Application No.: A.22-03-
Exhibit No.: SCE-02
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SOUTHERN CALIFORNIA EDISON®

(U 338-E)

Testimony in Support of Southern California Edison Company's Application for Approval of its Energy Efficiency Business Plan For 2024-2031, Volume 2 – Portfolio Plan

Before the

Public Utilities Commission of the State of California

Rosemead, California

March 4, 2022

SCE-02: SCE's Testimony in Support of Energy Efficiency Business Plan For 2024-2031, Volume 2 – Portfolio Plan

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I.

Executive Summary

In May 2021, the California Public Utilities Commission (Commission) adopted Decision (D.) 21-05-031, which established a new paradigm for energy efficiency (EE) portfolios, adopting a four-year portfolio to replace the current ten-year rolling portfolio process. In D.21-05-031, the Commission directed program administrators (PAs) to provide funding proposals for program implementation and portfolio administration costs based on detailed budget testimony covering the four-year portfolio period which runs from 2024 through 2027 (Four-Year Portfolio Plan).[1]

Southern California Edison's (SCE's) Four-Year Portfolio Plan will drive the development of a robust EE portfolio to address key customer, technology, and policy needs to meet California's overall energy and environmental goals. The Four-Year Portfolio Plan establishes how SCE will cost-effectively capture the energy savings necessary to achieve Total System Benefit (TSB)[2] goals and how SCE will support the broader EE market and deliver additional programming to increase equitable outcomes. To implement the strategies outlined in the Four-Year Portfolio Plan, SCE seeks approval of a $1,560 million budget forecast for the 2024-2027 portfolio period. The Four-Year Portfolio Plan also forecasts a 1.18 Total Resource Cost (TRC),[3] $3,624 million TSB, 6,579 gigawatt hours (GWh) and 1,334 megawatt (MW) savings, and an overall 1.15 million tons in greenhouse gas (GHG) emissions reduction.

This plan aligns with the following regulatory directives: (1) the Commission's 2021 Potential and Goals (P&G) Study adopted in D.21-09-037, which sets goals to "aggressively pursue all potentially achievable cost-effective energy savings opportunities, particularly from

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1 D.21-05-031, p. 34.

2 The TSB represents the total benefit that a measure provides to the electric and natural gas system. The TSB includes the total lifecycle avoided cost benefits less any increase in supply costs and is the same as the present value of the total resource cost benefits for EE.

3 The TRC forecast covers SCE's entire portfolio for the 2024-2027 period and includes Codes & Standards.

fuel substitution measures that have gone untapped,"[4] and (2) the California Energy Commission (CEC) 2021 Integrated Energy Policy Report (IEPR), which tracks achievement of Senate Bill (SB) 350's goal of doubling energy efficiency. Additionally, this plan expands SCE's commitment to support the State's overall EE goals outlined as a part of SCE's Pathway 2045[5] and Mind the Gap[6] whitepapers that articulate SCE's vision for achieving carbon neutrality in California by 2045, explain the need for EE to help reduce the amount of electricity consumed to further reduce total GHG emissions, and address policy changes necessary to ensure that California meets its goal of reducing GHG emissions 40% below 1990 levels by 2030. SCE's portfolio is designed to meet and exceed savings targets and goals expected of the portfolio and accounts for potential underperformance from the forecasted savings to ensure SCE achieves its goals. EE underpins a large part of SCE's vision to meet California's climate goals and serves as a critical intervention to reach customers broadly across all sectors.[7]

This Exhibit, SCE-02, presents SCE's strategies to EE program delivery for the 2024-2027 period. These strategies include new and traditional program offerings that meet the Commission's established TSB goals and reduce GHG emissions. SCE's strategies also include an increased focus on fuel substitution offerings that capture savings potential and complement additional offerings. Specifically, SCE introduces a Fuel Substitution Midstream Program to increase the adoption of Heating, Ventilation, and Air Conditioning (HVAC) fuel substitution measures, such as heat pumps; a Contractor Demand Building Program (CDBP) aimed at increasing demand for fuel substitution measures within the building contractors and tradespeople community; and a New Program Design Pilots Program that will test the effectiveness of novel program designs, such as a refrigerant exchange program to reduce high

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4 D.21-09-037, p.16.

5 *See* "Pathway 2045", this whitepaper is a data-driven analysis of the steps that California must take to meet the 2045 goals to clean the electricity grid and reach carbon neutrality, *available at* https://www.edison.com/home/our-perspective/pathway-2045.html.

6 *See* "Mind the Gap."

7 Sectors defined, per D.15-10-028 p. 47, as: Residential, Commercial, Industrial, Agricultural, Public, and Cross-Cutting.

global warming potential (GWP) refrigerants and a load shifting program to maximize TSB savings.

The Four-Year Portfolio Plan places a strong emphasis on SCE's role as an administrator as the portfolio continues to move toward programs that are proposed, designed, and delivered by third parties. SCE expects that 71% of its portfolio budget will be utilized to fund programs that are outsourced to third parties during the four-year period. This Exhibit describes the controls SCE utilizes to prudently manage the portfolio and third-party contracts. During the four-year period, SCE plans to continuously optimize the portfolio to address the needs of specific programs (e.g., fund shifting to higher performing programs), manage the risk of underperforming programs, and position itself to pivot to adapt to unpredictable events.

Lastly, SCE's Four-Year Portfolio Plan focuses on equity by introducing programs and approaches that will increase EE penetration to communities that have been historically underserved by EE programs. During the 2022-2023 period, SCE expects to deliver a Residential Equity Program and a Small and Medium Business (S/MB) Equity Program focused on the Commercial sector. As part of the Four-Year Portfolio Plan, SCE plans to expand its equity focus to other sectors in the portfolio through the proposed SMB Programs aimed at the Industrial, Agricultural and Public sectors. Customers in these sectors that face numerous barriers to adoption of EE – including costs, time constraints, and knowledge gaps – will be able to better manage their energy usage through incentives or direct installation of energy savings measures.

II.

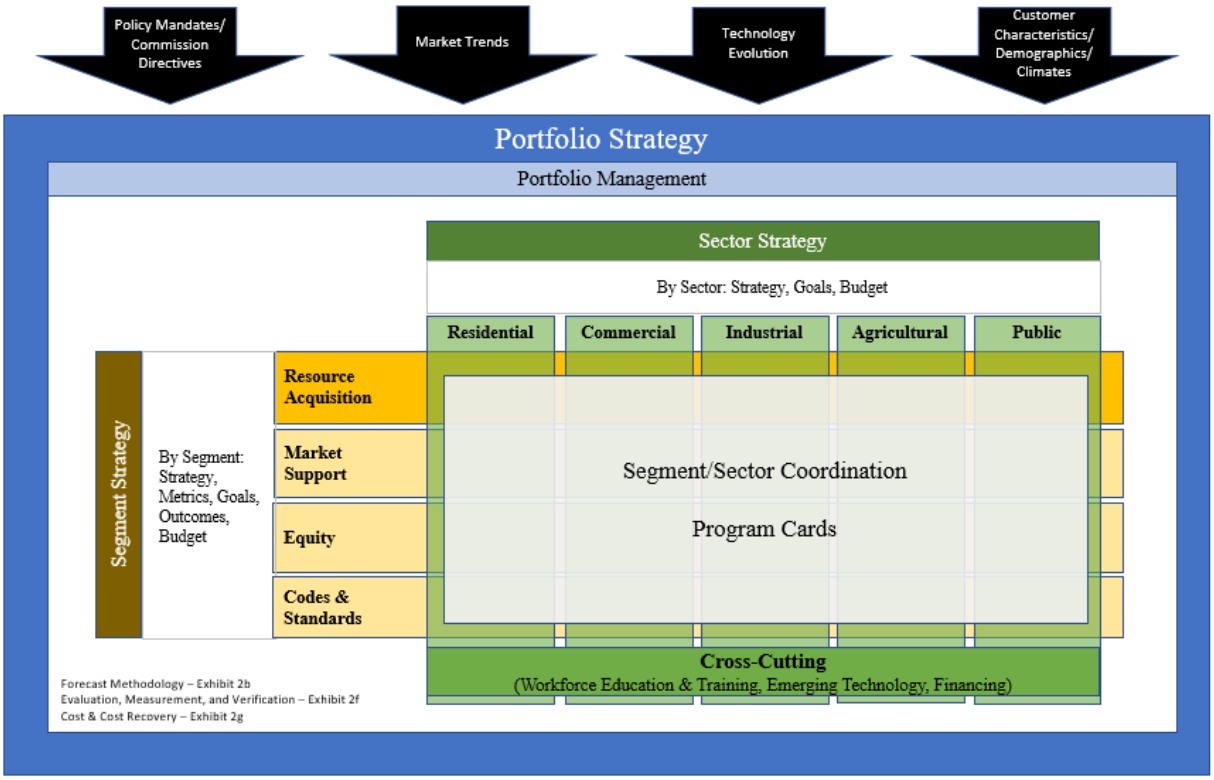
2024-2027 Portfolio Plan

A. Portfolio Summary

SCE continues to enhance its role as an EE PA through the delivery of a diverse, innovative, and cost-effective EE portfolio designed to meet the needs of our customers and the State of California's clean energy goals. This section addresses several portfolio strategies that drive SCE's Four-Year Portfolio Plan, including market intervention strategies, strategies to spur innovation, strategies to achieve clean energy goals, and strategies to incorporate low GWP refrigerants into the portfolio.

SCE frames the structure of its Four-Year Portfolio Plan in Figure II-1 below. This illustrative chart highlights the nuances and complexities of portfolio design and orchestration. The first axis is a segment horizontal "slice" that examines how SCE will approach the market from a Resource Acquisition, Market Support, Equity, and Codes and Standards (C&S) perspective. Each segment has different requirements and objectives and hence necessitates separate discussion as structured in this application. The second axis is a vertical sector "slice" that examines specific strategies and interventions that apply to each sector. These sectors are Residential, Commercial, Industrial, Agricultural, Public, and Cross-Cutting. Detailed descriptions, strategies, metrics, goals, and outcomes for both segment and sector can be found in IV below.

Figure II-1
Framework of SCE's Portfolio

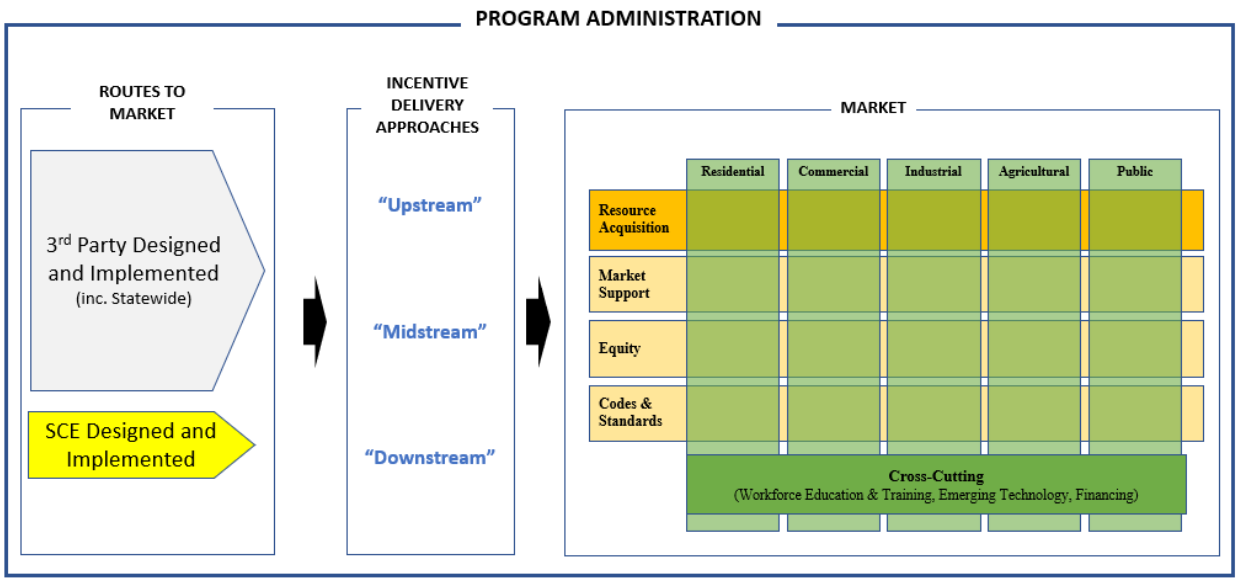


SCE must compose a portfolio that balances risks and benefits across multiple dimensions of requirements, goals, and objectives. To do so effectively demands diligent portfolio management practices. For instance, the intersection points between segment and sector require deep coordination to ensure efficiency and maximum value accrual. SCE expands on its tactical approaches to coordination within the Segment and Sector Strategy sections and discusses its portfolio management practices in Section II.C below. Overall, SCE underscores the responsibility to design and optimize a portfolio that contributes meaningfully to Commission goals and objectives, with the primary goals of providing customer benefits and helping the State achieve its climate and environmental goals.

In D.16-08-019, the Commission reinforced its position that PAs transition from an all-encompassing role as PA, Program Designer, and Program Implementer to one of principally a PA, leaving program design and implementation primarily to third parties. This policy change,

embodied in D.18-01-004, required PAs to meet minimum outsourced contract values by 2022 and marked a fundamental shift in a PA's role from program implementer to one that focuses on the design and structural composition of the portfolio as opposed to program delivery. This theme weaves tightly across business planning elements within this Application and is often reiterated through mention of third-party solicitations, which SCE acknowledges is a consequential "route to market." But equally important in this discussion are the design and administrative aspects of portfolio management, as illustrated below in Figure II-2 below.

Figure II-2
SCE Program Administration Structure



As a PA, SCE is responsible for delivery of TSB within budgetary constraints, policy requirements, and Commission guidance. Third-party designed and implemented programs advance this objective and are considered a delivery channel to achieve goals. However, SCE defines the strategic direction of the entire portfolio proposed in this Application and influences the portfolio make-up, complexion, resource allocation, and overall investment decisions. All of these aspects of administration are highlighted to emphasize that, although SCE relies heavily on

third parties to deliver cost-effective energy savings and TSB, SCE intends to act as a driving force of EE and ensure market viability and equity across its service area.

1. Portfolio Strategies

SCE's vision for the Four-Year Portfolio Plan is to achieve cost-effective energy savings, reach TSB goals, expand innovative solutions, and drive toward California's clean energy goals. A key element of SCE's overarching portfolio strategy centers on third-party designed and implemented programs. SCE has entered or will soon enter into contracts for all five Residential, Commercial, Industrial, Agricultural and Public sectors, as well as for statewide programs focusing on customer-centric and technology-specific offerings. SCE is in the process of soliciting for remaining segments and new Market Support and Equity offerings.

SCE considers the third-party designed and delivered programs a primary route to reach customers and an integral component of SCE's overall portfolio strategy. This approach applies across Segment and Sector strategies.

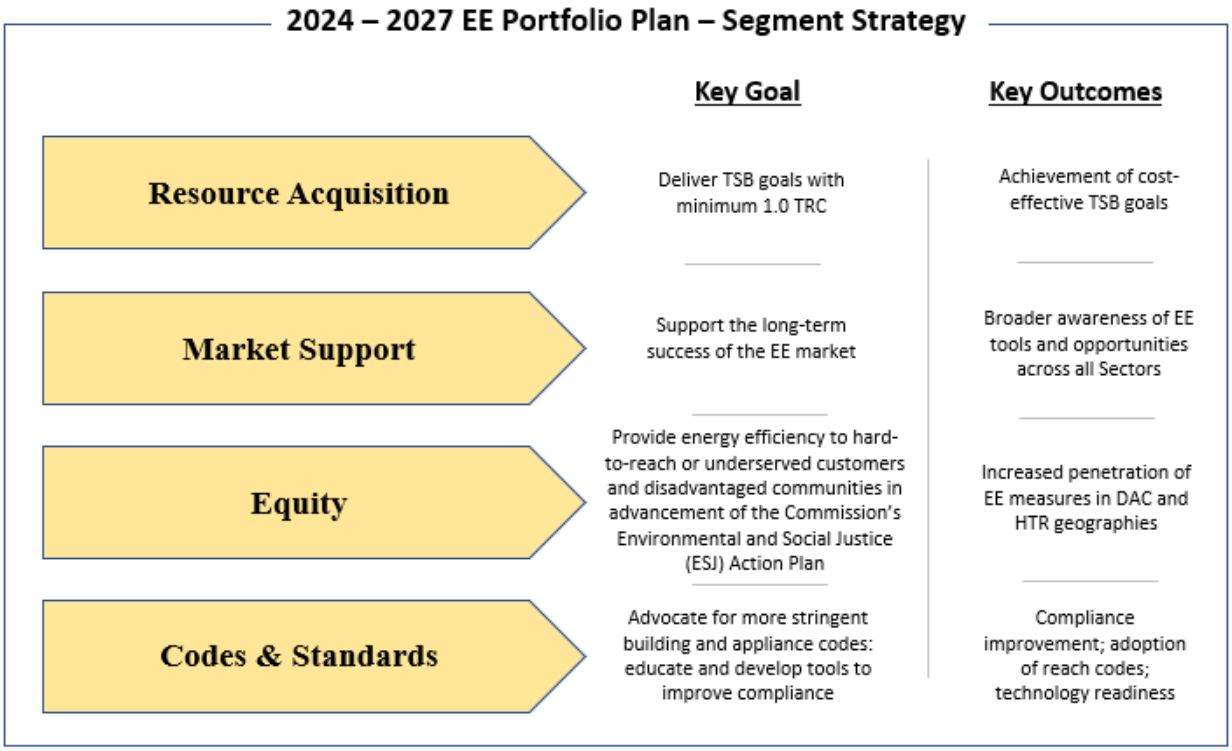
a) Segment Overview

In D.21-05-031, the Commission introduced new segmentation categories to enhance PAs' empowerment to invest in programs that may not meet a TRC requirement of 1.0, but still merit consideration because of their benefits to EE market longevity and expansion of equitable interventions in under-served areas. The new segmentation includes Resource Acquisition, Market Support, and Equity. This segmentation affords SCE latitude to invest in programs characterized as Market Support and/or Equity with no TRC requirement, but capped at 30% of the entire portfolio budget. Resource Acquisition programs, which will make up a majority of the portfolio, continue to require a minimum TRC of 1.0. This new segmentation serves as the basis for how SCE codifies its strategy across these three horizontal "slices" (see Figure II-3 below) of the market and how it balances the requirement for TSB achievement while fostering market viability and promoting equitable interventions.

Figure II-3 below summarizes SCE's segment strategy and indicates directionally how TSB accrues by segment. SCE expects the Resource Acquisition segment to be the primary

approach to generate the most TSB with Market Support and Equity providing some contribution to TSB. This expectation aligns with TSB goals and the intent of Market Support and Equity programs as enablers or catalysts for long-term viability and coverage. In this regard, SCE considers Market Support and Equity programs no less important than the Resource Acquisition programs identified in SCE's portfolio.

Figure II-3
SCE's Segment Strategy



(1) Resource Acquisition

SCE has demonstrated through its competitive solicitation process that a market for third-party led EE programs exists in a meaningful capacity. SCE recognizes that the third-party market still requires investment and flexibility by PAs to encourage more participation by a broader set of businesses, and this Application looks to build on the work previously accomplished through prior solicitations conducted as part of the transition to the third-party model initiated by the Commission. As a result, SCE centers its Resource Acquisition strategy

around solicitations for third-party designed and implemented services and plans to promote opportunities through access to the entire customer base. A majority of the portfolio budget aligns with this strategy and reflects SCE's ambition to ensure the marketplace has sufficient opportunity to innovate and provide cost-effective savings. Additionally, SCE may influence and signal to the market, at least directionally, preferences for market participation and outcomes through Request for Abstract (RFA) and Request for Proposal (RFP) design and requirements. For instance, evaluation criteria may weigh innovation or policy objectives in a manner that encourages broader participation and more creative thinking from the marketplace to increase inclusivity of all businesses. As a Portfolio Administrator, SCE exercises diligence in utilizing best available information on the market and its customers to optimize available benefits. Identification of market gaps, for example, may arise and if they do, SCE may deploy targeted gap-filling solicitations. If a market-based solution is undeveloped or unsuccessful in the solicitation process, SCE may stand up an in-house effort to meet a market need or demonstrate viability before releasing the opportunity to the market. SCE has budgeted for these opportunities in its SCE-led programs and/or as a part of the Pilot Design program to cover unproven approaches that would fall under the Market Support segment.

(2) Market Support

Market Support, with no minimum TRC requirement, allows SCE to invest in programs that may not yield immediate savings, but may serve as foundational underpinnings that ensure long-term viability of the EE market and may lead to more future cost-effective measures. Market Support programs, therefore, align to a two-fold objective. The first requires investments that will continually inform market participants, from suppliers and technology developers to end-users/customers, of opportunities that they can utilize within EE. The second requires investments in new technologies. The Statewide Electric Emerging Technologies Program (SWEETP) fits within this category and, although it is considered a sector, has relevance within Market Support because it reflects 15% of the Segment budget. New and emerging technologies typically require market support because they may not have matured to a point of broad scale

commercial viability, and thus, it is through SCE's leadership that they be evaluated, piloted, and nurtured to reach a level of sustainability to drive a cost-effective value proposition.

(3) Equity

Like Market Support, the Equity segment advances investments that do not require a minimum TRC. This segment was established so that PAs could implement programs to address underserved customers and hard-to-reach (HTR) and disadvantaged communities (DACs) without cost-effectiveness constraints. SCE's approach to this segment aligns closely with the Environmental and Social Justice (ESJ) Action Plan[8] and shares its vision for more equitable distribution of resources. SCE plans to increase EE penetration and awareness in these targeted markets through the new Residential Equity Program, SMB Commercial, Industrial, and Agricultural Equity Programs and Public Equity Program which will be solicited for third-party design and implementation in 2022 and beyond.[9] SCE expects these programs to be tailored to serve these populations more effectively, which may be done through a direct installation or similar turnkey approach.

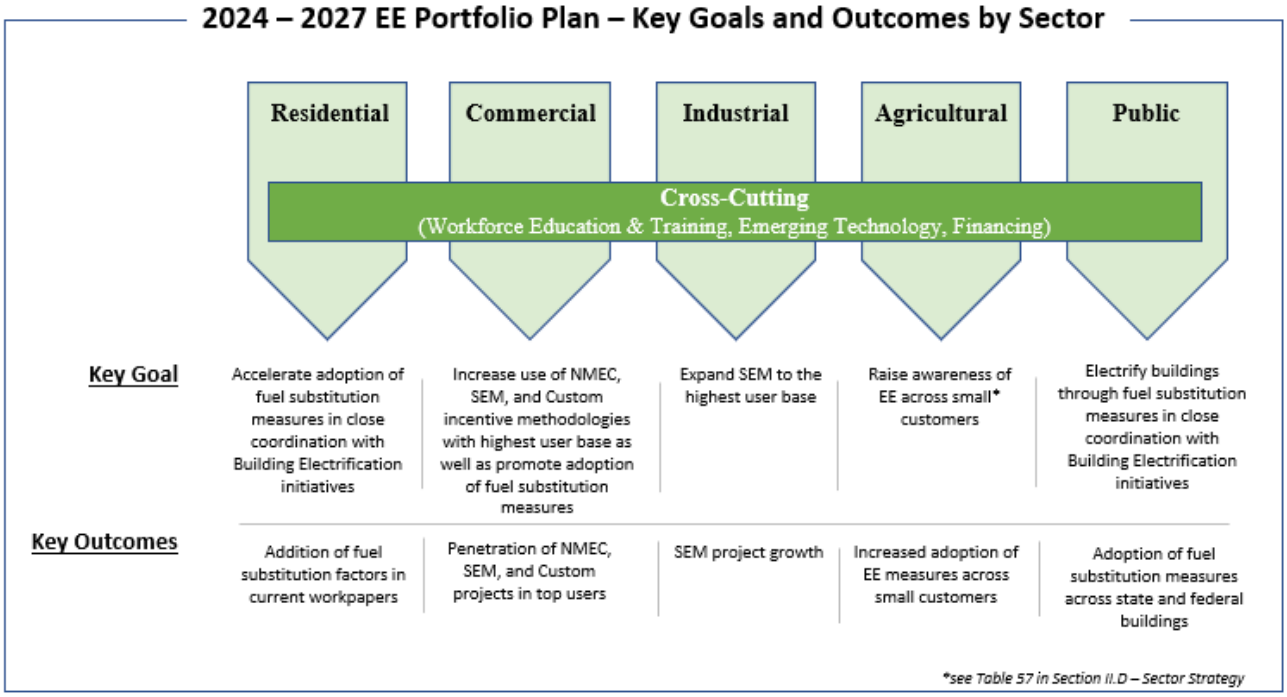
b) Sector Overview

The second axis to SCE's Portfolio Strategy aligns vertically by sector. As depicted in Figure II-4 below, TSB goals align to market opportunity size, as defined by the P&G Study. A key contributor to realizing TSB goals lies in fuel substitution interventions, which is an integral offering for this planning period and is discussed in detail in Section IV.B.

[8] S*ee* ESJ Action Plan, p. 32, *available at* https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/draft-cpuc-esj-2010262021c.pdf.

[9] *See* Section IV.B for additional details on these programs.

Figure II-4
SCE's Sector Strategy



Other specific interventions to drive TSB by sector follow traditional delivery approaches and methodologies, as discussed under Market Intervention Strategies.

2. Market Intervention Strategies

SCE will employ market intervention strategies across the three delivery channels (upstream/midstream/downstream) for all sectors and segments, with a targeted deployment of a Strategic Energy Management (SEM) approach.[10] These market intervention strategies are designed to promote customer use of EE solutions, as shown in Figure II-5 below. Incentive Delivery Approaches rely on interventions that target specific market actors to address barriers within a value chain. Specifically, interventions that target suppliers or manufacturers represent an "Upstream" approach, those that target distributors or retailers represent a "Midstream" approach, and those that target end users or customers represent a "Downstream" approach.

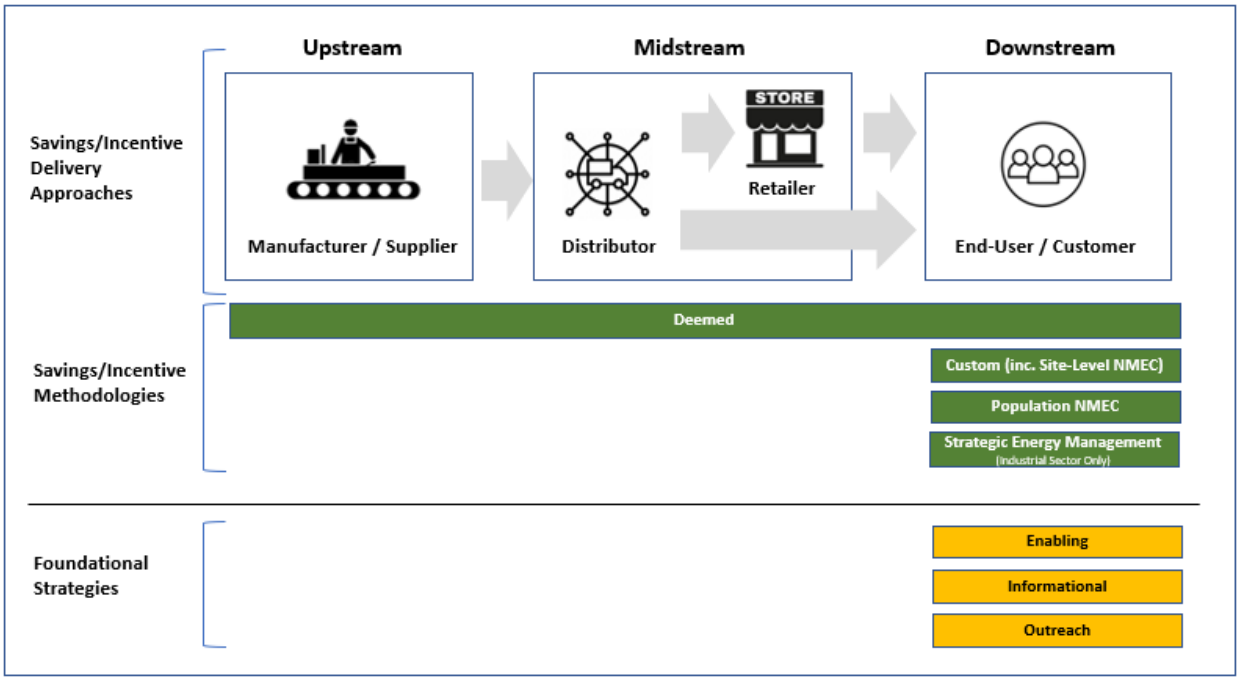
[10] Strategic Energy Management historically only applies to the Industrial sector only and this application includes its expansion to Commercial and Public Sectors.

Through third-party and SCE-implemented programs, the targeted entity or individual receives financial incentives to influence energy usage behavior of the end-use customer. For example, a distributor of HVAC may receive an incentive for sales of high-efficiency HVAC equipment, a retailer may receive an incentive to promote higher efficiency products to installers and end-use customers, and, finally, end-users/customers may receive a direct incentive to replace inefficient products.

D.16-08-019 requires upstream and midstream interventions to be delivered statewide.[11] SCE's Four-Year Portfolio Plan includes continued support for the implementation of statewide programs, but also proposes some modifications to existing statewide programs that could better improve program successes. Further, as discussed in SCE-01, SCE proposes the ability to stand up new SCE-run programs that would provide upstream and midstream incentives.

[11] *See* D. 16-08-019, p. 62.

Figure II-5
Market Intervention Approach



Participants in EE programs can qualify for (or receive) various types of financial incentives based on the different methodologies used to calculate energy savings. These methodologies include Custom, Deemed, Normalized Metered Energy Consumption (NMEC), and SEM. Each methodology caters to meet the diverse requirements of the market sector that it targets. For instance, an industrial sector customer that manufactures concrete may utilize an array of pumps and electric powered hydraulic systems to produce product. This customer may engage a third party or SCE directly to evaluate EE opportunities. Given the scale and complexity of this type of EE savings opportunity, a Custom or SEM approach would most likely be warranted. Those approaches involve calculating and distributing incentives based on approved engineering and implementation plans and evidence of successful installation and operation. Alternatively, in a Deemed approach, a fixed incentive is paid after successful

installation of an approved measure.[12] And, lastly, NMEC utilizes historical usage as a baseline and determines energy savings after an intervention is completed and operational for a set period. The net reduction is the basis for an NMEC incentive.

Along with Incentive Delivery Approaches and Incentive Methodologies, SCE has what it calls "Foundational Strategies" to help drive market awareness, enable financing of energy efficient products, and provide easy access to usage data. These Foundational Strategies are a necessary part of the Four-Year Portfolio Plan because they provide support to the overall EE portfolio in several different capacities: by ensuring the market is aware of EE program opportunities, educating program participants on key EE policy and code requirements, and enabling behavior change throughout SCE's service area. Additional discussion on how SCE proposes to utilize these approaches in its portfolio is addressed in Chapter IV below.

3. Strategies to Spur Innovation

SCE remains committed to pursuing new sourcing and delivery strategies in an effort to capture innovation and improve the customer experience and reduce the cost of delivery. As SCE solicits for third-party designed and implemented EE programs, it will continue to weigh innovation highly as part of the overall bid evaluation process. Solicitations do, and will continue to, explicitly ask bidders to address how their proposals are innovative or how they will spur innovation in the market. SCE examines the robustness of the proposals and considers all viability factors, such as time to market, technology evolution, market barriers, and customer adoption trends. Juxtaposed against this need to spur innovation, however, SCE will continue to exercise fiduciary responsibility to customers and assemble programs within its portfolio that will ultimately lead to cost-effective Resource Acquisition programs.[13] Balancing innovation, and the resultant potential long-term benefits, against delivery of short-term cost-effective

[12] A measure is defined as "1) Specific customer actions which reduce or otherwise modify energy end use patterns, and 2) a product whose installation and operation at a customer's premises results in a reduction in the customer's on-site energy use, compared to what would have happened otherwise". See Energy Efficiency Policy Manual Version 6, April 2020, p. 78.

[13] 1.0 TRC requirement per D.18-05-041, p. 135.

savings remains a challenge, but SCE now has additional discretion to invest prudently to help stimulate innovation due to the creation of the Market Support segment. Ultimately, SCE will continue to seek robust and innovative proposals from a diverse cross-section of market participants and encourage all bidders to bring their experiences, creativity, and knowledge to bear to help drive EE forward.

Along with the solicitation-driven approach to spur innovation, SCE will continue to enable the market for early-stage ideas that pertain to proof-of-concepts, new untested savings methodologies, and policy considerations that support continuous improvement of the EE portfolio. These types of investments can often be unproven for market participants to undertake and capture cost-effective EE savings, and because of this risk, PAs should continue to play this role of market enabler. In the previous application period, for example, SCE initiated pilots or introduced new measures, such as Heat Pump HVAC units into SCE's EE portfolio that yielded most of the portfolio's fuel substitution savings with sufficient cost-savings opportunities to make them programmatic offerings. Historical precedents of success substantiate SCE's role as a market enabler where investment of incremental budget to run pilots, conduct feasibility testing, and market research may yield future cost-effective EE savings opportunities. For SCE-led pilots identified in the Four-Year Portfolio Plan and for those that have not yet been identified, SCE will share results broadly across the market to stimulate scrutiny, further evaluation, and ultimately additional investment.

4. Strategies to Achieve Clean Energy Goals

SCE will continue its engagement and focus on scaling innovative fuel substitution efforts in the Four-Year Portfolio Plan to drive toward California's Clean Energy Goals. The 2022-2032 P&G Study stated, "…we remain intent on sending a strong signal to all PAs to pursue fuel substitution savings opportunities."[14] SCE agrees with the Commission that fuel substitution measures should be a staple in EE portfolios. The resource portion of SCE's Four-

[14] D.21-09-037, p. 16.

Year Portfolio Plan integrates fuel substitution opportunities at scale through existing local programs. Through new program proposals such as the CDBP and the Fuel Substitution Midstream Program (shown in the table below), SCE's Four-Year Portfolio Plan will build complementary fuel substitution efforts alongside third-party implementers and the Building Electrification (BE) Application (A.21-12-009) to minimize competing offers and reduce customer confusion while maximizing the value derived from customer funds and accelerate adoption of fuel substitution technologies.

Table II-1
Fuel Substitution Program Budgets
(in millions)

Program	2024	2025	2026	2027	Total (2024-2027)
CDBP	$2	$2	$2	$2	**$8**
HVAC Fuel Substitution Midstream Program	$16	$16	$16	$17	**$65**
Total SCE Budget	$385	$389	$394	$392	**$1,560**
Fuel Sub Programs % of Budget	5%	5%	5%	5%	**5%**

The proposed CDBP, discussed in Section III.C.7, will be aimed at increasing the demand for fuel substitution measures with building contractors and tradespeople, which will benefit the broader marketplace and all fuel substitution efforts. The proposed Fuel Substitution Midstream Program, discussed in Section IV.B.1, will support fuel substitution measures, utilizing a midstream approach to scale available fuel substitution technology. This proposed program is also intended to provide affordable access to heat pump HVAC equipment to customers through contractors that serve them. SCE experienced success with this approach in 2020 when it introduced 14,261 units to the marketplace via SCE's former Plug Load and Appliance program.[15] The Fuel Substitution Midstream program will provide flexibility to fill

[15] The Plug Load and Appliance program was closed in 2021 to make way for the Statewide Upstream HVAC program led by San Diego Gas & Electric Company (SDG&E).

gaps in statewide programs and local offerings by ensuring specifically that fuel substitution measures are available in the marketplace.

Moreover, SCE will continue to support EE and Demand Response (DR) integration efforts across the portfolio in a comprehensive and cohesive manner. SCE will leverage third-party contracts to integrate DR efforts within EE programs delivered through third-party contracts and SCE programs. For example, SCE's Residential Direct Installation Program incorporates smart thermostats into the program, and, due to cross-marketing and providing program information to customers, 67% of participants in that program have signed up for a complementary DR program. As a result of this coordination success, and because Residential Direct Installation participants typically reside in hotter climate zones and thus use more energy on average, SCE can capture even more DR potential from these program participants that also sign up for DR programs. As further discussed in Section IV.B below, each sector highlights programmatic budgets dedicated to EE/DR integration policy priorities in D.18-05-041.As further discussed in Section IV.B below, each sector highlights programmatic budgets dedicated to select EE/DR integration policy priorities in D.18-05-041.

5. Strategies to Incorporate Low GWP Refrigerants into Portfolio

In 2018, SB 1013 directed the Commission to consider developing a strategy for including low-GWP refrigerants in EE portfolios. In D.20-04-010, the Commission adopted a set of policy updates to the avoided-cost calculator that required PAs to account for avoided costs of high-GWP gases in EE portfolios. These updates paved the way for programs and/or measures focused on the use of low-GWP refrigerants.

SCE's Four-Year Portfolio Plan is fully committed to incorporating low-GWP refrigerants into the EE portfolio by modifying existing programs and measures or developing new program designs that minimize refrigerant GHG impact and incorporate refrigerant impacts for relevant technologies. Refrigerants present a significant impact to the climate with estimates

of ~20 Million Metric Tons of GHG in the State[16] with one of the fastest growing emissions areas. Some examples of potential program design changes include limits on GWP refrigerants or increased incentives for low GWP refrigerants. SCE expects that third-party program implementers will adjust their programs to account for avoided costs associated with refrigerants accordingly.

SCE has also dedicated funds as part of its New Program Design Pilots Program described in Section III.C.6 to test the effectiveness of novel program designs, including programs designed to reduce GHG emissions from refrigerants. A potential option is to pilot a program that will exchange high-GWP refrigerants for low-GWP refrigerants. If proven to be successful, SCE intends to transition pilot programs to third parties for broader implementation.

Furthermore, SCE anticipates that the third-party SWEETP will have an opportunity to address refrigerant improvement through potential future technology evaluations that align with the program's planning and prioritization efforts and EE portfolio needs. Lastly, as directed in D.21-05-031,[17] SCE is evaluating low GWP refrigerant measures for inclusion to future program portfolios. This will be an on-going effort expected to align with California Air Resources Board (CARB) requirements.

B. Key Metrics and Outcomes

In various decisions, the Commission has introduced three notable changes to the PAs' portfolio design requirements.[18] First, the Commission ordered a shift from PAs' predominantly designing and implementing EE programs to committing at least 60% of a portfolio budget to programs designed and implemented by third parties by 2023. Second, D.21-05-031 shifted portfolio savings goals from a traditional kilowatt hour (kWh)/kilowatt (kW) basis to TSBs. Third, the Commission segmented EE portfolios into three different categories: Resource

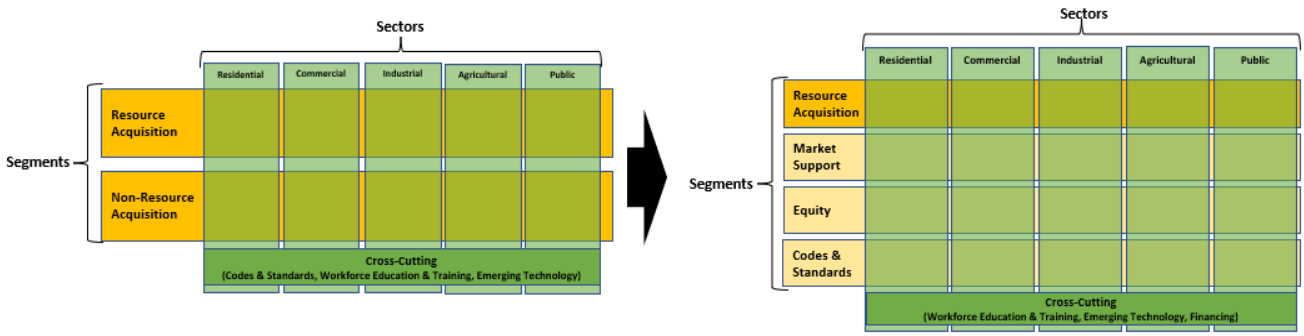
[16] California Air Resources Board (2021). California Greenhouse Gas Emission Inventory - 2021 Edition, *available at* https://ww3.arb.ca.gov/cc/inventory/data/data.htm (figure 3) in excel file.

[17] *See* D.21-05-031, OP 16.

[18] *See* D.18-01-004 Ordering Paragraph (OP) 1 and D.21-05-031 OPs 1 and 2.

Acquisition, Market Support, and Equity.[19] Figure II-6 below conceptually depicts this new segmentation. These three updates, in aggregate and singularly, serve as foundational drivers to SCE's 2024-2027 Four-Year Portfolio Plan.

Figure II-6
Segment Approach to Energy Efficiency Programs



SCE presents a robust Four-Year Portfolio Plan that considers near-term requirements for cost-effective resource acquisition while, at the same time, advancing longer-term investments to ensure the move to clean energy, equity, and stability of the EE market. The latitude to allocate budget to programs that focus on compelling value propositions other than primarily cost-effectiveness of savings affords SCE discretion to consider factors such as fuel substitution, emerging technologies, innovation, and customer equity in designing its portfolio.

For tracking portfolio progress and performance, SCE will use the following metrics:

- TSB
- Third-party contracts
- GHG emissions
- Market segmentation
- Cost-effectiveness of the Resource Acquisition segment

SCE proposes to report these metrics in its monthly and annual EE reports.

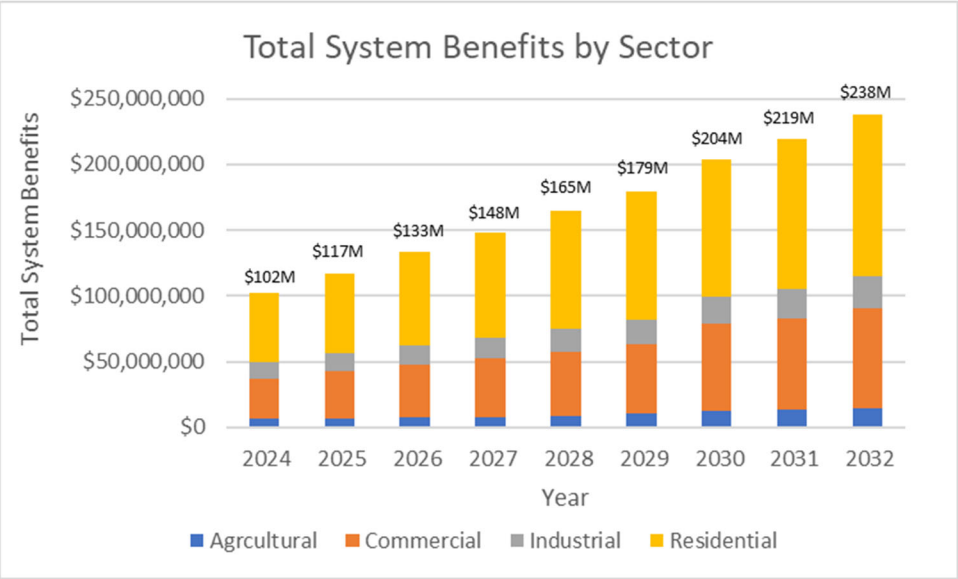
[19] Since at least 2012, Codes & Standards has been considered separately from the rest of the portfolio. *See* D.12-11-015.

1. TSB Goals

TSB is a dollar-based metric that represents the entirety of avoided costs by utilities and customers for energy savings and fuel substitution benefits. TSB "combines and optimizes the energy and peak demand savings goals, along with GHG benefits of energy efficiency, into one metric that can be forecasted and tracked,"[20] and it broadens the reach of EE to include interventions that will accrue benefits outside of the bounds of kWh and kW savings alone. TSB was conceived to consider the nuances of electricity usage at different times of the day and in different months of the year. Given the spikes in demand during the hotter periods of the year, and even the variation in electricity usage profiles on a day-to-day basis, electricity savings in aggregate do not always properly account for the true system value of EE measures. TSB, therefore, measures savings in the dollar value of the benefits that accrue to the entire system and encourages PAs to influence customer behavior to drive optimal TSBs and not kWh savings alone. SCE's Four-Year Portfolio Plan forecasts achieving well over 100% of the TSB goal shown in Figure II-7 below, and meeting 135% of the kWh savings target. SCE's third-party solicitations, which make up most of the portfolio, were conducted to meet kWh savings goals and cost-effectiveness, driving greater focus on long-lived measures.

[20] D.21-05-031.

Figure II-7
Portfolio TSB Goals by Sector[21]



2. Third-Party Contracts

As directed in D.18-01-004, SCE initiated solicitations for third-party designed, proposed and implemented EE programs in 2018 to meet the requirement that at least 25% of its portfolio budget be outsourced to third parties by the end of 2019, at least 40% of its portfolio budget be outsourced by the end of 2020, and at least 60% of its portfolio budget be outsourced by the end of 2022. As of the filing date of this Application, most of SCE's portfolio budget has been outsourced to third parties and SCE has executed contracts for the following programs: the Statewide Lighting Program,[22] and SCE's local Residential, Commercial, Industrial, Public, and Agricultural programs. SCE is also in various stages of the third-party solicitation process for the Higher Education Program[23], and Water/Wastewater Pumping Program.[24] .

SCE will continue to conduct solicitations for implementers to design and propose market-based solutions throughout the Four-Year Portfolio Plan. The third-party model is the

[21] Public sector is primarily contained within the Commercial Sector.
[22] SCE is the lead administrator for this statewide program.
[23] SCE is the lead administrator for this statewide program.
[24] SCE is the lead administrator for this statewide program.

preferred route to market across all sectors and segments. As contracts expire or terminate, new solicitations will be conducted to maintain, at a minimum, the 60% outsourcing level indicated in D.18-01-004. Table II-2 below provides projected third-party budgets, SCE total budgets, and third-party percentage of SCE's Four-Year Portfolio Period, with 2023 for reference.

Table II-2
Projected Third-Party Percentage of Portfolio
(in millions)

	2023	2024	2025	2026	2027	Total (2024-2027)
SCE Implemented Programs	$87	$110	$114	$115	$109	**$448**
Third-Party Program Budgets	$356	$265	$265	$269	$273	**$1,072**
SCE Budget (Less OBF Loan Pool)	$443	$375	$379	$384	$382	**$1,520**
Third-Party % of Budget	80%	70%	70%	70%	71%	**71%**

3. GHG Emissions Reductions

SCE's Four-Year Portfolio Plan places GHG reduction as one of the primary objectives for EE and focuses on how programs in the portfolio can contribute to overall GHG emissions reductions. As previously stated, the Four-Year Portfolio Plan achieves an overall 1.41 million tons in GHG reduction, the equivalent of removing approximately 300,000 passenger vehicles off the road for one year. GHG is a major driver of the TSB goal, representing a substantial portion of the avoided costs of energy efficiency, and SCE portfolio's transition to TSB will increase focus on GHG emissions reductions, including increased fuel substitution measures in statewide and local programs and a new Fuel Substitution Midstream Program. Lastly, as SCE updates future measure packages to incorporate benefits of low GWP refrigerants in applicable EE measures, it will allow programs to claim savings from low GWP refrigerants and encourage programs to focus on technologies that have refrigerants with lower GWP, resulting in reduced GHG emissions.

4. Market Segmentation

In D.21-05-031, the Commission introduced Market Support and Equity as new Segments of the EE portfolio. This segmentation shifts from the previous Resource and Non-Resource Acquisition segmentation to the new construct depicted in Figure II-6 above. Previously, the strict requirement for SCE to forecast a TRC above 1.25 and meet a TRC of 1.0 for the entire portfolio[25] constrained PAs from investing and maintaining programs that were not cost-effective but may have had large societal benefits. Under the new segmentation, a PA's portfolio must meet a forecasted TRC ratio of 1.0 for the Resource Acquisition segment only, thereby affording PAs, including SCE, flexibility to build a portfolio that better balances investments for near-term savings with long-term benefits. Because Market Support is intended to advance the long-term viability of the EE market, SCE will solicit and contract for programs that are not expected to yield a TRC of 1.0 but are still valuable and may lead to greater savings in the future. Similarly, SCE will employ this same approach for Equity programs that target Disadvantaged and Vulnerable Communities (DVC) and HTR customers – markets that have traditionally been challenging to penetrate given past cost effectiveness requirements. Table II-3 below provides the budget forecast for each segment in SCE's Four-Year Portfolio Plan. Specific strategies, interventions, and metrics for each segment are further discussed in Section IV.A.

[25] *See* D.18-05-041, Finding of Fact (FOF) 21.

Table II-3
Budget by Portfolio Segment
(in millions)

Segment	2023	2024	2025	2026	2027	Total (2024-2027)
Resource Acquisition	$292	$254	$251	$256	$254	**$1,015**
Market Support	$45	$65	$70	$68	$67	**$271**
Equity	$13	$30	$31	$32	$33	**$126**
C&S	$17	$19	$20	$20	$20	**$79**
Evaluation, Measurement and Verification (EM&V)	$16	$17	$17	$18	$18	**$69**
Total	$383	$385	$389	$394	$392	**$1,560**

C. SCE's Portfolio Management

As part of its role as a portfolio administrator, SCE has identified ways to optimize the portfolio, when needed, and manage risk associated with unforeseen events. Through continuous oversight of the portfolio and specific controls, SCE will be able to act swiftly, should the portfolio require adjustments to meet the goals and objectives outlined throughout this Testimony. SCE will monitor key performance indicators (KPIs) across all programs in its EE portfolio to effectively manage attaining savings goals, TSB, and other key factors to ensure compliance with Commission guidance.

In this section, SCE outlines its approach to portfolio management, which includes SCE's oversight and controls of SCE-led and third-party implemented programs, together with SCE's approach to portfolio optimization, administration of third-party programs, and risk management.

1. Oversight and Controls

As mentioned, most of the EE portfolio will be comprised of third-party delivered programs awarded through a competitive solicitation process that identifies the most qualified implementers that are able to deliver EE programs to customers. SCE will closely monitor implementer and program performance and actively track compliance with contractual

requirements, KPIs and other metrics, including savings and cost effectiveness contribution toward Portfolio objectives.[26]

In addition, as part of its prudent portfolio and contract management practices, SCE will review implementer's projects to ensure compliance with all contractual requirements, including Commission EE policies, accuracy of EE savings, and performance against contract milestones, expected savings, and cost effectiveness. SCE will conduct on-site or virtual inspections of some of the implementer's reported installations to verify equipment specifications and quantities and to validate kW demand and kWh energy savings. SCE will also closely monitor the performance of SCE-implemented programs through regular review of program pipeline projects and key performance indicators. SCE will continue to seek opportunities to strengthen current control measures and develop new control processes, as needed, to review and assess projects submitted by implementers. SCE will ensure that its projects, programs, and contracts continue to perform at the highest quality and deliver energy savings as expected.

2. Portfolio Optimization

SCE intends to manage its portfolio prudently to reach EE goals established by the Commission, support the needs of each sector and segment, and achieve planned savings, TSB goals, and cost-effectiveness targets. For third-party implemented programs, SCE's Four-Year Portfolio Plan places a strong preference on pay-for-performance contracts, an inherent and essential optimization feature, to tie SCE's EE program expenditures to measurable cost-effective benefits. For SCE-implemented programs, program managers will address performance issues and identify areas for potential improvements.

In addition, SCE will use its oversight and controls identified in Section II.C.1 above to continuously improve performance of its portfolio. Specifically, SCE will optimize its portfolio as follows:

[26] For SCE's quality and other controls, see SCE-01, Section IV.D.

- For underperforming programs, SCE will work with third-party implementers and SCE program management teams to identify root causes and develop strategies to improve program performance.
- SCE will ensure that forecasts are based on sound and reliable data, supported by appropriate project pipelines.
- SCE may consider shifting funds from low to high performing programs if SCE determines that additional savings opportunities are available. This approach relies on the ability to shift both among programs and program years (PYs) within the four-year portfolio period, as authorized in D.21-05-031.[27] SCE has traditionally used the ability to shift funds among programs in an individual PY to appropriately resource the best performing programs and provide the highest value to customers. Going forward, the flexibility of fund shifting among programs and PYs will allow SCE to effectively administer programs through their lifecycle of ramp-up, peak performance and ramp-down, and to adjust the portfolio as necessary to address unplanned events.
- SCE may seek to amend existing contracts or conduct new solicitations to address market gaps or significant opportunities not adequately served by the portfolio, including underserved segments, sectors, and subcategory of customers, to realize additional cost-effective or equity/market support benefits, or to continue programs that have reached the end of their contract.
- SCE may leverage local SCE-led programs or historical trade professional network to meet SCE's portfolio TSB goals.
- SCE will implement risk mitigation strategies, as described in Section II.C.4 below, including for unplanned and impactful events.

[27] D.21-05-031, p. 31.

- SCE will coordinate the Four-Year Portfolio with other demand-side programs as discussed in Section IV.D.4 and SCE's BE Program as discussed in SCE-01.

If changes to portfolio goals and metrics are necessary, SCE will utilize the true-up and mid-cycle advice letter process established in D.21-05-031 to identify and make any necessary changes. If SCE's Portfolio appears that it may not meet its goals, SCE will engage with the California Energy Efficiency Coordinating Committee (CAEECC) for guidance to support SCE's continuous improvement efforts.

3. Third-Party Programs

As discussed, SCE is responsible for administering an EE portfolio mainly proposed, designed, and implemented by third parties. SCE anticipates that 71% of its portfolio will be outsourced to third-party implementers during the Four-Year Portfolio period. Third-party implementers, under contract with SCE, market their programs to customers, identify measures that are eligible and appropriate for customers, enter contracts with customers, and implement the measures at customer sites. SCE claims energy savings toward its goals based upon third-party implementer delivered savings on an ex-ante basis. SCE's solicitation process is designed to evaluate and select programs most likely to deliver cost-effective EE savings, deliver TSB, and minimize customer costs. Additional details regarding SCE's approach to third-party programs are discussed in Section IV.C.

4. Portfolio Risk Management and Flexibility

SCE acknowledges that risks associated with the management of third-party programs could significantly impact SCE's portfolio performance. SCE has identified two key risks to meeting its goals in case of: (1) under-delivery of energy savings by third-party implementers, and (2) a major unplanned event that affects most/all programs, such as an aggravation of the current pandemic, a new pandemic, supply-chain disruptions, and inflationary pressures.

SCE's portfolio is well positioned to manage potential shortfalls from third-party implementers.[28] For under-delivery of energy savings by third-party implementers, SCE will actively manage third-party performance, fund shift where appropriate, stand-up new solicitations if necessary, and leverage pay-for-performance structures to protect customers from expenditures that do not realize claimable savings, as described in Section II.C.2 above. Additionally, SCE's portfolio was designed to meet PA targets and manage potential shortfalls from third-party forecasts by procuring additional resources to ensure the portfolio can meet its goals in the event one or multiple programs experience delivery challenges. Due to the portfolio and contract structure, SCE pursues all cost-effective EE in a manner that provides flexibility for SCE and third parties to meet their targets and reduce risk to the portfolio and customers' funds.

In 2020, the COVID-19 pandemic impacted industries focused on customer-oriented energy programs, including SCE's EE portfolio, and the EE workforce. If a major unplanned event occurs during the Four-year Portfolio Period, SCE will communicate with implementers to determine the situation and likelihood of meeting contractual obligations, establish a mitigation plan unique to the circumstances faced, leverage pay-for-performance contracts to ensure customers are protected, and assess SCE's ability to meet the four-year goals (given the flexibility provided by the four-year cycle).

Next, SCE will leverage the experience gained through the COVID-19 pandemic to establish a mitigation plan specific to new circumstances, potentially including different delivery models, incentive approaches, technologies, or other appropriate strategies. SCE will work with the third parties to determine if their programs can adjust to the changes and amend contracts as appropriate. Should third parties not be able to adjust, SCE may stand up a new streamlined solicitation tailored to the mitigation plan. As described above, fund shifting will also provide additional flexibility. Lastly, pay-for-performance compensation structure will limit exposure if energy savings are not realized.

[28] For SCE's quality and other controls, see SCE-01, Section IV.D.

III.

SCE's Four-Year Portfolio Plan Budget Forecast

SCE's total budget forecast for the Four-Year Portfolio Plan (2024-2027) is $1,560 million. The Four-Year Portfolio Plan's forecasted TSB is $3,624 million, including C&S, a forecasted TRC ratio of 1.18, and a forecasted Program Administrator Cost (PAC) ratio of 2.37, including C&S. Table III-4 and Table III-5 below show the total budget forecast for each year of the Four-Year Portfolio Plan, as well as the expected TSB, cost effectiveness metrics, and savings (by kW, kWh, and Therms) for each year. The Tables include the same forecasted metrics for PY 2023 as a point of historical comparison.[29] In addition to providing budgets and other metrics, this section details SCE's budget forecast methodology for the Four-Year Portfolio Plan.

Table III-4
SCE Total Forecasts by Year 2024-2027 (With C&S)

Metric	2023	2024	2025	2026	2027	Total (2024-2027)
Budget (in millions)	$457	$385	$389	$394	$392	**$1,560**
TSB (in millions)	$2,217	$929	$900	$889	$906	**$3,624**
TRC	2.90	1.21	1.19	1.17	1.16	**1.18**
PAC	5.76	2.45	2.35	2.29	2.38	**2.37**
GWh	1,630	1,785	1,669	1,623	1,502	**6,579**
MW	309	338	342	324	330	**1,334**
MM Therms	6	5	5	4	2	**16**

[29] Due to changes in the portfolio structure, Program Year (PY) 2023 is the most relevant comparison to the current business plan since it includes SCE's full solicitations for local programs, as well as the estimate for all statewide programs.

Table III-5
SCE Total Forecasts by Year 2024-2027 (Without C&S)

Metric	2023	2024	2025	2026	2027	Total (2024-2027)
Budget (in millions)	$440	$366	$369	$374	$372	**$1,481**
TSB (in millions)	$397	$318	$325	$344	$388	**$1,375**
TRC	1.02	0.85	0.87	0.88	0.91	**0.88**
PAC	1.11	0.92	0.93	0.97	1.09	**0.98**
GWh	514	698	693	735	704	**2,830**
MW	91	125	143	139	162	**569**
Therms	6	5	5	4	1	**16**

Table III-6 below, sets forth SCE's forecasted budget, TSB, TRC, PAC, and savings (kW, kWh, Therm) broken out by segment for the 2024-2027 portfolio period.

Table III-6
SCE Forecasted Budget and Savings Metrics by Year/Segment 2024-2027[30]

Year	Segment	Requested Budget (in millions)	TSB (in millions)	TRC	PAC	GWh	MW	Therms (MM)
2024	Resource Acquisition	$254	$286	1.06	1.12	664	118	4
	Market Support	$65	$29	0.49	0.63	26	4	1
	Equity	$30	$3	0.10	0.10	8	3	-
	C&S	$19	-	-	-	-	-	-
	EM&V	$17	-	-	-	-	-	-
	TOTAL Portfolio	**$385**	**$318**	**0.85**	**0.92**	**698**	**125**	**5**
2025	Resource Acquisition	$251	$285	1.09	1.13	658	136	4
	Market Support	$70	$36	0.55	0.73	27	5	1
	Equity	$31	$3	0.10	0.10	9	3	-
	C&S	$20	-	-	-	-	-	-
	EM&V	$17	-	-	-	-	-	-
	TOTAL Portfolio	**$389**	**$325**	**0.87**	**0.93**	**693**	**143**	**5**
2026	Resource Acquisition	$256	$311	1.10	1.20	699	131	4
	Market Support	$69	$30	0.51	0.62	27	5	-
	Equity	$32	$3	0.10	0.11	9	3	-
	C&S	$20	-	-	-	-	-	-
	EM&V	$18	-	-	-	-	-	-
	TOTAL Portfolio	**$394**	**$344**	**0.88**	**0.97**	**735**	**139**	**4**
2027	Resource Acquisition	$254	$353	1.11	1.38	669	153	1
	Market Support	$68	$31	0.53	0.63	25	5	1
	Equity	$33	$4	0.11	0.11	9	3	-
	C&S	$20	-	-	-	-	-	-
	EM&V	$18	-	-	-	-	-	-
	TOTAL Portfolio	**$392**	**$388**	**0.91**	**1.09**	**704**	**162**	**1**
Total	Resource Acquisition	$1,014	$1,235	1.09	1.21	2,690	539	13
	Market Support	$271	$126	0.52	0.65	106	19	3
	Equity	$126	$13	0.10	0.10	35	12	-
	C&S	$79	-	-	-	-	-	-
	EM&V	$69	-	-	-	-	-	-
	TOTAL Portfolio	**$1,560**	**$1,375**	**0.88**	**0.98**	**2,830**	**569**	**16**

Table III-7 below, sets forth SCE's forecasted budget, TSB, TRC, PAC, and savings (kW, kWh, Therm) broken out by sector for 2024-2027.

[30] Dashes (-) in this table and throughout this Exhibit indicate that the metrics shown are not applicable for the specific segment.

Table III-7
SCE Budget and Savings Metrics Forecast by Year/Sector 2024-2027

Year	Sector	Requested Budget (in millions)	TSB (in millions)	TRC	PAC	GWh	MW	Therms (MM)
2024	Residential	$112	$130	1.09	1.24	303	72	2
	Commercial	$124	$109	0.91	0.89	242	33	2
	Industrial	$50	$54	1.00	1.10	114	13	2
	Agricultural	$8	$6	0.69	0.90	9	2	-
	Emerging Tech	$11	$0	0	0	-	-	-
	Public	$20	$20	0.78	1.19	30	6	-
	Workforce, Education & Training (WE&T)	$10	$0	0	0	-	-	-
	Finance	$4	$0	0	0	-	-	-
	On Bill Financing (OBF) Loan Pool	$10	$0	0	0	-	-	-
	C&S	$19	-	-	-	-	-	-
	EM&V	$17	-	-	-	-	-	-
	TOTAL Portfolio	**$385**	**$318**	**0.85**	**0.92**	**698**	**125**	**5**
2025	Residential	$114	$128	1.13	1.22	302	92	2
	Commercial	$124	$114	0.93	0.94	243	32	2
	Industrial	$51	$56	1.02	1.14	115	12	2
	Agricultural	$8	$6	0.73	0.95	9	2	-
	Emerging Tech	$11	$0	0	0	-	-	-
	Public	$18	$19	0.81	1.30	24	5	-
	WE&T	$11	$0	0	0	-	-	-
	Finance	$5	$0	0	0	-	-	-
	OBF Loan Pool	$10	$0	0	0	-	-	-
	C&S	$20	-	-	-	-	-	-
	EM&V	$17	-	-	-	-	-	-
	TOTAL Portfolio	**$389**	**$325**	**0.87**	**0.93**	**693**	**143**	**5**
2026	Residential	$126	$148	1.15	1.26	351	81	1
	Commercial	$117	$117	0.94	1.01	229	31	1
	Industrial	$50	$56	1.03	1.17	115	15	1
	Agricultural	$9	$8	0.75	0.94	14	3	-
	Emerging Tech	$10	$0	0	0	-	-	-
	Public	$17	$16	0.76	1.09	26	8	-
	WE&T	$11	$0	0	0	-	-	-
	Finance	$6	$0	0	0	-	-	-
	OBF Loan Pool	$10	$0	0	0	-	-	-
	C&S	$20	-	-	-	-	-	-
	EM&V	$18	-	-	-	-	-	-
	TOTAL Portfolio	**$394**	**$344**	**0.88**	**0.97**	**735**	**139**	**4**
2027	Residential	$172	$219	1.12	1.34	391	85	1
	Commercial	$75	$84	0.92	1.15	158	39	-

Year	Sector	**Requested Budget (in millions)**	**TSB (in millions)**	TRC	PAC	GWh	MW	Therms (MM)
2027	Industrial	$30	$40	1.06	1.43	73	16	-
	Agricultural	$17	$18	0.89	1.18	34	8	-
	Emerging Tech	$10	$0	0	0	-	-	-
	Public	$25	$27	0.87	1.24	48	13	-
	WE&T	$12	$0	0	0	-	-	-
	Finance	$3	$0	0	0	-	-	-
	OBF Loan Pool	$10	$0	0	0	-	-	-
	C&S	$20	-	-	-	-	-	-
	EM&V	$18	-	-	-	-	-	-
	TOTAL Portfolio	**$392**	**$388**	**0.91**	**1.09**	**704**	**162**	**1**
Total	Residential	$524	$625	1.12	1.27	1,346	331	6
	Commercial	$440	$424	0.93	0.98	872	135	5
	Industrial	$180	$206	1.02	1.18	417	57	5
	Agricultural	$42	$38	0	0	66	15	0
	Emerging Tech	$42	$0	0	0	-	-	-
	Public	$81	$82	0.81	1.21	129	32	0
	WE&T	$44	$0	0	0	-	-	-
	Finance	$18	$0	0	0	-	-	-
	OBF Loan Pool	$40	$0	0	0	-	-	-
	C&S	$79	-	-	-	-	-	-
	EM&V	$69	-	-	-	-	-	-
	TOTAL Portfolio	**$1,560**	**$1,375**	**0.88**	**0.98**	**2,830**	**569**	**16**

Table III-8 below provides forecasted portfolio TSB, P&G expected TSB, and the percentage (%) of goal for years 2024-2027, with these same forecasted metrics for 2023 included for reference. SCE recognizes that the EE portfolio is forecasted to exceed the new TSB metric because the Four-Year Portfolio Plan budget is largely comprised of contracts that were designed to meet previous kWh and kW targets. The anticipated first year energy savings anticipated as a part of these contracts and included as a part of the Four-year Portfolio Plan period are roughly 150% of the Potential & Savings Goals first year savings targets which are also used to inform IEPR and other system planning forecasts. The budgets outlined are reasonable to administer the programs under contract or anticipated to be under contract, meet system planning needs, transition to a new TSB metric and accommodate uncertainty related to

third-party performance. SCE will further address the cost and assumptions used to build these budgets from the bottom up to ensure a reasonable request as the State transitions EE to a new TSB goal paradigm.

Table III-8
Comparison of SCE Portfolio to P&G
(in millions)

	2023	2024	2025	2026	2027	Total (2024-2027)
Portfolio TSB	$397	$318	$325	$344	$388	**$1,375**
P&G TSB	N/A	$102	$117	$133	$148	**$501**
% of Goal	N/A	311%	277%	258%	262%	**274%**

SCE does not anticipate meeting the Commission's requirement that at least 25% of a PA's budget be devoted to statewide programs,[31] and SCE requests the Commission remove that requirement for the reasons set forth in the policy section of SCE's Business Plan.[32] Table III-9 sets forth SCE's projected annual statewide program budget, SCE's total annual EE portfolio budget request, and the resulting percentage of each annual budget that is expected to be committed to statewide programs for 2024-2027. SCE includes these same metrics for 2023 for reference.

[31] *See* D.16-08-019, OP 6.
[32] SCE-01, Section IX.C.2.

Table III-9
Projected Statewide Percentage of Portfolio
(in millions)

	2023	2024	2025	2026	2027	Total (2024-2027)
SCE Statewide Program Budgets	$47	$52	$51	$50	$51	**$204**
Total SCE Budget	$377	$385	$389	$394	$392	**$1,560**
Statewide % of SCE Budget	12%	14%	13%	13%	13%	**13%**

A. Forecasting Methodology

SCE's forecasting methodology for the Four-Year Portfolio Plan continues to reflect the shift toward administration of the EE portfolio and away from individual program design and implementation, as detailed in D.18-01-004.[33] SCE's Four-Year Portfolio Plan forecasts budgets, savings, and cost-effectiveness for existing and new third-party-implemented local and statewide programs, as well as for SCE-led programs. Additionally, third-party implemented and SCE-implemented programs were analyzed alongside the Commission's 2022 Potential and Goals Study to inform future savings opportunities to inform the overall budget ask associated with the Four-Year Portfolio Plan.

Programs implemented via third-party contracts are expected to compose 71% of SCE's portfolio budget and 94% of savings for the period of 2024-2027, not including C&S. To develop the 2024-2027 budget for the Resource Acquisition segment, SCE utilized forecasts provided by third-party implementers to develop savings and cost effectiveness estimates as inputs to the budget forecasts for sectors and segments where third-party contracts currently are delivering to SCE. Third-party implementers that have delivery obligations during the contract period used best available information for their estimates, including updated savings and benefits values from Commission-approved tools, such as the cost-effectiveness tool (CET). As cost-

[33] *See* D.18-01-004, p. 28.

effectiveness inputs change, SCE will continue to evaluate the available mix of measures and programs and make portfolio adjustments as necessary to cost-effectively meet savings goals. SCE's existing third-party contracts are utilized and are reasonable to set initial forecasted conditions for the Application.

There are – and will likely be additional – third-party programs with contracts that are set to expire in PYs 2024-2027, during the portfolio period. For these programs, SCE plans to evaluate how the programs perform and will consider retaining the existing programs through contract extensions, amendments or replace the programs via new competitive solicitations. For the purpose of forecasting budgets for these programs, SCE utilized the budget, savings and cost-effectiveness information from the contracts that are expected to expire during the Four-Year Portfolio Period to inform future costs. Actual results and performance of current and anticipated third-party contracts may exceed the third parties' own estimates relied upon in this Application. In the event this occurs, SCE will utilize fund shifting from underperforming programs or from future years' budgets to cover any shortfalls.

In D.18-05-041, the Commission recognized that, due to multiple non-trivial uncertainties regarding third-party programs, PYs 2018 through 2022 should be treated as ramp-up or transition years.[34] While the Application period starts in 2024, SCE and other PAs are still facing uncertainties relating to third-party programs such as: (1) the timing, costs, benefits and savings associated with new contracts; (2) the timing, costs, benefits, and energy savings associated with implementing statewide and local programs; and (3) the timing and impact of measure package dispositions, Evaluation, Measurement & Verification (EM&V) dispositions, and policy changes in the EE landscape. SCE anticipates that the uncertainty will be reduced only after new statewide programs, new third-party programs, and various policy changes are fully implemented and operational for a period of time. SCE will then further optimize its portfolio to better achieve the Commission-adopted goals cost-effectively and within the budget

[34] *See* D.18-05-041, p. 71.

parameters of its revised and approved 2026-2028 mid-cycle update to further demonstrate any necessary adjustments to meeting portfolio targets.

For Market Support programs, SCE built a bottom-up forecast with specific details about costs and expected results. For the third-party implemented, SCE-led statewide SWEETP, SCE used the forecast from the third-party contract and added SCE administration expenses. For SCE-implemented local Market Support programs, SCE detailed each cost and the expected result for both the program implementation and portfolio administration costs. For statewide programs with another investor-owned utility (IOU) serving as lead PA, SCE utilized the statewide lead IOU's program budget forecast and included only SCE administration expenses for those programs. Budget details are explained in greater detail below.

For Equity programs, SCE built a bottom-up forecast with specific details about costs and expected results. At the time of filing this Application, SCE expects to solicit for a Residential Equity Program focused on residential customers and a SMB program focused on commercial customers.[35] The solicitations for these two new Equity programs will most likely be completed in 2022 with the programs starting prior to the start of the Four-Year Portfolio Plan period. In this Application, SCE is requesting approval to extend the SMB Program to the Industrial, Agricultural and Public sectors. For all these programs, SCE built an expected forecast for both program implementation and program administration costs. However, the program implementation costs are estimates of expected third-party contracts as discussed above. SCE will further refine these costs through the third-party solicitation process, once the final contracts are executed and, when so required, approved. There is one statewide program in the Equity segment, the PG&E-led Workforce Education & Training (WE&T) Career & Workforce Readiness (C&WR) program. SCE defers to PG&E, the statewide lead, to justify the reasonableness of the program budget. SCE will provide justification below for added SCE administration expenses of the statewide program. In the following section, SCE discusses the

[35] *See* SCE's EE ABAL for PYs 2022 and 2023 (Advice No. 4633-E-A), p. 41.

reasonableness of the proposed budget, detail on the portfolio administration vs. program implementation splits, and program modifications from 2023.

1. Reasonableness of Budget

Pursuant to D.21-05-031, SCE has developed a budget that is reasonable and follows zero-based budgeting practices, which requires SCE to analyze each function of the EE portfolio prior to including it in the portfolio budget.[36] As discussed above, SCE's budget forecast meets and exceeds the TSB and savings potential largely due to the inclusion of new third-party implemented programs within SCE's portfolio.

This section describes the costs and assumptions that were used to derive SCE's bottoms-up zero-based budgets, including the budget split between labor costs and non-labor costs for the third-party programs and SCE-implemented programs. The labor costs identified below include total full-time employee (FTE) support levels per program. Labor costs and FTE support levels associated with each program were determined based on SCE's experience with the level of support needed to manage the programs. SCE also determined the forecasted annual labor rates for each type of position, utilizing a 2021 standard labor rate and escalated at three (3) percent per year. Standard labor rates in SCE's SAP system are generally calculated by averaging actual pay rates for all employees in the job title. In general, there are multiple levels of labor and the higher the level, the more technical knowledge and decision-making responsibilities the employee has. SCE performs market surveys to align compensation to the market and the most recent survey was done for 2021. If the current salary grade structure is escalated three percent per year, all labor amounts included in the budget are within 20% of the midpoint of the relevant salary grade for each position and less than the escalated maximum for each salary grade. Additional details on functional groups and the levels of support can be found in SCE-03, Attachment B, Appendix 1 and Appendix 2.

[36] *See* D.21-05-031, FOF 12.

For the Four-Year Portfolio Period, SCE continues to reduce its total FTE count from 198 FTE in 2020 to 168 FTE in 2024 and further declining to 164 FTE by 2027.[37] This change is mainly due to the transition to third-party programs and statewide administration that began in PY 2020.

The Commission's EE Policy Manual directs all IOUs to reflect all costs associated with the delivery of the EE programs in their EE portfolios, broken out by the following categories:[38]

- **Administration:** Administrative costs for utility EE programs (excluding non-IOU third-party and/or government partnership budgets) are limited to 10 percent of total EE budgets. These costs shall be inclusive of any energy efficiency-related costs authorized and collected in other proceedings. These costs should also reflect the fully-loaded personnel costs of delivering EE programs and shall also note where the costs have been or will be recovered elsewhere to avoid double counting of costs.
- **Direct Implementation Non-incentive (DINI):** DINI costs are defined as resource program delivery support costs and shall have a target value set at 20% of the total adopted EE budgets.
- **Incentives:** Incentive costs include the costs of program delivery and are a subset of Direct Implementation costs which are defined as "costs associated with activities that are a direct interface with the customer or program participant or recipient."
- **Marketing, Education and Outreach (Marketing):** Marketing cost targets for EE are set at six percent of total adopted EE budgets, and include activities such as preparing and distributing collateral, support related to outreach events, and advertising, media, newspaper, website, and magazine related marketing activities.
- **EM&V:** EM&V costs is four percent of the total portfolio budget and is reserved for Commission Staff and PAs. EM&V activities include as staff travel to participate in

[37] SCE-03, Attachment A, Appendix 15, Table 10.

[38] *See* EE Policy Manual V. 6 section 2 "Funding Guidelines for IOUs" *available at* https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/e/6442465683-eepolicymanualrevised-march-20-2020-b.pdf.

Strategic Plan Workshop Market, cost assessment and other studies as called for or suggested by the Strategic Plan Benefits, and payroll tax, and pensions for EM&V labor.

The following table provides the budget forecast broken down by category for 2024-2027, with the same forecasted metrics for PY 2023 shown for reference. Detailed information on the budgets by category by each program/segment/sector are found in SCE-03 Attachment A, Appendix 5, Appendix 10 and Appendix 11.

Table III-10
SCE Total Budget Forecast by Category 2024-2027
(in millions)

Category	2023	2024	2025	2026	2027	Total (2024-2027)
Incentive Costs	$112	$106	$123	$127	$105	**$461**
Direct Implementation Non-Incentive Costs	$201	$214	$200	$201	$221	**$836**
Administrative Costs	$35	$32	$32	$33	$34	**$131**
Marketing	$18	$16	$16	$16	$15	**$63**
EM&V	$16	$17	$17	$18	$18	**$69**
Total	**$383**	**$385**	**$389**	**$394**	**$392**	**$1,560**

2. Employee Expenses

SCE forecasts a total of $ $2.7 million for employee expenses to cover costs incurred by employees for travel, meals, lodging, and conferences during the Four-Year Portfolio Plan period. These expenses are included in total labor budgets discussed later for FTEs and are further detailed in SCE-03, Attachment B, Appendix 1 and Appendix 2. These costs are included in each program budget and are estimated to be three percent (3%) of the labor costs for

the budgeting area. This estimate is in line with historical costs prior to the COVID-19 pandemic, which reflected employee expenses at three percent of total labor costs. For example, employee expenses in PY 2018 were $1 million (2.98 percent) of the $32.5 million total labor budget and were approximately $0.9 million (3 percent) of the $28.5 million total labor budget in PY 2019.

B. Third-Party and Statewide Implemented Programs

As previously discussed, the majority of SCE's Four-Year Portfolio Plan will be outsourced to third-party implementers. This includes programs offered at the local and statewide level. SCE's total budget forecast includes costs associated with the implementation and administration of third-party programs that will be in place or solicited for during the four-year period. All current third-party contracts are expected to expire in 2024-2026. SCE may extend these contracts or resolicit for new third-party programs that will meet the needs of the respective segments. The budget forecasts for these anticipated programs have also been included in SCE's overall third-party budget forecast. Pursuant to D.21-05-031, "Implementation costs associated with competitively-solicited third-party contracts shall be considered *per se* reasonable, without the PA needing to justify the costs using a zero-based approach."[39] As such, the following section provides a description of how SCE determined third-party and statewide implementation costs and a description of how SCE derived at the program administration costs associated with third-party and statewide programs. More detailed information regarding these costs can be found in SCE-03, Attachment B, Appendix 1 and Appendix 2.

1. Third-Party Implemented Program Implementation Costs

The total budget forecast for third-party implementation costs is $945.5 million for 2024-2027. This includes a total of $903.2 million for non-statewide contracts, including SCE's new Fuel Substitution Midstream Program and the three new SMB Equity Programs, and $42.3

[39] *See* D.21-05-031, COL 21.

million for SCE's portion of statewide programs for which SCE is the lead. These costs were derived using the budget forecast information provided by third-party implementers for each third-party program that will be offered during the Four-Year Portfolio Plan period. For programs that will be third-party designed and delivered, but which have not yet completed the solicitation process, SCE has forecasted the budget and savings based on a reasonable comparison to existing programs and the potential of the program. Specific costs will be justified and updated upon completion of the solicitation and submission of the Tier 2 advice letter required pursuant to D.18-01-004.

2. Non-SCE-led Statewide Program Implementation Costs

The total budget for implementation costs associated with statewide programs that are not led by SCE is $161.8 million for 2024-2027. OP 18 of D.18-05-041 assigned IOUs to be lead PAs for specific statewide programs.[40] The decision clearly articulated that the lead PA shall have sole responsibility for program vision development, design/delivery, and intervention strategies, procurement, implementer oversight, meeting savings goals, customer satisfaction levels and reporting. Non-Lead PAs may provide limited input for consideration prior to procurement, but primarily provide funding to the statewide programs and receive proportional savings and benefits based on the load share contribution. Please refer to the lead PAs application for additional details on implementation costs of these programs.

3. Third-Party Implemented Program Administration Costs

D.18-01-004 required IOU PAs to ensure that at least 60% of their EE portfolio budgets are allocated to third-party design and implemented programs, placing SCE in the role of PA for these programs. Further, in D.18-05-041, SCE was identified as the lead PA for a total of four statewide programs,[41] and SCE has some administration role for statewide programs for which the other IOUs serve as lead. SCE's budget forecast for the program administration associated

[40] *See* D.18-05-041, pp. 91-92, Table 3 and Table 4.

[41] SCE is the lead PA for the Statewide Lighting Program, the Electric Emerging Technology Program, the Higher Education Program, and the Water/Wastewater Pumping Program. *See* D.18-05-041, pp 91-92.

with all local and statewide third-party programs is $36.9 million. As discussed below, program administration costs are categorized by labor and non-labor costs that are required to properly manage the third-party contracts.

a) SCE Local Third-Party Programs

(1) Labor Costs – SCE Local Third-Party Programs

The labor costs associated with SCE's local third-party programs are $9.4 million for 2024-2027. This budget will fund a total of 19.4 FTE on an annual basis, an increase from 2023's level of 7.4. In addition to adding 2.6 FTE to support the new Fuel Substitution Midstream Program and Equity programs, the increase is due to additional engineering labor being charged directly to the programs for custom project reviews versus SCE including these as allocated portfolio level costs in prior years.[42] The labor costs related to this engineering work have been removed from the portfolio level costs, as discussed in Section III.D.2. These resources are required for contract management activities such as overseeing the programs to ensure that all contract terms are appropriately followed, invoices are processed and paid, to conduct any additional analyses necessary to make sure the contract is correctly implemented, and to assist in project submissions, rebate processing, project inspections, and custom project reviews and inspections.

(2) Non-Labor Costs – SCE Local Third-Party Programs

SCE's budget forecast includes non-labor costs associated with the administration of third-party programs, which total $14.6 million for 2024-2027. These costs include funding for site inspections and review of project details in support of validating savings.

b) SCE Led Statewide Programs

(1) Labor Costs – SCE Led Statewide Programs

SCE's labor costs associated with the statewide programs led by SCE are $5.2 million for 2024-2027. For these programs, excluding Emerging Technologies (ET), SCE budgeted $0.8

[42] *See* SCE-03, Attachment B, Appendix 1 and Appendix 2.

million for approximately 3.0 FTE in 2024 to support contract management and invoice process activities similar to those activities related to SCE local programs discussed above. SCE budgeted 3.9 FTE for 2023. SCE expects this labor would be reduced to 1.0 FTE per year after 2024 due to the proposed discontinuation of the Statewide Lighting Program.

For the SWEETP, SCE budgeted a total of $4.4 million for 5.95 FTE per year until 2026. This is an increase from 2023 budget of 3.5 FTE as the work activities shift from previous local programs to the Statewide (SW) program. These resources will support the close-out of projects for the local ET programs and the work needed to develop the SWEETP. After the local ET program is closed out at the end of 2025, the level of support to the SWEETP will increase further to 8.45 FTE to provide program management and supervision activities for the statewide program. Specifically, these roles will assist the implementer in reviewing the projects and results and compliance to the program requirements and contract terms.

(2) Non-Labor Costs – SCE Led Statewide Programs

The non-labor costs associated with SCE's administration of statewide programs are $5.5 million, which will be used to fund professional services and certain memberships that support PA administrative responsibilities as well as regional and national collaboration in support of the advancement of ET.

c) Non-SCE-led Statewide Program Administration Costs

SCE has budgeted $2.1 million for program administration costs associated with the non-lead statewide programs. These funds are needed to meet the requirements related to statewide programs, such as monthly and quarterly reporting to the other IOUs and other statewide program coordination with the lead IOUs, as well as coordination among statewide programs and SCE's local programs to avoid duplication, among other things.

SCE budgets a total of $2.1 million in total labor costs to fund 3.5 FTE to support all statewide programs SCE is required to fund, as shown in Table III-11.[43] SCE budgets $1.4

[43] *See* SCE-03 Attachment B, Appendix 1.

million for 2.5 FTE to support the 10 statewide programs excluding the C&S Statewide Program. As the C&S program requires some more technical expertise, SCE budgets $0.7 million to fund approximately 1.0 FTE per year to support the three programs. These positions are required for contract management coordination, rebate processing, and program analysis to oversee the contract to ensure that all of the terms of the contract are appropriately being followed and invoices are properly paid, to process invoices, and to perform any additional analyses that are required to ensure the contract is implemented correctly.

Table III-11
Non-SCE led Statewide Programs – Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.5	$0.5	$0.5	$0.6	$2.1

C. SCE-Implemented Programs

Budgets for SCE-implemented local programs are developed using a bottom-up approach with each cost being justified. SCE is forecasting approximately $275 million to fund SCE-implemented programs from 2024-2027, or an average of approximately $68.75 million per year. This is an average annual increase from 2023,[44] in which SCE budgeted $59 million for SCE-implemented programs. The increase is due primarily to the new Commercial SEM and Market Support programs, for which SCE has budgeted an average of $9.5 million per year. This is detailed further in the sections below.

1. Residential Direct Install

The Residential Direct Install Program provides the direct installation of comprehensive EE measures to residential single-family (SF) customers at no cost, targeting specific geographic areas to alleviate energy hardship, electric system constraints, and to assist lower- to medium-

[44] *See* Advice No. 4633-E-A, Attachment C.

income population not eligible for income assistance programs. The program is designed to enhance the EE knowledge and program participation of the targeted residential SF market segment to motivate them to undertake deeper EE activities and retrofits.

SCE budgets a total of $56.4 million for the Residential Direct Install Program for the 2024-2027 period. The budget for this program is necessary to support the targeting of lower- to medium-income customers who are not eligible for income assistance programs, including those residing in areas categorized as HTR, DAC), Rural, Tribal, Public Safety Power Shut-Off (PSPS) Zones, and Wildfire Zones. The purpose of this section is to describe the basis for SCE's forecast of labor and non-labor costs associated with SCE's Residential Direct Install Program from 2024- 2027.

a) Program Costs - Labor

SCE has budgeted a total of $1.5 million to fund program labor from 2024-2027, as shown in Table III-12 below.[45] The annualized amount is a slight increase from SCE's 2023 budget of $0.3 million, primarily due to labor cost escalation. Specifically, the budget would fund approximately 4.16 FTE annually for the direct implementation program management by an Advisor and a Sr. Specialist. The labor budget also includes application processing support which includes specialists to review project information and inspectors to validate installation. These roles are required to provide program management to verify that measures are installed in accordance with contract and measure package requirements and that all aspects of the program's implementation plan are followed appropriately as well as rebate processing, inspection, quality assurance reviews and call center support.

[45] *See* SCE-03, Attachment B, Appendix 1.

Table III-12
Residential Direct Install Program – Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.4	$0.4	$0.4	$0.4	$1.5

b) Program Costs - Non-Labor

SCE has budgeted a total of $55.0 million of non-labor costs to implement this program from 2024-2027, as shown in Table III-13 below.[46] This value was derived in coordination with SCE's vendor, who conducted an analysis to determine the maximum number of installations the program implementer could reasonably achieve per year, for years 2024-2027. The analysis considered the program's measure mix, program implementer resource allocation, scaling, measure package forecasts, market saturation, and customer acquisition. In addition to measure installations, $10,000 per year will go to an email marketing campaign and $2,000 per year will be used for updates to the sce.com landing page. These costs are necessary for scaling and customer acquisition to help meet the maximum number of installations forecasted. The marketing campaign and website updates are new budget expenditures for 2024-2027 that should drive increased program participation that results in an increase in application volume and program results.

[46] *See* SCE-03, Attachment B, Appendix 1.

Table III-13
Residential Direct Install Program – Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$13.7	$13.7	$13.7	$13.7	$55.0

2. Comprehensive Manufactured Homes Program

The Comprehensive Manufactured Homes Program is a direct install program that provides comprehensive energy efficient measures to manufactured/mobile home residents in collaboration with manufactured/mobile home parks and park managers. The program offers direct installation of energy-efficient products and services in manufactured/mobile home dwellings, and common areas of manufactured/mobile home parks, at no cost to the customer. The program is designed to enhance the customer's knowledge of EE, increase awareness of EE programs, and drive participation in other EE, DR, and income-qualified programs (IQP).

SCE budgets a total of $17.2 million for the Comprehensive Manufactured Homes Program for the 2024-2027 period. The budget for this program is necessary to support the targeting of lower- to medium-income customers who are not eligible for income assistance programs, including those residing in areas categorized as HTR, DAC, Rural, Tribal, PSPS Zones, and Wildfire Zones. The purpose of this section is to describe the basis for SCE's forecast of labor and non-labor costs associated with SCE's Comprehensive Manufactured Homes Program from 2024- 2027.

a) Program Costs - Labor

SCE has budgeted a total of $1.4 million to fund program labor from 2024-2027, as shown in Table III-14 below.[47] The annualized amount is a slight increase from SCE's 2023 budget of $0.3 million, primarily due to labor cost escalation. This funding is for approximately

[47] *See* SCE-03, Attachment B, Appendix 1.

3.88 FTE annually, to implement and manage the program. These roles are required to provide program management, to verify that measures are installed in accordance with contract and measure package requirements, to ensure all aspects of the program's implementation plan are followed appropriately, as well as for rebate processing, inspections, quality assurance reviews, and call center support.

Table III-14
Comprehensive Manufactured Homes Program – Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.3	$0.3	$0.4	$0.4	$1.4

b) Program Costs - Non-Labor

SCE has budgeted $15.8 million to implement this program from 2024-2027, as shown in Table III-15 below.[48] This value is in line with previous PY budgets and was derived by conducting an analysis to determine the maximum number of installations the program implementer could reasonably achieve per year, for years 2024 to 2027. The analysis considered the program's measure mix, program implementer resource allocation, scaling, measure package forecasts, market saturation, and customer acquisition. In addition to measure installations, SCE has also budgeted $1,000 per year for updates to the sce.com landing page. These costs are necessary for customer acquisition to help meet the maximum number of installations forecasted. The Comprehensive Manufactured Homes Program will offer a new deemed measure, Duct Optimization, which SCE expects will benefit customers and will assist in driving results. This new measure will replace measures that have expired in the program, like the Refrigerant Charge Measure.

[48] *See* SCE-03, Attachment B, Appendix 1.

Table III-15
Comprehensive Manufactured Homes Program – Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$3.94	$3.94	$3.94	$3.94	$15.8

3. SEM Program

The SEM Program is a strategy for generating energy savings from large energy users by incorporating energy management into their internal management systems. The SEM program is a holistic, whole-facility approach that uses NMEC and a dynamic baseline model to determine savings from all program activities at the facility, including behavioral, retro-commissioning and operational (BRO) and custom projects.

SCE budgets a total of $12.6 million for the SEM program for the 2024 to 2027 period. The budget for this program is necessary to support program delivery, customer acquisition into the program, customer incentives, and program oversight that results in behavioral, retro commissioning and operational savings as well as capital savings from deemed and capital projects. The purpose of this section is to describe the basis for SCE's forecast of labor and non-labor costs associated with SCE's SEM program from 2024- 2027.

a) Program Implementation Costs - Labor

SCE has budgeted a total of $0.4 million for labor from 2024-2027, as shown in Table III-16 below.[49] The annualized amount is a slight decrease from SCE's 2023 budget of $0.2 million, primarily due to expected reduction in FTEs from 1.7 as the program matures. Specifically, the budget would fund approximately 0.94 FTE annually, for direct implementation program management by an Sr. Specialist and other Technical Specialists. These roles are required to oversee the program to ensure that all aspects of the program follow the implementation plan appropriately being followed and invoices are properly paid.

[49] *See* SCE-03, Attachment B, Appendix 1.

Table III-16
SEM Program – Labor Budget Forecast
(in millions)

24	2025	2026	2027	Total
$0.1	$0.1	$0.1	$0.1	$0.4

b) Program Implementation Costs - Non-Labor

SCE has budgeted $12.2 million to implement this program from 2024-2027, as shown in Table III-17 below.[50] This value was derived using the cost per kWh of $0.22/kWh times the expected savings from the program over the four-year period. The total budget covers $1.1 million for customer incentives, $10.3 million for vendor contracts, and $0.2 million per year for measurement & verification consultants to review and confirm the savings generated from the SEM program.

Table III-17
SEM Program – Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$3.2	$3.3	$3.4	$2.3	$12.2

4. Commercial Energy Advisor

The Commercial Energy Advisor Program is SCE's benchmarking program. Building benchmarking is mandated by State of California Assembly Bill (AB) 802 for certain commercial and multifamily (MF) building owners. Benchmarking is an initiative designed to motivate commercial and MF building owners to measure and track the energy use of their facilities, compare their usage with the similar buildings, educate the building owners for the

[50] *See* SCE-03, Attachment B, Appendix 1.

benefits of benchmarking their facilities, and enable the building owners to track the impact of energy savings after implementing energy saving measures.

SCE budgets a total of $2.6 million for the Commercial Energy Advisor Program for the 2024 to 2027 period. The budget for this program is necessary to support SCE's requirement to provide aggregated building energy usage data to customers for the purpose of benchmarking their buildings. The CEC requires owners of large commercial and MF buildings to report energy use by June 1 annually and SCE must make this data available to customers. The purpose of this section is to describe the basis for SCE's labor and non-labor costs forecast associated with the implementation of SCE's Commercial Energy Advisor Program from 2024- 2027.

a) Program Costs - Labor

SCE has budgeted a total of $2.2 million to fund program labor for 2024-2027, as shown in Table III-18 below.[51] The annualized amount is an increase from SCE's 2023 budget of $0.4 million, due primarily to labor cost escalation. This amount is to provide funding for approximately 4.86 FTE annually for direct implementation support of the program. Specifically, the resources for this program will continue to support the implementation of the benchmarking program by working with SCE's Information Technology (IT) department to maintain the Automated Benchmarking System (ABS) to ensure it functions accurately and to troubleshoot and resolve technical issues. The proposed resources will oversee the Commercial Energy Advisor Program to ensure that all aspects of the program follow the implementation plan appropriately. Additionally, these resources will include assisting customers and authorized third parties with obtaining account information to set up buildings for benchmarking in SCE's Benchmarking Dashboard through SCE.com and assisting customers with meter mapping questions. Other program support activities include assisting customers with setting up their properties for benchmarking, responding to customer inquiries, and providing manual data requests.

[51] *See* SCE-03, Attachment B, Appendix 1.

Table III-18
Commercial Energy Advisor Program – Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.5	$0.5	$0.6	$0.6	$2.2

b) Program Costs - Non-Labor

SCE has budgeted a total of $0.4 million to implement this program, maintain the ABS, and provide updates to the sce.com Benchmarking landing page, as shown in Table III-19 below.[52] The ABS is the database used to manage customer building enrollments and provide building meter usage data. The costs for the ABS database were derived using internal IT cost estimates to enhance the ABS for improved functionality.

Table III-19
Commercial Energy Advisor Program – Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.1	$0.1	$0.1	$0.1	$0.4

5. WE&T Integrated Energy Education and Training (IEET)

SCE budgets a total of $36.5 million for WE&T IEET from 2024-2027. SCE will continue to offer WE&T IEET to provide educational opportunities to the incumbent and incoming workforce. SCE's WE&T IEET program covers a variety of EE topics that include but are not limited to: HVAC and refrigeration, building performance, home performance, building design and construction, lighting, and others. The purpose of this program is to provide the workforce with local and low to no-cost access to training curriculum and equipment demonstrations necessary to support statewide EE and decarbonization efforts.

[52] *See* SCE-03, Attachment B, Appendix 1.

The budget for this local program is necessary to support and further develop the workforce knowledge that will be needed to meet California's Decarbonization goals. Through WE&T IEET, SCE will continue to provide the workforce with the technical upskill needed to support efforts including EE topics, decarbonization, sustainable design, energy resiliency, environmental equity, electric food technologies, indoor air quality efforts, pumping and water efficiency/conservation, and much more. Additionally, WE&T IEETs low to no cost offerings target local DACs, allowing for the removal of potential barriers impacting adoption of energy efficient and decarbonization technologies. Beginning in 2022, SCE's WE&T IEET program intends to expand its curriculum of offerings to include courses that are aimed at addressing knowledge gaps surrounding clean energy technologies and their efficient operation. These activities will be extended to the Four-Year Portfolio Period. The purpose of this section is to describe the basis for SCE's forecast of labor and non-labor costs associated with the program from 2024-2027.

a) Program Costs - Labor

SCE forecasts a total of $8.3 million to fund program labor from 2024-2027, as shown in Table III-20 below.[53] The annualized amount is a slight increase from SCE's 2023 budget of $1.9 million, due primarily to labor cost escalation. The budget would fund approximately 15.56 FTEs on an annual basis for direct implementation of the WE&T IEET Program. These resources are required to create, coordinate, and deliver educational offerings through the Energy Education and Food Technology Centers (Centers) in Irwindale and Tulare. Additionally, these FTEs will support efforts, including seminar registration, events and other marketing efforts, including outreach, facility management, curriculum development, Mobile Education Unit (MEU) management, invoice processing, contract management, partnerships, tours, and consultations. This level of support is necessary and appropriate to meet the objectives of SCE's WE&T IEET Program and statewide EE/decarbonization efforts.

[53] *See* SCE-03, Attachment B, Appendix 1.

Table III-20
WE&T IEET Program – Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$2.0	$2.0	$2.1	$2.2	$8.3

b) Program Costs - Non-Labor

SCE has budgeted a total of $28.2 million 2024-2027 for program implementation, as shown in Table III-21 below. This value was derived using 2023 budget data and a three percent escalator. The program implementation efforts include delivery of educational classes, curriculum development, technical display updates and maintenance, management of a MEU, partnerships, and marketing.

Table III-21
WE&T IEET Program – Non- Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$6.7	$6.9	$7.2	$7.4	$28.2

6. EE New Program Design Pilots

In the Four-Year Portfolio Plan, SCE proposes an EE New Program Design Pilots Program for the purpose of testing the effectiveness of novel program designs targeted at delivering near-term TSB savings. If these programs prove to be successful, they will be transitioned to third-party Resource Acquisition or Equity programs. SCE expects to implement two pilots per year as part of this program. Some potential pilots include a novel refrigerant exchange program to swap out high GWP refrigerants or a TSB maximizing load shifting pilot to shift loads to their lowest costs. SCE forecasts a total of $21.3 million for the New Program

Design Pilots Program for the 2024-2027 period. The purpose of this section is to describe the basis for SCE's forecast of labor and non-labor costs associated with the program from 2024-2027.

a) Program Costs - Labor

SCE forecasts a total of $0.7 million to fund program labor from 2024-2027, as shown in Table III-22 below.[54] The budget would fund approximately 1.20 FTE on an annual basis for direct implementation and program management activities by an Advisor and Specialist. These roles are required to oversee the New Program Design Pilots Program, to ensure pilots are being developed and implemented appropriately, all aspects of the program follow the implementation plan appropriately, invoices are properly processed and paid, and any additional analyses that is required to ensure the program is implemented correctly. This program will require resources to be directly involved in developing and implementing these pilots throughout the four-year period. As discussed above, SCE anticipates implementing a total of two pilots on an annual basis with an advisor having greater oversight and management of each of these pilots to ensure that the pilot is adequately operationalized, evaluated, and reported. The specialist will provide support such as invoicing processing, data request support, reporting assistance.

[54] *See* SCE-03, Attachment B, Appendix 1.

Table III-22[55]
EE New Program Design Pilots Program – Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.2	$0.2	$0.2	$0.2	$0.7

b) Program Costs - Non-Labor

SCE has budgeted a total of $20.7 million for the pilot programs at approximately $5 million per year, as shown in the table below.[56] This budget was derived assuming two pilots per year, each around $2.5 million per year. This is consistent with similar pilot and novel programs in the past such as the Market Based Incentive Program, the High Opportunity Public Program, the IDEEA365 Program, and SCE's Clean Energy Optimization Pilot.[57] The non-labor budget forecast necessary to allow SCE to work with outside consultants to determine the viability of potential pilots, provide technical assistance should it be required in the implementation of the pilots, and do preliminary evaluations of the success of the pilots. The design for these pilots is still to be determined, but these non-labor costs are based on comparable historical pilot budgets. Table III-23 below provides the non-labor budget forecast.

[55] In some cases, the annual budget amounts will not sum to the total indicated in the table due to the use of rounding. More detail can be found in the corresponding workpaper in SCE-03.

[56] *See* SCE-03, Attachment B, Appendix 1.

[57] D.19-04-010, Decision Approving The Clean Energy Optimization Pilot And Adopting The Parties' Joint Settlement Agreement (May 1, 2019).

Table III-23
EE New Program Design Pilots Program – Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$4.9	$5.1	$5.2	$5.4	$20.7

7. EE Contractor Demand Building Program

SCE proposes adding the EE CDBP to the Four-Year Portfolio Plan. SCE intends to offer the CDBP as a method of driving change amongst market actors and consumers to drive the adoption of decarbonized technologies across the state. Working in partnership with SCE's WE&T IEET Program, this program will strive to build overall contractor demand for new decarbonized technologies through education and partnerships. Licensed Contractors who participate in this program will gain knowledge of statewide decarbonization efforts, EE practices, and clean energy technologies along with their applications. Participants who complete this program will have an opportunity to obtain clean energy technologies (i.e., Heat Pump Water Heaters and Heat Pump) or tools necessary for the installation of the technologies at a discounted rate through a partner organization.

SCE forecasts a total of $9.5 million to fund the CDBP from 2024-2027. The budget for this program is necessary to support and further develop the workforce knowledge and technical ability that will be critical to meeting California's Decarbonization goals. Through CDBP, SCE will provide the workforce with the knowledge, skills, and abilities needed to support decarbonization efforts across the state. Additionally, CDBP will target local disadvantaged workers, allowing for the removal of potential barriers impacting adoption and installation of Energy Efficient and decarbonized technologies. The purpose of this section is to describe the basis for SCE's forecast of labor and non-labor costs associated with the CDBP from 2024-2027.

a) Program Costs - Labor

SCE has budgeted approximately $0.6 million to fund program labor from 2024- 2027, as shown in Table III-24 below. This budget would support approximately 1.20 FTE annually direct implementation and program management. These roles are necessary to oversee the program development and delivery, ensure all aspects of the program follow the implementation plans, invoices are properly processed and paid, develop training content, and establish partnerships with key market actors. This program requires resources to be involved in coordinating with SCE's WE&T IEET program, industry trade groups, and other interested parties.

Table III-24
EE Contractor Demand Building Program – Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.1	$0.1	$0.2	$0.2	$0.6

b) Program Costs - Non-Labor

SCE has budgeted $8.9 million of non-labor costs, as shown in Table III-25 to solicit for a contractor to provide equipment incentives ("coupons") for heat pump water heaters to encourage contractors to participate in the training program. The selected vendor may also establish partnerships with a tool supplier to provide additional/different incentives that are determined to be valuable to the contractor pool. This value was derived using a forecast of $1,000 per heat pump water heater and 1,200 coupons per year.

Table III-25
EE Contractor Demand Building Program – Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$2.1	$2.2	$2.3	$2.3	$8.9

8. Local ET Programs

The SWEETP is a Statewide Program split into two programs – one program focused on gas ET and the other on electric ET. The SWEETP is led by SCE and its budget forecast is discussed in Section III.B.3.b)(1). However, as these are long terms projects, SCE will continue, during the Four-Year Portfolio Period, to close out existing projects under the Local ET Program - Technology Development Support, Technology Assessments, and Technology Introduction Support sub-programs. This section addresses the basis for SCE's forecast of labor and non-labor costs associated with these efforts.

a) Program Costs – Labor Cost

SCE has budgeted a total of $1.7 million to fund the three programs from 2024-2025, as shown in Table III-26.[58] The annualized amount for those two years is a slight decrease from SCE's 2023 budget of $1.1 million, due primarily to emerging technology activity shift from the local program to the statewide program. SCE has not included any budget for 2026-2027 because all of the local ET projects are expected to be completed by the end of 2025. This budget will support 6.17 per year FTEs in 2024 and 2025 for direct implementation, which includes engineering related activities, project management activities, and education/training of contractors, as needed. These roles are required to close out ongoing projects committed in prior years and are necessary to support ramp down activities and closure of the local ET programs expected to take place from 2022-2025. Additionally, these resources will support general

[58] *See* SCE-03, Attachment B, Appendix 1.

administrative work such as regulatory & compliance, reporting, and supply management support.

Table III-26
Local ET Program – Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.8	$0.9	$0	$0	$1.7

b) Program Costs - Non-Labor

SCE has budgeted a total of $50,000 per year of non-labor costs to fund collaboration efforts related to the remaining projects. During the ramp down of the Local ET Program, SCE plans to continue collaboration efforts with key stakeholders through the Emerging Technology Coordinating Committee (ETCC). The ETCC brings together member utilities, national and international emerging technology groups, and other technology stakeholders to collaborate on technology research. As the projects under the Local ET Program come to a close, SCE will continue sharing the research results with these stakeholders, ultimately reducing the duplication of research efforts and encouraging developers and manufacturers to develop technologies suitable for SCE Customers.

Table III-27
Local ET Program – Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.05	$0.05	$0	$0	$0.1

9. Financing Programs

SCE's Four-Year Portfolio Plan includes two financing programs, the On-Bill Financing (OBF) Program and the New Finance Offerings (NFO) Program. The purpose of these programs

is to facilitate the installation of EE measures by reducing the financial burden associated with upfront project costs. Specific program implementation and administration budget information for each program is provided below.

a) OBF Program Implementation Costs

SCE's budget forecast for the OBF Program is $41.8 million from 2024-2027 and includes labor and non-labor costs, including loans, associated with the implementation of SCE's OBF program. These costs are further described below.

(1) Labor Costs

As shown in Table III-28, SCE budgets a total of $0.8 million for 2024-2027 to fund approximately 1.81 FTEs on an annual basis for direct implementation, program management, analytical work and processing work.[59] The annualized amount is a slight decrease from SCE's 2023 budget of $0.3 million, due primarily to work shifting to the NFO Program. These roles are necessary to oversee the program to ensure that all aspects of the program follow the implementation plan, regulatory requirements are met, loans are correctly funded to qualifying customers, and loan repayments are properly accounted for. This level of support is appropriate because it ensures there is a fully dedicated person to manage the complexities of the OBF Program.

Table III-28
OBF Program –Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.2	$0.2	$0.2	$0.2	$0.8

(2) Non-Labor Costs

SCE budgets a total of $41.0 million in non-labor costs for 2024-2027 to implement this program. Excluding the loans, SCE budgeted $1.0 million for 2024-2027 that includes $47,000

[59] *See* SCE-03, Attachment B, Appendix 1.

per year for an email marketing campaign and $1,000 per year for updates to sce.com EE Financing and OBF web pages. In addition, $130,000 per year has been included in the budget for additional analytical support and $24,000 for the American Council for an Energy-Efficient Economy Finance Conference. One unique non-labor cost for this program is for loan defaults.[60] SCE budgets a total of $204,000 of loan defaults. SCE also budgets $40 million for loans it expects to issue throughout the four-year period. These loans will be funded through the current funds in the EE Program Balancing Account as discussed in Chapter V below. These costs are in line with historical expenditures for this program. SCE spent roughly $0.4 million per year from 2018-2019 and issued $12 million of loans in 2018 and $10 million in 2019.

Table III-29
OBF Program –Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$10.2	$10.2	$10.2	$10.2	$41.0

b) NFO Program Administration Costs

SCE's budget forecast for the NFO Program is $16.9 million from 2024-2027 and includes labor and non-labor costs associated with the implementation of the Program. These costs are further described below.

(1) Labor Costs

As shown in Table III-30, SCE budgets a total of $0.5 million to fund approximately 1.00 FTE per year for program management and program analysis.[61] These roles are necessary to oversee the program implementation, and to ensure that all aspects of the program follow the implementation plan and California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) Program Regulations, invoices are properly paid and processed, to fund

[60] An OBF loan default is the failure of a borrower to pay the principal on an OBF loan.
[61] *See* SCE-03, Attachment B, Appendix 1.

requests from CAEATFA as well as any additional analyses that are required to ensure the program is implemented correctly.

Table III-30
NFO Program –Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$0.1	$0.1	$0.1	$0.1	$0.5

(2) Non-Labor Costs

SCE has budgeted a total of $16.3 million to implement this program. This includes $8.9 million for the Credit Enhancements which was authorized by the Commission in D.21-08-006.[62] This funding is needed to continue design and implementation of the Pilots and, in part, due to the complexity of developing and launching the Pilots from the Track 1 of the Clean Energy Financing Rulemaking (R.) 20-08-022, which set the IOU funding levels for the NFO Program from 2024-2027.

This budget also includes $5.3 million for CAEAFTA consultants and ME&O activities, $400,000 for third-party marketing support and $780,000 for internal marketing campaigns, updates to sce.com, and coordination meetings. Additionally, this budget includes $800,000 for new IT requirements. Table III-31 provides the budget breakout by year for the total non-labor costs associated with this program.

[62] D.21-08-006 authorized up to an additional $75.2 million in Statewide ratepayer funding to support continued implementation of the financing programs and authorized CAEATFA to continue as program administrator through June 2027 with SCE's portion continuing at 29.1%, or $21.9 million. D.21-08-006 also allocated up to $8 million of the Statewide IOU funding to support marketing, education, and outreach programs implementation through the statewide marketing and authorized SCE's budget and recovery from 2022-2027 at $14.3 million.

Table III-31
NFO Program –Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$3.2	$5.0	$5.2	$2.9	$16.3

10. C&S- Local Programs

SCE offers the following local C&S programs: Compliance Improvement, Reach Codes, and Planning and Coordination (P&C). The purpose of these C&S programs is to provide education and coordination on energy efficiency, water efficiency, electrification, GHG reduction, alternative fuel vehicles, grid flexibility and sustainability, indoor air quality, and equity at a local level. SCE budgets a total of $48.8 million for these programs for the 2024-2027 period.

The budget for these local programs is necessary to support energy efficient building decarbonization, load flexibility, grid harmonization, sustainability, embodied carbon, existing buildings, resiliency, equity, indoor air quality, water conservation, transportation electrification, local ordinances, and all-electric education/training (in addition to traditional education/training) for various market actors. In addition to the CEC's electrification efforts, other agencies, such as CARB, have gradually increased their activities for zero-emission buildings from both the incentive and regulatory perspectives while developing the 2022 Scoping Plan Update for the State Implementation Plan, which is based upon regional districts' Air Quality Management Plans. SCE has been actively supporting CARB and regional air quality management districts, for planning zero emission appliances (such as water heaters, space heaters, and cooking appliances) in residential and commercial sectors. The purpose of this section is to describe the basis for SCE's forecast of labor and non-labor costs associated with the implementation of SCE's local C&S programs from 2024 to 2027.

a) Program Costs - Labor

SCE forecasts requiring a total of $5.4 million in labor costs to fund approximately 8.2 FTEs for administration and implementation of the three local subprograms, as shown in Table III-32.[63] The annualized amount is an increase from SCE's 2023 budget of $1.2 million, due to an increase of 0.3 FTE to support additional activity in this area. The proposed resources will continue to support the implementation of the local C&S programs by developing and overseeing technical projects that support California's energy and climate goals, driven by various statutes, rules, and regulations such as AB 3232, SB 49, the Warren Alquist Act, SB 350, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standards 62.1, 55, and 90.1, the American National Standards Institute (ANSI) / Consumer Technology Association (CTA)-2035-A Standard, California Code of Regulations (CCR) Title 24 Part 6 and Part 11, etc. SCE's labor costs in this area have increased, from $0.6 million in 2018, $0.8 million in 2020, and $1.1 million in 2023. This increase is primarily due to the continued increase in activity for this program. SCE utilized this historical spending information to determine the necessary funding for this program.

Table III-32
C&S Program –Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$1.3	$1.3	$1.4	$1.4	$5.4

b) Program Costs - Non-Labor

As shown in Table III-33, SCE budgets a total of $43.4 million in non-labor costs to support contracts that are necessary to implement the activities discussed above for these local programs.

[63] *See* SCE-03, Attachment B, Appendix 1.

Table III-33
C&S Program –Non-Labor Budget Forecast
(in millions)

2024	2025	2026	2027	Total
$10.85	$10.85	$10.85	$10.85	$43.4

D. Overhead Costs

In addition to the program implementation costs discussed above, there are other costs necessary for the proper functioning of the portfolio. These costs are known as overhead costs and are applied across the entire Four-Year Portfolio Plan. These costs include general and administrative costs, pensions and benefits, and EM&V. SCE's Overhead costs are consistent with costs outlined in the EE Policy Manual.[64]

1. Portfolio Administration vs. Program Implementation Costs

Portfolio administration costs are necessary to support the overall portfolio and are distinct from program implementation costs. For example, SCE includes costs which can be directly tied to a program as program implementation. This includes employees managing specific contracts, performing program project reviews and inspection, and project processing. These costs will not be allocated but will reflect actual work performed on the program. All other costs supporting the portfolio such as Regulatory Compliance, Engineering Services, Portfolio Analytics, and Marketing, Education and Outreach are included in the Portfolio Administration. The following table provides the budget request broken down by portfolio administration and program implementation costs for 2024-2027 with 2023 for reference.[65] For more detailed information about budgets by category by each program/segment/sector, please see tables in SCE-03, Attachment A, Appendix 5, Appendix 10, Appendix 11 and Attachment B, Appendix 1 and Appendix 2.

[64] *See* EE Policy Manual v. 6, pp. 88-90.
[65] Requirement of D.21-05-031, pp. 32-33.

Table III-34
SCE Total Budget Request by Category 2024-2027
(in millions)

Segment	2023	2024	2025	2026	2027	Total (2024-2027)
Portfolio Administration	$18	$17	$17	$18	$18	**$70**
Program Implementation	$348	$352	$354	$359	$356	**$1,421**
Total	**$367**	**$369**	**$371**	**$377**	**$374**	**$1,491**

2. Portfolio Administrative Costs

Portfolio administrative costs and general costs associated with the implementation of SCE's portfolio of EE programs are reported by segment in order to attribute the appropriate costs to programs under the Resource Acquisition segment for the TRC calculation. SCE budgets a total of $69.7 million for all Portfolio Administration or 4.5 percent of SCE's requested budget. The maximum percentage for Portfolio Administration allowed is 10 percent.[66] The costs allocation for the Resource Acquisition, Market Support, Equity and C&S segments is based on the percent of the number of programs in a given segment. No Portfolio Administrative costs are allocated to Measurement & Evaluations.

Under portfolio administrative costs, SCE budgets a total of $49.0 million to fund from 79.68 to 83.12 FTE for portfolio level activities for 2024-2027. These anticipated resources are a decrease from the 102.17 FTE estimated for PY 2023 as shown in SCE-03, Attachment B, Appendix 2. This decrease is partially due to some of the engineering services labor being budgeted under direct program costs.[67] The total FTE amount includes employee-related

[66] *See* D.21-05-031, COL 19, p. 77.

[67] *See* Section III.B.3.a)(1), which described the addition of FTEs due to shifting engineering services to direct program costs. Even with this shift, however, there is an overall decrease in the number of FTEs budgeted for portfolio administration during the Four-Year Portfolio Plan period.

expenses for travel, conferences, etc., that are allowable under the CPUC's EE Policy Manual.[68] The following is a breakdown of the portfolio administrative costs by functional groups.[69]

- SCE forecasts 29.25 FTE for "Policy, Strategy and Regulatory Reporting Compliance." This function is necessary for goal planning, legislative review, policy support on regulatory proceedings, portfolio optimization, locational targeting, audit support, process controls and review, decision compliance oversight and tracking, data requests and overall portfolio policies & procedures.
- SCE forecasts 12.94 FTE for "Program Management." Resources for this function are for the management and administrative assistance for the portfolio, management of current and future solicitations, and program support for invoice processing.
- SCE forecasts 5.73 FTE for "Account Management / Sales." This function supports customers regarding our implementers and their list of available programs.
- SCE forecasts 9.86 FTE for "Engineering Services" to develop measure packages, technical policy support and technical reviews.
- SCE forecasts 9.25 FTE for "Portfolio Analytics." This function provides funding oversight, compliance filing support, data reconciliation, data retrieval, and program performance reporting.
- SCE forecasts 3.65 FTE for "Marketing, Education & Outreach" to conduct customer research to help guide our review of the portfolio's coverage for our customer and provide meaningful information to our implementers to promote clean EE and equitable access to the programs.
- SCE forecasts 9.00 FTE to provide "IT" support to maintain, update SCE's project tracking systems and report development.
- Non-Labor Costs

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68 *See* EE Policy Manual v. 6, pp. 89-90.

69 *See* SCE-03, Attachment B, Appendix 2.

For the Four-Year Portfolio Plan, SCE's forecasts approximately $20.7 million of non-labor portfolio level costs. These expenses are not directly related to a specific program but rather multiple programs because activities associated with these costs benefit the overall Four-Year Portfolio plan. This budget would support the areas identified below. More details regarding these costs can be found in SCE-03, Attachment B, Appendix 2.

- SCE budgets a total of $7.7 million, or approximately $1.9 million per year, "Policy, Strategy and Regulatory Reporting Compliance" expenses. This includes $0.3 million per year for outside legal counsel for support of the EE Portfolio; $0.3 million per year for memberships to EE related organizations; $0.1 million per year for a contingent worker and tech writer to support writing of policies and procedures; $0.3 million per year for consultants to support SCE's program operations and administration; $0.6 million per year fund the independent evaluators (IEs) associated with third-party solicitations pursuant to D.18-01-004. IEs will provide guidance to SCE during the solicitation process; and $0.3 million per year to support the CAEECC facilitator.
- SCE budgets a total of $0.5 million, approximately $0.12 million per year, for "Program Management" expenses. This expense is for maintenance for the Proposal Evaluation and Proposal Management Application (PEPMA) website required for third-party solicitations to perform necessary website maintenance, updates, cybersecurity, and hosting fees, as well as SCE's Purchase Order Management (POMAN) system hosting, maintenance, updates, and cybersecurity fees. Lastly, this includes general expenses such as office supplies, etc. This level is appropriate because it is expected to be needed as the workforce returns to the office more regularly post-pandemic.
- SCE budgets a total of $5.7 million for "Engineering Services." This includes $0.9 million for 2024, $0.7 million for 2025, $0.9 million for 2026, and $0.7 million for 2027 of direct implementation costs for measure package development. These values

were derived from the budgeted amount for 2022 and 2023 measure package activities and historical costs for measure package development. Due to two years measure package development cycle starting from 2024, both 2024 and 2026 budgeted amounted are higher because SCE anticipates that all necessary package activities will be loaded in the 1st year versus 2nd year. Additionally, this budget includes $0.6 million per year from 2024 to 2026 and $0.7 million for 2027 of direct implementation costs for the California Technical Forum (CalTF) and the California Electronic Technical Reference Manual (eTRM) development and maintenance. These values were derived from the budgeted amount for 2022 and 2023 CalTF and eTRM activities and it is expected that SCE will continue to support CalTF and eTRM activities from 2024 through 2027.

- SCE budgets a total of $6.8 million ($1.7 million per year) for "IT" costs for the iEnergy and the Subcontractor Management and Reporting Tool (SMART) systems to support SCE's program operations. These systems are necessary to track end to end processing from intake of program applications to issuing of program incentives as well as tracking project information inclusive of customer information, savings, installation cost, energy equipment being installed and replaced for EE Programs. These values were derived from the licensing, hosting and maintenance of the two tracking systems which have a fixed cost of $800,000 per year ($500,000 iEnergy and $300,000 SMART). For iEnergy, SCE budgets an additional $900,000 per year for additional service hours needed to maintain the system, this amount is appropriate based on the anticipated support of new programs expected to be implemented in iEnergy.

3. EM&V Costs

EM&V budgets are calculated as four percent of overall budget per D.16-08-019.[70] The total EM&V costs for the Four-Year Portfolio Plan are $69.5 million. This is a split of 27.5 percent for SCE's EM&V budgets to support studies administered by SCE and 72.5% for the CPUC EM&V budgets for studies administered by the CPUC. The Regional Energy Network (REN) portion of EM&V budgets are collected as a line item under REN EM&V. However, the CPUC portion of the REN EM&V budgets is rolled into the SCE budget request. The funds available for SCE EM&V are utilized to fund SCE's 4.55 FTE to project manage and provide analysis and comments on SCE studies as well as the studies funded through the CPUC. The EM&V budget is not allocated to any segment but is a separate line item in SCE's overall budget table.[71]

E. Other Costs

This section details costs which are not program operations costs or overhead costs but are required as part of the Four-Year Portfolio Period.

1. California's Analysis Tool for Locational Energy Assessment (CATALENA) Costs

D.18-05-041 directed the IOUs to competitively solicit a third party to implement the deployment, maintain data quality, consistency and security, continue development of the Energy Atlas' capabilities, and encourage and support local governments that choose to participate.[72] The decision directed the PAs to allocate up to $2 million to expand the Energy Atlas, and include annual Energy Atlas management and maintenance costs in their annual budget advice letters proportionally according to relevant EE program budgets. Since 2018, in coordination with Energy Division, the utilities developed the work scope for the competitive solicitation to

[70] *See* D. 16-08-019, p. 3, COL 67.
[71] *See Id*., p. 3.
[72] *See* D.18-05-041, OP. 32.

implement the analysis tool known as CATALENA. Assuming a successful solicitation process takes places in 2022-2023, CATALENA will be implemented for the 2024-2027 period.

Costs associated with CATALENA include $2 million for development of the tool, plus costs associated with the ongoing management (i.e. web hosting, cyber security, data updates) of the tool. The IOUs have agreed to use Statewide budget allocations for the funding of this tool, which makes SCE's allocation for CATALENA 32.08%. This allocation results in a total budget of approximately $0.9 million for the 2024-2027 period and includes SCE's share of the development and O&M costs associated with CATALENA.

2. EE and DR Limited Integration Costs

SCE's budget includes $10.6 million per year for implementation of SCE's Integrated Demand Side Management (IDSM) program. This budget was required as part of D.18-05-041,[73] and is appropriate at this level because the allocated funding will be used for SCE programs as well as local and third-party administered programs to focus on EE and DR integration. D.18-05-041 states that for the Residential sector, "Each IOU shall budget a minimum of $1.0 million annually from its IDSM budget" and "at least $20 million annually in IDSM funds shall be divided among the IOU PAs on the basis of load share" for the non-residential sectors. SCE will utilize these funds to help drive EE and DR integration efforts when EE investments are already being made. SCE will utilize the budget for connecting smart thermostats to eligible DR programs and will make funding available to third-party PAs. The budget amount is required to ensure there is enough funding available for SCE and third-party IDSM efforts.

3. REN Costs

SCE's budget forecast includes two types of costs associated with RENs. The first is the overall forecast budgets associated with the 2024-2027 Four-Year Portfolio Plan of each of the RENs in SCE's service territory – SoCalREN and 3CREN. These budgets are based on information provided by the RENs. Detailed description on reasonableness for these budgets can

[73] *See* D.18-05-041, pp. 36-37.

be found in REN applications. The second type of cost is administrative costs. D.19-12-021 requires that "administrative costs associated with the utility's performance of the fiscal agent role shall be tracked and considered separately for cost-effectiveness purposes, beginning with the 2021 PY."[74] SCE has budgeted a total of $0.6 million, equating to 1.0 FTE for REN Administration costs.[75] This budget will allow SCE to oversee the coordination with and payments for the REN activities, and other regulatory compliance requirements associated such as Joint Cooperation Memos.

F. Program Modifications from 2023

In this section, SCE describes the program changes, program closures, program additions, and program forecast changes that will take place at the start of the Four-Year Portfolio Plan or are proposed for the Four-Year Portfolio Plan period.

1. Program Changes

There are two main changes that SCE will perform as part of the Four-Year Portfolio Plan period. The first is a recategorization of specific segments that programs fall into to better align with the segmentation approach adopted in D.21-05-031. The second is a shift in program budgets, focusing on those significant budget shifts from PY 2023.

a) Segment Categorization Changes

- **Statewide Career and Workforce Readiness Program** – This program is led by PG&E and will be recategorized from the Market Support segment to the Equity segment. Justification for this change and program details can be found in PG&E's Application.
- **CATALENA/Energy Atlas** – Costs associated with this effort will move from general administrative expenses to a standalone program under the Market Support segment because SCE anticipates CATALENA to become an offering within the EE portfolio during the four-year period as discussed above.

[74] *See*, D.19-12-021, OP 5.
[75] *See* SCE -03, Attachment B, Appendix 1.

b) Significant Budget Shifts from PY 2023

As part of the Four-Year Portfolio Plan, SCE's will undergo several budget shifts that will increase or decrease program budgets by more than 40% from the 2023 budget. For statewide programs in which SCE is not lead PA, please refer to the lead PA's 2024-2027 EE Application for further details regarding significant budget shifts from PY 2023.

- **Programs with** budget **increases of greater than 40%:**[76]
  - Commercial SEM - The Commercial SEM program will utilize the Industrial SEM Program Design and Measurement & Verification Guides to extend SEM to the Commercial sector. Customer participation has declined over recent years (2014-2018) in Commercial Calculated and Deemed programs and SEM offers a holistic approach to serve customers through behavioral, retro commissioning and operational savings as well as capital savings from deemed and capital projects. SEM takes advantage of cohorts that are typically comprised of different sub-industry participants to allow for diversity of participation and sharing of best practices across cohort participants. The increased budget is due to the launch of this new program which will include the addition of new participant cohorts and cycles. With one new cohort in 2024, two new cohorts in 2025, two new cohorts and new cycle in 2026, and two new cohorts and two new cycles in 2027.
  - SMB Equity Program - SMB Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted SMB commercial customers and to help

[76] Budget changes to statewide programs also includes SCE's costs associated with the administration of a statewide program. Regardless of whether SCE is a non-lead PA for a statewide program, there is some administration necessary (i.e. reporting, invoice processing) for each program.

them manage their business energy use. The SMB Equity Program offers SMB customers incentives or direct installation of HVAC, lighting, water heating, etc. measures. SCE is forecasting a budget increase for the new SMB Equity Program due to program ramp up activities, after contract negotiations are finalized and the program launches.

- Residential Equity Program - SCE is forecasting a budget increase for the new Residential Equity Program due to program ramp up activities, after contract negotiations are finalized and the program launches. The Residential Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their household energy use. The Residential Equity Program offers single family and MF equity-targeted residential customers incentives or direct installation of HVAC, lighting, water heating, etc. measures.
- SWEETP – The budget for this program has increased due to the transition of activities such as costs of conferences and memberships from the local ET program to the Statewide program.
- NFO - The NFO program is reporting a budget increase during the four-year portfolio period because the carryover funds that are utilized by CAEATFA will be exhausted in PY 2023, requiring up to $500,000 annually to support the information technology and marketing strategies for the California Hub for Energy Efficiency Financing (CHEEF) programs.
- NFO Credit Enhancements - The NFO Credit Enhancements is a subset of the NFO Program. The budget for this sub-program has increased because this is the first time that this sub-program is used to

track revenue requests for Credit Enhancements separately from the NFO Program. For the Four-Year Portfolio Plan, Credit Enhancements will be recorded using this sub-program, since funding for Credit Enhancements is recorded in a EE Finance Programs Balancing Account and it is separate from the NFO Program's operating budget recorded in the Procurement Energy Efficiency Balancing Account (PEEBA).

- **Statewide Programs with budget shifts associated with SCE's administration:**[77]
  - SW Non-Res Ag New Construction
  - SW Non-Res Ag Mixed New Construction
  - SW Non-Res Comm New Construction
  - SW Non-Res Comm Mixed New Construction
  - SW Non-Res Ind New Construction
  - SW Non-Res Ind Mixed New Construction
  - SW Non-Res Pub New Construction
  - SW Non-Res Pub Mixed New Construction
  - SW Non-Res Res New Construction
  - SW Non-Res Res Mixed New Construction
  - SW Res Mixed New Construction
  - WE&T Career Connections
  - WE&T Career and Workforce Readiness
- **Non-SCE Led Statewide Programs:**
  - C&S Advocacy - State Appliance Standards Advocacy
  - Department of General Services
  - SW Non-Res Ag New Construction

[77] The changes in SCE administrative costs for these programs were mainly due to the difference in SCE's budget forecast approach for program year 2023 compare to the four-year portfolio period.

- SW Non-Res Ind New Construction
- SW Non-Res Ind Mixed New Construction
- SW Non-Res Pub New Construction
- SW Non-Res Pub Mixed New Construction
- SW Non-Res Res New Construction
- SW Non-Res Res Mixed New Construction

- **Programs with budget decreases of greater than 40%:**
  - Enervee Marketplace - The Enervee Marketplace Program is reporting a budget reduction from 2023 to 2024. The reduction in budget is due to the 2023 budget included budget for potential overperformance by the implementer, which is not necessary in 2024, and portfolio support costs that were previously allocated to the program will now be allocated to a separate Portfolio Administration budget.
  - Residential Behavioral Program - The Four-Year Portfolio Plan includes the third-party implementer's actual forecast rather than its contracted amount which was used to determine budgets for the 2022-2023 PYs.
  - Upstream Lighting Program - The CA Statewide Lighting Program is reporting a budget decrease at the account of Net-to-Gross (NTG) reductions and possible loss of accompanied measures. It is estimated that the NTG for the High/Low Bay, and Type B and C LED Tube measure packages will see a reduction from an approximate statewide average of 0.94 down to 0.65.
  - Savings By Design (SBD) - SCE's SBD Program's ramp down and closure process implemented as of the end of 2021 will result in a reduction of program costs related to the development of new projects.

The program will continue to manage pipeline projects until their completion which is estimated will occur at the end of 2025.

- OBF Program – the budget for this program will decrease due to portfolio costs that were previously allocated to programs General and Administrative costs being transferred from the program's overall budget to a separate Portfolio Administration budget.
- Technology Development Support - The locally implemented non-resource Technology Development Support subprogram of the ET Program will transition to the new SWEETP. It is expected that the sub-program activities will ramp down while the new statewide program ramps up in early 2022 under third-party implementation. The sub-program will stop developing new projects in 2022 but will continue to operate until all committed projects are completed, which shall be no later than December 2025. The relatively small budget decrease for the sub-program is to account for final project and program closure activities.
- Water Infrastructure Systems EE (WISE) Program - SCE was authorized to close and stop accepting new enrollments for the WISE program in SCE's 2019 Annual Budget Advice Letter (ABAL). SCE accepted applications to the program through June 2019 and stopped accepting new project applications thereafter. SCE will close the WISE program upon completion of existing commitments in PY 2024. The relatively small budget decrease for the program is to account for final project and program closure activities.
- Agriculture Third-Party Solicitation - The budget for this solicitation will decrease due to the solicitation placeholder during the 2022/2023 PYs. In 2023, SCE set a placeholder budget of approximately $6.6

million which was decreased to approximately $3.2 million to match contracted values in 2024. Previously, the budget was a placeholder for multiple on-going solicitations.

  - Industrial Third-Party Solicitation - The budget for this solicitation will decrease because there will be no solicitations planned for the Industrial sector in 2024.
  - Commercial Third-Party Solicitation- The budget for this solicitation will decrease because there will be no solicitations planned for the Commercial sector in 2024.

- **Statewide Programs with budget shifts associated with SCE's administration:**[78]
  - Food Service Point of Sale
  - Res HVAC Quality Installation (QI) / Quality Maintenance (QM)
  - Midstream Comm Water Heating
  - SW Res New Construction
  - Plug Load and Appliance

2. New Programs

SCE proposes the following new programs for the Four-Year Portfolio Plan period.

- **Fuel Substitution Midstream Program** – This program will be offered as part of the Resource Acquisition segment and will provide midstream incentives for HVAC fuel substitution measures that are not covered by the Statewide HVAC programs. The Fuel Substitution Midstream Program is further described in the Sector Strategy section of this Exhibit.
- **EE Contractor Demand Building Program** – This program will be offered as part of the Market Support segment and will encourage contractors to learn about and participate in **WE**&T trainings and SCE's portfolio of EE programs and measures.

[78] The changes in SCE administrative costs for these programs were mainly due to the difference in SCE's budget forecast approach for program year 2023 compare to the four-year portfolio period.

Additional details about this program are described in the Sector Strategy section of this Exhibit.

- **EE New Program Design Pilot** – This program will be offered as part of the Market Support segment and will test out new program designs that are not yet ready for third-party **implementation**. Additional details about this program are described in the Sector Strategy section of this Exhibit.
- **SMB Equity Programs** – SCE proposes three new SMB Equity Programs, each individually tailored to the industrial, agricultural, and public segments. These programs would include the same program offerings as SCE's current Commercial SMB Equity Program and will provide industrial, agricultural, and public equity-targeted customers with direct installation EE solutions tailored to their needs. Additional details about this program are described in the Sector Strategy section of this Exhibit.
- **NFO Credit Enhancements** - The NFO Credit Enhancements Program ID is a subset of the NFO Program. For the four-year portfolio period, Credit Enhancements will be recorded separately from the NFO Program because their funding is recorded in **the** Energy Efficiency Finance Programs Balancing Account (EEFPBA) and, therefore, is separate from the Programs' operating budget which recorded in the PEEBA.

3. Closed Programs

The list below identifies those programs which SCE plans to close at the end of 2023 due to replacement with new third-party programs that will be in place in 2024. SCE sought Commission approval to close these programs in its EE ABAL (Advice 4633-E-A).[79]

- SCE-13-TP-026 - Residential 3P Solicitation
- SCE-13-TP-027 - Industrial 3P Solicitation

[79] Supplement to Advice 4633-E, SCE Company's EE Program and Portfolio ABAL for PYs 2022 and 2023 (January 7, 2022). Advice No. 4633-E-A was approved on February 16, 2022 and made effective as of December 8, 2021.

- SCE-13-TP-028 - Commercial 3P Solicitation
- SCE-13-L-002B - City of Long Beach Energy Leader Partnership
- SCE-13-L-002F - Gateway Cities Energy Leader Partnership
- SCE-13-L-002L – Orange County Cities Energy Leader Partnership
- SCE-13-L-002M - San Gabriel Valley Energy Leader Partnership
- SCE-13-L-002O - South Bay Energy Leader Partnership
- SCE-13-L-002P - South Santa Barbara County Energy Leader Partnership
- SCE-13-L-002Q - Ventura County Energy Leader Partnership
- SCE-13-L-002T - West Side Energy Leader Partnership
- SCE-13-L-002V - North Orange County Cities
- SCE-13-L-003C - County of Los Angeles Energy Efficiency Partnership
- SCE-13-SW-002B - Commercial Calculated Program
- SCE-13-SW-003B - Industrial Calculated Energy Efficiency Program
- SCE-13-SW-004B - Agriculture Calculated Energy Efficiency Program
- SCE-13-TP-007 - Primary and Fabricated Metals
- SCE-13-TP-008 - Nonmetallic Minerals and Products
- SCE-13-TP-010 - Comprehensive Petroleum Refining
- SCE-13-TP-021 - Enhanced Retrocommissioning
- SCE-13-TP-024 – AB 793 Residential Pay-for-Performance
- SCE-13-TP-025 - Facility Assessment Service Program

IV.

Portfolio Strategies

A. Segmentation Strategy

1. Summary of Market Segments and Strategy

SCE's Four-Year Portfolio Plan is segmented into four distinct segments: Resource Acquisition, Market Support, Equity, and C&S.[80] Implementing this new paradigm enables PAs to design portfolios that balance requirements for cost-effective EE, the advancement of clean energy goals, investment in equitable outcomes, and support for the long-term viability of EE. Additionally, this market segmentation allows PAs to implement programs that may not be cost effective today but are likely to be so in the future with meaningful innovation and equity gains over time. See Figure II-3 for a summary of key goals and outcomes for each segment.

For the Four-Year Portfolio Period, SCE plans to optimize its EE portfolio with the following objectives in mind: (1) maximize cost-effective energy savings that provide TSB to support affordability (aligns with the Resource Acquisition segment); (2) provide EE market support and enable new EE and GHG emissions reduction technology adoption and customer support (aligns with Market Support segment); and (3) support underserved customers, including DVC and HTR customers using objectives and metrics that align with the CAEECC working group's recommendations (aligns with Equity segment).

The Resource Acquisition segment of the portfolio is primarily composed of third-party proposed, designed, and implemented programs contracted through solicitations.[81] Programs that make up the Resource Acquisition portion of the portfolio are intended to deliver cost-effective benefits (1.0 minimum TRC) to meet a majority of SCE's TSB requirement. Market Support and Equity are expected to contribute to TSB as well, but in the near-term, without cost-effectiveness requirements, they are intended to act somewhat in a non-resource capacity in

[80] C&S is also considered a separate segment.

[81] For the 2024-2027 portfolio period, 81% of SCE's Resource Acquisition segment budget is assigned to third-party programs.

which their objective is primarily geared toward intangible benefits. Thus, programs that comprise the Resource Acquisition segment account for the majority of expenditure in SCE's proposed portfolio for 2024-2027. The size, scale, and forecasted cost-effectiveness of Resource Acquisition programs serve as key drivers in establishing the available funding for Market Support and Equity segments, because investment in these segments is capped at 30% of total portfolio budget.[82]

The Market Support segment of the portfolio contains programs with a primary objective of supporting the long-term success of the EE market by educating customers, training contractors, building partnerships, and moving beneficial technologies toward greater cost-effectiveness. Market Support programs are needed to support innovation and the potential for higher future savings that could not be accomplished if the programs were required to be cost-effective from the outset. The Market Support segment will leverage existing programs while also seeking innovation from new programs that will support the EE market and further spur innovation and implementation of EE. Market Support programs in SCE's Application include statewide and local WE&T, SWEETP, Statewide New Construction, Statewide HVAC Quality Installation/Quality Management (QI/QM), local ET Program, local Commercial Energy Advisor, and local Finance. New Market Support programs include EE Contractor Demand Building, EE New Program Design Pilots, and CATALENA/Energy Atlas. Details on each SCE-led and third-party implemented program can be found in each segment discussion below and in Program Cards in SCE-02, Attachment 1.[83]

Although SCE has focused on equity objectives in the past, the new market segmentation strategy adopted by the Commission offers PAs new opportunities to ensure more equitable distribution of EE measures. The Commission recognized the increasing difficulty for PAs to maintain a cost-effective portfolio while meeting all the Commission's policy objectives,

[82] D.21-05-031, Assessment Of Energy Efficiency Potential And Goals and Modification Of Portfolio Approval And Oversight Process (May 26, 2021).

[83] Additional information on statewide programs can be found in the Program Cards of the respective program administrator.

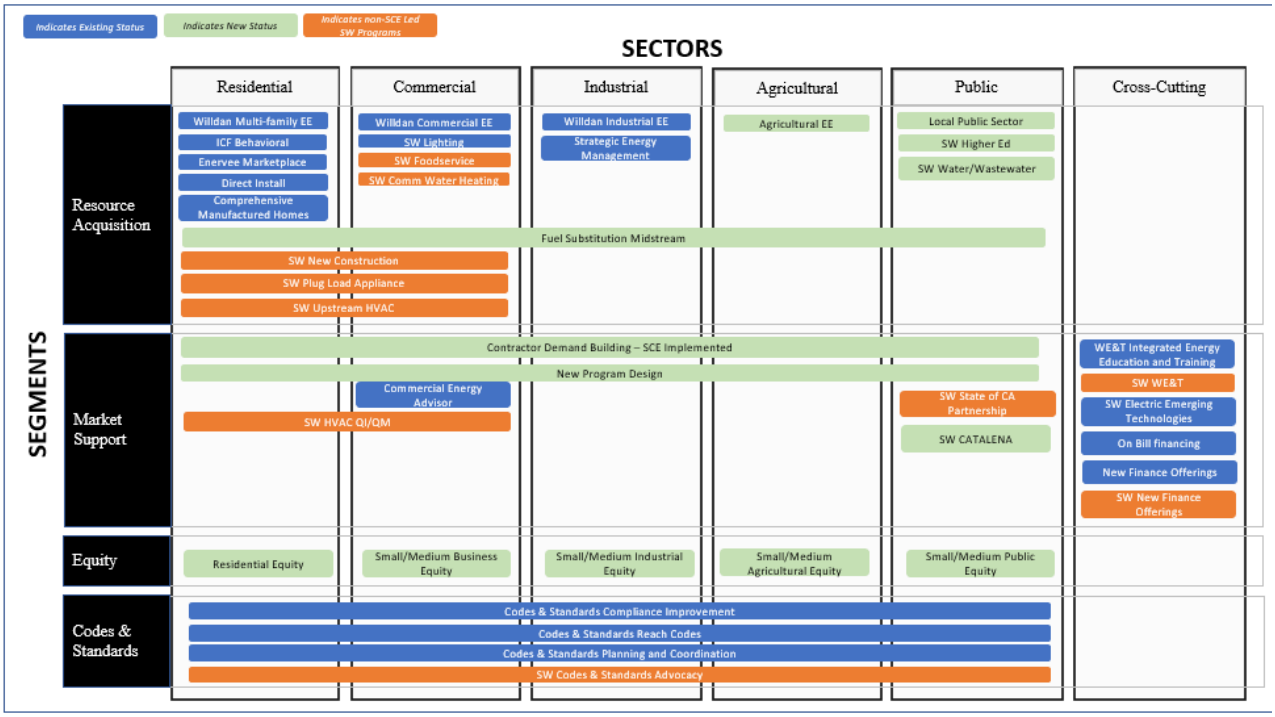
including more equitable delivery of EE savings.[84] With the new segmentation paradigm, SCE welcomes the opportunity to develop programs with a focus on equity. In forecasts herein, SCE aligns with the objectives and metrics developed through the CAEECC working group to support this segment. Through these objectives and metrics, SCE intends to focus on increased energy-efficiency opportunities for underserved customers, which includes, but is not limited to, HTR customers and DACs.

The C&S segment of the portfolio contains programs with a primary objective of advocating for more stringent building and appliance codes, promoting greater knowledge and improving compliance with these codes, and coordinating with stakeholders to research the potential for future codes. The C&S Program contains statewide advocacy subprograms (Federal and State advocacy) and local C&S subprograms (Compliance Improvement, Reach Codes, P&C). The historical success of savings accrued from C&S is a testament to the effectiveness of this program, and SCE plans to invest in local efforts to help accelerate adoption and compliance.

The summarized view below demonstrates how SCE's programs align within the segment/sector portfolio framework. Budgets for programs were developed using a bottom's up approach. However, most of the budget is in the Residential and Commercial sectors due to the potential in those sectors and the outcomes of the third-party contracting process. This allocation is consistent with what would be expected from the P&G Study. Specific details on each program can be found in Section IV.B. For completeness, this view includes statewide programs led by other PAs, however discussions from the "horizontal" segment perspective that follow will be limited to SCE led programs.

[84] *See,* D.21-05-031, pp. 10-11.

Figure IV-8
SCE's Portfolio Framework



2. Resource Acquisition

a) Resource Acquisition Segment Budget

The following table provides the budget request for the Resource Acquisition segment for 2024-2027 with 2023's budget authorization included for reference. For more detailed information about budgets by category for each program/segment/sector, see table in SCE-03, Attachment A, Appendix 5, Appendix 10 and Appendix 11.

Table IV-35
SCE Resource Acquisition Segment Budget Request for 2024-2027
(in millions)

Segment	2023	2024	2025	2026	2027	Total (2024-2027)
Resource Acquisition Segment Total	$292	$254	$251	$256	$254	$1,014
% of Total Portfolio	76%	66%	64%	65%	65%	65%

SCE's proposed budget for the Resource Acquisition segment of its portfolio builds off third-party contracts that are in effect as of this filing date along with remaining budget yet to be contracted through on-going solicitations. The budget request for 2024 aligns closely with 2023's forecast, which assumes that third-party implementers will deliver savings as their contracts stipulate. In the event of default or contract expiration, SCE allocates budget based on three possible outcomes. The first is contract renewal. If implementers meet obligations and demonstrate performance, contracts may be renewed with new savings goals. The second is re-solicitation as a result of default or conclusion of their contract for additional price discovery or competition. If implementers do not meet contractual requirements, SCE may terminate and re-solicit for comparable programs. Additionally, if a contract has reached the end of its delivery term, SCE will consider resoliciting for a program to assess optimal value for customers. The third is funding reallocation in lieu of re-solicitation. Remaining budget may be shifted to other programs that prove viable and demonstrate reliable savings. The net of these outcomes is preservation of budget to meet TSB goals.

b) Resource Acquisition Segment Strategies, Goals, and Outcomes

(1) Resource Acquisition Segment Strategies

SCE's principal strategy for the Resource Acquisition segment is best characterized through its employment of market-based solicitations to acquire third-party designed and implemented programs that will deliver cost-effective savings. While this theme weaves tightly

within the narrative of this entire application period, it is underscored here to shed light on several nuances that merit further discussion. The first is innovation. The second is gap-filling. The third is demand side management (DSM) coordination.

(a) Innovation

As discussed in Section II.A, SCE commits to spurring innovation in the marketplace and plans to utilize the solicitation process as a conduit for this objective. SCE, as a PA, influences innovation requirements through its RFP. For instance, innovation is defined and highlighted as a key requirement in bidders' proposals, and SCE weights this criterion accordingly to ensure relevance. For opportunities that may not be considered by market participants, SCE may deploy in-house resources and manage them to an outcome that may trigger a new solicitation.

(b) Gap-Filling

For in-house programs not already outsourced, SCE plans to continue solicitations to replace them entirely with market-based solutions or augment them in a componentized fashion that creates the most value. In executing this strategy, if gaps in market coverage are discovered, SCE may pursue targeted solicitations to close them. Fuel substitution opportunities, for example, merit strong consideration for this gap filling approach given its substantial TSB contribution potential. SCE has embarked on evaluation of existing measures that may qualify for fuel substitution benefits in current measure packages. Results of these efforts may seed solicitations that drive market awareness and excitement for this opportunity.

(c) DSM Coordination

Lastly, SCE recognizes the value of tight coordination across the various DSM portfolios/interventions and underscores its importance as the EE portfolio expands to include new segments and increases its role in scaling fuel substitution opportunities. As new opportunities arise, SCE will continue to coordinate within EE portfolio segments and across proceedings to minimize duplication and maximize layering of incentives where possible to accelerate EE and fuel substitution adoption in the State. For example, SCE will meet internally to discuss new and existing programs to share information about potential program synergies and

to avoid program overlap or duplication. For more information on specific coordination, see Section IV.D.4.

The table below describes specific intervention strategies for the Resource Acquisition segment.

Table IV-36
Resource Acquisition Intervention Strategies

Strategy	Description	Applicable Sectors
Delivery Strategies		
Upstream Incentives	Financial incentives directly to manufacturers, distributors, or retailers to buy down the cost and increase the sales of energy efficient products and reducing complexity/difficulty of participating for high volume.	All
Midstream Incentives	Financial incentives directly to vendors or distributors to buy down cost and increase sales of energy-efficient products.	All
Downstream Customer Incentives	Payments made to customers to encourage installation of energy efficient measures.	All
Downstream Direct Install	Payments made to vendors to install energy efficient measures at the customer's site. Access to Direct Install Programs benefits customers by removing technical and search burdens by providing vendors that have already been vetted and can be leveraged for customer touchpoints.	All
Savings/Incentive Methodologies		
Deemed Incentives	Incentives or rebates paid to customers to adopt EE measures based on measure package values that establish savings based on typical installation conditions. Typically allows for customer friendly program designs with rebates for qualifying products.	All
Custom Incentives	Incentives paid to customers to adopt EE measures based on the circumstances of installation that require calculations. Typically designed as a rate for the unit of energy saved (kWh, kW, Therm, etc.) and used for more complex EE measures with more variable savings.	All
NMEC/Meter Based Savings	Provide incentives for customers to install comprehensive EE measures that will be measured at the meter utilizing Site Level, Population, Randomized Control Trial (RCT) methodologies to arrive at savings.	All

Outreach Strategies		
Demonstration Projects	Demonstrate best practices and disseminate technical expertise to overcome knowledge gaps for market actors or industry.	All
Intelligent Outreach	A targeted marketing approach using analytic tools to deliver specific messages to specific customer groups to increase EE adoption.	All
Partnering	Identification and recruitment of key partners and market actors needed to support and reach various customer groups and drive adoption of EE.	All
HTR, Disadvantaged, and Underserved Community Outreach	Outreach to HTR, disadvantaged and underserved communities and relax certain program parameters that hinder EE program participation.	All
Enabling Strategies		
Financing	Designed to assist customers in acquiring the capital necessary to procure and install EE measures.	All
Single Point of Contact	Streamline program offerings for market actors to reduce burden to participate in program offerings.	All
Technical Assistance	Professional assistance with EE project identification (e.g., audits and virtual audits), development, and management that will facilitate implementation of EE and IDSM projects.	All
Information Strategies		
Building Energy Benchmarking Data Access	Leverage customer data to benchmark facilities and provide a roadmap for EE retrofit opportunities; allow sub-metering costs to be included in project costs; identify solutions to help identify savings potential and manage energy use.	Commercial Industrial Agricultural Public
Community Data Access	Development of CATALENA/Energy Atlas community energy usage. Participate in Energy Data Access Committee (EDAC) to influence policy in order to make data more user-friendly to local governments (within Commission and California state law requirements for data privacy).	Public
Customer Data Access	Green Button "Download My Data" function for access to usage from individual accounts and Green Button "Connect My Data" function for customer to authorize SCE to send their energy usage and billing data to registered third parties.	All

(2) Resource Acquisition Segment Goals

The primary objective of the Resource Acquisition segment of the portfolio is to deliver cost-effective EE programs that assist customers in managing their energy needs while simultaneously achieving SCE's TSB goals required by D. 21-09-037.[85] The Commission's

[85] *See* D. 21-09-037, Decision Adopting Energy Efficiency Goals For 2022-2032, p.20.

transition to TSB (represented in dollars) changes the primary focus of the EE portfolio to capturing energy savings at the time of highest avoided cost benefits and renews focus on incentivizing long-lasting measures. SCE's Application reflects those revised goals by seeking to maximize TSB, particularly within the Resource Acquisition market segment. Table IV-37 below represents the sector level TSB potential and aggregate to the Total Portfolio TSB goal. In addition to the portfolio level goal, IOUs are expected to achieve these savings targets while maintaining a forecasted TRC ratio of 1.0 or greater for Resource Acquisition programs.

SCE's Resource Acquisition segment of its portfolio is primarily comprised of pay-for-performance third-party contracts that require implementers to achieve kWh and kW goals as well as achieve a minimum TRC ratio of 1.0. Because of changes in Avoided Cost and the introduction of Fuel Substitution to the P&G Study, current TSB goals reflect an increased percentage of savings that can be derived from the Residential sector broadly. Conversely, non-residential customers are seeing decreased savings from traditional EE measures but increased savings in overall BRO programs from areas like SEM. TSB goals indicated in the table below reflect this shift in EE opportunity.

Table IV-37
Portfolio TSB Goals by Sector
(in millions)

Year	Residential Sector TSB	Commercial Sector TSB	Industrial Sector TSB	Agricultural Sector TSB	Total EE Portfolio TSB Goal
2024	$53	$30	$13	$6	$102
2025	$61	$36	$14	$7	$117
2026	$71	$40	$15	$7	$133
2027	$80	$44	$16	$8	$148

(3) Resource Acquisition Segment Outcomes

One notable outcome that SCE seeks is increased penetration in the Residential sector through fuel substitution. Efforts are underway to stimulate this conversion through the

introduction of fuel substitution measures in existing measure packages. Additionally, SCE proposes a new Fuel Substitution Midstream program that offers education, training, and incentives to distributors and contractors to advance high efficiency fuel substitution measures. SCE plans to release a solicitation for this program as part of the Market Gap solicitation by Q3 2022 to be market ready in 2024.

SCE's focus on the Residential sector aligns closely with its commitment to equitable outcomes in DACs and HTR communities. SCE's resource programs are complementary to Equity and Market Support segments of the portfolio and will continue to support these communities. In fact, all requests for proposals require bidders to address how their programs and interventions address disadvantaged and HTR populations. SCE considers these elements in its evaluation criteria to ensure EE measures are broadly available regardless of geography and income levels. Increased penetration in these communities is a desired outcome and is tracked as part of the third-party contract.

c) Resource Acquisition Segment Metrics

SCE's TSB Goals by sector are based on the 2022 P&G Study and are heavily influenced by the introduction of Fuel Substitution measures at scale. Under the current iteration of the P&G Study, Fuel Substitution comprises approximately 32% on average of TSB savings from 2024 to 2031. SCE anticipates an acceleration of savings in later years of the application period as technology improves, programs evolve, and markets stabilize.

In addition to TSB, SCE will track traditional kWh and kW savings by program, sector, and segment. These metrics, while no longer determinants of Commission goals, remain valuable in helping SCE, and the industry broadly, understand how downstream load impacts may change as PAs shift to TSB. SCE-03, Attachment A, Appendix 23, Table 9 contains the full list carryover metrics from D.21-05-031 in addition to proposed new metrics.

Table IV-38
Resource Portfolio Metric(s) – TSB Goals
(in millions)

	2023	2024	2025	2026	2027	Total (2024-2027)
Portfolio TSB	$396	$318	$325	$344	$388	**$1,375**
P&G TSB	N/A	$102	$117	$133	$148	**$501**
% of Goal	N/A	311%	277%	258%	262%	**274%**

1

Table IV-39
Resource Portfolio Metric(s) - Portfolio TSBs by Sector
(in millions)

	2023	2024	2025	2026	2027	Total (2024-2027)
Residential Sector TSB	$119	$130	$128	$148	$219	**$625**
Commercial Sector TSB	$179	$109	$114	$117	$84	**$424**
Industrial Sector TSB	$70	$54	$56	$56	$40	**$206**
Agricultural Sector TSB	$10	$6	$6	$8	$18	**$38**
Public Sector TSB	$18	$20	$19	$16	$27	**$82**
Total TSB	$396	$318	$325	$344	$388	**$1,375**

Table IV-40
Resource Portfolio Metric(s) – First year savings by Sector

Sector	First-Year Savings Type	2023	2024	2025	2026	2027	Total (2024-2027)
Residential Sector	GWh	122	303	302	351	391	**1,346**
	MW	38	72	92	81	85	**331**
Commercial Sector	GWh	253	242	243	229	158	**872**
	MW	36	33	32	31	39	**135**
Industrial Sector	GWh	108	114	115	115	73	**417**
	MW	10	13	12	15	16	**57**
Agricultural Sector	GWh	12	9	9	14	34	**66**
	MW	2	2	2	3	8	**15**
Public Sector	GWh	19	30	24	26	48	**129**
	MW	4	6	5	8	13	**32**
Potential and Goal TSB savings equivalent	GWh	461	462	497	529	560	**2,048**
	MW	69	64	68	73	77	**282**

Table IV-41
Resource Portfolio Metric(s) – GHG Reductions by Sector
(in tons)

Sector	2023	2024	2025	2026	2027	Total (2024-2027)
Residential Sector	39,746	72,234	80,115	93,144	106,352	**351,845**
Commercial Sector	78,773	47,790	46,424	46,453	27,391	**168,058**
Industrial Sector	33,602	27,810	27,880	26,731	14,101	**96,522**
Agricultural Sector	3,472	1,355	1,637	2,501	6,168	**11,661**
Public Sector	6,878	4,067	4,290	3,454	6,498	**18,309**
Total	162,471	153,256	160,345	172,282	160,510	**646,393**

d) Resource Segment-specific Coordination

SCE anticipates achieving TSB goals by coordinating Resource Acquisition programs across the five sectors of the Business Plan. Each sector will pursue as many cost-effective

savings opportunities as practicable to optimize the portfolio's benefits to customers. For those customer types that historically have been challenging to reach, whether because of reluctance or cost-effectiveness constraints, SCE may deploy programs through Market Support and/or Equity segmentation to help bolster their participation.

3. Market Support

a) Market Support Segment Budget

The following table provides the budget request for the Market Support segment for 2024-2027 with 2023 for reference. More detailed information about budgets by category for each program/segment/sector can be found in SCE-03, Attachment A, Appendix 5, Appendix 10, and Appendix 11.

Table IV-42
SCE Market Support Budget Segment Request for 2024-2027
(in millions)

Segment	2023	2024	2025	2026	2027	Total (2024-2027)
Market Support Segment Total	$45	$65	$70	$69	$68	$271

SCE has allocated Market Support budget to the Statewide Career Connections Program, local WE&T IEET Program, SCE-led SWEETP, PG&E-led Statewide New Construction Programs, SDG&E-led Statewide HVAC QI/QM Program, Local ET Programs, local Commercial Energy Advisor Programs, and local Finance Programs. SCE has also developed new local programs such as the EE CDBP, EE New Program Design Pilots Program, and a newly categorized CATALENA/Energy Atlas program. For SCE-led local programs, SCE built a bottoms' up forecast with specific details about costs and expected results for each program. For the SCE-led SWEETP, SCE utilized contracted values to develop the budget. For statewide programs with other IOUs serving as lead PA, SCE utilized forecasted budget amounts allocated to it by each statewide lead IOU.

b) Market Support Segment Strategies, Goals, and Outcomes

(1) Market Support Segment Strategies

In previous Applications, market support programs, while not explicitly called out as such, were embedded within Resource Acquisition programs. Because of TRC requirements, these types of programs were often subordinated in favor of more cost-effective programs. Consequently, the 2022-2023 budget advice letter reflects this portfolio composition. This business plan application, however, introduces Market Support segmentation that allows PAs flexibility and discretion to invest in programs with long-term benefits in mind. Investment in fuel substitution, new technologies, and under-served markets are several examples of how this segmentation will address areas of opportunity that in the past have not received adequate focus because of stringent cost effectiveness requirements.

The table below describes specific intervention strategies for the Market Support segment.

Table IV-43
Market Support Intervention Strategies

Strategy	Description	Applicable Sectors
Delivery Strategies		
Downstream Customer Incentives	Payments made to customers to encourage installation of energy efficient measures.	All
Measure Application Types		
Deemed Incentives	Incentives or rebates paid to customers to adopt EE measures based on measure package values that establish savings based on typical installation conditions. Typically allows for customer-friendly program designs with rebates for qualifying products.	All
Custom Incentives	Incentives paid to customers to adopt EE measures based on circumstances of installation that require calculations. Typically designed as a rate for the unit of energy saved (kWh, kW, Therm, etc.) and used for more complex EE measures with more variable savings.	All
Outreach Strategies		
Demonstration Projects	Demonstrate best practices and disseminate technical expertise to overcome knowledge gaps for market actors or industry.	All
Intelligent Outreach	A targeted marketing approach using analytic tools to deliver specific messages to specific customer groups to increase EE adoption.	All
Partnering	Identification and recruitment of key partners and market actors needed to support and reach various customer groups and drive adoption of EE.	All
DAC and HTR and Underserved Community Outreach	Outreach to HTR, disadvantaged and underserved communities and relax certain program parameters that hinder EE program participation.	All
Contractor Demand Building	Providing coupons for energy efficient equipment to encourage contractors to participate in WE&T classes and actively promote of EE equipment (particularly fuel substitution equipment).	

Enabling Strategies		
Financing	Designed to assist customers in acquiring the capital necessary to procure and install EE measures.	All
ET	Identifying and evaluating promising innovations and delivery mechanisms through scanning and screening, planning and prioritizing, technology development and technology support research, focused pilots, dissemination, measure package development, outreach events, and technology transfer.	All
New Program Design Pilots	Test the effectiveness of novel program designs targeted at delivering near-term TSB savings.	All
Technical Assistance	Professional assistance with EE project identification (e.g., audits and virtual audits), development, and management that will facilitate implementation of EE and IDSM projects.	All
Information Strategies		
WE&T	Delivers educational offerings, tools, and other resources to equip the clean energy workforce with knowledge to recognize and act upon EE opportunities.	All
Building Energy Benchmarking Data Access	Leverage customer data to benchmark facilities and provide a roadmap for EE retrofit opportunities; allow sub-metering costs to be included in project costs; identify solutions to help identify savings potential and manage energy use.	Commercial Industrial Agricultural Public
Community Data Access	Development of CATALENA/Energy Atlas community energy usage. Participate in the EDAC to influence policy in to make data more user-friendly to local governments (within Commission and California state law requirements for data privacy).	Public
Customer Data Access	Green Button "Download My Data" function for access to usage from individual accounts and Green Button "Connect My Data" function for customer to authorize SCE to send their energy usage and billing data to registered third parties.	All

(2) Market Support Segment Goals

SCE intends to drive greater awareness of EE opportunities and tools across all sectors in 2024-2027. A critical element of a well-functioning and efficient marketplace centers on knowledge that customers possess of the diverse EE products and services available to them. Through this process of disseminating education and knowledge, SCE hopes to foster demand for EE that will manifest in future installations and/or behavior changes that will directly lead to increased TSB savings. SCE intends to track Market Support performance through metrics aligned to the CAEECC Market Support Metric Working Group's (MSMWG) primary objective:

to "support the long-term success of the EE market."[86] Five sub-objectives under this umbrella include:[87]

(a) Demand

Increasing demand for EE interventions starts with educating customers in a manner that will help accelerate their understanding of costs and benefits of EE. SCE intends to utilize a multi-pronged approach to reach customers, convey compelling messaging, and engage in meaningful conversations. In addition to traditional marketing and outreach approaches, SCE will promote online tools that assist businesses, governments, and homeowners analyze electricity consumption data across broad geographies and building types in easy to comprehend visualizations. These tools will complement an array of online collateral with one-click access to tutorials, webcasts, and analytics. Often, a higher touch interaction results in more favorable outcomes, so SCE intends to leverage service providers to scale its messaging as broadly and deeply as possible. In-house efforts across WE&T programs will also provide a platform from which to communicate and educate stakeholders.

(b) Supply

This sub-objective seeks to increase the supply of vendors qualified to install EE measures by way of training, incentives, and building knowledge. A healthy marketplace requires sufficient demand with commensurate supply. Imbalances may create inefficiencies that could result in unintended consequences. For instance, if demand generation efforts prove successful without enough supply to meet that demand, customer frustration may result and contribute to adoption barriers. Hence, SCE plans to invest in Market Support programs that will help build a supply of EE contractors, manufacturers, and other industry service providers.

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[86] The MSMWG defines "EE Market" as "individuals and organizations participating in transactions around EE products or services including customers and market actors (which notably includes demand and supply side)."

[87] CAEECC-Hosted Market Support and Equity Metrics Working Groups Draft Prospectus 6-24-2021, *available at* https://4930400d-24b5-474c-9a16-0109dd2d06d3.filesusr.com/ugd/849f65_a8e8bf4b699246fdb0b22e7c9293153c.pdf.

(c) Partnerships

Partnerships help IOUs develop cooperative relationships with interested parties including governments/advocates, contractors/suppliers/manufacturers, and the community. Partnerships create favorable value propositions for each party. With alignment of mission and objective, cooperation across market participants cultivates an environment of shared benefits and desired outcomes that sometimes proves more accretive than through a go-it-alone approach. SCE has a long history of successful EE partnerships and will continue to build on them in Higher Education and the Department of General Services Statewide Programs in the Resource Acquisition segment.

(d) Innovation and Accessibility

Innovation is a critical component of the health of a vibrant marketplace. Technology obsolescence often leads to inefficiencies, but through innovation, new and better are possible. To foster innovation in the marketplace, SCE encourages service providers to consider new ideas and approaches to create value for customers. Financial motivations to do so align with SCE's solicitation objectives, and the market will often reward the highest value solutions. Where gaps in the market exist, SCE may pilot new concepts or technologies to test their viability. Given its history of administering programs and serving a diverse customer base, SCE possesses perspectives on new products, approaches, and technologies that may be brought to bear through in-house investments.

New and innovative products and services are only as good as their viability in the marketplace through demonstrated adoption. This adoption is possible through awareness and accessibility of the product and/or service, and without them, penetration may languish. Hence, SCE intends to reduce these potential barriers by ensuring outreach and education platforms reach target markets, stakeholders are educated, and new products/services are readily accessible for deployment.

(e) Access to Capital

Even with sufficient supply and demand, market adoption of EE interventions may sputter because of a lack of capital to make the necessary investment. This financial hurdle may pose an insurmountable challenge in DACs. SCE intends to alleviate this burden through financing programs that offer no cost loans with convenient payments attached to electric bills. Program specific strategies are detailed Section IV.B.

(3) Market Support Segment Outcomes

(a) Demand

By the end of 2027, SCE expects to deliver three foundational components to its Market Support strategy: Commercial Energy Advisor, CATALENA tools, and New Construction Programs. Commercial Energy Advisor is a benchmarking tool that tracks energy usage across large commercial and MF buildings. Through this tool, building owners can compare electricity consumption against comparable structures to help guide EE decisions. CATALENA is another tool in development that expands upon the Los Angeles Energy Atlas to include all of California. With CATALENA, local government agencies will have readily available access to historical energy usage data from across the State through which to assist and inform EE decision-making processes. To increase demand for whole BE measures, SCE will solicit a new CDBP and leverage Statewide New Construction and Residential HVAC QI/QM Programs.

(b) Supply

SCE expects an increased supply of contractors trained in EE through local WE&T and statewide WE&T Career Connections programs. WE&T programs will offer introductory classes on clean energy technologies, EE programs, and rates, all aimed at advancing clean energy objectives while demonstrating a value proposition to motivate participation. Additionally, SCE will offer a growing catalog of online tutorials, including live webcasts and on-demand content, to facilitate "one-click" access to education. To incentivize participation, SCE will stand-up a new CDBP, an offering that includes distribution of coupons to drive financial motivation for fuel substitution measures such as heat pumps. To complement these

approaches, SCE will also employ a higher touch engagement with stakeholders through its MEU and the newly developed CDBP. Both programs conduct outreach and drive interaction among SCE representatives and tradespeople through impactful face-to-face conversations.

The Statewide New Construction program, led by PG&E, will pay incentives to builders and contractors for above-code installation of EE measures. The combination of these local and statewide programs that are intended to educate the building industry and accelerate EE penetration in new construction and qualifying retrofits will remain a focus in this Application.

(c) Partnerships

SCE's EE partnerships take many forms from formal contracts or agreements to mutually beneficial arrangements to promote the EE marketplace. Through this application, SCE anticipates development of robust partnerships with customers, contractors/suppliers/manufacturers, and community-based organizations (CBOs) through local and statewide WE&T Programs, CDBP, and the SWEETP. These programs facilitate in-person interactions and present opportunities to influence in a more meaningful way than would otherwise be possible through less personal channels such as online or paper-based marketing.

Historically, partnerships between government institutions and IOUs have helped drive increased focus on and delivery of EE in public institutions. SCE will continue to build on existing partnerships in Higher Education and the Department of General Services Statewide Programs in the Resource Acquisition segment. These partnerships between government institutions and IOUs have helped drive increased focus on and delivery of EE in public institutions. SCE intends to build on these successes and will continue to promote EE in the Public sector.

Additionally, through WE&T, Contractor Demand Building, and ET Programs, participants will be encouraged to explore new ways of cooperating with PAs to drive more scale in the marketplace and achieve results faster than doing so alone. SCE expects increased partnerships across contractors, customers, and suppliers/manufacturers both through in-house programs and through its contracted third parties.

(d) Innovation and Accessibility

SCE expects an increase in piloting of new ideas, technologies, and methodologies through its ET Program and a proposed New Program Design Program. The ET Program fosters the development of viable EE technologies and identifies technologies that are deemed unlikely to result in cost-effective energy savings in the future. Through manufacturer-neutral assessments and recommendations based on empirical data, the ET Program presents stakeholders an unbiased perspective on new products and technologies that helps to mitigate market adoption risk. Similarly, the New Program Design Pilot is expected to help in assessing viability of novel programs that have yet to be designed or tested. SCE budgeted funding to explore innovative approaches through pilots in live settings to generate sufficient data from which to draw definitive conclusions. For those pilots that demonstrate viability at scale, SCE will solicit for implementation services.

(e) Access to Capital

SCE expects that by 2027, there will be financing options for a broad cross-section of customers.[88] Market support programs will provide financing that supports residential and non-residential customers through OBF and NFO programs. OBF is an existing program that offers zero-interest loans to non-residential servicing contractors (also known as "Tradepros" in SCE terminology) that are repaid through customer bills. This program, which began in 2010, has demonstrated enough participation and value that SCE proposes to maintain it in this Application period. To complement OBF, SCE plans to launch NFO, a program administered by CHEEF and led by CAEATFA and includes a Residential Energy Efficiency Loan Program, a Small Business Finance Program, and an Affordable Multi-Family Program to provide financing to residential customers and small businesses. Moreover, programs in the Resource Acquisition

[88] SCE is participating in and proposing additional changes to clean energy financing overall within R.20-08-022, which may have impacts upon the way its EE measures are ultimately financed or owned by customers.

segment will offer financing and direct installation options for customers to overcome financial barriers.

c) Market Support Segment Metrics

The CAEECC MSMWG recommended a series of metrics for each of the five sub-objectives for the Market Support segment of the portfolio. For each sub-objective, SCE will continue to track and collect data on the applicable existing metrics, as well as collect data, at the appropriate time in the program process, to track newly established metrics.

In addition to the descriptions below (taken directly from the MSMWG Report,[89]), SCE-03, Attachment A, Appendix 25, Table 18.2 sets forth specific metrics associated with the Market Support segment, along with targets, collection methodology, and historical comparisons for which SCE expects results in the 2024-2027 Application period.

(1) Demand

The CAEECC MSMWG did not find any currently applicable existing metrics in this category.

CAEECC MSMWG recommended new metrics for Sub-Objective #1:

- Metric 1.A: Number and percentage increase/decrease of inquiries and/or requests for information on EE products and services through relevant Market Support programs
- Metric 1.B: Number and percentage increase/decrease of customers receiving information, education, or outreach on EE projects, products, and services through relevant Market Support programs
- Awareness, Knowledge, Attitudes, Behavior (AKAB) Survey to IOU Customers[90], which includes:
    - Percentage of customer sample aware of EE product/service (Awareness)

[89] For more information, *see also* CAEECC's Proposal, which can be found at CAEECC MSMWG Final Report - https://www.caeecc.org/market-support-metrics-wg.

[90] Any AKAB surveys for the Market Support segment should be led by single entity, such as a contractor to the Energy Division or lead PA. The AKAB surveys should be performed in a timely fashion with granularity down to applicable PAs.

- Percentage of customer sample that is knowledgeable of EE product/service's benefits (Knowledge)
- Percentage of customer sample that is interested in obtaining an EE product/service (Attitude)
- Percentage of customer sample that has taken action toward obtaining EE product/service (Behavior)
- Percentage of customers that have obtained EE products/services (Behavior)

(2) Supply

The CAEECC MSMWG identified the following existing metrics in sub-objective #2:

- Number of collaborations by Business Plan sector to jointly develop or share training materials or resources.
- Number of participants by sector
- Percentage of participation relative to eligible target population for curriculum
- Percentage of total WE&T training program participants that meet the definition of disadvantaged worker.
- Percentage of incentive dollars spent on contracts with a demonstrated commitment to provide career pathways to disadvantaged workers
- Number of C&WR participants who have been employed for 12 months after receiving the training

Recommended new metrics for Sub-Objective #2:

- Metric 2.A: Number of Contractors (that serve in PA service area) with knowledge and trained by relevant Market Support programs to provide quality installations that optimize EE
- Metric 2.B: AKAB Survey to market actors around capability and desire to supply
  - Percentage of market actors aware of energy efficient products and/or services that can be supplied to customers (Awareness)

- Percentage of market actors knowledgeable of energy efficient products and/or services that can be supplied to customers (Knowledge)
- Percentage of market actors that are interested in supplying energy efficient products and/or services to customers (Attitude)
- Percentage of market actors that have supplied energy efficient products and/or services to customers (Behavior)

- Metric 2.C: AKAB Survey to market actors around increased ability, capability, and desire to realize quality installations
  - Percentage of market actors aware of what is required to perform/ensure quality installation of energy efficient products and/or services that optimize EE savings (Awareness)
  - Percentage of market actors knowledgeable of how to perform to perform/ensure quality installation of energy efficient products and/or services that optimizes EE savings (Knowledge)
  - Percentage of market actors that are interested in performing/ensuring quality installation of energy efficient products and/or services that optimize EE savings (Attitude)
  - Percentage of market actors that have performed/ensured quality installation of energy efficient products and/or services that optimizes EE savings (Behavior)

(3) Partnerships

The CAEECC MSMWG did not find any currently applicable existing metrics in Sub-Objective #3.

Recommended new metrics for Sub-Objective #3:

- Metric 3.A: Number of EE customers/market actors reached through partner networks and partner communications channels
- Metric 3.B: Assessed value of the partnership by partners
- Metric 3.C: Percentage of partners that have taken action supporting EE

Recommended new indicators for Sub-Objective #3:

- Indicator 3.A: Number of partners by type and purpose
- Indicator 3.B: Dollar value of non-ratepayer in kind funds/contributions utilized via partnerships

(4) Innovation and Accessibility

The CAEECC MSMWG identified the following existing metrics for sub-objective #4:

- All ET Program Common Metrics

Recommended new metrics for Sub-Objective #4:

- Metric 4.A: Number of new, validated technologies (outside of ET Programs) recommended to CalTF
- Metric 4.B: Number of market support projects (outside of ET Programs) that validate the technical performance, market and market barrier knowledge, and/or effective program interventions of an emerging/under-utilized or existing energy efficient technology
- Metric 4.C: Cost effectiveness of a technology prior to Market Support programs relative to cost effectiveness of a technology after intervention by the Market Support programs (percent change in cost effectiveness)
- Metric 4.D: Percent market penetration of emerging/under-utilized or existing EE products or services
- Metric 4.E: Percent market participant aware of emerging/under-utilized or existing EE products or services
- Metric 4.F: Aggregated confidence level in performance verification by product, project, and service (for relevant programs)

Recommended new indicators for Sub-Objective #4:

- Indicator 4.A: Number of providers for performance verification services

(5) Access to Capital

The CAEECC MSMWG identified the following existing metrics in for sub-objective #5:

- Participant data, e.g. credit score, census tract income, CalEnviroScreen Scores of areas served, zip code
- Comparisons between market-rate capital vs. capital accessed via EE programs, e.g. interest rate, monthly payment

Recommended new metrics for Sub-Objective #5:

- Metric 5.A: Total projects completed/measures installed and dollar value of consolidated projects
- Metric 5.B: Ratio of ratepayer funds allocated to private capital leveraged
- Metric 5.C: Differential of cost defrayed from customers (e.g., difference between comparable market rate products and program products)
- Metric 5.D: AKAB Survey to IOU Customers
- Percentage of market participants aware of capital access opportunities for investments in energy efficient projects, products, and/or services (Awareness)
- Percentage of market participants knowledgeable about capital access opportunities for investments in energy efficient projects, products, and/or services (Knowledge)
- Percentage of market participants interested in leveraging capital access opportunities for investments in energy efficient projects, products, and/or services (Attitude)
- Percentage of market participants that were unable to take action due to access to capital or affordability of energy efficient projects, products, or services (Behavior)

d) Market Support Segment-Specific Coordination

SCE expects its Market Support programs to coordinate closely within the segment and across the Resource Acquisition, Equity, and C&S segments. For example, ET Programs and WE&T programs will coordinate as they have done so historically by collaborating to identify, develop, and support relevant courses on emerging technologies, their design, installation, operations, and maintenance. SCE expects coordination between Market Support and Equity segments to be mutual. For example, WE&T training classes may provide contractors with required information for implementation of Equity programs, and Equity programs may inform

stakeholders of WE&T classes, where appropriate. For Resource Acquisition programs, market support will provide the foundation upon which cost-effective resource offerings are built. Market support programs will be a funnel for contractors, technologies, funding, and expertise that will support the future growth of the Resource Acquisition segment. Implementers of Market Support programs will work closely to ensure that their activities are accurately reflecting current C&S and will assist, where appropriate, in developing local C&S activities. For example, SCE's local Code Compliance program will leverage the Centers to deliver code compliance training to local code enforcement officials.

The Market Support segment will also provide focused support for low-income and HTR customers. These programs will engage with CBOs to leverage their unique skillsets to ensure adequate participation in these programs. For example, the SWEETP will provide insight into technical and non-technical opportunities and challenges for HTR customers, and these insights will guide the scope and type of emerging technology projects to target HTR customers. WE&T programs will utilize CBOs to deliver training to communities and individuals that may have historically been underrepresented in these programs.

SCE also expects that these programs will be closely coordinated through regular communications with similar REN programs to minimize duplication and maximize the impact of these programs, described further in the Joint Cooperation Memos with each of the RENs.[91] For example, SCE intends to work closely with 3C-REN, SoCalREN and the newly formed I-REN to deliver WE&T training where appropriate to these regions.

Market Support programs will also coordinate with the Market Transformation Administrator (MTA) who will conduct Market Transformation Initiatives (MTIs). According to CAEECC MSMWG's recommendations, market support is distinct from market transformation in that MTIs seek to reduce barriers "to a specific technology and/or behavior solution."[92]

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[91] *See* 2022 Cooperation Memos are *available at* https://www.caeecc.org/joint-cooperation-memos.

[92] CAEECC-Hosted Market Support Metrics Working Group Report and Recommendations to the California Public Utilities Commission and the EE Program Administrators, pp. 21-22, *available at* https://www.caeecc.org/market-support-metrics-wg

PG&E is completing the solicitation process for the MTA as part of the Market Transformation budget. Once the MTA is selected and a design has been finalized, SCE will work with the MTA and PG&E to ensure that there is no overlap or duplication of effort. For example, SCE may elect to submit an intervention as an MTI rather than through ET or Resource Acquisition programs, if it is more appropriate to that design (such as longer duration for market maturity, cost-effectiveness, or potential for impact).

ET Programs also include emerging technology focused pilots, which are projects focused on identifying market barriers for high-impact technologies and conducting pilots through installations to identify interventions that overcome market barriers. The emerging technology focused pilots will ultimately advise if and how high-impact technologies may be integrated within the EE resource programs. ET Program findings will be disseminated to the MTA as well as other resource program designers. Wherever feasible, ET Programs will coordinate to provide support to the Commission's Market Transformation Framework and coordinate with the future Market Transformation Administrator to avoid duplication of effort.

Lastly, SCE expects the Market Support programs to be coordinated where possible with SCE's non-EE programs. This includes coordination with the IQPs, such as the Energy Savings Assistance (ESA) Program. For example, the ESA program has ESA-specific training that participants in the EE WE&T training would likely find beneficial. The Market Support programs could also provide leads for enrollment in the California Alternate Rates for Energy Program (CARE) and the Family Electric Rate Assistance Program (FERA) rates. SCE will cross promote other programs such as Charge Ready programs and the Self-Generation Incentive Program (SGIP) equity programs, where appropriate.

4. Equity Segment

a) Equity Segment Budget

As the Commission has recognized, SCE anticipates that not all customers will be able to take advantage of resource programs, and thus SCE will implement EE programs focused on equity to help ensure comprehensive support and opportunities for all customers to become more

energy efficient. SCE's Resource Acquisition segment programs will serve, but not focus on, HTR and disadvantaged populations. SCE will also implement programs that specifically target populations that qualify for additional support and incentives based on equity considerations. Table IV-44 lists the total Equity segment budget request for 2024-2027, with 2023 budget included for reference. For more detailed information about the proposed budgets for each Equity segment program, see SCE-03, Attachment A, Appendix 10, Table 7.1.

Table IV-44
SCE Equity Segment Budget Request for 2024-2027
(in millions)

Segment	2023	2024	2025	2026	2027	Total (2024-2027)
Equity Segment Total	$13	$31	$32	$33	$34	$130

The Equity segment budget includes allocations for five local Equity programs and statewide WE&T C&WR. SCE built a bottom-up forecast with specific details about costs and expected results for these local Equity programs. Budgets are estimates because SCE plans to administer these programs through contracts with third-party implementers. Thus, budgets will be further refined after SCE has executed contracts for these programs. For the WE&T C&WR Program, SCE has included budget and forecasts provided to it by the statewide lead PA, PG&E. For more details on the forecast methodology, see Section III.B.

b) Equity Segment Strategies, Goals, and Outcomes

(1) Equity Segment Strategies

In the Equity segment, SCE has proposed five distinct programs, one for each market sector to ensure maximum coverage across SCE's service area. SCE expects selected third-party implementer(s) to provide extensive community engagement, target low-education households, and employ contractors within communities that will be served by these programs. SCE expects

this segment to be best served through direct installation/turnkey delivery. SCE expects to utilize the following intervention strategies for the Equity segment:

Table IV-45
SCE Equity Market Intervention Strategies

Strategy	Description	Applicable Sectors
Delivery Strategies		
Downstream Customer Incentives	Payments designed to encourage customers to adopt and install EE measures. Customer incentives will continue to be available to customers and will include incentives to comply with EE codes (i.e., "to code") and to go beyond codes (i.e., "above code").	All
Delivery Approaches		
Direct Install / Turnkey	Access to Direct Install or Turnkey Programs allows customers to benefit because these programs remove technical and search burden by providing vendors that have already been vetted and can be leveraged for customer touch points.	All
Outreach Strategies		
Intelligent Outreach	A targeted marketing approach using analytic tools to deliver specific messages to specific customer groups in order to increase EE adoption.	All
Partnering	Identification and recruitment of key partners and market actors needed to support and reach various customer groups and drive adoption of EE.	All
HTR, Disadvantaged, and Underserved Community Outreach	Outreach to HTR, disadvantaged and underserved communities and relax certain program parameters that hinder EE program participation.	All
Enabling Strategies		
Financing	Designed to assist customers in acquiring the capital necessary to procure and install EE measures.	All
Single Point of Contact	Streamline program offerings for market actors in order to reduce burden to participate in program offerings.	All
Technical Assistance	Professional assistance with EE project identification (e.g., audits and virtual audits), development, and management that will facilitate the implementation of EE and IDSM projects.	All
Information Strategies		
Building Energy Benchmarking Data Access	Leverage customer data to benchmark facilities and provide a roadmap for EE retrofit opportunities; allow sub-metering costs to be included in project costs; identify solutions to help identify savings potential and manage energy use.	Commercial Industrial Agricultural Public
Customer Data Access	Green Button "Download My Data" function for access to usage from individual accounts and Green Button "Connect My Data" function for customer to authorize SCE to send their energy usage and billing data to registered third parties.	All

(2) Equity Segment Goals

The CAEECC Equity Metric Working Group (EMWG) met to develop objectives and metrics for the Equity segment. In the final report, the EMWG recommends the following primary Objective for the Equity segment:[93]

For HTR, disadvantaged, and/or underserved individuals, households, businesses, and communities: address disparities in access to EE programs and workforce opportunities;[94] promote resilience, health, comfort, safety, energy affordability, and/or energy savings;[95] and reduce energy-related GHG and criteria pollutant emissions.[96]

There is no specific savings or TSB goal for the Equity segment.

(3) Equity Segment Outcomes

The Equity segment of the Application is intended to drive differentiated Equity programs to address key customer, technology and policy needs of HTR, disadvantaged, and underserved customers. These programs are expected to serve as a tool to assist customers in managing their energy needs. As customers transition to time-of-use rates, emerge from a global pandemic and face increasing customer choice with the introduction of fuel substitution efforts at scale, customers need programs, support, and resources to navigate their choices, increase their energy efficiency, and meet their energy needs. SCE anticipates that Equity segment programs will deliver some savings toward the TSB goals set by the Commission, but savings achievement and cost effectiveness are not the primary goals of these programs.

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93 CAEECC Equity Metrics Working Group Final Report, *available at* https://www.caeecc.org/equity-metrics-working-group-meeting.

94 The term "workforce opportunities" includes, but is not limited to, the EE supply chain, companies/non-profits that deliver efficiency services, as well as the workers who implement the work within Equity segment programs. This language does not presume that PAs must create programs to address all or some of the items listed here, nor does it infer that we have consensus that this segment should have workforce specific programs. The purpose of the "*" is to clarify what the term "workforce opportunities" encompasses. Any substantive issues should be addressed within the context of the workforce metric(s).

95 Energy affordability pertains to bill savings achieved through increased efficiency in energy use, delivering the same or improved level of service with a lower cost to the customer.

96 The term "criteria pollutant" refers to: ground-level ozone, particulate matter, carbon monoxide, lead, sulfur dioxide, and nitrogen dioxide, *available at* https://www.epa.gov/criteria-air-pollutants.

SCE's Equity segment programs will also aim to support customers to achieve more EE in a manner tailored to their needs. SCE proposes equity-focused programs across all sectors to reach all underserved categories of customers. SCE's equity programs will complement Resource Acquisition and Market Support programs, by using additional targeted and policy-oriented approaches to achieve greater EE for customers that otherwise would not have access to EE measures. Additionally, the Equity segment of the portfolio will be critical to introduce new offerings to support the scaling of emerging technologies or nascent technologies in the marketplace that advance the State's policy needs and customers' energy needs.

The Equity segment programs will also strive to support contractors that live and work in areas targeted by these programs. For Equity segment programs, SCE will require implementers to track metrics about their employees and contractors in their programs, and SCE encourages implementers to work with under-represented contractors, to the extent possible.

c) Equity Segment Metrics

SCE's Equity segment aligns with the goals established in the ESJ Action Plan.[97] This plan, released by the Commission on February 21, 2019, outlines approaches for consideration by PAs to address customers within DACs, vulnerable communities and HTR geographies. The ESJ Action Plan outlines nine goals and describes action items to meet these goals and drive the CPUC and the State toward meeting ESJ goals and objectives. Consistent with D.21-05-031,[98] this segment will improve access to EE and help contribute to Goal 1 (Consistently integrate equity and access considerations throughout CPUC regulatory activities), Goal 2 (Increase investment in clean energy resources to benefit ESJ communities, especially to improve local air quality and public health), and goal 5 (Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and

[97] *See* ESJ Action Plan Version 1.0 *available at* https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/environmental-and-social-justice.pdf. Version 2.0 is currently in draft form and incorporating stakeholder feedback.

[98] *See* D.21-05-031, pp. 14-15.

benefit from CPUC programs) of the ESJ Action Plan.[99] This segment of the portfolio represents approximately eight percent of the 2024-2027 budget and contributes to achieving long-term energy, environmental, and equity objectives. This budget was developed using a bottom-up analysis (as described in Section III.A above) for each program while being mindful to stay below the 30% of the entire portfolio for Market Support and Equity segments combined.[100]

SCE's primary objective for the Equity segment, as recommended by the EMWG, targets HTR, disadvantaged, and/or underserved individuals, households, businesses, and communities.[101] EMWG developed metrics for the Equity segment along the following three categories:

- Metrics and Indicators to Measure Who and How Target Populations are "Served"
- Metrics and Indicators to Assess Energy and/or Cost Savings in Targeted Populations
- Indicator to Assess "Holistic" Benefits

Below SCE describes each metric:[102]

1. Metrics and Indicators to Measure Who and How Target Populations are "Served"

The following are key metrics to measure the populations being served, as well as how those target populations are serves. The term "equity-targeted", used throughout the CAEECC report, refers to populations targeted by the Equity segment programs, which are DAC, HTR and underserved populations.[103]

- **Metric A.1:** Total number of residential (SF or MF unit) equity-targeted households served by the Equity programs

[99] ESJ Action Plan, pp. 15-17.

[100] *See* D.21-05-031, OP 4

[101] For the specific Equity segment metrics, with expected results for 2024-2027, see SCE-03, Attachment A, Appendix 23, Table 18.2.

[102] *See also* CAEECC EMWG Final Report, *available a*t https://www.caeecc.org/equity-metrics-working-group-meeting**.**

[103] *See* D.21-12-031, pp. 14-15.

- **Metric A.2:** Total number of MF equity-targeted buildings served by the Equity programs
- **Metric A.3:** Total number of Agricultural or Industrial equity-targeted customers served by the Equity programs
- **Metric A.4:** Total number of equity-targeted public facilities and equipment or community projects served by the Equity programs
- **Metric A.5:** Total number of SMB equity-targeted participants served by the Equity programs.
- **Metric A.6:** Total number of companies/non-profits served by Equity segment programs
- **Metric A.7:** Total number of contractors/workers implementing Equity segment programs
- **Metric A.8:** Total percent of contractors and/or workers that are disadvantaged workers or otherwise underrepresented, who are directly involved in implementing Equity segment programs
- **Metric A.9:** Total percent of companies/non-profits who are Diverse Business Enterprises (DBE)[104] or otherwise underrepresented (e.g., BIPOC-owned)[105] with contracts to implement Equity segment programs
- **Metrics and Indicators to Assess** Energy **and/or Cost Savings in Targeted Populations**

The following are key metrics and indicators to measure who and how the targeted populations are being served.

- **Metric B.1:** Expected first-year bill savings in total $ for equity-targeted participants

[104] CAEECC EMWG uses the term DBE. However, SCE will align with the CPUC General Order (GO) 156 which uses the term "WMDVLGBTBE" means a women-owned, minority-owned, disabled veteran-owned and/or LGBT-owned business enterprise.

[105] BIPOC stands for Black, Indigenous, and People of Color.

- **Indicator B.2:** Direct Savings from **Equity** segment programs, using existing TSB methodology including:
    - GHG reductions (tons)
    - Total kWh savings
    - Total therm savings
    - Total kW savings

2. Indicator to Assess "Holistic" Benefits

The EMWG proposed an indicator intended to measure holistic, or "combined total benefits," of the Equity segment programs. This indicator is intended to explore alternative ways to assess both energy and non-energy benefits together – under a "combined total benefits" metric – that can be used for programs in the Equity segment.

- **Indicator C.1: Benefits** to participants and to society as a whole. This indicator includes the following in $ and/or units until units can be monetized.
    - Energy and climate benefits (monetized within TSB)
    - Health "counts of participants receiving this benefit" until we can monetize.
    - Comfort - in "counts of participants receiving this benefit" until we can monetize.
    - Safety - in "counts of participants receiving this benefit" until we can monetize.
    - Economic or other "non-energy benefits" (as proposed by the PAs or program) in dollars or "counts of participants receiving this benefit" until we can monetize.

d) Equity Segment-Specific Coordination

Community engagement is a key principle of all SCE's Equity programs. SCE expects that community engagement will (1) occur during program design and to identify community

needs and solutions, (2) during program implementation, and (3) during program assessment. SCE will engage with the community during the development of the program solicitation to ensure that community needs are accurately captured. SCE also expects that the chosen third-party implementer will engage with the community prior to designing and proposing programs for the Equity segment.

SCE also expects these equity-focused programs to coordinate closely with the Resource Acquisition and Market Support segments. For example, Resource Acquisition segment programs likely will also serve some equity-eligible customers in the normal course of those programs. As noted in the Market Support section above, the Equity and Market Support segments will provide mutually beneficial support to each other. SCE also intends to closely coordinate any Equity programs with similar REN programs to minimize duplication and maximize the impact of these programs.

Lastly, SCE expects these programs to be closely coordinated with SCE's non-EE programs. This includes close coordination with the IQP, such as the ESA Program which may be the most appropriate program for customers depending on their eligibility to participate in ESA. The Equity programs could also provide a warm handoff for enrollment in the CARE and FERA rates. SCE will also cross promote other programs such as the Charge Ready Programs and the SGIP equity programs, where appropriate.

5. Codes & Standards

a) C&S Segment Budget

The following table provides the budget request for the C&S segment for 2024-2027, with 2023 included for reference. Direct Implementation budgets were held flat for 2024-2027, as the C&S subprograms have been increasing funding to accommodate expanded scope since 2018, when the CEC signaled that future codes would be focused on decarbonization by moving to a more GHG-based metric that promotes electrification and grid harmonization. SCE expects to efficiently deploy C&S strategies using the budget requests, inclusive of Direct

Implementation and Labor, as highlighted in the table below. For more detailed information about budgets for each proposed C&S program, please see SCE-03, Attachment B, Appendix 1.

Table IV-46
SCE C&S Segment Budget Request for 2024-2027
(in Millions)

Segment	2023	2024	2025	2026	2027	Total (2024-2027)
C&S Segment Total	$17	$19	$20	$20	$20	$79

b) C&S Segment Strategies, Goals, and Outcomes

(1) Segment Strategies

SCE recognizes the importance of C&S in the pursuit of multiple EE and decarbonization policy objectives. Specifically, the C&S program aims to strengthen or develop regulations to promote and support EE, water efficiency, electrification, GHG reduction, alternative fuel vehicles, grid flexibility and sustainability, indoor air quality, and equity considerations.

- **Planning and Coordination**
  - Support building industry on meeting new construction Title 24 Part 6 and 11 requirements.
  - Conduct research, data collection, and market analysis, including lab testing, field tests, field surveys, tear down analyses, collection of cost data, etc.
  - Lead the California Building Energy Modeling (CalBEM) organization, to support strategies to reform to energy modeling practices in California and improve and update the California Building Energy Code Compliance (CBECC) compliance software.
  - Coordinate and collaborate with other programs on flexible demand that maximize the GHG reductions.
  - Coordinate and collaborate with affordable housing stakeholders to optimize benefits of decarbonization to low-income customers.

- Coordinate with internal and external Transmission & Distribution (T&D) organizations to support the grid harmonization objectives in Title 24 that will be needed to support an increase load in new all-electric buildings.
- Coordinate with statewide and local EE resource and non-Resource Acquisition programs, RENs, and the selected MTA.

- **Compliance Improvement**
  - Coordinate with statewide IOUs and other stakeholders to understand each market actor's unique workflow and their barriers to energy code compliance.
  - Determine the appropriate performance improvement solution, and develop and deploy appropriate training, tools, and resources necessary to improve compliance workflow across the project delivery process and supply chain.
  - Perform outreach in the marketplace when there is a lack of awareness and understanding of code requirements and/or compliance benefits.
  - Deploy training and support resources to enhance technical understanding of emergent compliance pathways for electrified end-use technologies and other building decarbonization strategies.
- **Reach Codes**
  - Support local adoption of reach codes that target higher levels of EE, distributed energy resources (DERs), electric vehicles (EVs), EV infrastructure, and GHG reduction than otherwise applicable codes.
  - Lead collaboration efforts with CEC, local government staff, and other stakeholders to expand beyond EE performance-based reach codes to include existing buildings, renewables, EVs, and EV infrastructure, DERs, DR, and water saving measures.
  - Support collaboration efforts with CEC, local government staff and other stakeholders to increase awareness of the value of Reach Codes.

- Lead strategic planning activities within the EE portfolio to identify "code preparedness" priorities for the building and appliance code advocacy programs.

- **Statewide Building Codes, Statewide Appliance Standards, and Statewide National, and International Standards Advocacy subprograms**

  Refer to PG&E's application for more detail as these subprograms are administrated by PG&E per D. 18-05-041.

  - Code Readiness Subprogram

    This subprogram is specific only to PG&E with much of the similar work completed through SCE's C&S Program (under P&C and Reach Codes subprograms), SWEETP, Emerging Market & Technologies (EM&T), and in conjunction with EE incentives programs, EM&V, and other internal SCE organizations.

  - Decarbonization Subprogram

    This subprogram is specific to PG&E with much of the similar work completed through SCE's C&S Program (under P&C and Reach Codes subprograms), ET Programs, EM&T, and other internal SCE organizations.

(2) Segment Goals

The C&S program is expected to move California toward its carbon neutrality goals through a variety of market interventions.

- **Planning and Coordination**
  - Accelerate the progress toward California's deep decarbonization goals of having "zero-emission buildings" (AB 3232), which bring additional benefits for enhancing indoor air quality and other health benefits, that integrate with a demand flexibility (SB 49) strategy for optimal use of on-site renewable generation while harmonizing with the T&D capacity and reliability.

- Manage and support Title 24 compliance software updates, the CalBEM organization, grid impact simulations, and alternative metrics research.

- **Compliance Improvement**
  - To ensure that the energy and GHG savings potential of appliance and building energy code measures are realized as market participants incorporate them properly into their projects and products.
  - To streamline the process of Energy Code compliance via tools that improve accuracy while reducing effort.
- **Reach Codes**
  - Accelerate market acceptance and adoption of higher energy efficient building standards, decarbonization codes, and alternative compliance paths by local jurisdictions.
  - Track all reach codes related activities by local jurisdiction and provide technical support to jurisdiction staff as requested.
- **Statewide Building Codes, Statewide Appliance Standards, and Statewide National, and International Standards Advocacy subprograms:**

  Refer to PG&E's application for more detail, as these subprograms are administrated by PG&E per D.18-05-041.
  - Code Readiness Subprogram

    This subprogram is specific only to PG&E with much of the similar work completed through SCE's C&S Program (under P&C and Reach Codes subprograms), SWEETP, EM&T, and in conjunction with EE incentives programs, EM&V, and other internal SCE organizations.
  - Decarbonization Subprogram

    This subprogram is specific to PG&E with similar work completed through SCE's C&S Program (under P&C and Reach Codes subprograms), SWEETP, EM&T, and other internal SCE organizations.

(3) Segment Outcomes

SCE's three local C&S subprograms each has its own set of outcomes that collectively strive to decarbonize the built environment.

- **Planning and Coordination**
  - Characterization of key technologies along Technology readiness, Market readiness, and Program readiness levels.
  - Achievement of coordination among energy modeling software stakeholders through the CalBEM organization and support the CEC's updates to Title 24 compliance software.
- **Compliance Improvement**
  - Demonstrated workforce that is better able to integrate energy code requirements and standards into their project work.
  - Achievement of standards in future building codes that have been vetted by subject matter experts to ensure practical enforceability address potential compliance challenges.
- **Reach Codes**
  - Successful adoption of reach code ordinance(s) by local jurisdictions for meeting their GHG reduction and energy related goals, including but not limited to DERs, EVs, and EV charging.
- **Statewide Building Codes, Statewide Appliance Standards, and Statewide National, and International Standards Advocacy subprograms**

  Refer to PG&E's application for more detail, as these subprograms are administrated by PG&E per D.18-05-041.
  - Code Readiness Subprogram

    This subprogram is specific only to PG&E with similar work completed through SCE's C&S Program (under P&C and Reach Codes subprograms),

SWEETP, EM&T, and in conjunction with EE incentives programs, EM&V, and other internal SCE organizations.

- Decarbonization Subprogram

  This subprogram is specific to PG&E with much of the similar work completed through SCE's C&S Program (under P&C and Reach Codes subprograms), SWEETP, EM&T, and other internal SCE organizations.

c) C&S Segment Metrics

Although not a widget-based program, C&S has identified metrics for each subprogram by which to measure success.

- **Planning and Coordination**
  - Number of technologies with readiness levels that are tracked in accordance with CEC priorities. Readiness levels will be presented to CEC and CPUC annually, to show how the market continues to transform.
  - Number of initiatives to support advancing readiness levels. Minimum of three active initiatives per year.
  - Completed annual Market Readiness status reports.
  - Number of Events to support the focus elements of 1) Decarbonization; 2) Strategic Planning and Coordination; 3) Grid Harmonization; 4) Code Harmonization; and 5) Program Coordination. Includes participating in CARB and South Coast Air Quality Management District (AQMD) meetings and workshops.
- **Compliance Improvement**
  - Number (#) of classes offered on topics of Energy Code standards, requirements, and modeling protocols
  - Number (#) of participants attending scheduled classes

- Percentage (%) knowledge swing, as self-reported by attendees who indicate that they are better prepared to integrate Energy Code requirements into their job tasks

- **Reach Codes**
  - Number (#) of local governments that participate in workshops regarding best practices for adoption and implementation of reach codes
  - Number (#) of local governments that receive customized technical consultation services and/or cost-effectiveness studies from the reach code "toolkit" that support achieving local GHG or energy related goals.
- **Statewide Building Codes, Statewide Appliance Standards, and Statewide National, and International Standards Advocacy subprograms**

  Refer to PG&E's application for more detail, as these subprograms are administrated by PG&E per D.18-05-041.
  - Code Readiness Subprogram

    This subprogram is specific only to PG&E. SCE conducts this work within our existing C&S local subprograms (P&C and Reach Codes), SWEETP, EM&T, and in conjunction with EE incentives programs, EM&V, and other internal SCE organizations.
  - Decarbonization Subprogram

    This subprogram is specific to PG&E. SCE conducts this work within our existing C&S local subprograms (P&C, Compliance Improvement, and Reach Codes), ET Program, EM&T, and other internal SCE organizations.

d) Segment-specific Coordination

SCE's C&S program coordinates across many different internal and external organizations, state agencies, and other stakeholder groups.

- **Planning and Coordination**

- Greater coordination with other state agencies such as the CARB, Building Standards Commission (BSC), Department of Health Services (DHS) on topics such as: embodied carbon, low-global warming climate refrigerants, distributed energy resources (DER) control strategies to maximize renewable energy use and allow greater grid harmonization, EV charging infrastructure, induction cooktops, etc.
- Engagement and coordination among energy modeling stakeholders through the CalBEM organization, including energy simulation advocates, utilities, practitioners and designers, software developers, standards and research entities, regulatory institutions, and municipalities.

- **Compliance Improvement**
  - Statewide IOU coordination to ensure a consistent set of resources and offerings that address the needs of market actors throughout California.
  - Collaboration with the RENs to ensure local coordination of training and stakeholder education.
  - Partnerships with professional associations and non-governmental organizations to reach target stakeholders and improve the reach of available resources and training.
- **Reach Codes:** Lead collaboration efforts with CEC, local governments, RENs, and other stakeholders to accelerate higher local EE code, DER and EV adoption, and GHG reduction.
- **Statewide Building Codes, Statewide Appliance Standards, and Statewide National, and International Standards Advocacy subprograms[106]:**
  - Code Readiness Subprogram: This subprogram is specific only to PG&E. SCE conducts this same work in our local C&S subprograms (P&C, Compliance

[106] Refer to PG&E's application for more detail, as these subprograms are administrated by PG&E per D. 18-05-041.

Improvement, and Reach Codes), SWEETP, EM&T, and in conjunction with EE incentives programs, EM&V, and other internal SCE organizations.

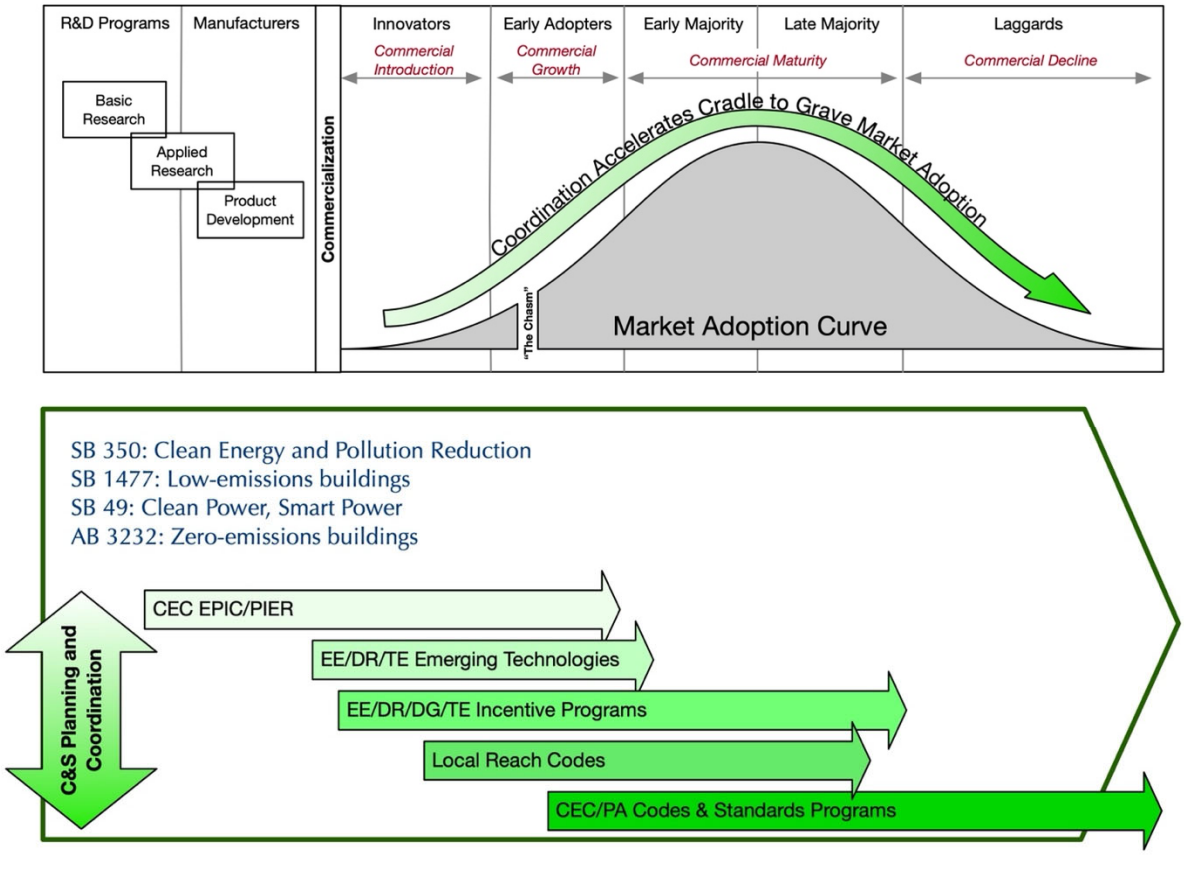
- Decarbonization Subprogram: This subprogram is specific to PG&E. SCE already conducts this work in our existing C&S subprograms (P&C, Compliance Improvement, and Reach Codes), SWEETP, EM&T, and other internal SCE organizations.

B. Sector Strategy

The EE ecosystem encompasses multiple technology markets, each with unique barriers, program interventions, and market actors. Throughout California's 50-yearlong effort to reduce energy use, stemming from the oil crisis in the 1970s, California customers have funded the development and maintenance of a spectrum of programs that address different market challenges that face an energy-efficient technology at each stage in its lifecycle. The figure below shows five stages of the market adoption curve for a prototypical technology as it becomes commercially available, achieves mass market adoption, and gradually declines as the market becomes saturated. In the bottom of the figure, customer-funded programs are mapped to different segments of the market adoption curve, showing where these programs have their primary activities.

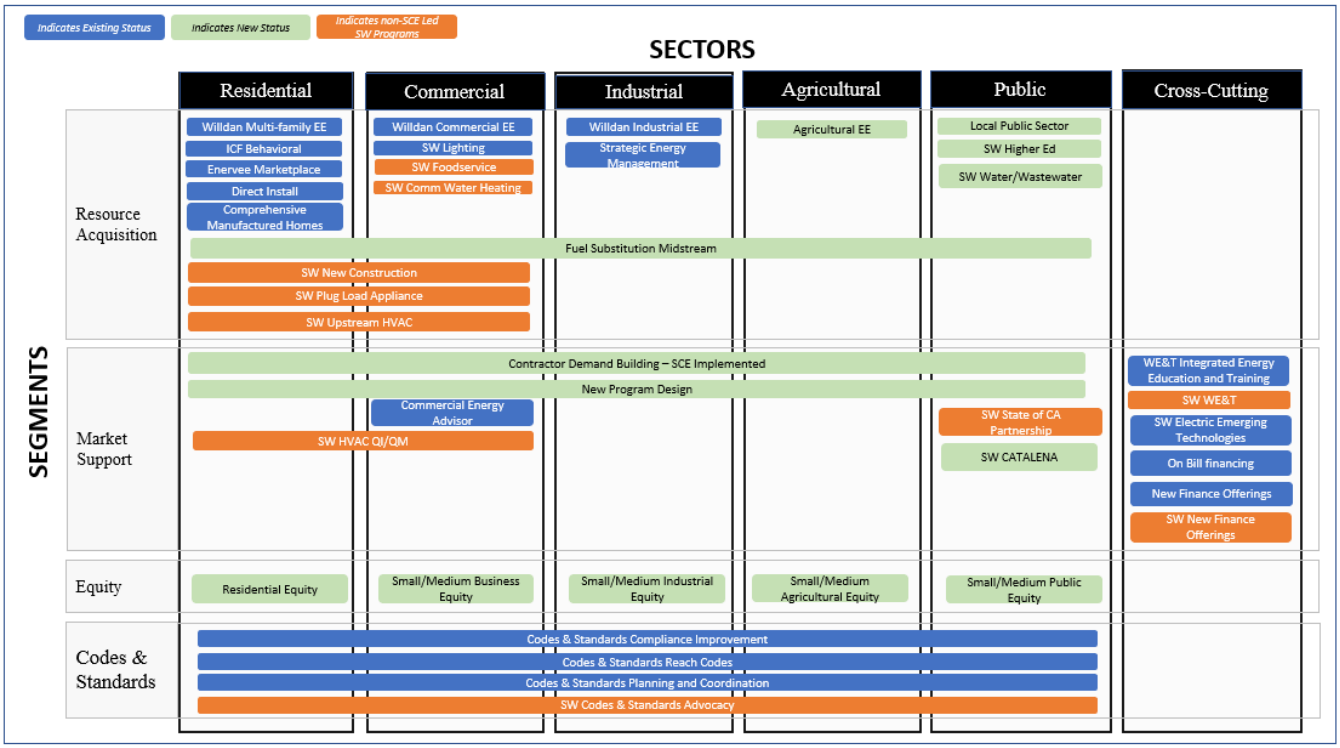
All together, these customer-funded programs achieve an acceleration and transformation of the product's unique market. However, the coordination across these programs is not systematic. In some cases, coordination is implicit, in that widespread market adoption is usually desirable prior to adoption of a technology into code, and Resource Acquisition programs help promote widespread adoption. While progress has been made in coordination between some of these programs, a new approach will be required to identify and track the changing market needs to create opportunities to share data and learnings across customer-funded interventions that may otherwise be lost, delaying the acceleration of market adoption.

Figure IV-9
Customer-funded programs address market barriers throughout the product's market adoption cycle



As discussed in Section IV.A above, SCE's portfolio has been composed along segment and sector dimensions so that strategic approaches to addressing opportunities can be catered to meet specific requirements within each intersection as depicted in Figure IV-10 below.

Figure IV-10
Program Alignment Across Sectors and Segments



It is important to point out that segmentation is inextricably linked across sectors within this portfolio framework and discussion of one requires co-dependency on the other and vice versa. A simple example of this linkage can be illustrated through the Resource Acquisition segment whose primary strategic objective lies in attainment of cost-effective TSB. However, from a sector perspective, there are nuances and complexities within each sector that merit differentiated strategies and approaches. For instance, an agricultural customer has energy requirements that differ quite substantially when compared to, say, a commercial office building.

SCE's portfolio aligns with the six sectors established in D.15-10-028: Residential, Commercial, Industrial, Agricultural, Public, and Cross-cutting.[107] The Cross-Cutting sector includes WE&T, ET, C&S, and Financing programs. Sectors may contain a combination of Resource Acquisition, Market Support, and Equity programs that employ different intervention

[107] Sectors defined, per D.15-10-028 p. 47, as: Residential, Commercial, Industrial, Agricultural, Public, and Cross-cutting.

strategies to meet specific outcomes for a given sector. This matrixed arrangement is by design and allows for optimal coverage within each sector to ensure future viability (Market Support) and equitable participation (Equity) in addition to TSB and kW/kWh savings (Resource Acquisition). Budgets for programs were developed using a bottom's up approach. However, most of the budget is in the residential and commercial sectors due to the TSB potential in those sectors and the outcomes of the third-party contracting process. This allocation is consistent with what would be expected from the P&G Study. Each sector is discussed in detail in subsequent sections of this Exhibit.

SCE's overarching strategy for all sectors is based on the solicitation paradigm.[108] Through targeted RFPs, SCE intends to maximize customer participation and coverage such that its goals and outcomes summarized in Figure II-4 are achieved cost-effectively and expeditiously.

For the Four-Year Portfolio Period, SCE and/or third-party service providers will continue using many of the proven and successful intervention strategies in place today while adding new strategies to enhance its portfolio. In some cases, SCE will modify existing sector strategies to increase their effectiveness. For example, SEM is a savings methodology specific to the Industrial sector, however, based on innovative third-party proposals that seek to expand SEM to all sectors, SCE will evaluate its viability and pursue opportunities accordingly. Further, SCE will identify new programs where gaps exist and go to market for innovative and streamlined approaches to fill these gaps. Fuel substitution, for instance, is a core strategic focus across all sectors, and SCE proposes a new midstream program to create incentives for contractors and other tradespeople to evangelize and sell the benefits of electrification specifically focused on HVAC opportunities initially. Lastly, SCE will employ what it calls foundational strategies to ensure broad outreach, customer assistance, and access to data are readily available as summarized in Table III-3 of Exhibit SCE-01.

[108] *See* Section II.A. for details.

1. Residential Sector

SCE's Residential sector is one of the largest in terms of usage, budget, and savings, and can provide some of the key saving opportunities envisioned for SCE's EE portfolio. SCE's Residential sector consists of approximately 4.5 million service accounts, includes approximately 15 million people, and spans eight climate zones. Prior to Covid-19, electricity usage in the Residential sector had been slowly transitioning from historically high demand periods to a flattened demand curve throughout the day. This trend accelerated when Covid-19 hit, forcing a significant portion of the population to alter its work, schooling, and social behaviors. Because more people were in their homes during this period, consumption increased in this sector, as expected. As the pandemic moderates, however, there is an expectation that a gradual shift back to the Commercial sector may occur, but based on industry trends, this new work/study-from-home model may resume indefinitely – permanently altering the usage profiles of the past.

This observation is important to note in light of the P&G study on opportunities for fuel substitution. As the work-from-home population grows, demand for electricity during daytime hours may continue to increase. For instance, on a cool winter day when demand for heating increases to serve more people at home, the requirement for increased EE is compounded if gas heaters are swapped for electric heat pumps. This type of trade-off between increased electricity usage that results from fuel substitution factors heavily in how SCE composes its portfolio to balance requirements for GHG reduction while minimizing impact to the grid with incremental load.

In this section, SCE describes the Residential Sector's goals, objectives, strategies, and coordination efforts within SCE's portfolio for 2024-2027. How this sector interacts within segment aligned programs is also discussed. Program specific information within the Four-Year Portfolio Plan is included in the Program Cards found in SCE-02 Attachment 1.

a) Sector-specific goals, objectives and strategies

Given the tremendous diversity of cultures, education levels, climates, and incomes across SCE's service area, addressing residential customers at scale to influence their energy

usage poses quite a challenge. While traditional intervention approaches have proven effective, the new TSB model, along with aggressive GHG reduction targets, compel PAs to consider new approaches to accelerate progress toward meeting State goals. Fuel substitution presents a sizeable opportunity in the Residential sector, and SCE intends to capitalize on it through a solicited midstream program. SCE will also pursue innovative approaches to addressing this sizeable market through its New Program Design Program. Although it is categorized within Market Support, SCE anticipates that new initiatives emanating from it will eventually contribute meaningful TSB in this sector.

SCE believes in the importance of educating its Residential customers on the importance of EE. The challenge, again, is in reaching them at scale to drive action. One approach, or route to market, that is central to SCE's overall resource acquisition strategy is the leverage of third-party service providers who are contracted to design and deliver EE programs. Through third parties, SCE anticipates an increase in customer engagement that will influence the purchase and installation of highly efficient appliances and help customers adopt behavioral changes that remain at the forefront of customers' daily lives. By empowering customers to realize the value of EE, SCE plans to offer simplified programs that connect customers to appropriate products, services, or solutions that are customized to meet their needs and enable continuous energy management. To be successful in achieving the Residential sector's goals and objectives, SCE will utilize the following key strategies:

- Enable third parties to promote cost-effective programs and solutions
- Simplify programs and offerings
- Create new offerings (where appropriate)
- Focus on increasing adoption of fuel substitution measures
- Support programs that are implemented via Statewide Administrators

(1) Residential Sector Goals

Key goals for the Residential sector include capturing as much cost-effective EE savings as possible to meet TSB targets. Supporting and developing simplified fuel substitution programs

that address barriers to adoption for electrification are central tenets within this sector. It is also important to establish well delineated lines of coordination across offerings with increased emphasis on DAC, IQP, and other equity offerings that can provide proper sector coverage with minimal overlap across other initiatives or filings. Another key goal is to coordinate relevant BE offerings and EE Market Support programs to grow the saturation of fuel substitution measures and provide the correct level of incentives to residential customers.

Table IV-47
Residential Sector TSB Goals (in millions)

Year	Residential Sector TSB
2024	$53
2025	$61
2026	$71
2027	$80

(2) Residential Sector Objectives

The objectives of the Residential sector are to capture cost effective TSB, enable all residential customers to have access to EE information and products, and to develop and grow fuel substitution efforts in order to contribute to SB 350 and Pathways 2045 objectives.

(3) Residential Sector Strategies

SCE's approach to the diverse nature of the sector is to source third parties who will tailor solutions based on customer sub-sectors.[109] SCE and its partners will provide solutions to customers to meet their energy management needs and provide a means for continuous engagement, education, and expertise to help drive deep EE savings. To do so cost-effectively, SCE will support and deploy new fuel substitution programs and tools, enable market participants to design and deliver simple third-party EE Programs, and support statewide administered programs. This strategy will support the state's goals of reaching energy savings

[109] Sub-sectors: single family, MF, manufactured homes, and new construction.

targets, reducing GHG emissions, and supporting customer needs. Interventions include more cost-effective approaches for customers performing retrofits through meter-based, pay-for-performance, and residential direct install offerings. These adjustments may require targeted investment and scale-back of historical approaches such as a downstream deemed program. To drive forward changes needed in the Residential sector, SCE will employ the following overarching strategies to residential sub-sectors to enhance its portfolio:

(a) New Construction

New construction opportunities will be served by the Statewide Residential New Construction Program led by PG&E. Refer to PG&E's application for the strategy to address new construction.

(b) SF and Manufactured Homes:

- Third parties will design and deliver mass market programs to offer scalable EE offerings that include distribution of information about rebates or energy saving technologies or programs (i.e., statewide Plug Load Appliance, statewide HVAC, Marketplace, Home Energy Reports).
- Targeted offerings: Approximately one third of SCE's Residential energy usage is in hotter climate zones (e.g., CZ10, 14, and 15), allowing for targeted offerings focusing on higher energy intensity customers to receive larger utility avoided cost benefits. This approach allows SCE to expand into some cooler albeit more populous areas to capture overall cost-effective savings.

(c) MF Customers

- Smaller MF residences such as duplexes and fourplexes face different needs compared to their larger, more complex, MF community counterparts. Because of variation in investment decision criteria and the diversity of decision-makers, a differentiated approach is required to address this sub-sector. Willdan's Multifamily Energy Efficiency Program seeks to penetrate this sub-sector through traditional

savings methodologies targeting property managers, homeowner association managers, and contractors.

- MF complexes with more units face larger investment decisions and complexities than their smaller counterparts, and many have common areas, making them more akin to commercial facilities than residential homes. For example, the current Multifamily Energy Efficiency Program, contracted with Willdan, will provide comprehensive EE solutions and technical assistance that cover a wide range of services to all MF customers across SCE's service area. The program offers flexible incentive and financing options to MF customers to help eliminate upfront costs and ensure programmatic investment is appropriately sized. The Do-It-Yourself Delivery option for simple in-unit measures helps customers avoid installation costs, which is a desirable solution for DAC/HTR tenants. Further, the program attempts to simplify EE by recommending measures that align with customer's energy profile and reduce the time to payback. Their outreach includes messaging that educates decision-makers and customers about the financial benefits of EE measures, opportunities for IDSM including DR, self-generation, and overall electrification.

b) Sector-Specific Coordination

The Residential sector requires coordination with other sectors and filings. The BE filing and the low-income filings (D.21-06-015) are two salient examples where coordination is required in order to avoid duplication of incentive offerings and marketing efforts. The Residential sector will coordinate with WE&T along with certain financing programs to help customers reduce their upfront costs of capital EE expenditures. For additional information on marketing education and outreach efforts please see the WE&T section below. Fuel substitution programs, for instance, may complement BE efforts and require layering incentives. BE is primarily focused on electrifying water heaters and HVAC for homes and may require panel upgrades and other key infrastructure changes. As EE fuel substitution programs focus on electric HVAC heat pump equipment through the Fuel Substitution Midstream Program,

coordination between the two may be required because of the dependency on the same panel and wiring infrastructure. The cost of two potential service visits and installations could be avoided through tight coordination. Similarly, in situations where overlaps do not exist, but complimenting offerings do, SCE will facilitate cross-promotion to fill gaps. Fuel substitution programs can assist BE efforts and vice versa. To illustrate, a residence may choose to replace its gas water heater with an electric on-demand system through a BE-based program. While this intervention is in a planning stage, SCE and/or the third-party could introduce an opportunity to replace the customer's gas furnace with a high efficiency electric heat pump at the same time or shortly thereafter. This type of coordination opportunity will remain a focal point across all sectors.

The Residential sector will also coordinate with DR programs to leverage EE measure installations to help facilitate customer enrollment in DR programs. An example would be to provide funding to cover the incremental cost for enrolling a customer on a residential DR program by leveraging a smart thermostat received through a direct install EE program. Per D.18-05-041,[110] EE/DR funds are allocated for DR purposes when EE investments have already been made, so SCE and/or third parties may utilize this funding for existing and new programs.

Cross-cutting programs within WE&T, ET, and C&S will also be factored into Residential sector strategy to ensure similar economies of scale can be achieved. These details can be found below.

c) Categorization by Segment

(1) Resource acquisition

The Residential sector includes programs that deliver cost-effective energy savings and TSB values described in Table IV-47. Resource Acquisition programs contain various delivery approaches including but not limited to third-party designed and delivered programs, downstream incentives, midstream incentives, upstream incentives, and direct install delivery

[110] D.18-05-041 p. 35.

mechanisms. SCE will conduct solicitations for innovative programs that prioritize cost-effective savings, maximize TSB, and fill existing program gaps. SCE will also review opportunities for new resource programs and look to develop and grow fuel substitution programs and measures that reduce residential customer costs and bring deep TSB to the Residential sector.

(2) Market support

The Residential sector will include Market Support programs that help facilitate the adoption of EE and fuel substitution measures across the sector. Market Support programs will focus on educating market actors on the benefits of traditional EE along with the necessary steps to successfully implement fuel switching activities at residences, MF properties and other dwellings within the Residential sector. Market support programs will also leverage WE&T specific activities to help educate customers on available options to save money.

(3) Equity

The Equity portion of the Residential sector focuses on delivering programs to HTR customers and DACs. Equity programs utilize effective strategies to deliver energy and GHG savings to customers. Historically, offerings focused on equity utilize a high-touch, direct install approach that offers a no-cost solution to deliver EE and fuel substitution measures to targeted locations through an SCE approved installer. SCE will leverage existing resources and look to market solutions on how best to deliver and implement Equity programs across the Residential sector. For Example, SCE's Residential Direct Installation Program is resource offering that relies on targeted, hotter climate zone for cost-effectiveness and a similar approach could be expanded to focus on delivering equity benefits across the service territory with a new offering.

d) Program Details

SCE's Residential sector is comprised of six programs tailored to residential customers. Four are existing and two are new for this Application period. SCE seeks approval to include these two new programs in its portfolio. If contracted programs expire within this application period, SCE anticipates maintaining a similar level of spend for comparable programs whether

through extension of current third-party contracts or newly solicited ones. These programs address fuel substitution adoption and equity objectives.

- The Comprehensive Manufactured Homes Program provides direct installation of energy-efficient products in manufactured home dwellings and common areas of manufactured home parks, at no cost to the customer. The program targets customers who are residents of manufactured homes and manufactured home parks who may not qualify for IQP. SCE requests a total budget of $17.2 million for the 2024-2027 portfolio period.
- The Residential Direct Install Program offers direct installation of comprehensive EE measures to residential customers at no-cost, targeting specific geographic areas to alleviate energy-hardship, electric system constraints, and financial burden on those who do not qualify for income assistance programs. SCE requests a total budget of $56.4 million for the 2024-2027 portfolio period.
- The Willdan Multifamily Energy Efficiency Program provides comprehensive EE for all MF segments of the Residential sector across SCE's service area. SCE contracted Willdan Energy Solutions to develop and implement this program from 2021 through 2026.[111] SCE requests a total budget of $56.0 million for the 2024-2026 portfolio period and intends to maintain a similar level of budget beyond the contracted period.
- The ICF Residential Behavior Program drives adoption of behavioral changes in households through personalized Home Energy Reports (HERs) and Energy Advisor support. These reports highlight household usage and compare consumption across benchmarks to help educate and ultimately modify customer behavior. SCE contracted ICF to develop and implement this program from 2021 through 2024. SCE requests a total budget of $4.3 million for this program through the contracted period. Beyond this period, SCE intends to maintain a similar level of spend.

[111] The 2026 program year is subject to SCE receiving funding approval through December 31, 2026 from the Commission on or before December 31, 2023.

- The Enervee Marketplace is a pay-for-performance program. The Program is intended to achieve savings by driving in-market shoppers to an online marketplace that allows shoppers to choose and purchase energy efficient products. SCE contracted Enervee through the end of 2024 to implement the contract. As such, the Marketplace will launch in 2022 and ramp up to full capacity by 2024. SCE requests a total budget of approximately $2.6 million for the marketplace in PY 2024 and intends to maintain a similar level of funding beyond the contracted term.
- The Residential Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their household energy use. At the time of filing this Application, SCE is preparing a competitive solicitation process to procure a third-party to implement this program. SCE anticipates completing the solicitation process and contracting a third-party by the middle of 2023. SCE requests a total budget of $59.0 million for the 2024-2027 period.

SCE provides further details on each of these programs in the Program Cards in Attachment 1 of this Exhibit. The Program Cards highlight delivery channels, savings type, sector opportunities and challenges, intervention strategies, program metrics, and links to program implementation plans.

(1) New Program Details

As part of the Four-Year Portfolio Plan, SCE requests approval for two new programs: the Fuel Substitution Midstream Program and the CDBP.

The Fuel Substitution Midstream Program is a Market Support program designed to promote technical understanding of selling and installing high efficiency fuel substitution measures. The program engages manufacturers and distributors to promote warehousing of high efficiency equipment to make it readily available to the marketplace. It also helps educate contractors on how to sell and install these high efficiency electric alternatives. The program provides midstream incentives that may include time of sale discounts to end use consumers to

help defray the cost of equipment. The P&G adopted in D.21-05-031[112] made clear that fuel substitution comprises a large portion of the EE goal. This program will help fill a HVAC gap in existing statewide programs and drive increased fuel substitution measures into the portfolio. And although categorized within the residential sector, it will be available to all sectors. SCE plans to solicit for this program in 2022 with implementation beginning in 2024. The budget for the program is $65.0 million over four years from 2024-2027. SCE is focusing its EE fuel substitution efforts on HVAC to layer incentives with additional programs in this space. SCE demonstrated effectiveness with this approach in the 2020 portfolio's PLA program. Eventually, SCE anticipates supporting new technologies as uptake, coordination, and funding increase.

The CDBP focuses on stimulating EE and Fuel Substitution demand among contractors and tradespeople through existing WE&T programs. This program will provide coupons for discounted fuel substitution heat pumps to contractors who go through WE&T fuel substitution training as a means of building demand for fuel substitution in the population that the contractors serve. SCE has found that there is a severe knowledge gap in fuel substitution measures and their benefits among contractors and their customers. This program seeks to close that knowledge gap by encouraging the training of contractors from 2024-2027 through this program. This program is categorized as Market Support within the Residential sector but will target contractors/installers who serve all sectors. SCE intends to design and implement this program with no expectation of a near term solicitation due to the complementary nature with local educational offerings and facilities. The budget for the program is $7.9 million from 2024-2027.

Additional program details can be found in Attachment 1 of this Exhibit.

(2) Program Closures

As part of the Four-Year Portfolio Plan, SCE requests the Commission approve closure of the Residential Pay-for-Performance Program[113] that was launched to meet the objectives of AB 793 to avoid duplicate efforts among other current and newly designed programs in SCE's

[112] D.21-05-031, OP 1.

[113] The Residential Pay for Performance Program was approved via Resolution E-4820 on April 6, 2017.

portfolio. Pursuant to AB 793, the Commission issued Resolution E-4820 which directed the IOUs to implement various AB 793 requirements[114] including establishing programs that provide incentives to residential and SMB customers to acquire energy management technologies (EMTs). SCE requests closure of the Residential Pay-for-Performance Program because existing or new programs and activities will maintain compliance with AB 793 and Resolution E-4820. Specifically, the new third-party program, Residential Behavior Program, expected to launch late 2022, will provide HERs to residential customers. The new third-party program Efficient.ly,[115] which is a new Marketplace-type website expected to launch in 2022, will provide EMT pass-through rebates on various products and home appliances. SCE will report the EMT metrics required in Resolution E-4820[116] in the upcoming 2021 EE Annual Report to be filed on May 1, 2022.

2. Commercial Sector

SCE's Commercial sector contains over 500,000 customer service accounts across 100+ business classifications per the North American Industrial Classification System (NAICS).

The following table provides the number of customers and usage information for the Commercial sector.

[114] Resolution E-4820 set forth specific requirements for the IOUs to include in their EE portfolios, including rebate offerings, reporting requirements, an online marketplace, a marketing plan and report, customer follow-up communication activities, and residential and commercial SMB Pay-For-Performance programs.

[115] Efficient.ly, also known as Enervee Marketplace Program, is a new third-party program administered by Enervee.

[116] *See* Resolution E-4820, OP 1c, *available at* https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M183/K573/183573610.PDF .

Table IV-48
SCE Commercial Sub-sector Classification

Size	Accounts	Total MWh
<20 kW	424,000	4,400,000
20-200 kW	79,000	10,300,000
200-500 kW	5,000	4,900,000
>500 kW	2,000	7,400,000

Given the higher energy consumption from a few thousand customer accounts, SCE, through third-party implementers, will ensure focus on highly scalable savings methodologies such as NMEC, Custom, and SEM programs for its largest commercial customers. SCE has found that these types of meter-based and calculated-savings programs offer large commercial customers deep energy savings potential with the right balance of incentives to drive acceptable returns on investment and payback timing. Midsize and small commercial customers, on the other hand, often benefit more from a deemed approach in a down or midstream type of program. The return on investment for these smaller customers is more compelling because of the faster time from EE measure installation to incentive receipt.

SCE will not limit itself strictly to these savings methodologies and delivery approaches. Opportunistically, SCE may conduct targeted solicitations for specific energy savings programs for the largest commercial accounts. Moreover, through its proposed New Program Design Market Support program, SCE intends to evaluate innovative designs and approaches to ensure long-term EE viability in this sector. Although the largest savings opportunities are consolidated among the largest consuming accounts, SCE recognizes the importance of market coverage across all potential EE customers. Hence, programs such as the proposed SMB Equity and NFO will ensure sufficient coverage broadly across this sector. The proposed SMB Equity program

may leverage a Direct Install delivery method that will serve the SMB population, especially within HTR and disadvantaged communities

In this section, SCE describes the Commercial sector's goals, objectives and strategies, and coordination efforts between the sectors within SCE's portfolio for the 2024-2027 portfolio period. This section also provides a description of how the Commercial sector is targeted within the Resource Acquisition segment, Market Support segment, and Equity segment. Lastly, this section provides program details, including a description of new programs and program cards for existing programs, for all programs in SCE's portfolio that are classified as Commercial programs.

a) Sector-Specific Goals, Objectives and Strategies

(1) Commercial Sector Goals

The primary goal of the Commercial sector, along with all sectors, is to deliver cost-effective TSB to customers and advance the State's clean energy goals. This goal, while somewhat simple in text, encompasses complexities that require further examination. For instance, PA's have responsibility not only to customers but also to the state and all of its constituents to advance programs and investments that will ensure long-term viability of the EE market and that will provide equitable coverage for the under-served. The new segmentation framework helps this multi-faceted charge, and SCE appreciates the latitude afforded it through less stringent cost-effective requirements in the Market Support and Equity segments. Hence, composing a portfolio with this long view in mind, while encumbered by strict near-term requirements, will always remain a balancing act. SCE's proposed program mix for this sector, therefore, represents thoughtful calculation of risk profiles along technology, market, timing, and customer dimensions to ensure optimal outcomes.

TSB goals indicated below in Table IV-49 are quantitative outputs from a collection of investments where some have explicit traceability from invested dollar to TSB savings while others are less straightforward. Market Support, for instance, is a necessary segment, because these investments will serve as foundational underpinnings for the entire market. In other words,

without it, delivering on the tangible TSB goals becomes more challenging. With this view in mind, SCE intends to drive near-term TSB, by way of third-party implementers, by focusing on select high opportunities that will generate the highest return on investment. NMEC, Custom, and SEM are such approaches to delivery. For Market Support, SCE expects increased participation and awareness through WE&T, financing programs, an improved access to usage data. For Equity, SCE plans to launch a new SMB Equity program to assist customers in under-served communities.

Table IV-49
Commercial TSB Goals (in millions)

Year	Commercial Sector TSB
2024	$30
2025	$36
2026	$40
2027	$44

(2) Commercial Sector Objectives

Along with meeting TSB goals, other objectives for the Commercial sector include standing up the SCE-led CDBP, soliciting for New Program Design Program, soliciting for a new SMB Equity Program, and ensuring Market Support efforts generate increased participation and awareness. SCE's approach to achieving these objectives is based on the segmentation framework discussed in detail below.

(3) Commercial Sector Strategies

How SCE achieves its objectives will depend in large part on the effectiveness of third-party designed and implemented programs. A key strategy for the Commercial sector follows traditional segmentation approaches wherein customers are classified or categorized by similar attributes. In this case, SCE uses average annual electricity consumption to group customers such that interventions can be catered to address them at scale. Table IV-51 below breaks out

large, medium, and small customer sizes to demonstrate the magnitude of fragmentation in the small classification. Given the diversity of end-use business types and varying size of customers in the Commercial sector, SCE and, by extension, its contracted implementers plan to utilize optimal intervention strategies for each type and size. For example, a midstream delivery approach for high volume products to serve medium and small business customers has demonstrated effectiveness as a delivery channel to reach a fragmented customer base with some degree of scale.

SCE has completed a solicitation for a Commercial sector program and Willdan was the successful third party. The Willdan Commercial Energy Efficiency Program utilizes multiple intervention strategies to provide rebates and incentive options for customers of different sizes. Additional details on this program are found in Attachment 1 of this Exhibit. Historically, SCE managed and implemented its own portfolio of Commercial sector programs that utilized various delivery channel strategies and savings methodologies such as Deemed, Calculated, and metered approaches to determine energy and demand savings. Now, as SCE continues to transition away from managing programs to enabling third parties to develop and implement their own, the reliance on market actors to innovate grows exponentially. SCE expects third parties to offer innovative programs that utilize any combination of delivery approaches and methodologies, even ones that have not yet been envisioned. Known delivery strategies in market today or planned are outlined in Table IV-50 below. SCE will monitor sector coverage and identify potential gaps in offerings. If gaps are discovered, new programs will be solicited.

Table IV-50
Commercial Sector Delivery Strategies

Delivery Strategies	Description	Applicable Sectors
Downstream Customer Incentives	Payments designed to encourage customers to adopt and install EE measures. Customer incentives will continue to be available to customers and will include incentives to comply with EE codes (i.e., "to code") and to go beyond codes (i.e., "above code").	Commercial
Direct Install / Turnkey	Access to Direct Install or Turnkey Programs allows customers to benefit because these programs remove technical and search burden by providing vendors that have already been vetted and can be leveraged for customer touch points	Commercial
Midstream Incentives	Financial incentives directly to vendors or distributors to buy down cost and increase the sales of energy-efficient products	Commercial
NMEC/Meter Based Savings	Provide incentives for customers to install comprehensive EE measures that will be measured at the meter	Commercial
SEM	An organization-wide SEM approach that sets long-term energy savings goals and uses rigorous tracking and reporting systems can drive greater savings, reach across entire building portfolios, and institutionalize such practices to sustain long-term savings	Commercial
Upstream Incentives	Financial incentives directly to manufacturers to buy down the cost and increase the sales of efficient products and reducing hassle for high volume products	Commercial

SCE will facilitate market solutions through solicitations that meet the needs of customers by tailoring delivery strategies and savings methodologies that align with customer size, needs and expectations. Large Commercial customers that have a sophisticated understanding of their operations may be best served by a NMEC or a calculated program approach that maximizes energy savings and incentive amounts. NMEC and calculated programs require longer cycle times to process data and validate savings compared to deemed savings. In coordination with the CPUC-led Custom Process Review (CPR) subgroup working meetings, SCE is looking to reduce requirements to reasonable levels and to expedite the application process to increase program participation.

A SEM program in the Commercial sector may also benefit large customers. Medium and smaller customers that do not have the resources to participate in SEM workshops and

"treasure hunts" or the ability to wait for metered incentives may best be served by utilizing deemed energy savings programs that leverage a midstream or downstream delivery channel. Midstream channels offer upfront savings usually at the point of purchase and reduce the amount of paperwork/rebate application a customer must provide to SCE or a third party, because the participating vendor processes the requirements. However, the midstream approach may not collect as granular a level of customer information as a downstream program would because most midstream programs are run through a distributor channel where the program relationship is with the distributor and not the end use customer. Delivery strategies will be available for all commercial customers with certain strategies being used to target a specific sized customer for the market. For example, a direct install program may be solicited that targets small to medium sized customers in HTR areas or DAC.

Table IV-51
Commercial Sector Delivery Approach by Size

Segment	Proposed Delivery Approaches
Large	Direct-to-Customer tiers of service, NMEC, SEM, and Custom offerings
Mid-Size	• Customers with high energy savings opportunities will be served through the Direct-to- Customer Delivery model • Majority of Mid-size customers reached by mid/downstream delivery channels for above-code energy savings
Small	• Customers with limited energy savings opportunities addressed through mid/downstream delivery channels • HTR and DAC customers maybe be served by deemed direct Install programs

SCE is no longer the Single Point of Contact (SPOC) for strategic planning, Marketing, Education & Outreach (ME&O), and EE offerings. Traditional deemed, calculated, and SBD EE offerings have been ramped down in coordination with new third-party program launches, such as:

- Commercial Deemed and Custom programs

- Midstream Point of Purchase
- SBD

b) Sector-Specific Coordination

The Commercial sector will coordinate with WE&T to spread awareness around program offerings and to educate customers on the benefits of EE and prolonged energy savings. See the WE&T section below for additional details. Commercial customers may leverage various financing programs to help reduce the upfront costs of large capital-intensive projects to improve operations and enhance efficiency. The Commercial sector will also coordinate with other non-residential sectors such as the industrial and agricultural sector in terms of program offerings and measure overlap.

The Commercial sector will also coordinate with EE/DR integration efforts to help facilitate customer enrollment in DR programs. Per D.18-05-041,[117] EE/DR funds are primarily used for DR purposes when EE investments are already being made. SCE may utilize EE/DR funds for existing and new programs within this portfolio, and EE/DR funds will be made available to third-party implementers to utilize to address EE/DR integration efforts within third-party programs.

c) Categorization by Segment

(1) Resource Acquisition

Resource acquisition programs will be offered to commercial customers through third-party proposed, designed and delivered programs. In 2020, SCE completed a solicitation for a Commercial program that will provide customers with demand higher than 20 kW with rebate and incentive options through various delivery channels that will count toward resource acquisition goal attainment.[118] SCE will continue to review program coverage and identify potential gaps in program offerings to offer new or alternative programs that provide customers

[117] D.18-05-041 p. 35.

[118] SCE AL 4348-E, p. 1. SCE's Advice Letter for Approval of Residential, Commercial, and Industrial Energy Efficiency Third-Party Contract for Comprehensive Commercial Program."

with incentive options. Because a small subset of Commercial customers account for a large share of energy consumption, SCE will focus on SEM and calculated Resource Acquisition programs that target select high consumption manufacturing customers. By leveraging SEM119, SCE will be able to focus on cost effectively achieving TSB, energy, and demand savings goals.

SEM represents a key opportunity to drive energy savings while reducing overall energy consumption on the grid. SEM's integrated approach to energy management, with a focus on reducing energy waste and increasing participation among customers, makes it an ideal solution to span across different sectors. SEM has mainly been implemented successfully in the Industrial sector. However, on December 15, 2020, the Commission approved Marin Clean Energy's 2021 budget to administer EE programs, including the deployment of SEM programs for Industrial, Agricultural and Commercial sector customers. The Commission clarified in D. 21-12-011 that no changes were made to the rules that SCE would need to follow to propose SEM expansion into other sectors as part of its EE portfolio. D.21-12-011 also confirmed that a Tier 2 advice letter is required "for a program making a change to a market sector."

Based on SCE's Market Based Incentive Pilot filing, SCE observed a 90% decline in program participation between 2014-2018. SEM presents an opportunity to offset this decline by using a holistic approach to serve customers and by offering behavioral, retro commissioning, and operational savings as well as capital savings from deemed and capital projects. SEM takes advantage of cohorts typically comprised of different sub-industry participants to allow for diversity of participation and sharing of best practices across cohort participants.

SEM has demonstrated program effectiveness in other sectors and markets including:

- In the Industrial sector for California and other states.
- In the Agricultural, Commercial, Hospitals, MF, Public, Non-Profits, Small Businesses, Universities, and Water/Wastewater facilities in other jurisdictions.[120]

[119] Benefits will accrue from an existing SCE-led SEM program along with any future SEM programs led by contracted third parties.

[120] California Industrial SEM Design Guide *available at* https://www.aceee.org/sem-program-directory.

According to Navigant's P&G Study, SEM offers a "long-term continuous improvement process that educates and trains business energy users to develop and execute long-term energy goal setting and strategic planning and to integrate energy management into business practices throughout the organization"[121]. Additionally, the study cites that "A SEM-like program is assumed for the commercial sector".

Net savings are gross savings adjusted for changes in energy use and demand that would have happened in the absence of the program. The Program is eligible to use an NTG ratio of 1 because it incorporates an opportunity register to track identified energy savings opportunities from treasure hunts and uses project tracking reports and energy modeling to demonstrate the Program influence (compared to other similar programs). SEM's continuous improvement approach and typical six-year program cycle timeline are focused on achieving long-term, sustainable savings.

SEM continues to evolve and provide an innovative opportunity that will help support the Commission's EE goals. As such, SCE believes the current EM&V guides developed for the Industrial sector can be used in other sectors. Implementation plans can further refine these elements in a program Design Guidebook for the Public sector and be presented as part of the IP workshops.

(2) Market support

The Commercial sector will offer programs in the Market Support segment to educate business customers on ways to save money through EE interventions. Commercial sector customers will also have the opportunity to participate and benefit from the Statewide Lighting Emerging Technologies Programs. For example, a Commercial sector customer may elect to participate in a demonstration project as part of the Statewide Lighting Emerging Technologies program or simply attend to gather unbiased information on new technologies. Commercial

[121] Navigant 2019 Energy Efficiency Potential & Goals Study *available at* https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M309/K725/309725430.PDF.

sector customers and contractors may also benefit from the WE&T efforts across the state that offer technical training at a variety of levels to raise awareness of EE opportunities.

(3) Equity

The Equity portion of the Commercial sector will focus on delivering programs to HTR and DAC customers through the SMB Equity Program discussed in the following section. Equity programs will contract with third-party contractors to deliver energy and GHG savings programs. These third-party contractors are likely to use strategies such as a direct install approach offers a no-cost solution to deliver EE and fuel substitution measures to targeted locations through an SCE approved installer. SCE will leverage existing resources and look to market solutions on how best to deliver and implement Equity programs across the Commercial sector.

d) Program Details

SCE's Four-Year Portfolio Plan will continue to offer the following three programs under the commercial sector: Commercial Energy Efficiency Program, the Commercial Energy Advisor Program, and the SMB Equity Program. These programs are tailored to meet increase participation in the adoption of EE measures by commercial customers.

- The Commercial Energy Efficiency Program will provide comprehensive EE for all commercial customers with a monthly maximum demand greater than 20 kW across SCE's service area. SCE contracted with Willdan Energy Solutions to develop and implement this EE Program to SCE customers starting in 2021 and will continue through 2025.[122] SCE is requesting a budget of $260.7 million for 2024-2027 portfolio period and intends to maintain a similar level of funding for a comparable program whether through extending the existing contract or a newly solicited one.

[122] SCE is currently offering this program as part of the current portfolio period. This program may be extended through 2026 subject to funding approval by the Commission before December 31, 2023.

- The Commercial Energy Advisor Program complies with the AB 802 mandate, CEC benchmarking regulations which require utilities to maintain records of energy usage data of all nonresidential buildings. The program shares information with the CEC for posting on the CEC website so that building owners and operators can compare their building's energy use to other similar buildings and take action to improve the energy efficiency, reduce GHG emissions, and lower utility bills. SCE is requesting a total budget of $2.6 million for the 2024-2027 portfolio period.
- The SMB Equity Program will focus on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their household energy use. Specifically, the SMB Equity Program will offer single family and MF equity-targeted residential customers incentives or direct installation of HVAC, lighting, water heating, etc. At the time of filing this Application, SCE is preparing a competitive solicitation to procure a third-party to implement this program. SCE anticipates completing this solicitation and contracting a third-party by the end of 2022. SCE is requesting a total budget of $33.9 million for the 2024-2027 period.

Program details for each of these programs can be found in Attachment 1 of this Exhibit.

(1) New Program Details

As part of the Four-Year Portfolio Plan, SCE requests approval of the New Program Design Pilots Program. The Program seeks to test the effectiveness of novel program designs targeting delivery of near-term TSB savings. If these programs prove successful, they can be transitioned to third-party Resource Acquisition or Equity programs. SCE expects to have 2 proposed pilots per year as part of this program. The resource acquisition third-party solicitation process has delivered innovative program designs. However, these programs tend to be variations of similar designs/measures previously offered due to the risk to both the implementer and portfolio of savings not being realized. SCE contends that there is an opportunity for

particularly novel program designs to prove their effectiveness before initiating a full-scale program. This Program is categorized as Market Support within the Commercial sector, but pilots may be available to any/all sectors. SCE may conduct a request for information to solicit for novel program ideas, but this program will not be a third-party designed and delivered. The budget for the program is $21.3 million over four years from 2024-2027.

(2) Program Closures

As part of the Four-Year Portfolio Plan, SCE requests the Commission approve closure of the Facility Assessment Services Program that was launched to meet the objectives of AB 793. Closure will avoid duplicate efforts among other current and newly designed programs in SCE's portfolio. SCE requests closure of the Residential Pay-for-Performance Program because existing or new programs and activities will maintain compliance with AB 793 and Resolution E-4820. Specifically, the Commercial Behavior Program, expected to launch in 2023, will drive adoption of behavioral changes by providing personalized Business Energy Reports (BERs), Energy Advisor support and rewards to SMB/commercial customers. The Program will include an initial treatment group of 80,000 SMB customers across SCE's service area who will receive customized bi-monthly BERs (delivered via paper and email channels) that will provide feedback on their energy use and recommended low-cost or no-cost ways to save energy. Additional information on the commercial behavior program can be found in the Program Cards found in Attachment 1 of this Exhibit.

3. Industrial Sector

SCE's Industrial sector contains approximately 35,000 customer service accounts with a wide range of manufacturing classifications per the NAICS. The following table provides the number of customers and usage information for the Industrial sector.

Table IV-52
SCE Industrial Sub-sector Classification

Size	Accounts	Total MWh
<20 kW	24,000	200,000
20-200 kW	9,000	1,300,000
200-500 kW	1,000	1,300,000
>500 kW	1,000	9,200,000

Since 2014, savings from deemed and calculated projects have steadily declined. Because deemed measures often do not align to the types of equipment that consume the most electricity, this savings methodology has produced minimal savings opportunities. Custom projects also struggled because of the level of sophistication of energy management in the largest customers where prior capital investments in equipment upgrades already considered EE as an avenue to reducing operating expenses. When new opportunities for custom projects arose, they often failed because of long review and approval cycle times. A promising area of opportunity, however, has recently emerged in SEM. Launched in 2018, SEM projects have steadily gained traction with demonstrable cost-effective savings and high customer satisfaction rates. Based on this success, SCE will continue to grow SEM through third-party implementers.

In this section, SCE describes its Four-Year Portfolio Plan for the Industrial sector including sector goals, objectives and strategies, and coordination efforts among the different sectors within SCE's portfolio.

a) Sector-Specific Goals, Objectives and Strategies

(1) Industrial Sector Goals

The primary goals of the Industrial sector are achieving TSB targets, maintaining cost-effectiveness for the Resource Acquisition segment, and providing education and outreach to customers and stakeholders to better enhance the understanding of EE benefits. Table IV-53 below identifies the Industrial sector TSB goals for PYs 2024 through 2027.

Table IV-53
Industrial Sector TSB Goals
(in millions)

Year	Industrial Sector TSB
2024	$13
2025	$14
2026	$15
2027	$16

(2) Industrial Sector Objectives

Primary objectives for the Industrial sector include providing program coverage for the different sized large, mid-size and small customers with an emphasis on capturing TSB from the large and mid-sized customers while targeting HTR and DAC customers through Equity programs. Because large customers account for a majority of energy usage and demand in the Industrial sector, SCE intends to build on SEM successes to scale this approach more broadly across the top tier of consumers.

(3) Industrial Sector Strategies

Key strategies for the Industrial sector include: alignment of delivery approach and savings methodology with customer size, and solicitation of targeted programs. SCE completed a solicitation for an Industrial sector program in 2021 that utilizes multiple intervention strategies to provide rebates and incentive options for customers of different sizes. Historically, SCE managed and implemented a portfolio of Industrial sector programs that utilized traditional delivery channel strategies and savings methodologies (deemed, calculated, and metered approaches) to determine energy and demand savings. SCE will continue to transition away from managing programs to enabling third parties to design, implement, and deliver savings through delivery strategies and savings approaches of their choosing. See Table IV-54 below. As the Four-Year Portfolio Plan progresses, SCE will continuously monitor program sector

coverage to identify potential gaps in offerings. To the extent programs are needed to fill gaps, SCE will solicit for new programs.

Table IV-54
Industrial Sector Delivery Strategies

Delivery Strategy	Description	Applicable Sectors
Downstream Customer Incentives	Payments designed to encourage customers to adopt and install EE measures. Customer incentives will continue to be available to customers and will include incentives to comply with EE codes (i.e., "to code") and to go beyond codes (i.e., "above code").	Industrial
Direct Install / Turnkey	Access to Direct Install or Turnkey Programs allows customers to benefit because these programs remove technical and search burden by providing vendors that have already been vetted and can be leveraged for customer touch points	Industrial
Midstream Incentives	Financial incentives directly to vendors or distributors to buy down cost and increase the sales of energy-efficient products	Industrial
NMEC/Meter Based Savings	Provide incentives for customers to install comprehensive EE measures that will be measured at the meter	Industrial
SEM	An organization-wide SEM approach that sets long-term energy savings goals and uses rigorous tracking and reporting systems can drive greater savings, reach across entire building portfolios, and institutionalize such practices to sustain long-term savings	Industrial
Upstream Incentives	Financial incentives directly to manufacturers to buy down the cost and increase the sales of efficient products and reducing hassle for high volume products	Industrial

A small number of large industrial customers account for a substantial amount of energy and demand usage in the sector. By targeting these customers with direct to customer programs and offerings, such as the SEM Program, SCE intends to achieve significant energy savings and TSB. SEM programs have demonstrated traction in this sector, and SCE plans to continue this comprehensive approach to energy management for large industrial customers.

Industrial customers with limited potential may be served best through Equity programs that prioritize DAC customers to educate and prepare the market for new technologies or to build awareness of EE benefits, programs and services available. Additionally, Resource Acquisition programs complementing programs within the Market Support segment make the adoption of EE

technologies easier through direct install or point-of-sale offerings for smaller industrial customers.

Table IV-55
Industrial Sector Delivery Approach by Size

Segment	Proposed Delivery Approaches
Large	Direct-to-Customer tiers of service, NMEC, SEM, and Custom offerings
Mid-Size	• Customers with high energy savings opportunities will be served through the Direct-to- Customer Delivery model • Majority of Mid-size customers reached by mid/downstream delivery channels for above-code energy savings
Small	• Customers with limited energy savings opportunities addressed through mid/downstream delivery channels if applicable • HTR and DAC customers maybe be served by deemed direct Install programs in the Equity Segment

b) Sector-Specific Coordination

Industrial sector programs will coordinate with WE&T to spread awareness of program offerings and to educate customers on the benefits of EE and prolonged energy savings. See WE&T in the Cross-Cutting section below for additional details. Financing programs within Market Support will be another intersection point where coordination could benefit Resource Acquisition programs in this sector. DR is another area that presents an opportunity for coordination as large industrial customers may enroll in DR programs that could complement EE and vice versa.

c) Categorization by Segment

(1) Resource acquisition

As noted, a small number of customers represent a sizeable portion of energy consumption within the Industrial sector. This level of consolidation presents opportunities for SCE and contracted implementers to target specific interventions in a manner that may yield higher returns on investment. SEM, for instance, is one such intervention that has demonstrated

viability of cost-effective savings for this customer set. SCE will, therefore, continue to focus on offering SEM programs to help Industrial customers assess their energy use and ultimately assist in developing an action plan to drive deep energy savings at the lowest cost possible. These Resource Acquisition programs will target the highest consuming manufacturing customers. On the other hand, SCE intends to address mid-size and small industrial customers through down and midstream delivery approaches with measures that have demonstrated viability. If planned interventions fail to produce expected savings outcomes, SCE may conduct additional targeted solicitations for specific energy savings programs. In the meantime, SCE intends to support a recently completed solicitation for an Industrial program that offers customers with rebate and incentive options for EE deployment.

SCE's Four-Year Portfolio Plan will serve the Industrial sector with energy efficiency offerings through the current Willdan Industrial Energy Efficiency Program. This program will run through 2025[123] and will provide comprehensive EE for all industrial customers with a monthly maximum demand greater than 20 kW. SCE contracted with Willdan Energy Solutions to develop and implement the program to SCE customers. The program budget is $113.6 million for the 2024-2026 period. Program details for this program can be found in the Program Cards found in Attachment 1 of this Exhibit.

(2) Market support

SCE's Four-Year Portfolio plan does not include any Market Support programs targeted at the Industrial sector. This fact does not suggest, however, that there is no market support available. Industrial sector customers will still have an opportunity to participate in and benefit from emerging technology efforts to develop future programs. Additionally, customers, contractors, and their staff may also benefit from Workforce and Education efforts across the state that offer technical training at a variety of levels to raise awareness of EE opportunities.

[123] The Willdan Industrial Energy Efficiency Program was approved on July 20, 2021 for program implementation to begin on January 2022. This program may be extended to 2026 subject to SCE receiving approval through the end of 2026 from the Commission before December 31, 2023.

(3) Equity

Industrial customers in DAC zip codes will likely benefit from targeted programs like a Direct Install approach, but unfortunately measure availability may be limited because of the complex nature of manufacturing in the Industrial sector. To address this gap, SCE proposes to extend the SMB Equity Program, offered in the Commercial sector, to the Industrial sector as further discussed below.

d) Program Details

As discussed above, SCE seeks Commission approval to extend the SMB Equity Program to the Industrial sector. The Small/Medium Industrial Equity Program will offer SMB equity-targeted industrial customers incentives or direct installation of HVAC, lighting, water heating, etc. measures. The SMB Industrial Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their energy use. SCE believes this program is necessary to deliver savings to smaller industrial businesses that face numerous barriers to adoption of EE including costs, time constraints, and knowledge gaps. This program will seek to address this historically underserved population through a streamlined direct installation approach that alleviates many of the barriers to adoption. SCE is soliciting for the SMB Equity Program in 2022-2023 for operations in 2023. The expansion to the Industrial sector will occur in 2024 through 2027. This program is categorized in the Equity segment and Industrial sector. SCE forecasts a total budget of $5.5 million to implement this program for the 2024-2027 period.

4. Agricultural Sector

SCE's Agricultural sector contains approximately 28,000 customer service accounts within a wide range of agricultural classifications (orange groves, dairy cattle and milk production, etc.) per the NAICS. The following table provides the number of customers and usage information for the Agricultural sector.

Table IV-56
SCE Agricultural Sub-sector Classification

Size	Accounts	Total MWh
<20 kW	18,000	100,000
20-200 kW	10,000	1,000,000
200-500 kW	600	400,000
>500 kW	100	300,000

Since 2014, SCE has experienced a sharp decline in custom EE projects. One bright spot in this sector has centered on deemed measures that include higher efficiency pumps, pump optimization controls, and energy management systems. Although SCE experienced an uptick in demand for these measures, the overall outlook remains cautious simply based on minimal volume of projects. And much like in the Industrial sector, the Agricultural sector employs specialized equipment and processes that present challenges in introducing new deemed measures. Seemingly, a custom approach would appear to be a better fit, however, customers have indicated little interest because of long review and approval cycle times. Fortunately, with the recent success of SEM in the Industrial sector, SCE anticipates similar interest in this methodology in the Agricultural sector and plans to expand it through in-house pilots or third-party implementers.

In this section, SCE describes its Four-Year Portfolio Plan for the Agricultural sector including sector goals, objectives and strategies, and coordination efforts among the different sectors and segments within SCE's portfolio.

a) Sector-Specific Goals, Objectives and Strategies

(1) Agricultural Sector Goals

Achievement of TSB targets is the principal goal within the Agricultural sector. Doing so cost-effectively within the Resource Acquisition segment will be highly dependent on third-party delivery performance. But in areas of Market Support and Equity, SCE plans to ensure

viability of EE through new programs and to increase penetration in underserved locations through Equity-based programs, respectively. Specific objectives follow.

Table IV-57
Agricultural Sector TSB Goals[124]
(in millions)

Year	Agricultural Sector TSB
2024	$6
2025	$7
2026	$7
2027	$8

(2) Agricultural Sector Objectives

Ensuring adequate access to EE interventions across all sizes of Agricultural customers remains a top priority for this sector. With a solicitation underway, SCE expects program launch in the second or third quarter of 2022. In parallel, SCE intends to build on the success of SEM in the Industrial sector to expand "SEM-like" programs for agricultural customers. These programs will follow a lighter-touch or open (non-cohort) model to encourage broader participation. Fewer touchpoints may prove advantageous for small and medium customers who may not have the resources to expend in full-scale SEM projects. Although SEM has been approved for Industrial customers only, SCE advocates for expansion across all non-residential sectors.

Indoor agriculture, or controlled environment agriculture, presents an opportunity for deemed lighting measures and will be monitored closely as this sub-sector is expected to experience rapid growth. Based on the volume of licensing requests through the California Department of Cannabis Control, SCE anticipates doubling of demand within the next two years. A deemed workpaper is pending, and once approved, SCE will ensure its inclusion in solicitations.

[124] Scenario 2: TRC Reference (2021 AC).

(3) Agricultural Sector Strategies

The overarching strategy for the Agricultural sector centers on solicitation for innovative programs that meet customer needs while advancing SCE's Portfolio goals. SCE will solicit for delivery strategies to provide all sizes of customers with program options to save energy and reduce GHG. Water savings is a key customer objective, and SCE anticipates that the updates to the embedded energy savings valued by the water and energy nexus inputs to the CET will allow for implementers to propose innovative program designs that include high water savings measures such as drip irrigation conversions to provide benefit to the grid and substantial benefit to the customer from realized water savings. SCE anticipates the rapidly developing indoor agriculture segment will also benefit from program designs that help address the unique challenges to meeting ideal growing conditions in a controlled environment. While Small Agricultural Customers in rural areas are not currently considered "Hard to Reach", SCE recognizes that this group would benefit from the outreach efforts to raise awareness of EE opportunities and simple pathways to participating in programs.

The table below outlines the general approach to each segment of customer in the Agricultural sector. SCE also recognizes that Market Support Programs can continue to serve various aspects of Agricultural sector requirements. As an example, the ET Programs continue to be a vital source to vet new technologies for viability. WE&T help stakeholders across the sector become aware of energy efficient technologies and the necessary design and installation criteria to reap the available benefits.

Table IV-58
Agricultural Sector Delivery Approach by Size

Segment	Proposed Delivery Approaches
Large	Direct-to-Customer tiers of service, NMEC, SEM, and Custom offerings
Mid-Size	• Customers with high energy savings opportunities will be served through the Direct-to- Customer Delivery model • Majority of Mid-size customers reached by mid/downstream delivery channels for above-code energy savings
Small	• Customers with limited energy savings opportunities addressed through mid/downstream delivery channels • HTR and DAC customers maybe be served by deemed direct Install programs

b) Sector-Specific Coordination

The Agricultural sector will coordinate with WE&T to spread awareness around program offerings and to educate customers about the benefits of EE and prolonged energy savings. Refer to the WE&T sector section below for additional details. Agricultural customers may leverage various financing programs to help reduce the upfront costs of large capital-intensive projects to improve operations and enhance efficiency. Implementers will also coordinate with other nonresidential sectors to provide clear messaging that some offerings may overlap with others, requiring coordination to maximize benefits.

Additionally, certain statewide programs, such as the Non-Residential New Construction program, may help agricultural customers with specific needs. Expansion of facilities or upgrades that require new construction often entails evaluation of new technologies, approaches, and processes, so programs such as the Non-Residential New Construction program have opportunities to intercede and provide offers that may otherwise not been considered by the customer. These types of coordination opportunities abound and require diligent portfolio management practices that SCE has optimized over the years.

While it is generally understood that statewide programs take precedence over local, SCE will continue to coordinate with implementers and other program owners to avoid duplication of effort and to identify gaps in service. SCE will also continue to evaluate the performance and coverage of program offerings and may elect to conduct future solicitations to address any perceived gaps.

Outside of EE, SCE will coordinate with the DR Program to help facilitate agricultural customer enrollment in DR programs and vice versa.

c) Categorization by Segment

(1) Resource acquisition

SCE is currently completing a solicitation that will result in a program offering targeted directly at SCE's Agricultural customers. This solicitation will be filed prior to the filing of this application and is reflected in the savings values assumed for the Agricultural sector as best available data. The program is anticipated to be operational through the beginning years of this application and into 2025. Afterwards, based on implementer performance, SCE will consider options to extend the contract or solicit for a new one.

(2) Market Support

No Market Support programs that solely target the Agricultural sector exist at this time. However, as in the Industrial sector, agricultural customers will have the opportunity to participate and benefit from ET Programs. For example, an Agricultural sector customer may elect to participate in a demonstration project as part of the ET Program or be able to glean unbiased information on new technologies. Customers, contractors, and their staff may also benefit from WE&T efforts across the state that offer technical training at a variety of levels to raise awareness of EE opportunities.

(3) Equity

Agricultural customers will likely benefit from targeted programs like a direct install approach where products are installed at little to no cost to the customer. SCE's Four-Year

Portfolio Plan proposes to extend the SMB Equity Program, offered in the Commercial sector, to the Agricultural sector as further discussed below.

d) Program Details

SCE's portfolio includes the Local Agricultural Program which is tailored to meet the needs of Agricultural customers in SCE's service area. It is intended to address the needs of customers whose primary businesses are agricultural production, including field and seed crops, fruit and nut crops, vegetables and melons, livestock, poultry, floriculture, indoor agriculture, or on-site food processing if such on-site food is of one of the foregoing categories and floriculture. At the time of filing this Application, the Local Agricultural Program advice letter has been filed with the Commission and is awaiting approval. The term of the program is expected to go through 2025. Program details for this program can be found in the Program Cards in Attachment 1 of this Exhibit.

As discussed, SCE seeks Commission approval to extend the SMB Equity Program to the Agricultural sector. The Small/Medium Agricultural Equity Program will offer SMBs equity-targeted incentives or direct installation of HVAC, lighting, water heating, etc. measures. The SMB Agricultural Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their energy use. SCE believes this program is necessary to deliver savings to smaller agricultural businesses that face numerous barriers to adoption of EE including costs, time constraints, and knowledge gaps. This program will seek to address this historically underserved population through a streamlined direct installation approach that alleviates many of the barriers for adoption. SCE is soliciting for the SMB Equity Program in 2022-2023 for operations in 2023. Expansion to the Agricultural sector will occur in 2024 through 2027. This program is categorized in the Equity segment and Agricultural sector. SCE forecasts a total budget of $10.9 million to offer this program in 2024-2027.

5. Public Sector

SCE's Public sector contains approximately 60,000 customer service accounts within a wide range of classifications per the NAICS. The following table provides the number of customers and usage information for the Public sector.

Table IV-59
SCE Public Sub-sector Classification

Size	Accounts	Total MWh
<20 kW	49,000	300,000
20-200 kW	11,000	1,700,000
200-500 kW	2,000	1,500,000
>500 kW	700	3,500,000

a) Sector-Specific Goals, Objectives and Strategies

(1) Public Sector Goals

In D.21-09-037, the Commission defined the Public sector as a subset of the Commercial sector, but it does not differentiate the goals between sectors. Therefore, SCE is showing the Commercial TSB Goals, identified in Table IV-60 below, as the goals for the Public sector. SCE expects that the Public sector will comprise approximately 20% of the Commercial sector TSB goal based on historical usage splits between the sectors.

Table IV-60
Commercial TSB Goals
(in millions)

Year	Commercial Sector TSB
2024	$30
2025	$36
2026	$40
2027	$44

(2) Public Sector Objectives

The Public sector is comprised of diverse buildings and end uses for Local, State and Federal Government as well as special districts. SCE's portfolio will provide program offerings to meet the needs of all customer groups within the sector to support appropriate EE adoption to align with customers' needs and goals. Many Public sector customers have established GHG reduction targets that include BE as a key strategy to meet their objectives. SCE will look to align EE Program offerings to support fuel switching measures to electrify public buildings to meet the State's and individual jurisdictions' collective GHG reduction goals.

(3) Public Sector Strategies

The overarching strategy for the Public sector is to solicit innovative programs from the market that meet customer needs while advancing SCE's Portfolio goals. The Public sector consists of Federal, State, and Local Government entities that have a diverse set of building and EE opportunities. Three statewide programs will largely serve this sector throughout California. The first is the Statewide State of California and California Department of Rehabilitation and Correction Program that will be led by PG&E. The other two are the Statewide Higher Education Programs and the Statewide Water Wastewater and Pumping Program administered by SCE. The Statewide Higher Education Program serves the University of California (UC), California State University (CSU) and the California Community College (CCC) systems with market designed programs that address customer needs. The Statewide Water Wastewater and

Pumping Program serves local governments and special districts on this distinct end use. SCE will also have local programs focused on the Public sector. These programs will undergo a competitive solicitation process to select an innovative, cost-effective market-based solution to serve the Public sector customers not addressed by Statewide programs. SCE will continue to assess performance and customer coverage to evaluate if future solicitations are appropriate for the Public sector.

b) Sector-Specific Coordination

Much of the Public Sector within SCE's service area is supported by RENs. For these areas, SCE will continue to coordinate with RENs to develop Joint Cooperation Memos to demonstrate how PAs will avoid or minimize duplication for programs that address a common sector but pursue different activities as directed in D.18-05-041.[125] As SCE completes third-party solicitations and new third-party programs launch, SCE will ensure that RENs are invited to Implementation Plan workshops and given the opportunity to comment and ask clarifying questions. As details of third-party program designs become available, SCE will continue to monitor for gaps in customer groups, measures, or approaches that may exist for the sector and assess how to best address them through contract amendment, solicitation, or modification to an existing SCE offering. SCE will engage RENs so that they have sufficient information to avoid unserved segments of the Public sector and coordinate in areas of overlap to provide clear messaging to implementers and customers while avoiding duplication of incentives funded by EE Programs.

c) Categorization by Segment

The Public sector is categorized in the Resource Acquisition segment of the Portfolio. Certain Public sector customers may receive benefits from complementing efforts in other areas the Portfolio such as C&S, a cross-cutting sector that may help to advance reach codes and WE&T that may help educate staff and constituents. Equity programs are primarily targeted at

[125] D.18-05-041, p. 97.

certain residential and small commercial customers that are not well served by traditional income-qualified or EE Programs. To the extent that Public sector customers, such as Local Governments, may benefit from promoting these programs to their constituents, SCE may support their mission and sustainability objectives through Equity programs.

(1) Resource acquisition

SCE is currently conducting three solicitations that should result in program offerings for Public sector customers. The Statewide Higher Education solicitation will serve the UC, CSU, and CCC systems across all the IOUs' service areas in California. Similarly, the Statewide Water/Wastewater and Pumping Program will serve Public sector customers across the state for EE opportunities associated with water delivery and wastewater treatment. SCE is also conducting a local solicitation for the balance of the Public sector to address the needs of local and federal government customers. As programs are finalized and in market, SCE will conduct ongoing gap analyses and conduct additional solicitations as necessary to serve Public sector customers in a cost-effective manner.

(2) Market support

No Market Support programs that solely target the Public sector are planned at this time. However, Public sector customers will have the opportunity to participate in and benefit from C&S as well ET Programs. For example, a Public sector customer may elect to participate in a demonstration project as part of the ET program or adopt reach codes that are developed in C&S. Public sector staff and their constituencies will also benefit from WE&T efforts across the state that offer technical trainings at a variety of levels to raise awareness of EE opportunities.

(3) Equity

SCE will conduct a solicitation for the SMB Equity Program in 2022-2023 for operation in 2023 and will expand this offering to serve Public sector customers in DACs and vulnerable communities in 2024-2027. SCE envisions the program will primarily focus on direct install and turnkey delivery strategies to address the needs of municipal buildings such as city halls, court buildings, parks & recreation, schools, community centers, and other facilities for local

governments, tribes and special districts. The intent of the program is to accelerate the adoption of EE measures to better serve the public while realizing utility bill savings. SCE anticipates measures that address lighting, HVAC, plug loads, and pumping would be the primary targets with a preference to integrate controls to take advantage of DR opportunities in support IDSM. SCE would also support the inclusion of measures that provide both water and energy savings to position Public sector customers to respond to long term drought conditions in California.

d) Program Details

For the Four-Year Portfolio Plan, SCE will continue to include the Statewide Higher Education Program, Statewide Water/Wastewater Pumping Program, and the Public sector Third-Party Program currently under solicitation in the Public sector portion of the portfolio.

The Statewide Higher Education and Statewide Water/Wastewater Pumping Programs will be delivered throughout the State by third parties and administered by SCE on behalf of the IOUs. The Statewide Higher Education Program will serve the UC, CSU and CCC systems with calculated and deemed EE technology or measures. The budget forecast for this program is $16.0 million for the 2024-2027 period.[126] The Statewide Water/Wastewater Pumping Program will provide public sector customers with EE incentives for verified installations at customer water production, conveyance, treatment, and distribution sites with water/wastewater production located within PG&E, SCE, SoCalGas, and SDG&E service areas. The budget forecast for this program is $21.2 million for the 2024-2027 period.

SCE will offer a local third-party program to address the Public sector's needs through a solicitation that is anticipated to result in an executed contract in the first quarter of 2022. This solicitation is expected to result in an innovative, cost-effective program design that meets the needs of Public sector customers that are not addressed by statewide programs. At the time of this filing, the Local Government Third-Party Solicitation has been submitted as a placeholder for the anticipated program. Details of this program will be filed in the forthcoming Advice

[126] This budget reflects the total program budget that all IOUs will contribute to.

Letter that will be submitted after the contract has been executed with the implementer. The budget forecast for this program is $29.2 million for the 2024-2027 period. Program details of each of these programs are found in the Program Cards found in Attachment 1 of this Exhibit.

As discussed above, SCE seeks Commission approval to extend the SMB Equity Program to the Public sector. The Public Equity Program will offer equity-targeted customers[127] incentives or direct installation of HVAC, lighting, water heating, and other relevant measures. The Public Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their energy use. SCE believes this program is necessary to enable savings from the Public sector, a sector that has historically faced numerous barriers to adoption of EE that include cost constraints, time limitations, competing priorities, and knowledge gaps. This program will seek to address this underserved population through a streamlined direct installation approach that helps alleviate many of the barriers to adoption. SCE is soliciting for the SMB Equity Program in 2022-2023 for operations in 2023. The expansion to the Public sector will occur in 2024 through 2027. This program is categorized in the Equity segment and Public sector. SCE forecasts a total budget of $9.7 million for this program for 2024-2027.

SCE will transition CATALENA/Energy Atlas costs to a standalone program in the Market Support segment. CATALENA is a website/database system that will enable users to view and download aggregated electric and gas usage profiles of IOU service area customers in cross cutting sectors that include Residential, Commercial, Industrial, and Agricultural. It combines electric and gas energy consumption data with other relevant factors such as building characteristics (sq. ft, vintage), EE program deployment, EV and charging station data, behind-the-meter solar and storage capacity, and census data and displays this information through data visualization formats including graphs, charts, and potentially an interactive map. SCE will

[127] In SCE-01, Section IX.D, SCE proposes a modification of the HTR definition to include public sector customers as "hard-to-reach" if they meet the geographic criteria approved in G-3497 and updated in D.18-05-041 and are classified as a local government, K-12 school, community college, or tribal lands. This program will focus on these hard-to-reach Public Sector customers.

solicit for CATALENA upon receipt of guidance on solution requirements from the CPUC. This program is categorized in the Market Support segment and Public sector. SCE forecasts a total budget of $0.86 million for this program for 2024-2027.

6. Cross-cutting Sector – C&S

C&S is a cross-cutting program that supports California's EE and Decarbonization goals by planning, collaborating, and coordinating various activities to bring energy efficient building decarbonation, and grid harmonization. The total budget forecast for C&S is $79 million for the four-year period, of which $49 million will fund SCE's local C&S programs.

California policymakers have continued to set a variety of important energy and climate policy goals via legislative bills, executive orders, and state agency action plans. These statewide goals have an important common theme: "decarbonization." California now goes beyond traditional EE and focuses on decarbonization in power generation (SB 100), transportation (SB 350), and buildings (AB 3232, SB 1477), in addition to renewable energy, energy storage, water efficiency, and grid harmonization. In response to the call for decarbonization, the CEC introduced heat pump baselines for 2022 Title 24, in addition to requiring on-site renewable generation (i.e., on-site photovoltaic (PV)) and batteries for certain non-residential building types. Furthermore, CEC recently released AB 3232 Assessment report[128] that outlines seven strategies, five of which are related to C&S, in coordination and collaboration with other programs. The five strategies related to C&S are:

1. Building end-use electrification
2. EE
3. Refrigerant Leakage Reduction
4. DERs
5. Demand Flexibility

[128] CEC, "California Building Decarbonization Assessment," 2021, *available at* https://efiling.energy.ca.gov/GetDocument.aspx?tn=239311

The AB 3232 Assessment Report concludes, after examining a direct emission baseline, that only "aggressive electrification" efforts would achieve a 40% CO_{2e} reduction by 2030.[129] The report also points out that efficient electrification of space and water heating in California's buildings "present the most readily achievable pathway"[130] to the goal. The CARB also recognizes the importance of efficient electrification of space and water heating and therefore is in the process of introducing "zero emission" in its management plan for coming years.

For these reasons, the C&S vision is energy efficient building decarbonization that embraces California's deep decarbonization goals of having "zero-emission buildings" (AB 3232) that integrate with a demand flexibility (SB 49) strategy for optimal use of on-site renewable generation while harmonizing with T&D capacity and reliability. This vision and market shift are much broader than the traditional C&S activities that focused on code adoption, reach code adoption, and compliance improvement. Therefore, SCE's P&C subprogram, in sync with Compliance Improvements and Reach Code subprograms, will continue to lead the way to meet California's challenging but urgent decarbonization goals by integrating and coordinating various programs and activities—including, but not limited to ET Programs, EM&T, WE&T, ME&O, EM&V, various incentive programs including the Building Initiative for Low Emissions Development (BUILD) and Technology and Equipment for Clean Heating (TECH) Initiatives, SGIP, ESA Programs, BE pilots/programs, EE Programs, transportation electrification, MTAs, and T&D design and planning — as envisioned by the CPUC for the main goal of ordering P&C Subprogram (D.12-05-015).

a) P&C Subprogram

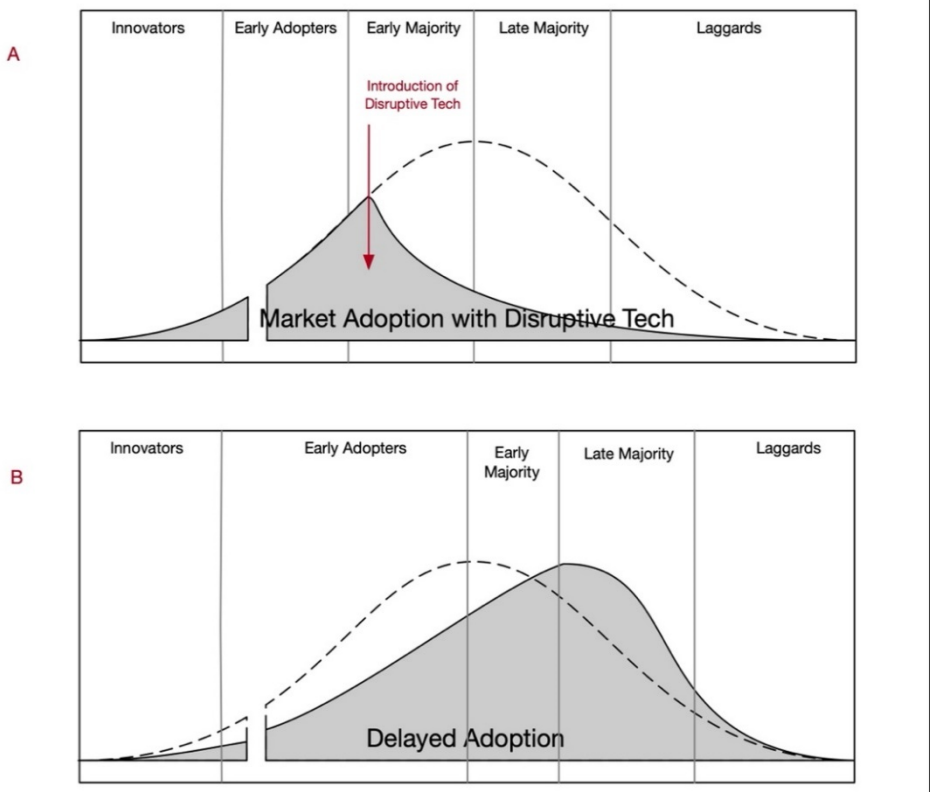
SCE's C&S P&C will play a vital role in coordinating across California customer-funded programs in order to identify and track changing market needs (e.g., heat pump water heater market penetration is lower, and there is a significant knowledge and skill gap for installation),

[129] *Id*., p. 13.
[130] *Id.,* Abstract on p. ii.

facilitate development of appropriate interventions, and accelerate market adoption throughout the life cycle of key GHG reduction and energy efficient technologies.

SCE's P&C Subprogram will continue to provide much needed tracking of markets for key technologies and monitoring of markets as they progress from early commercialization through code adoption by planning, coordinating, and collaborating with various programs and stakeholders, including T&D and transportation electrification. Markets are dynamic, and many external factors may influence the successful adoption of a technology. Figure IV-11, below, shows two examples; in the first figure, a technology may have been successfully launched but may be faced with the introduction of another product with disruptive effects. In this case, customer-funded programs must identify the disruption quickly, adjust the flow of resources to that technology, and possibly validate the new technology for inclusion in the program. In the second example, a promising technology experiences a drawn-out introductory period. In this case, customer-funded programs must seek data-driven bases for continuing incentives for such a technology or decide to allocate resources elsewhere.

Figure IV-11
Market Adoption with Disruptive Technology, and Delayed Adoption



The SCE P&C subprogram will monitor markets of key technologies by categorizing each technology market into "readiness levels". The concept of readiness levels is widely used throughout technology development organizations. These readiness levels track three dimensions of a product's market status: Technology readiness, Market readiness, and Program readiness. These readiness levels differ from historical readiness levels used by the Department of Energy and the National Aeronautics and Space Administration in that those readiness levels track technology status from basic research to "flight ready" or to its commercial introduction. The readiness levels track the technology's status after commercial introduction, with an eventual end point of widespread market adoption, including code readiness from the cost-effectiveness or least cost perspective.

In the short-term, SCE's P&C will characterize markets of key technologies along the three aforementioned readiness levels: Technology, Market, and Program. In the mid-term, P&C will identify programs that address challenges faced by key technologies and determine whether gaps in customer-funded interventions exist. P&C will then coordinate across PAs, Program Implementers, CEC's Electric Program Investment Charge Program (EPIC), state and local agencies, and other market actors to develop a scope of work that articulates how such a gap might be filled. P&C will provide supporting data to form the foundation of new solicitations, new programs, or even new policies, to meet those gaps in accelerating market adoption. In the long term, P&C will systematize the sharing of data and lessons learned across customer programs so that in coordination, the customer-funded programs can achieve an end-result that is greater than the sum of the parts: accelerated adoption of GHG and energy-reduction technologies. P&C's focus on the three readiness levels, while planning, coordinating, and collaborating with other programs and external stakeholders, will lead CEC's pursuit of "aggressive decarbonization efforts" by electrifying space heating and water heating, while integrating with DERs, EVs, EV infrastructure, and other various technologies that harmonize with the electric grid and provide flexible demand capabilities.

SCE has two other subprograms: Compliance Improvement and Reach Codes.

b) Compliance Improvement Subprogram

The Compliance Improvement Subprogram continues to assist with improving compliance for both the Building EE and CALGreen Standards (Title 24, Part 6 and Part 11), including all-electric or BE, and California's Appliance Standards (Title 20) by providing needs-based tools, training, resources, and outreach to targeted market actors throughout the entire compliance supply chain. Additionally, the subprogram will continue to develop new resources and outreach aimed at emergent code areas, such as electric end-use technology baselines for heat pump space and water heating, and how they impact compliance requirements and energy modeling protocols.

c) Reach Codes Subprogram

The Reach Codes Subprogram continues to help local jurisdictions seeking to reduce energy consumption, increase energy efficiency, promote renewable self-generation (e.g., solar panels on the roof), and achieve overall emission reductions, which is often as a key strategy identified in their respective Climate Action Plans (CAPs). Furthermore, the AB 3232 Assessment Report recognizes the importance of the Reach Codes that "has also facilitated electrification efforts."[131] Therefore, the Reach Codes subprogram will continue to track local jurisdictions' various decarbonization efforts, including traditional higher EE code adoption, and continue to support them. Unlike PG&E and SDG&E, SCE is a single-fuel utility and cannot act alone to set the "aggressive electrification" path that CEC concluded for meeting AB3232 in SCE's service area. Thus, a higher degree of coordination and collaboration efforts among various stakeholders will be carried out by the Reach Codes subprogram to support local jurisdictions' CAPs and other decarbonization activities.

d) Sector-Specific Goals, Objectives and Strategies

The C&S Program serves a diverse customer landscape and plays a cross-cutting role in supporting Residential, non-residential, and Public sectors. As described in Section IV.A.5, P&C proposes to monitor the markets of key technologies by categorizing each technology market into "readiness levels". These readiness levels track three dimensions of a product's market status: Technology Readiness, Market Readiness, and Program Readiness. Because the C&S Program works closely with the CEC and other market actors, it is often at the forefront of the issues and addressing questions for many of the organizations. This allows the C&S Program to be in an excellent position to share the knowledge gleaned through existing relationships.

(1) C&S Sector Goals & Objectives

The C&S Program, as a cross-cutting program and a statewide program for advocacy activities, seeks to help California's customers reduce GHG by:

[131] CEC California Building Decarbonization Assessment, Final Report (Aug. 2021) at p. A-22 *available at* https://www.energy.ca.gov/data-reports/reports/building-decarbonization-assessment.

- Achieving progress toward CPUC, CEC and CARB policy goals.
- Coordinating with other IOU programs and entities to support the state's energy policy goals.
- Enabling buildings to uncover additional value streams by functioning as grid assets.
- Supporting building design teams, contractors, customers, and government agencies to improve their ability to understand and comply with codes and standards.
- Assisting local governments in developing ordinances that exceed statewide minimum requirements, including deep GHG reduction driven ordinances such as all-electric or all-electric ready buildings.

In addition, the economic benefits continue to accrue with each transaction following code adoption. This translates to reduced operating costs which directly affect the bottom line for multiple stakeholders, including:

- Local governments: increase ability to meet local goals, such as Climate Action Plans, through supporting standards implementation as determined by the California Environmental Quality Act.
- Local businesses: increase profits, reduce prices.
- Homeowners and residents: lower energy costs, increase in discretionary income.

(2) C&S Sector Strategies

In response to AB 3232 Assessment Report,[132] C&S will focus on following areas for planning, coordinating, and collaborating with various programs:

- Decarbonization and Building end-use electrification – EPIC, ET, EM&T, and various incentive programs such as the CEC BUILD and TECH programs;

[132] CEC California Building Decarbonization Assessment, Final Report (Aug. 2021), *available at* https://www.energy.ca.gov/data-reports/reports/building-decarbonization-assessment.

- Energy Efficiency – EPIC, ET and various incentive programs;
- Refrigerant Leakage Reduction – CARB, ET, Environment Health and Safety;
- DERs – SGIP, DR, and other incentive programs; and
- Demand Flexibility – EPIC, EM&T, ET, transportation electrification, and other incentive programs.

(3) P&C Subprogram

The P&C Subprogram will continue working with DSM programs and EM&V staff, other cross-cutting programs (ET Programs and EM&T in particular), and SCE T&D staff to establish long-term goals for certain building types, systems, and equipment. Combining policy goals with the program's vision, teams will then develop integrated plans with clear near-, mid-, and long-term objectives. Each integrated plan will support one or more of the statewide policy goals. Given the increased integration efforts with other programs, P&C will work toward informing new EM&V studies that appropriately assess and incent collaboration. The P&C Subprogram will also be enhanced to include preparedness activities to support the building industry in reaching energy efficient building decarbonization. The more immediate goal of these activities will be to provide a "crosswalk" for the new construction building industry from the current building code to the next version that will be increasingly focused on energy efficient building decarbonization. P&C and ET Programs and EM&T will continue to coordinate activities to leverage the success of past and future decarbonization ET projects.

The P&C Subprogram will continue leading building energy modeling (BEM) coordination in support of a wide variety of internal and external stakeholders across four key areas: code baseline modeling, the CalBEM organization, grid impacts modeling, and alternative metrics research.

The proposed annual budget for the P&C subprogram is $8 million per year for 2024-2027.

Table IV-61
P&C Subprogram Budget Forecast
(in Millions)

	2024	2025	2026	2027
Forecast budget by PY	$8	$8	$8	$8

Since 2013, the CPUC has emphasized the need to implement a "process that dynamically integrates early planning activities within the C&S Program with supporting program activities across the IOUs' portfolio.[133] In response, C&S formed the P&C Subprogram. This Subprogram will continue to facilitate an integrated, dynamic approach to C&S by coordinating and aligning strategic planning across impacted IOU and non-IOU programs and initiatives.

California's increasing commitment to energy efficient building decarbonization has resulted in a growing number of state policy goals, expressed in Executive Orders, legislative bills, and state agency action plans. California is currently at the forefront of a fundamental power system transformation toward a cleaner, more diverse "plug and play" grid[134] that integrates an ever-growing set of DERs and technologies that include DR, EV infrastructure, PV systems, and battery energy storage. Specific emphasis will be placed on energy efficient building decarbonization and grid flexibility, to support the state policy goals of achieving its bold clean energy goals. As a result, the C&S P&C Subprogram activities will address the growing number of state policy goals while supporting the development of a "plug and play" grid that is safe, reliable and flexible.

[133] *See* D.12-05-015 p. 246.

[134] The Emerging Clean Energy Economy, September 2016, SCE. Paper explains that the utilities must modernize the electric grid to respond to customer demands of having a clean, plug and play grid that can accommodate customer solar energy generation, batteries and other DERs.

BEM coordination is a key part of P&C which will support four key areas: code baseline modeling, the CalBEM organization, grid impacts modeling, and alternative metrics research. BEM coordination will occur with the CEC to manage and support updates and changes to Title 24 compliance software[135] (all except C&S Enhancement driven compliance support). Additionally, BEM coordination activities seek to establish a common building energy model prototype set for the State of California and work toward the implementation of a stable and independent baseline code compliance option. BEM coordination activities will provide support and facilitation of CalBEM. CalBEM is facilitated by industry-leaders who thoughtfully plan and drive progress through action plans; focused on three core goals: (1) educating BEM users, (2) improving BEM capabilities and accuracy, (3) streamlining & simplifying the BEM processes.

The scope of the P&C Subprogram will expand to help quantify and understand the grid impacts of existing codes and proposed code changes through energy modeling. The energy modeling coordination activities will employ existing and novel demand and energy modeling tools to establish new approaches for estimating grid impacts. Lastly, energy modeling coordination will provide ongoing technical support to evaluate the impacts of using alternate metrics in the Title 24 compliance process. Table IV-62 describes the P&C Subprogram strategies and Table IV-63 describes the P&C Subprogram tactics.

[135] All activities except codes adds or updates directly reported in Codes and Standards Enhancement (CASE) during the CEC code adoption proceedings.

Table IV-62
P&C Subprogram Strategies

P&C Subprogram Needs	C&S Objective	C&S Strategies
Coordinate C&S activities across the PA territories.	1. **Public Programs Coordination.** Internal & external public program stakeholders are able to coordinate their approach with C&S stakeholders to achieve statewide energy efficient building decarbonization.	PC-1. Convene forums and provide support where public programs can coordinate actions to prepare the market for EE building decarbonization and future code adoption.
	2. **Grid Harmonization.** T&D professionals are able to plan and coordinate with C&S stakeholders to facilitate the transition to a clean, flexible and resilient "plug and play" grid.	PC-2. Convene forums and provide support where grid experts and C&S stakeholders can discuss standards for a clean, flexible and resilient “plug and play” grid.
	3. **Building Energy Modeling.** Energy modeling stakeholders are able to plan and coordinate with C&S stakeholders to facilitate the streamlined development and advancement of predictive energy modeling processes and tools that are critical to achieving energy efficient building decarbonization.	PC-3. Lead statewide strategic planning activities with building energy modeling stakeholders to advance and streamline predictive energy modeling processes and tools.

Table IV-63
P&C Subprogram Tactics

Tactics	New or Modified Tactic?	Objective	Near-term: 1-2 yr. Mid-term: 3-6 yr. Long-term: 5-15 yr.
Lead the continuation of strategic planning activities and enhance coordination across the EE portfolio and other internal and external public programs by developing new tools to communicate existing standards and future work.	Mod	1	Near-Term
Support development of technology trajectories that incorporate market transformation tools, including technology readiness levels, facilitate future adoption by utility programs, and state or federal building and/or appliance codes.	Mod	1	Near-Term, Mid-Term, and Long-Term
Lead the establishment and facilitation of a communications forum with regulatory agencies and critical stakeholders to appropriately structure and phase in DERs as they relate to advancing codes and standards.	New	1, 2	Near-Term, Mid-Term, and Long-Term
Lead the establishment and facilitation of a communications forum with internal utility T&D system organizations, including grid operations, distribution and transmission planning, load forecasting, and line extension policies.	New	2	Near-Term, Mid-Term
Support the new construction market with technical support, training, and other technical assistance to achieve energy efficient building decarbonization.	Mod	1, 2, 3	Near-Term
Lead statewide strategic planning activities with building energy modeling stakeholders to advance and streamline predictive energy modeling processes and tools that are critical to achieving energy efficient building decarbonization.	New	3	Near-Term, Mid-Term
Cross-Cutting Sectors: Residential, Commercial, and Public			
Partners: The C&S program team engages with many different stakeholders and partners, including, but not limited to: • Programs within the EE portfolio • Other internal and external code-impacted programs outside of the EE portfolio: T&D, DG, EVs, DR, IQP, Community Choice Aggregators (CCAs), etc. • Agencies and code-setting entities: CPUC, CEC, CARB, DOE, ASHRAE, International Code Council (ICC) • Municipal utilities and organizations: Sacramento Municipal Utility District (SMUD), Los Angeles Department of Water & Power (LADWP), Southern California Public Power Authority (SCPPA), Northern California Power Agency (NCPA) • External progressive utilities and other entities: NEEA, National Grid, Arizona Public Service, West Coast Collaborative, etc. • Water agencies • New construction industry leaders			

(4) Compliance Improvement Subprogram (Local Program)

The Compliance Improvement Subprogram assists with improving compliance for both the Building EE and CALGreen Standards (Title 24, Part 6 and Part 11), and California's Appliance Standards (Title 20). Compliance improvement activities complement advocacy work by enabling potential savings from C&S to be realized and persist over time. The Compliance Improvement subprogram targets market actors throughout the entire compliance supply chain by providing needs-based tools, training, resources and outreach.

The Compliance Improvement budget spans PY 2024 through 2027. The budget distribution for 2024-2027 is below:

Table IV-64
Compliance Improvement Budget Forecast
(in millions)

	2024	**2025**	**2026**	**2027**
Forecast Budget PY	$3	$3	$3	$3

Table IV-65 describes the Compliance Improvement strategies and Table IV-66 describes the Compliance Improvement tactics.

Table IV-65
Compliance Improvement Subprogram Strategies

Compliance Improvement Subprogram Needs	C&S Objective	C&S Strategies
Code compliance requires market actors to have current technical knowledge about code implementation and building decarbonization.	1. California market actors have the knowledge, tools, and materials needed to increase code compliance and clean energy design	CI-1. Lead and develop a plan to improve and disseminate resources supporting compliance with building and appliance efficiency standards with a focus on GHG Reduction to help realize the full potential of adopted standards.
Code compliance needs to be implemented by market actors throughout the compliance supply chain.	2. Targeted California market actors understand their respective roles and responsibilities in code compliance and energy efficient building decarbonization	CI-2. Design and offer classes and resources to support various market actors in the compliance supply chain to understand their unique roles and responsibilities in compliance, and equip each with the specific knowledge, skill, and tools they need to quickly, easily and effectively perform their compliance job tasks.
Code development sometimes occurs without addressing code implementation needs.	3. Identify code compliance barriers in Codes and Standards Enhancement (CASE) studies and include ways to address them	CI-3. Support the development of successful standards by helping CASE authors address potential gaps impacting different market actors in their reports and code implementation during the code development (advocacy) process.
Code compliance needs to be tracked using a consistent framework across PAs	4. C&S stakeholders are able to track code updates and compliance.	CI-4. Lead monitoring and reporting using a consistent framework on compliance with building and appliance efficiency standards.

Table IV-66
Compliance Improvement Subprogram Tactics

Tactics	New, Existing or Modified Tactic?	Near-, Mid-or Long -Term?	Strategies Addressed?
Identify needs of the various market actors in the compliance supply chain and work with each actor group to identify, guide development of and test potential compliance improvement solutions with a focus on energy efficient building decarbonization	Modified	Near-, Mid-, and Long-Term	1, 2, 4
Develop tools to support the reduction of burdensome processes that present barriers to compliance, clean energy design, and building decarbonization	Modified	Near-, Mid-, and Long-Term	1, 2, 3, 4
Develop training that teaches market actors how to perform their unique compliance job tasks and deliver training using the appropriate modalities per market actor to streamline compliance	Modified	Near-, Mid-, and Long-Term	1, 2
Create resources (job aides) that help market actors understand how and when to comply with California's building and appliance EE standards	Existing	Near- and Mid- Term	1, 2
Support certification of energy analysts and help create demand for the use of Certified Energy Analysts on specific projects	Existing	Near-, Mid-, and Long-Term	2
Conduct multimedia and face-to-face outreach to increase awareness of the value of compliance with California's energy standards and the availability of tools, training and resources to support improved compliance	Modified	Near-, Mid-, and Long-Term	1, 4
Incorporate user-centered design methodologies during the code development process in collaboration with advocacy stakeholders	Existing	Near- and Mid-Term	3
Collaborate with key agencies during the rulemaking process to develop outreach plans to support new building and appliance standards	Existing	Near- and Mid- Term	2, 3
In collaboration with other stakeholders, support the development of compliance measurement and tracking methods to inform future code updates and compliance improvement activity planning	Existing	Mid- and Long-Term	4
Coordinate with local professional organizations developing partnerships to extend outreach to market actors on appliance and energy code compliance and building decarbonization resources	Modified	Near and Long- Term	1,2,4

Partners: The C&S program team engages with many different stakeholders and partners, including, but not limited to:

- Code-setting entities: CEC, California Department of Housing and Community Development (HCD), BSC
- Sectors: Residential, Industrial, Commercial, Public, Cross Cutting
- Other state agencies
- IOUs: IOU Statewide C&S Team, Programs, WE&T, DR
- Municipal Utilities: Publicly-owned utilities (POUs) and water districts
- Code enforcement community including local ICC Chapters and California Building Officials (CALBO)
- Design, construction, energy consultant community members
- Local Professional Organizations including Building Industry Association (BIA), American Institute of Architects (AIA) and US Green Business Council (USGBC)
- Manufacturing and Distributor representatives
- Retail community representatives
- State and local governments including local Council of Governments (COGs)
- SoCalREN, 3C-REN and proposed I-Ren
- Research community members
- California's higher education institutions
- Energy and sustainability non-profit organizations
- CBOs

(5) Reach Codes Subprogram

The Reach Codes Subprogram helps jurisdictions seeking to reduce overall emissions, often as a key strategy identified in their respective Climate Action Plans (CAPs). State law enables jurisdictions to enact local ordinances which exceed statewide building energy standards (Title 24, Part 6); however, to do so the municipalities must demonstrate cost-effectiveness. Many jurisdictions seeking to advance reach code measures lack the financial resources or technical capability to develop effective ordinance language or to conduct cost-effectiveness studies.

The Reach Codes budget spans PY 2024 through 2027. The budget distribution for 2024-2027 is below:

Table IV-67
Reach Codes Budget Forecast
(in millions)

	2024	2025	2026	2027
Forecast budget by PY	$1	$1	$1	$1

Table IV-68 describes the Reach Codes strategies and Table IV-69 describes the Reach Codes tactics.

Table IV-68
Reach Codes Subprogram Strategies

Reach Codes Subprogram	C&S Objective	C&S Strategies
Reach code benefits need to be articulated according to the values of local governments.	Local governments can readily articulate to their constituents the benefits of reach codes in terms of their jurisdiction's own objectives.	1. Support local adoption of reach codes that target higher levels of EE, building decarbonization, and greenhouse reduction goals.
		2. Lead collaboration efforts with CEC and other stakeholders to expand beyond traditional EE performance-based reach codes to include GHG-emissions reduction, existing buildings, renewables, building electrification, EV infrastructure, energy storage, DR, and water saving measures.
		3. Support collaboration efforts with CEC and other stakeholders to increase awareness of the value of Reach Codes to achieve Climate Action Plan emission reduction goals.
		4. Lead collaboration efforts with CEC to develop cost-effective CAlGreen voluntary tiers to support future code cycles that are focused on energy and GHG reduction.
C&S need to be implemented in a supportive market in order to achieve satisfactory compliance	CASE studies include data on market receptiveness	5. Lead strategic planning activities within the EE portfolio to identify "code readiness" priorities for the building and appliance code advocacy programs.

Table IV-69
Reach Codes Subprogram Tactics

Tactics	New or Modified Tactic?	Strategy Addressed	Near-term = 1-2 yr. Mid-term = 3-6 yr. Long-term = 5-15 yr.
Lead development of tools in collaboration with local jurisdictions that can track, quantify and report reach code energy savings and GHG reduction.	Mod	1	Mid-term
Lead coordination with CEC and HCD staff, as well as other stakeholders, by preparing cost effectiveness studies that support the CALGreen Voluntary Tier rulemaking process in addition to other reach code measures and pathways, such as electrification ordinances.	Mod	1	Near-term
Support local initiatives to improve efficiency in existing buildings such as Home Energy Score upon resale or on a voluntary basis, Green Multiple Listing Service, and/or retrofit EE for multifamily.	Mod	2	Near-term
Support collaboration efforts with CEC, RENss, regional public affairs, and other stakeholders to educate local elected officials and staff regarding the value of Reach Codes in reducing GHGs, the requirements for adoption of local Reach Codes and best practices, tools and resources available to help local implementation.	Mod	3	Near-term
Lead the integration of EE, BE, renewables, EV infrastructure, energy storage, DR, and water saving measures as a comprehensive reach code "toolkit" of measures. Support standards for DR-enabled appliances Collaborate with the CEC to develop compliance software rulesets to optimize operation of PV, storage, and other IDER components. Identify strategies for mitigating potentially adverse impacts on the local distribution grid (especially aged infrastructure areas) including tariffs, net energy metering, and interconnection regulation.	New	3	Long-term
Lead strategic planning activities with EE programs and future BE programs to develop program incentives and targeted program offerings promoting reach code measures to rapidly increase market adoption and prepare these measure to transition into the Title 24 building energy code.	Mod	4	Mid-term

(6) Sector-Specific Coordination

C&S will coordinate with programs within the EE portfolio as well as internal and external code-impacted programs outside of the EE portfolio such as T&D, DG, EVs, DR, IQP, and CCAs. Agencies and code-setting entities such as the CPUC, CEC, CARB, DOE, ASHRAE, and ICC will also be coordinated with as well as municipal utilities (e.g., SMUD, LADWP, SCPPA, NCPA), external progressive utilities such as NEEA, APS, and new construction industry leaders. Coordination within each C&S segment will be detailed below according to each subprogram as follows:

- **Segment-specific Coordination – Compliance Improvement**
  - Coordinate compliance improvement strategies and deployment with other California utilities to the extent possible to ensure the highest levels of statewide consistency.
  - Coordinate activities with the local RENs to ensure collaborative delivery of training and resources to regional stakeholders, and to avoid duplication of efforts or offerings
  - Coordinate training materials and course delivery with WE&T Subprogram to seek opportunities for knowledge increase on energy code subjects to simultaneously build EE skills and workforce capacity within affected industries, and vice versa
- **Segment-specific Coordination – Reach Codes**
  - Coordinate at the statewide level with other utilities and state agencies to author cost-effectiveness studies for common reach code measures by climate zone, which can be leveraged by jurisdictions to simplify their adoption pathway
- **Segment-specific Coordination – Statewide Building Codes Advocacy**
  - Refer to PG&E's EE business plan for more detail as this subprogram is administrated by PG&E per Decision 18-05-041.

- **Segment-specific Coordination – Statewide Appliance Standards Advocacy Subprogram**
  - Refer to PG&E's EE business plan for more detail as this subprogram is administrated by PG&E per Decision 18-05-041.
- **Segment-specific Coordination – Statewide National and International Standards Advocacy Subprogram**

  Refer to PG&E's EE business plan for more detail as it is no longer a local subprogram.
  - Code Readiness Subprogram

    This subprogram is specific only to PG&E. SCE conducts this same work in our local C&S subprograms (P&C, Compliance Improvement, and Reach Codes), SWEETP, EM&T, and in conjunction with EE incentives programs, EM&V, and other internal SCE organizations.
  - Decarbonization Subprogram

    This subprogram is specific only to PG&E. SCE conducts this same work in our local C&S subprograms (P&C, Compliance Improvement, and Reach Codes), SWEETP, EM&T, and other internal SCE organizations.

(7) Program Details

In addition to the program descriptions above, SCE provides specific program details for each of these programs in the Program Cards found in Attachment 1 of this Exhibit.

7. Cross-cutting Sector – WE&T

WE&T is a cross-cutting program that delivers educational offerings, tools, and other resources to equip the clean energy workforce with the knowledge to recognize and act upon EE opportunities. WE&T provides education and training opportunities to current and future workers, enabling them to perform the work needed to support California's clean energy goals.

The Centers, located in Irwindale and Tulare, are the primary delivery channel for providing education and training to the public, SCE customers, and the clean energy workforce

through both in-person and virtual delivery platforms. Additionally, the Centers offer best-in-class event hosting, creating various opportunities for SCE to connect with key stakeholders. As such, the Centers continue to be uniquely positioned to expand their portfolio of offerings and resources, helping to meet the needs of the growing clean energy industry. To accomplish this, as part of the Four-Year Portfolio Plan, the Centers will continue to leverage subject matter experts and partners to develop and enhance course content and educational exhibits to provide the workforce with the technical knowledge and skills necessary to prepare today's workforce for tomorrow's challenges.

The Centers will continue to support the growing market demand for a skilled, adequately trained workforce and in large enough numbers to support statewide decarbonization efforts. A clean energy economy depends on a workforce and a consumer population that understands, accepts, and adopts advanced technology and an educated workforce that can properly install and maintain current and emerging technologies. A decarbonized energy economy will also require trade professionals capable of effectively promoting BE and fuel switching alternatives to their clients. A key focus of the Centers is to provide the workforce, including those in DAC, with access to educational resources that include free or low-cost options, online content, multi-lingual options, and resources offered through both satellite and partnership locations. The Centers will provide educational offerings, tools, and other resources to equip consumers, market actors, and the workforce with the necessary knowledge and skills to help California meet its GHG reduction goals and support SCE's Pathway 2045.

a) Sector-Specific Goals, Objectives and Strategies

The primary goals of WE&T Cross-Cutting sector is supporting the long-term success of the EE market by achieving attendance, partnership, and outreach targets through SCE's Centers and utilizing the newly developed MEU.

(1) WE&T Goals & Objectives

SCE's WE&T Cross-Cutting sector will focus on creating a supply of workers to enable California to achieve decarbonization goals and to increase outreach to the workforce and market

actors in DAC. In 2024-2027 SCE will continue to deliver programs and training to the clean energy workforce to achieve the sub-objectives below:

(a) Sub-Objective #1: Demand (Consumers/End users)

As part of a comprehensive training program, the Centers plan to leverage introductory classes to provide end-users with education on clean energy technologies, programs, rates, etc., aimed at advancing clean energy objectives. The Centers' growing online offerings, including live webcasts and on-demand content, will provide easy-to-access education. In addition, the MEU will continue to be leveraged to conduct outreach to end-users throughout SCE's service area.

(i) Educating Customers

The Centers intend to leverage and expand their comprehensive curriculum to provide customers, attendees, and end-users with the foundational knowledge and skills necessary to participate in the clean energy movement successfully. By offering introductory level content through a combination of in-person and online channels, we will continue to create awareness and additional demand for carbon-free technologies. Additionally, these training programs will demonstrate to end-users the value of proactively adopting clean technologies, including minimizing downtimes, cost benefits, and others.

(ii) Online & On-Demand Offerings

Expanding the Centers' live webcasts and on-demand options will provide accessible education to our end-users, including those in DAC. Removing accessibility barriers to educational content will create greater consumer awareness of carbon-free technologies and programs, increasing demand for adoption.

(iii) MEU

The Centers will leverage a MEU to conduct outreach into communities with accessibility barriers or those less inclined to seek out or attend in-person courses. Outreach will include but is not limited to disadvantaged and underserved communities, high school and college events, trade shows, and other community events. This unit will contain displays and

demonstrations that showcase innovative and new carbon-free technologies and promote SCE offerings like CARE, FERA, and other relevant programs.

(b) Sub-Objective #2: Supply (workforce)

Building from an existing foundation of comprehensive course content, the planned curriculum will provide the necessary technical upskill to grow the supply of workers capable of reaching California's decarbonization goals. The educational focus includes advanced courses, certification options, and continuing education opportunities through online and in-person channels, removing accessibility barriers to disadvantaged workers. Additionally, a multi-disciplinary approach will help to facilitate the cross-promotion of clean energy technologies.

(i) Educate Workforce

The Centers will continue to enhance WE&T offerings as the clean energy market evolves. The primary objective of WE&T is to provide the workforce with the skills and technical knowledge necessary to install and maintain current and emerging technologies. The Centers' extensive curriculum will provide the workforce with the necessary knowledge to help drive increased adoption of fuel substitution technology and IDSM opportunities. The Centers will continue to provide top-tier training in other areas impacting the energy workforce, such as Heat Pump technologies, HVAC, Sustainability, C&S, Foodservice technologies, and others. Additionally, the Centers will leverage the MEU and other educational displays to supplement and enhance the delivery of course content at on-location training events.

(ii) Online & On-Demand Offerings

The Centers will continue to meet workforce needs by providing an interactive and hands-on learning experience through high-quality, in-person, and instructor-led course offerings. To provide a flexible learning experience, the Centers will continue to expand the current stock of online offerings such as live webcasts and on-demand courses. This robust online channel will expand the reach of the program to the workforce that would otherwise not be able to attend events in-person due to distance or work schedules. Additionally, these

offerings will allow DAC to obtain the training necessary to succeed as a part of the clean energy movement.

(iii) Workforce Technology Promotion

A significant challenge to adopting clean energy technologies is the tendency of the workforce to promote traditional or otherwise known technologies. The education provided by the Centers will help the workforce (plumbers, electricians, and other trades) understand the benefits of clean energy options and develop the skills needed to implement and promote the technologies to end-users. Additionally, education will help facilitate the advancement of cross-disciplinary awareness/benefits, bridging the gap between various trades. Knowledge of emerging technologies will drive implementation and highlight the value of a proactive approach to adopting clean energy technology to end-users, including minimizing downtimes, cost benefits, and others.

(c) Sub-Objective #3: Partnerships

A key focus of the WE&T Program is to develop partnerships that increase outreach to targeted audiences, including DACs. Through both new and continued partnerships, the Centers intend to expand the reach of the WE&T program, enabling market actors to obtain training and resources that are necessary to remain valued contributors within the clean energy movement.

(i) Establishing Partnerships

The Centers will collaborate with various CBO, educational institutions, and other organizations to establish partnership opportunities that will include, but not be limited to:

1. Providing tailored technical education or training.
2. Providing training-the-trainer sessions
3. Support for kick-start or early-stage initiatives
4. Support the development of EE curriculum or materials
5. Provide building performance or other measurement tools

Identification of additional on-location options, further expanding reach into specific communities

(ii) Partnership Customer Outreach

Additionally, the Centers will continue to utilize vendors to reach targeted audiences that are otherwise unreachable through traditional methods. Establishing meaningful partnerships will have a dramatic impact on the Centers ability to effectively utilize the funding available in support of the overall EE workforce.

(d) Sub-Objective #4: Innovation and Accessibility

The Centers will support disadvantaged workers by providing-training opportunities both in-person and online, through partnerships, and with the use of a MEU. In addition, by mobilizing the MEU to visit disadvantaged community events, WE&T will be able to demonstrate new innovative technologies to the general public. By partnering with local non-profits, CBOs and government agencies, the MEU will be able to travel to HTR areas. These Centers will deliver on-location workshops in remote areas to make accessibility to educational offerings and displays available.

(2) WE&T Sector Strategies

The overarching strategies for WE&T is the development of comprehensive and technical upskill curriculum delivered through flexible learning platforms and a focus on partnerships that increase outreach to DACs. These strategies will enable market actors to obtain training and resources that are necessary to remain valued contributors within the clean energy movement.

In 2022 and 2023, SCE enhanced the WE&T IEET program by including new training on the latest fuel substitution technologies and complementary IDSM technologies, such as energy storage, PV, and more.

(a) Sector-Specific Coordination

The WE&T section of the Four-Year Portfolio Plan is a Cross-Cutting segment that interacts with other sectors throughout the portfolio. This section provides high-level descriptions of how WE&T interacts with those sectors.

(i) Residential Sector

The Residential sector coordinates with WE&T to incorporate and integrate industry-specific education and training opportunities for end-users and the workforce that supports the residential segment. As part of this effort, the following are a few cross-cutting strategies on which the sectors will collaborate:

- Leverage the Centers to provide in-person education, interactive educational displays, and energy or technology consultation.
- Continue to deliver industry-valued, standards-based residential HVAC quality installation and maintenance curricula and pathways to certification.
- Work with contract training providers to enhance residential HVAC technical offerings that increase contractor soft-skills and proficiency in both the HVAC and home performance industries.
- Develop new decarbonization curricula and other educational tools and offerings, targeted to high-potential market actors and decision makers, to enhance their knowledge of the technological innovations and integrated business strategies required to effectively understand, interpret, and meet clean energy goals.
- Leverage the MEU to conduct outreach to residential end-users focused on DAC and HTR communities throughout SCE's service area.

(ii) Commercial Sector

As one of the largest sectors served by SCE, the Commercial sector is a key area focus for WE&T program. SCE's WE&T program will continue to incorporate and integrate industry-specific education and training opportunities for business owners and the workforce that supports the Commercial segment. Different delivery strategies will be utilized to provide large, medium, and small customers with education offerings to adopt clean energy technologies and reduce GHGs. Strategies include:

- Leverage the Centers to provide in-person education, interactive educational displays, and energy or technology consultation.

- Leverage the MEU to conduct outreach to business and industry-specific organizations like food services and clean energy technologies.
- Continue to expand online and on-demand offerings to include targeted seminars for the commercial segment.
- Collaborate with industry stakeholders to convene industry-specific forums, conferences, and education sessions that seek to bring awareness of both regional energy-related challenges and opportunities to meet decarbonization objectives.
- Continue to develop partnerships that increase outreach to the commercial segment, including business owners and the workforce, enabling market actors to obtain training and resources that are necessary to remain valued contributors within the clean energy movement

(iii) Industrial Sector

An important sector served by SCE is the Industrial sector. The WE&T program will continue to incorporate and integrate industry-specific education and training opportunities for industrial business owners and the workforce that supports the Industrial segment. Different delivery strategies will be utilized to provide industrial customers with education offerings to adopt clean energy technologies, such as Programable Logic Controllers (PLC), Variable Frequency Drives (VFD), air compressors, and to educate customers on DSM programs like DR.

- Leverage the Centers to provide in-person education, interactive educational displays, and energy or technology consultation specific to industrial technologies.
- Continue to expand online and on-demand offerings to include targeted seminars for the industrial segment.
- Collaborate with industry stakeholders to convene industry-specific forums, conferences, and education sessions that seek to bring awareness of both regional energy-related challenges and opportunities to meet decarbonization objectives.
- Continue to develop partnerships that increase outreach to the industrial segment, including business owners and the workforce, enabling market actors to obtain

training and resources that are necessary to remain valued contributors within the clean energy movement.

(iv) Agricultural Sector

Another important sector served by SCE is the Agricultural sector and is a significant focus for the WE&T program. The WE&T program will continue to incorporate and integrate industry-specific education and training opportunities for agricultural segment. Different delivery strategies will be utilized to provide agricultural customers with education offerings to adopt clean energy technologies like energy management systems for pumping applications, VFD for water irrigation, and educate customers on DSM programs like DR.

- Leverage the Centers to provide in-person education, interactive pumping displays, and energy or technology consultation specific to agricultural applications.
- Continue to expand online and on-demand offerings to include targeted seminars for the agricultural segment.
- Collaborate with industry stakeholders to convene industry-specific forums, conferences, and education sessions that seek to bring awareness of both regional energy-related challenges and opportunities to meet decarbonization objectives.
- Continue to develop partnerships, including educational partnerships, that increase outreach to the agricultural segment, enabling market actors to obtain training and resources that are necessary to remain valued contributors within the clean energy movement.

(v) Public Sector

In the Public sector, SCE's WE&T program will continue to support the education of decision makers on upcoming code changes and the value of EE, expand access and availability of educational offerings, and continue to look for ways to enhance cross-sector collaborations throughout the EE value chain.

As building code requirements evolve and focus on increased GHG reduction in support of California's aggressive decarbonization goals, local governments and jurisdictions face

challenges when pursuing the adoption and implementation of these compliance requirements. SCE will continue to focus Public sector code awareness (via C&S) efforts through targeted offerings to plan examiners, building inspectors, and other decision makers in government on baseline code awareness and expected changes in future code, while encouraging the adoption of voluntary or measure-specific reach codes.

WE&T will develop a well-informed support industry to residential new construction builders and developers, including building inspectors, financial and real estate professionals, appraisers and other entities central to the advancement of residential electrification. The expansion of current in-field educational offerings will be accomplished through the partnerships and the delivery of additional, targeted workshops and seminars using Public sector facilities where many of these market actors work.

Furthermore, SCE will continue to expand online and on-demand offerings to include targeted seminars in the Public sector on code awareness and compliance improvement.

(vi) C&S

In the C&S sector, SCE's WE&T program will continue to support the development of code changes and stretch codes by focusing on educating market actors of emerging codes and standards to develop a workforce capable of achieving SCE's clean energy and decarbonization goals. The WE&T program will:

- Collaborate with energy modeling developers in educating market actors to understand the California code requirements related to nonresidential HVAC, envelope, and indoor lighting systems.
- Provide training in energy modeling software such as EnergyPro for use in clean energy design and compliance.
- Coordinate training materials and course delivery with the C&S subprogram to increase knowledge on energy codes to build workforce capacity within affected industries.

(b) Categorization by Segment

All WE&T programs are part of the Market Support segment but will impact both the Resource Acquisition and Equity segments. The WE&T programs will help support the Resource Acquisition segment by providing the workforce with the skills and technical knowledge necessary to install and maintain current and emerging technologies. The Centers' extensive curriculum will provide the workforce with the knowledge needed to help drive increased adoption of fuel substitution technology and IDSM opportunities.

The WE&T programs will also help support the Equity segment by providing easy-to-access training opportunities both in-person and online, establishing partnerships with CBOs, leveraging the mobile educational unit to carry training content and messaging, to HTR, disadvantaged, and underserved individuals, households, businesses, and communities.

b) Program Details

The Four-Year Portfolio Plan does not include proposals for any new WE&T programs. Details on the existing WE&T program which SCE will continue as part of the four-year period is provided in the WE&T program card found in the Program Cards found in Attachment 1 of this Exhibit.

8. Cross-cutting Sector – Emerging Technology

The SWEETP is a cross-cutting program that supports California's EE and Decarbonization goals through identifying and evaluating promising innovations and delivery mechanisms. This program is currently contracted with a third party for implementation in 2022 to 2025. SCE intends to extend the existing contract or re-solicit for the period beyond 2025.

a) Sector-Specific Goals, Objectives, and Strategies

(1) Emerging Technology Sector Goals

The goal of the SWEETP is to drive EE and demand reduction across the residential and non-residential program portfolios by finding cost effective measures available through means, including but not limited to, such as partnerships, innovation and accessibility.

(2) Emerging Technology Sector Objectives

The SWEETP links to Market Support sub-objectives through partnerships, innovation and accessibility described below. For additional details, see the Implementation Plan logged in the California Energy Data and Reporting System (CEDARS).[136]

- Sub-Objective #3: Partnerships

  Sub-Objective #3 is to build, enable, and maintain partnerships with consumers, governments, advocates, contractors, suppliers, manufacturers, CBOs and/or other entities to obtain delivery and/or funding efficiencies for EE products, and/or services and added value for partners. [Activity e.g., building partnerships]

- Sub-Objective #4: Innovation and Accessibility

  Sub-Objective #4 is to build, enable, and maintain innovation and accessibility in technology, approaches, and services development to increase value and decrease costs of EE, and/or increase scale of and/or access to emerging or existing energy efficient products, and/or services. [Activity e.g., moving beneficial technologies toward greater cost-effectiveness]

(3) Emerging Technology Sector Strategies

The SWEETP strategies to accomplish this objective for all technology sectors are described below:

(a) Scanning and Screening

SWEETP conducts broad stakeholder outreach with structured guidance to encourage a wide range of high-quality idea submissions that are aligned with the residential and non-residential portfolio needs. SWEETP reviews emerging technology trends on a frequent and regular basis to advise and support the residential and non-residential portfolios.

[136] Statewide Electric Emerging Technologies Program (SWEETP)

(b) Planning and Prioritization

SWEETP develops new Technology Priority Maps (TPMs) and revised TPMs to inform program direction. SWEETP also develops a flexible Prioritization Framework to determine how emerging technology projects are selected based on, for example, business plan objectives and emerging technology trends. SWEETP publishes quarterly technology area reports that summarize the program's results for each TPM technology area to enable the program to adjust direction based on changing sector needs.

(c) Technology Development Research and Technology Support Research

SWEETP implements projects focused on understanding and assessing a technology's potential. The main purpose of these projects is to verify a technology's technical (i.e., savings) claims and better understand market barriers or assess a technology's scalability of savings for the portfolio. In addition, they are used to comprehend the market state of a technology or group of technologies, test new program approaches, or gain deeper knowledge for longer term goals (e.g., decarbonization).

(d) Focused Pilots

Focused pilots are conducted in cooperation with other internal IOU programs to overcome supply chain and market barriers for high-impact, new technologies. Specialized TPMs are developed to prioritize focused pilots, by identifying specific technologies that have high potential to deliver substantial savings to the portfolio but have not been widely adopted in the marketplace because of market barriers. These pilots are currently approved through the third-party contract that runs from 2022 to 2025. SCE intends to extend or re-solicit at expiration of this term.

(e) Dissemination

SWEETP will disseminate program-level process information and results through webinars, emails, events, the program website, and other marketing media as needed to promote public visibility and engage stakeholders.

(f) Measure Package Development

SWEETP will coordinate with the Statewide PAs of the relevant sector-specific Statewide Program to support the development measure packages for a subset of technology research projects, subject to CPUC review and approval, to support the launch of new measures to facilitate successful adoption of technologies into the portfolio. ET projects, where appropriate for the project's objectives, are supported with measure package development to support introduction of new savings opportunities into the various sectors of the EE portfolio.

(g) Outreach Events

SWEETP conducts outreach events to communicate emerging technology information and direction to emerging technology market participants and receives input from emerging technology market participants.

(h) Technology Transfer

SWEETP facilitates technology transfer to the portfolio through dissemination of final reports, new measure development, and technology transfer meetings with key stakeholders

b) Sector-Specific Coordination

The SWEETP program is the only program in this program sector and is designed to engage stakeholders of various sectors through each program strategy.

(1) Scanning and Screening

The SWEETP enhances technology transfer by incorporating stakeholder feedback into individual ET project proposals to align project outcomes with specific portfolio and/or sector needs. The SWEETP will hold workshops with stakeholders such as technology developers, technology development actors, regional and national emerging technology collaboratives, and EE resource program managers to ensure alignment of ET project proposals with the IOU's customer needs. Collaboration across these entities will be important to avoid duplication of efforts and ensure any research being done on promising emerging technologies address the needs of IOU customers.

(2) Planning and Prioritization

The SWEETP ensures alignment with IOU and state needs by investing in annual strategic planning efforts, providing a flexible prioritization framework for decision support, and clearly defining program technology needs for all sectors. As the technology landscape continues to evolve, the SWEETP will need to regularly monitor the market, consult and gather feedback from relevant stakeholders, and adjust the prioritization framework to address the changing needs of all IOU customer segments. A Program Leadership Team will be established, consisting of California EE program portfolio stakeholders and advisors (e.g., CalTF, the PAs of the technology-specific statewide programs, the ETCC, CEC) to collectively evaluate research priorities and impacts, and identify opportunities for cost-sharing to achieve the SWEETP program objectives.

(3) Focused Pilots, Technology Development Research, Technology Support Research, Outreach Events, Measure Package Development, and Technology Transfer

Relevant project stakeholders will be identified as projects are designed for focused pilots, technology development research, technology support research, outreach events, and measure package development. Project stakeholders may span multiple program and technology sectors and will primarily depend on the scope of the project and/or technology being evaluated. These identified stakeholders will be consulted throughout various stages of each project, from project proposals to review of preliminary findings to project completion. The SWEETP will gather and address stakeholder feedback for each project delivered through the program, to ensure the final project outcomes are useful for the EE portfolio.

(4) Dissemination

Dissemination of program and project results is important to grow awareness and market engagement through expanded stakeholder communications and transparency. The SWEETP will ensure all program sectors, including the residential and non-residential resource programs,

are aware of emerging technologies that can benefit their respective areas. Dissemination activities will ultimately support portfolio integration.

SWEETP will inform stakeholders by communicating Program information, activities and both individual Projects and Program-level results. Dissemination activities may include, but are not limited to, publishing Program and Project reports to the Program website, and a series of Outreach Events discussing Program-level results.

As part of this, Outreach Events may also entail:

- Publishing the priorities (via the TPMs) on the SWEETP website to gather ideas
- Hosting targeted events and attending industry conferences with market actors such as manufacturers and distributors

c) Categorization by Segment

The SWEETP is a program under the Market Support segment and will support the Resource Acquisition and Equity segments through its strategies of supplying new EE measures to the portfolio and ensuring program activities align with the DAC needs through low-income specialists and other tactics detailed below.

(1) Resource acquisition

One of the strategies of the SWEETP is to transfer promising emerging technologies to the EE resource program portfolio. This is accomplished through early planning and prioritization efforts and through facilitating measure development for the EE programs. The program's planning efforts focus on gathering stakeholder guidance on portfolio needs. As the portfolio evolves to future TSB metrics, SWEETP stakeholders may advise the program on appropriate and prioritized technology research to meet new portfolio goals. TPMs will be developed to guide the program on technology research priorities, where TPMs will be available by technology groupings and evaluated against key portfolio priorities, such as TSB.

SWEETP's strategies also include efforts to supply new EE measures to the portfolio. Through focused pilots, technology development/support research, measure package development, SWEETP will increase the supply of available EE products to optimize portfolio

energy savings. SWEETP's efforts also provide risk-mitigating benefits by advising the EE resource portfolio on products that do not meet the needs of the portfolio.

(2) Market Support

The SWEETP program is part of the Market Support segment. This includes both the statewide and local emerging technologies programs. The SWEETP supports critical "stage-gates" early in the development of customer offerings, by identifying which are the "beneficial technologies" in the Market Support segment definition's subobjective: "moving beneficial technologies toward greater cost-effectiveness". A "stage-gate" process, used here as an example, is a decision-making process that weeds out inappropriate or unsuitable candidates from further review, and allows suitable candidates to pass through to the next stage for more rigorous and more resource-intensive assessment. In alignment with the Market Transformation Framework in D.19-12-021, the SWEETP's Market Support role and objectives would under Stage 1 (Concept Scanning & Identification), Stage 2 (Concept Development and Assessment), Stage 3 (Strategy Development), and partly under Stage 4 (Strategy Testing), due to the ET focused pilots and other pilot testing of market interventions. The identification of "beneficial technologies" is a non-trivial task and requires decision-making under conditions of uncertainty. The stage-gate model describes a way to mitigate the risk of overcommitting resources to assessing a technology that turns out to be unsuitable. The SWEETP's assessments in Stage 1 are usually exploratory and may consist of a lab test under controlled conditions, whereas assessments in Stage 3 or 4 may seek to obtain data from all of California's climate zones in support of a measure package and require in-situ assessments under standard environmental challenges.

The SWEETP provides value to the portfolio both by identifying "beneficial" technologies as well as weeding out inappropriate technologies. The SWEETP serves the IOUs by providing a trusted, manufacturer-neutral assessment, and provides recommendations based upon project findings. The SWEETP does not seek to be prescriptive; rather, the SWEETP makes recommendations based on empirical data, and the ultimate decision of whether or not to

offer an emerging technology depends on the program designers, who must accept the risk of the technology's costs and performance.

Although activities in Stages 1-4 of the Market Transformation Framework cannot increase the cost-effectiveness of a technology by themselves, in conjunction with incentives and marketing from Resource Acquisition programs operating in Stages 5-7, the market share of emerging and underutilized technologies can be increased, and the resulting economies of scale will hopefully reduce measure costs and thereby increase cost-effectiveness. It should be noted that the thresholds for risk tolerance may be different between traditional incentive programs, that may require near-cost effective performance in the short run, versus market transformation programs, that may be specifically seeking non-cost-effective technologies that would benefit from market transformation. Therefore, ET Program's data and findings are generally intended to be useful to designers of both types of programs.

(3) Equity

SWEETP's design includes a focus on disadvantaged workers, DACs, and HTR customers. SWEETP includes a low-income specialist to ensure program activities align with the DAC needs. The specialist will engage with CBOs to provide insight to technical and non-technical opportunities and challenges for DAC communities. The specialist will support the program by guiding appropriate SWEETP projects for DAC customers. SWEETP's project prioritization framework will have screening criteria for DAC potential to help prioritize certain project types. In some cases, projects may be "fast tracked" to deliver focused outputs that can address immediate portfolio needs related to DAC. As appropriate, project findings will be crafted with a focus on potential benefits for DAC customers.

d) Program Details

SCE will implement two ET programs in 2024-2027. The first program is the SCE-administered local ET Program, which is composed of three sub-programs: Technology Introduction Support, Technology Assessment Support, and Technology Development Support. SCE's activities for the local program will focus on ramp-down efforts to complete previously

committed projects from prior years. By 2025, SCE intends to close out all active projects under the SCE-administered local ET Program. The second program is the SWEETP, which is a third-party implemented program. The SWEETP program duration is currently contracted for 2022-2025. SCE's plans for continuing the program in 2026-2027. The Program Card details described below provide more details of the SWEETP. As the Lead Administrator and consistent with CPUC prior decision outlining its responsibilities, SCE will provide appropriate oversight to this program as designed and implemented by the third-party implementer. There will be no new programs in 2024-2027. Program details for the ET program is located in the Program Cards found in Attachment 1 of this Exhibit.

The Market Support segment includes the SWEETP, which aims to identify emerging and underutilized technologies that have the long-term potential to deliver cost-effective energy savings. The SWEETP aims to bring those technologies to non-residential and residential resource portfolios promptly. The SWEETP budget spans PY 2022 through 2025. The budget distribution for 2024-2027 is below:

Table IV-70
SWEETP Budget
(in millions)

	PY 2024	PY 2025	2026	2027
Forecast Budget by PY	$18	$18	$18	$18

The Market Support segment also includes the SCE-administered local ET Program. The program closes in early 2022, and SCE plans to continue ramping down prior committed projects through the end of 2025. The local ET Program will only require continued labor funding from 2024 through 2025 to close out projects committed through 2022.

9. Cross-cutting Sector – Finance

The Statewide Finance Program is a cross-cutting program that supports California's EE and Decarbonization goals by facilitating the purchase and installation of EE measures both in the Residential and Non-residential markets.

a) Sector-Specific Goals, Objectives and Strategies

(1) Finance Sector Goals

The Statewide Finance Program, which includes the OBF Program and the NFO, will continue to provide market support to the overall EE Portfolio by making the capital required to purchase and install energy efficient measures more available and accessible to those customers for whom they might otherwise not be available.

(2) Finance Sector Objectives

The CAEECC Market Support Working Group identified the following sub-objective related to Finance and applicable to this sector.

- Sub-Objective #5: Access to Capital
- Build, enable, and maintain greater, broader, and/or more equitable access to capital and program coordination to increase affordability of and investment in energy efficient projects, products, or services. [Activity e.g., access to capital]

(3) Finance Sector Strategies

(a) OBF Program

Due to OBF's excellent performance record since its inception in 2010 and loan default rate below one percent, SCE's strategy is to continue to offer its OBF Program, which provides eligible customers with zero-interest financing for the purchase and installation of qualifying energy-efficient measures. Loans are available to qualifying nonresidential customers, including commercial, industrial, government, and institutional customers who repay their OBF loan as a line item on their electric bill. During the 2024-2027 funding cycles SCE will continue to extend

its current offering to the new local third-party programs, and SCE customers participating in the new statewide EE programs.

(b) OBF Loan Pool

SCE is authorized to use funds recovered in the current year to fund loans committed during the current year. The Commission and the Energy Division have previously granted SCE the authority to retain funds from prior EE and OBF program cycles and repayments collected from previous loans to be used in subsequent program cycles, resulting in a net decrease between SCE's PY budget and annual EE funding request. Consistent with this precedent, SCE is requesting authority to retain unspent uncommitted OBF funds from prior funding cycles to use for the 2024 through 2027 funding cycles within the OBF program only.

For PYs 2024 through 2027, SCE requests authorization to retain $40 million, from repayments, unspent, and uncommitted OBF funding from the 2010-2012, 2013-2015, 2016, 2017, 2018, 2019, 2020, and 2021 OBF program funding cycles, to fund OBF Program commitments. SCE proposes to retain approximately $.14 million from the 2010-2012 program cycle, $1.15 million from the 2013-2015 OBF program cycle, $0.52 million from the 2016 program cycle, $0.30 million from the 2017 program cycle, $0.33 million from the 2018 OBF program cycle, $16.01 million from the 2019 program cycle, $12.00 million from the 2020 program cycle, and $9.55 million from the 2021 OBF program cycle to make up the $40.00 million needed for the 2024-2027 funding period. This is reduced from the $12.00 million retained for PY 2023 due to lower overall demand for this program and the transition to third-party implemented programs. Table IV-71 includes the authorized budgets, loans issued, commitments, repayments and funds needed from the 2010-2012, 2013-2015, 2016, 2017, 2018, 2019, 2020, and 2021 program periods.

Table IV-71
OBF Loan Pool

Program Cycle[1]	Authorized Budgets (a)	Revenue Requirement Returned (a.1)	Loans Issued[2] (b)	Write Offs (c)	Repayments (d)	Commitments[3] (e)	Retained for 2018-2023 OBF Loan Pool[4] (f)	Available Balance (a)-(a.1)-(b)-(c)+(d)-(e)-(f)	Proposed to Retain for 2024-2027
2010-2012	$32,000,000	$9,451,136.00	$21,853,666.44	$269,304.92	$20,994,898.56	$-	$21,265,358.07	$155,433.13	$138,433
2013-2015	$54,724,863	$-	$47,251,049.80	$393,871.88	$38,261,532.72	$-	$44,010,221.23	$1,331,252.81	$1,151,252.81
2016	$11,000,000	$-	$11,333,120.57	$-	$6,195,786.50	$-	$5,240,283.21	$622,382.72	$522,382.72
2017	$15,000,000	$-	$4,359,464.21	$-	$2,303,190.67	$-	$12,607,759.32	$335,967.14	$295,967.14
2018	$14,000,000	$-	$6,283,709.55	$-	$2,439,203.05	$3,374,856.72	$6,376,380.30	$404,256.48	$329,256.48
2019	$17,500,000	$-	$2,024,485.52	$-	$828,397.17	$273,095.78	$-	$16,030,815.87	$16,010,815.87
2020	$17,000,000	$-	$4,623,179.57	$-	$432,584.13	$727,769.18	$-	$12,081,635.38	$12,001,635.38
2021	$15,000,000	$-	$375,016.79	$-	$10,267.50	$2,431,504.46	$-	$12,203,746.25	$10,210,256.47

[1] SCE was previously granted authority to retain funds from prior OBF program cycles to use in subsequent program cycles. See SCE Advice 3880-E.
[2] Cumulative amount of loans issued during the program cycle.
[3] Commitments are based on the total number of OBF projects that already have committed/reserved funds set aside.
[4] Funds retained for the 2018-2021 program cycles.

(c) NFO

As a result of D.21-08-006 SCE will continue to support the CHEEF Programs through June 30, 2027.

In addition to providing support to the CAEATFA for the administration and ME&O of the existing CHEEF programs through the statewide marketing vendor, SCE will conduct internal ME&O efforts directed drive traffic to the GoGreen Financing website and ultimately drive customer participation.

Authorization for specific SCE funding requests to support the CHEEF Programs through June 30, 2012 has been requested by SCE Advice Letter 4595-E, and SCE Advice Letter 4606-E.

Other Finance efforts, including the expansion of existing programs, or the proposal of new finance programs will be done outside of this filing, and as part of the (R.)20-08-022.

b) Sector-Specific Coordination

Offering OBF to third-party and SCE customers that participate in Statewide EE programs might reduce accessibility to detailed project information.

It is important that any new OBF processes derived from the shift from utility to third-party administration of incentive programs are simple and easy to understand for customers. This

will require working closely with third-party implementers, contractors and other IOUs to identify potential issues, find solutions and share best practices.

Similarly, expanding the NFO and bringing them to scale is a task that requires working closely with multiple stakeholders, including CAEATFA, EE contractors, financial institutions and the Statewide IOU team. This close collaboration is an important part of the overall administration of the NFO, and SCE will continue to maintain the same level of coordination within the CHEEF that is essential for the success of the NFO.

c) Categorization by Segment

EE Finance Programs are categorized as Market Support but will support both Resource Acquisition and Equity segments.

(1) Resource Acquisition

The EE Finance Program will help support the Resource Acquisition segment by facilitating the installation of energy efficient measures by reducing the financial burden of upfront costs through zero percent financing, and the convenience of loan repayment through the customer's utility bill.

(2) Market Support

The EE Finance Program is part of the Market Support segment. This includes both Statewide Finance Programs, OBF and NFO.

(3) Equity

The EE Finance Program provides support to Equity customers by making financing of EE projects accessible to Small Business customers that in some cases might not qualify for other financing options.

d) Program Details

The Statewide Finance Program, which includes the OBF Program and the NFO, provides market support to the overall EE Portfolio by facilitating the purchase and installation of EE measures both in the Residential and Non-residential markets. There will be no new EE

finance programs. Program details for SCE's finance programs, identified above, are found in the Program Cards found in Attachment 1 of this Exhibit.

C. Third-Party Programs

1. Third-Party Solicitation Strategy

SCE is committed to prioritizing market-based solutions to meet its portfolio needs. At the time of filing this Application, SCE's current portfolio has undergone a solicitation for each sector or Statewide offering. Third-party programs are planned to comprise 71% of the portfolio in the initial year (2024) of the Four-Year Portfolio Plan. SCE expects the percentage of third-party contracts to continue to increase overtime for the following three reasons: 1) Any third-party program under contract is anticipated to stay as a third-party program as current contracts conclude, fail or are amended, 2) SCE has targeted offerings in its current portfolio that may be appropriate to undergo a more targeted solicitation (i.e., the Residential Direct Install program) which would reduce overall program budgets operated by SCE, and 3) SCE's future solicitations will focus on new segments or gap-filling programs to support a targeted customer group that will contribute to SCE's commitment to third parties' overall budgets and support SCE's customers and portfolio needs. SCE's solicitation strategy will support the success of the overall portfolio and contribute to the expansion of a robust EE marketplace.

The table below lists local and statewide third-party programs that fall under three categories: current, new and placeholder. Programs under the "current" category are those program that will be in place at the start of the Four-Year Portfolio Plan period. Programs under the "new" category are programs that SCE is proposing as part of the Four-Year Portfolio Plan period. Lastly, the "placeholder" category identifies upcoming solicitations for those third-party contracts that will conclude in PY 2024 or 2025.[137]

[137] The Local Public Sector 3P Solicitation and Agriculture 3P Solicitation as well as UC/CSU/CCC solicitations and Water/wastewater Solicitations are categorized as "placeholders," but are undergoing the solicitation process at the time of filing this Application. SCE expects that programs for these solicitations will be operational in 2024.

Table IV-72
List of Current and Upcoming Third-Party Programs

Program Name	Program Type	Business Sector	Category
Enervee Marketplace	Local Third Party	Residential	Current
Residential Behavioral Program	Local Third Party	Residential	Current
Commercial Behavioral Program	Local Third Party	Commercial	Current
Comprehensive Multifamily Program	Local Third Party	Residential	Current
Comprehensive Commercial Program	Local Third Party	Commercial	Current
Comprehensive Industrial Program	Local Third Party	Industrial	Current
Department of General Services	SW Third Party	Public	Current
Plug Load and Appliance	SW Third Party	Residential	Current
Upstream HVAC (Comm + Res)	SW Third Party	Commercial	Current
Upstream HVAC (Comm)	SW Third Party	Commercial	Current
Upstream HVAC (Res)	SW Third Party	Residential	Current
Water/wastewater pumping	SW Third Party	Public	Placeholder
Lighting (Upstream)	SW Third Party	Commercial	Current
UC/CSU/CCC	SW Third Party	Public	Placeholder
Food Service POS	SW Third Party	Commercial	Current
Midstream Comm Water Heating	SW Third Party	Commercial	Current
ETP, electric	SW Third Party	Emerging Tech	Current
Res HVAC QI/QM	SW Third Party	Residential	Current
SW Non-Res Ag New Construction	SW Third Party	Agricultural	Current
SW Non-Res Ag Mixed New Construction	SW Third Party	Agricultural	Current
SW Non-Res Comm New Construction	SW Third Party	Commercial	Current
SW Non-Res Comm Mixed New Construction	SW Third Party	Commercial	Current
SW Non-Res Ind New Construction	SW Third Party	Industrial	Current
SW Non-Res Ind Mixed New Construction	SW Third Party	Industrial	Current
SW Non-Res Pub New Construction	SW Third Party	Public	Current
SW Non-Res Pub Mixed New Construction	SW Third Party	Public	Current
SW Non-Res Res New Construction	SW Third Party	Residential	Current
SW Non-Res Res Mixed New Construction	SW Third Party	Residential	Current
SW Res New Construction	SW Third Party	Residential	Current
SW Res Mixed New Construction	SW Third Party	Residential	Current
WET Career Connections	SW Third Party	WE&T	Current
Codes & Standards Advocacy - State Appliance Standards Advocacy	SW Third Party	Codes & Standards	Current
Codes & Standards Advocacy - State Building Codes Advocacy	SW Third Party	Codes & Standards	Current
Codes & Standards Advocacy - National Codes & Standards Advocacy	SW Third Party	Codes & Standards	Current

Local Public Sector 3P Solicitation	Local Third Party	Public	Placeholders
Agriculture 3P Solicitation	Local Third Party	Agricultural	Placeholders
Public Equity Program	Local Third Party	Public	New
Residential Equity Program	Local Third Party	Residential	New
Small/Medium Agricultural Equity Program	Local Third Party	Agricultural	New
Small/Medium Business Equity Program	Local Third Party	Commercial	New
Small/Medium Industrial Equity Program	Local Third Party	Industrial	New
WE&T Career and Workforce Readiness	SW Third Party	WE&T	New
EE New Program Design Pilots	Local Third Party	Residential	New
EE Contractor Demand Building Program	Local Third Party	Commercial	New
Residential 3P Solicitation	Local Third Party	Residential	Placeholders
Commercial 3P Solicitation	Local Third Party	Commercial	Placeholders
Industrial 3P Solicitation	Local Third Party	Industrial	Placeholders

a) Stakeholder Feedback Regarding SCE's Solicitation Process

In July 2018, SCE formed its Procurement Review Group (PRG), composed of Commission staff, consumer representatives, and non-market participants who do not have a financial interest in the outcome of the solicitation. SCE will continue to work closely with its PRG and pool of IEs to receive feedback on SCE's third-party solicitation process.[138] Consistent with D.18-01-004, the PRG serves as an advisor to SCE by providing feedback during all stages of the solicitation process, including RFA/RFP development and preparation and scoring/evaluation criteria to evaluate bids received through solicitations. An IE also provides support to both the PRG and SCE throughout the entire solicitation process, including verbal reports of solicitation activities at PRG meetings and written semi-annual reports filed with the Commission.

b) Solicitation Scope and Schedule

The third-party solicitation scope includes solicitations to meet four primary needs: 1) procuring new programs in the Equity and Market Support segments of the Portfolio, 2) addressing portfolio gaps that materialize after the initial solicitation rounds, 3) procuring

[138] For more information, please see Energy Efficiency Procurement Review Group and Independent Evaluator Handbook, Energy Efficiency Third-Party Solicitations, October 22, 2018 Version 1.0 *available at* https://pepma-ca.com/Public/PublicEvents.aspx?f=EI1iLGIE66mTQ61lzQpETFu%2fqbTsPE3RpaYzMnCgxZgOAyoA6taxiaoR%2bS9yTvKAIsbXjlWx7pvE4D4CyPNtjw%3d%3d

contracts for targeted customers/segments that are currently served by SCE's programs, and finally, 4) replacing or extending contracts whose terms will expire during the four-year portfolio period. As addressed in SCE-01, SCE requests to consolidate the current two stage solicitation process into a single stage solicitation to expedite new offerings, increase SCE's ability to meet portfolio needs and reduce the overall burden to stakeholders and implementers to encourage greater diversity associated with these solicitations by reducing the time commitment from the market.[139] SCE's solicitation scope and schedule are detailed Attachment C of SCE-03 to show existing solicitations that are anticipated to impact the Four-Year Portfolio Plan. This schedule also includes the timeline for solicitations that are anticipated to take place in 2024 and beyond. For the four-year portfolio period, SCE anticipates launching competitive solicitations for those third-party programs which contracts that are set to expire in 2024, 2025 or if they are not extended.

SCE's Equity solicitation will happen in two phases. The first Equity solicitation will address the Residential and Commercial sectors outlined in the 2022 and 2023 Bi-annual Budget advice letter that are anticipated to continue through a portion of the Business Plan Period. For example, a Residential Equity Program starting in late 2022 or early 2023 is anticipated to continue into 2024. The second phase of the Equity solicitations will include the Agricultural, Industrial and Public sectors. This provides SCE and the market with a balance of getting to the market as quickly as possible as well as being able to apply lessons learned to the second phase of Equity solicitation which are new segments in the portfolio.

Additionally, Market Support solicitations are likely to be targeted to meet a program need. For Example, SCE's Contract demand Building program may be efficiently administered by a third-party in conjunction with SCE's local WE&T training program. Market Support offerings solicitations will be on an as needed basis. Finally, solicitations aiming to fill market gaps will begin to happen in 2022-2023 and will continue to run into the four-year portfolio

[139] *See* SCE-01, Section IX.B.

period. The portfolio will undergo a continuous assessment for market gaps based on the portfolio's overall coverage with existing contracts. Section IV.B describes the proposed programs' purpose in more detail.

c) Distribution of Risk of Third-Party Solicitations

SCE negotiates the risk allocation of third-party programs and contracts during each solicitation. SCE's solicitations include the EE Form Agreement which provides the market the ability to understand SCE's approach to balancing the benefits and the burdens of the risks associated with third-party programs and helps inform how the risks should be included in the submittal of their bids. As SCE outsources a majority of the programs to third-party implementers, program implementers are in the best position to manage the risk of designing, delivering and implementing the program. Third-party implementers have significant autonomy to implement their own strategies and projects, and for that reason, it is appropriate for them to assume the ex-ante risk associated with the programs. Given commercial realities, along with how EE EM&V works, implementers typically do not assume ex-post risk related to savings claims. Impact evaluations consist of analyzing the impact of programs a year or more after savings have been achieved, claimed, reported, and implementers have invoiced and been paid for results. Should the savings be materially different in the impact evaluation than the ex-post claimed savings, the utility does not have the opportunity to correct the savings claimed and paid to third-parties to reflect results from impact evaluations.

d) Best Practices and Lessons Learned from Prior Solicitations

From the initial set of 2 solicitations, some best practices include maintaining competitive solicitations throughout negotiations and providing a price refresh opportunity based on negotiated positions. With the experience of the two-stage process in the initial solicitations, one prospective change (lesson learned), is to simplify the RFA process for potential participants by deferring questions that belong in the RFP stage. With the current solicitation process, SCE found that the dual RFA/RFP stage constrained the bidder community on the types and number

of solicitations to participate in given the length and volume of information necessary to participate in a specific solicitation.

e) SCE Outreach Approach and Supplier Diversity

SCE's outreach approach continues to focus on promoting the solicitations through a variety of different venues. The most prominent means for circulation of solicitations include notification and dissemination of all solicitation-related activity through a publicly available website (PEPMA)[140] that enables any prospective bidders to see and select which solicitations are of interest and which to pursue. There are more than 2,000 firms registered on PEPMA that have and will continue to receive solicitation notifications. Additionally, SCE will continue to publicize EE solicitations through various webinars, stakeholder engagements workshops and engaging external industry organizations that may have interest in participating in EE solicitations.

For the Four-Year Portfolio period, SCE looks to obtain a pool of diverse contracts which would include new, small, diverse and innovative program implementers. SCE expects that the proposal to transition from a two-stage solicitation approach to a single-stage approach addressed in SCE-01 will facilitate participation by smaller and more diverse vendors. In addition, SCE expects that having targeted solicitations and multiple awards encourages smaller and more diverse vendors with innovative program ideas, to participate in the solicitation process. Furthermore, it is expected that the Equity and Market Support program solicitations will provide more flexibility to a diverse set of suppliers with a range in size and capabilities, even while SCE implements the Commission's preference for pay-for-performance contracts.

Lastly, SCE will offer participants registering for bidder conferences the option to make their company name and contact information available to other bidder conference participants. This type of information sharing may lead to connections that help alleviate administrative and

[140] PEPMA website *available at* https://www.pepma-ca.com/Public/Default.aspx.

other concerns raised by small and diverse businesses throughout the initial years of SCE's third-party solicitation process and may lead to increased participation in the process.

2. Statewide Programs

In D.16-08-019, the Commission established the definition and structure of statewide programs, directed these programs to be designed and delivered by one or more statewide implementers under contract to a lead PA, and required upstream (at the manufacturer level) and midstream (at the distributor level) interventions to be delivered statewide. In D.18-05-041, the Commission identified the associated lead PA for each of the statewide programs it adopted[141] and articulated that the Lead PA shall have sole responsibility for Program vision development, design/delivery, and intervention strategies; procurement, implementer oversight, meeting savings goals, customer satisfaction levels and reporting. Non-Lead PAs may provide limited input for consideration prior to procurement, but primarily provide funding to the statewide programs and receive the proportional savings and benefits based on the load share contribution.[142] Consistent with this guidance, the IOUs intend to continue to pursue outsourcing the proposal, design, implementation, and delivery of statewide programs to third parties throughout the four-year portfolio plan period. However, the Commission should eliminate the requirement that 25% of an IOUs' budget be committed to statewide programs for the reasons discussed in SCE-01.[143]

a) Statewide Programs Led by SCE

In D.18-05-041, the Commission assigned SCE to be the Lead PA for four statewide programs. These statewide programs include Statewide Lighting, Statewide Water/Wastewater, and SWEETP. SCE provides an overview of these programs in the table below. In this Business Plan, SCE will continue to lead the program administration of these programs, except for the

[141] *See* D.18-05-041, OP 26.
[142] *See Id*., OP 18.
[143] *See* SCE-01, Section IX.C.

Statewide Lighting Program. As discussed in SCE-01, SCE proposes to close the Statewide Lighting Program at the end of the contract term due to expire in 2024.

Table IV-73
Statewide Programs Lead by SCE

Program Name	Program Description	3P Implementer	Term (in months)
CA Statewide Lighting Program	The Statewide Lighting Program will provide high efficiency lighting solutions for customers across the commercial and industrial sectors of the combined IOU service territories and will employ Deemed measures.	TRC Solutions, Inc	35
Statewide Electric Emerging Technologies Program (SWEETP)	The Statewide Electric Emerging Technology Program is a non-resource program focused on helping all customer sectors throughout the California electric IOU service territories meet its energy reduction goals by identifying emerging technologies that have the long-term potential to deliver cost-effective energy savings through the EE program portfolio and Codes & Standards.	Cohen Ventures, DBA Energy Solutions	62
Statewide Water/Wastewater Pumping	The Statewide Water/Wastewater program offers EE incentives for verified installations at customer water production, conveyance, treatment, and distribution sites with water/wastewater production located within PG&E, SCE, SoCalGas, and SDG&E service territories.	TBD	TBD
Statewide Higher Education	The Statewide Higher Education program is intended to serve the University of California, California State University, or the California Community College systems, with calculated and deemed energy efficiency technology or measures.	TBD	TBD

b) Statewide Programs Led by Other PAs

Pursuant to D.18-05-041, SCE provides funding to Lead PAs and receives the proportional benefits from the Statewide Program through the CPUC's CEDARS reporting system. For the Four-Year Portfolio Plan, SCE will continue to support the seven statewide programs as non-lead PA. These programs include: Midstream Plug Load & Appliance program, the Upstream HVAC program, the New Construction Program, the NFO program, the C&S Advocacy program, the WE&T program, the Department of Corrections program, the Foodservice Point of Sale Program and Midstream Commercial Water Heating programs. SCE will also support two statewide downstream pilot programs including HVAC QI/QM program and the Career and Workforce Readiness program. Additional details regarding these Statewide Program are addressed in each of the lead PAs Business Plan Application. As discussed in SCE-01, modifications to statewide programs are warranted and SCE recommends the Commission

undergo an assessment process through a workshop to identify the specific modifications necessary to improve the success of these programs.

3. Strategies for Risk Mitigation in Third-Party Providers

Third-party implementers are a key component for the success of the EE portfolio, including SCE's ability to meet its TSB and cost-effectiveness goals. In other words, if third parties are not able to deliver their contracted-for savings, it is unlikely that SCE will be able to meet the goals set by the Commission. With that risk in mind, SCE has developed three key risk mitigation strategies associated with third-party contracts: 1) pay-for-performance contracting will incentivize third-party implementers to deliver cost-effective EE savings and reduces the risk of using customer funding without a commensurate delivery of EE savings, 2) proactive contract management will support SCE in identifying risks of potential implementer defaults and/or underperformance, both individually and across the portfolio, and 3) accelerated solicitation schedules, which are being requested as a part of this Application, will help SCE more quickly fill any gaps from, among other things, underperforming third-party implementers. All three of these mitigation strategies will assist SCE in achieving its portfolio's goals, while also protecting customer funds and managing program and portfolio risk and enable SCE to achieve its portfolio's goals.

SCE will focus on continuing to encourage a diverse set of businesses to participate in its solicitations. At the time of the Application filing, SCE's portfolio includes six different implementers across five sectors, statewide programs, and non-resource activities. Four out of six implementers have identified 34 initial subcontractors of which over 50% are designated DBEs. SCE recognizes that the portfolio budget is concentrated with programs implemented by one company, which has significant expertise in delivering EE savings. However, while that concentration poses some risk, SCE has mitigated that risk by entering into separate contracts with a well-established implementer that will be independently tracked and managed, so that SCE can fill any gaps if there are contractual shortfalls. Moreover, SCE balanced the risk of too much concentration with the expected increased cost effectiveness and overall decreased costs

that result from economies of scale. In other words, a single implementer bidding on multiple programs likely can submit a more cost-effective offer because fixed start up and operational costs can be spread across programs.

4. Contract Management

After SCE completes the solicitation process and executes agreements with third-party implementers, each agreement is assigned to an SCE contract manager. The contract manager is the third-party implementer's primary SCE contact and is responsible for monitoring both SCE's and the implementer's compliance with contractual requirements. Contract managers oversee activities, including reviews of measure and project eligibility, milestone and forecast reports, project approvals, and invoice payments. The contract manager will also work closely with SCE's internal subject matter experts in Engineering Services, Law, Supply Management, and with CP&S Management, as necessary, to coordinate implementation and improvements to contract management processes, escalate and manage emergent contract issues, and manage resolution of contract issues and disputes.

The contract managers work externally with the third-party implementers to review program performance against milestones and program targets and internally with SCE portfolio management to closely monitor and track performance of third-party programs.

D. Portfolio Coordination

SCE engages in several forums to coordinate its portfolio, as appropriate and permissible, and to seek to avoid duplication of other PA EE portfolios. These forums include CAEECC, CPUC Workshops, working groups and project coordination groups (PCGs) to provide stakeholder input for the CPUC to consider. As described below, on a local level, SCE coordinates with the RENs and CCAs to manage areas of potential overlap and complementary services to the same customers. On the statewide level, the four funding IOUs coordinate to efficiently administer the statewide program model and minimize the administrative efforts of the non-lead IOUs while providing the necessary resources for lead IOUs to effectively administer the program. Additionally, the four funding IOUs coordinate the administration of

their SEM programs which share a jointly developed program and M&V guide but solicit separate implementers to serve their local markets.

1. Coordination among Regional Programs

SCE has historically met with the RENs and CCAs with overlapping territory to discuss portfolio administration details to ensure that there are not duplicative offers and that there is clear messaging to the end use customers. Additionally, SCE and the RENs coordinate, and will continue to coordinate, through Joint Cooperation Memos that are intended to minimize duplication and avoid customer confusion. As the SCE Portfolio continues to evolve toward third-party implemented programs, SCE will continue to engage the RENs and CCAs to identify long-term gaps that may be appropriate for those entities to fill by implementing targeted programs. As new, innovative third-party programs come into market, SCE will continue to review its portfolio offerings and add, modify, or close any programs as appropriate (i.e., if they are underperforming, or other relevant reasons) and will notify RENs and CCAs of these changes. As the EE landscape evolves, SCE anticipates that the RENs and CCAs will continue their own assessments and may develop appropriate offerings, as approved by the Commission.

2. Coordination with Statewide Programs

The IOU PAs have several regularly scheduled meetings that are presently used to coordinate the administration of statewide programs. In the near term, the IOUs have also established the Statewide Energy Efficiency Team (SWEET) that meets on a more frequent basis to improve the administrative efficiency of statewide programs and addresses any operational concerns that arise during the implementation of statewide programs. At times, individual issues may warrant organizing ad hoc meetings with the appropriate stakeholders from each relevant PA. In all instances, the meetings are held in conformance with antitrust guidelines and include a detailed formal agenda with the antitrust statement read at the beginning of each meeting. There may be specific issues or instances where CPUC Energy Division staff is invited to participate in the meeting to provide input on guidance to ensure accurate reporting and most efficient methods to administer the statewide programs. SCE envisions the cadence of these

meetings to reduce as the statewide program model matures as systems such as CEDARs are updated to accommodate efficient administration.

3. Coordination among PAs

The portfolio managers of each of the IOUs typically meet on a quarterly basis to discuss administration of the statewide programs. SCE also meets regularly with the non-IOU PAs to discuss coordination of programs (as described above). These meetings are described in more detailed in the Joint Cooperation Memos filed with the Annual Reports.

4. Coordination with other Demand-Side Programs

SCE will coordinate EE efforts with other demand-side programs to collaborate on program strategy, combine incentives, and enhance the customer experience where applicable, as briefly discussed in SCE-01.[144] SCE-01 also describes how the EE application and the BE application will be complementary and coordinated.[145]

The collaboration between EE, DR, BE, and other customer programs (i.e., building decarbonization, solar, transportation electrification, low income, and resiliency programs) will be necessary to discuss new and existing programs, share information about potential program synergies and to avoid program overlap or duplication. Information shared through this collaboration includes informing the cross-cutting teams of new and proposed programs, including certain details about program design, incentive structure and target market. After sharing and reviewing the program information, SCE will evaluate potential coordination efforts in order to maximize demand side program opportunities.

Collaboration on marketing and communication plans/calendars with key dates, customer profiles, and program details will ensure that SCE's demand-side and EE efforts are well coordinated, resulting in greater participation, engagement, and awareness by customers. Through timely and relevant communications of such offerings as joint rebates for EE and DR programs, income-qualified programs, such as the ESA Program, and applications for programs

[144] *See* SCE-01, Section III.C.7.
[145] *See* SCE-01, Section III.C.2.a).

like BE, customers may be made more aware of those offerings and likely to participate. One key example of a coordinated effort is the SCE's Residential Direct Install Program and SCE's Smart Energy Program. Customers that receive a smart thermostat in the direct install program are automatically enrolled in SCE's Smart Energy DR Program. As part of the Four-Year Portfolio Plan, SCE will plan to look for future opportunities that maximize EE and DR coordination.

SCE will also coordinate EE/DR efforts with other PAs to communicate best practices and provide updates on EE/DR activities. The CPUC repurposed IDSM funds in 2018 as part of D.18-05-041 to focus on the limited integration of EE and DR by providing requirements and general policy principles for PAs to follow. SCE will continue to focus on EE/DR opportunities where applicable and will utilize EE /DR funds internally and for third-party contract implementers (where applicable) when EE investments are being made.

In addition to coordination efforts within SCE, SCE will continue to coordinate with other PAs. A cadence of monthly and quarterly regularly scheduled meetings has been established to ensure that there is a clear understanding and coordination between all PAs. At present, there are monthly meetings between the IOUs to discuss EE/DR activities relating to the repurposed IDSM funds described in D.18-05-041. There are also SCE internal monthly EE KPI meetings and monthly EE Solicitations Steering Team meetings, where such coordination, discussions, and planning take place on an ad hoc basis.

E. Stakeholder Engagement

In D.21-05-031, the Commission encouraged PAs to consult "early and often" with stakeholders prior to the filing of this Application.[146] Through the course of developing this Application, SCE engaged the IOUs, Cal Advocates, the Natural Resource Defense Council (NRDC), Sierra Club, Earth Justice, Small Business Utility Advocates (SBUA) and the California Efficiency and Demand Management Council (CEDMC). These engagement

[146] *See* D.21-05-031, p. 48.

activities consisted of sharing SCE's vision for its EE portfolio and obtaining feedback on the following key policy proposals in this Application:

- Modifications to Statewide Programs
- Transition to Single-stage solicitations
- Modifications to the HTR definition
- Efforts focused on Fuel Substitution (i.e. Fuel Substitution Midstream Program)

Stakeholders did not voice a strong position on the proposals. Feedback received from stakeholders was considered in developing this Application. For example, some stakeholders indicated that modifications to statewide programs through a process that provided stakeholder input was appropriate, that the market would benefit from a shorter and more direct solicitation process, and that an increased focus on fuel substitution is necessary to align EE policy with the state's decarbonization goals.

F. Evaluation, Measurement & Verification

1. Summary of planned EM&V Studies and Activities

SCE's Portfolio will include EM&V activities that are needed to support SCE's portfolio of programs as well as Pilots using innovative and robust methods for evidence driven insights. EM&V's primary responsibilities include coordinating with the Commission staff and their evaluators to facilitate successful ex post evaluations, providing evaluation and strategic support through data collection, data analyses, and knowledge dissemination for business and compliance insights, and conducting assessment of SCE's programs using CPUC approved methods to support the portfolio's success, as needed. SCE's EM&V support will focus in the following areas: Resource Acquisition, C&S, Equity and Market Support programs.

a) Resource Acquisition and Portfolio Support Research

(1) NMEC based Support

SCE anticipates that a significant portion of Resource Acquisition programs will utilize the NMEC framework. As such SCE anticipates research efforts in the future that are designed to increase the reliability of population based NMEC as recommended by recent research

sponsored by PG&E.[147] While residential NMEC has demonstrated a strong foundation due to the homogeneity of residential households, these results cannot be assumed to translate uniformly to non-residential sectors. Future research may include feasibility studies to understand both procedural and analytical issues regarding the application of population level NMEC in non-residential settings. Population level NMEC programs have not yet been implemented at scale by the IOUs or other utilities. However, in D.21-12-011, the CPUC has directed SCE and other PAs to implement the Market Access Program (MAP) that will utilize a Population NMEC approach in both Residential and Commercial sectors. It is anticipated that such programs will provide further insight to the applicability of Population NMEC to larger and non-homogenous sectors or populations. SCE intends to invest resources to identify issues, support development of appropriate EM&V methodologies for population level NMEC and provide solutions. Additionally, SCE will continue collaborating with the Commission, peer IOUs, and other stakeholders to update the NMEC rulebook through working groups, PCG meetings, and in other settings.

In D.09-9-047, CPUC "directed an investigation into the feasibility of crediting savings from behavior-based EE programs."[148] The same decision adopted a policy to measure and count savings from comparative usage programs using experimental design methodologies. This decision allowed SCE and other IOUs to increasingly rely on behavior change programs as an essential part of their EE portfolio. Research that helps SCE understand customers' behavioral motivations and reasons for engagement with energy efficiency-related products (e.g., technology, information, services) provide opportunities to develop more effective programs, increase adoption, reduce excess energy consumption, and elevate customer satisfaction.

[147] Pacific Gas & Electric NMEC Control Group Accuracy Assessment, *available at* https://pda.energydataweb.com/api/view/2533/NMEC%20Control%20Group%20Accuracy%20Assessment%20Pre-Public%20Draft%20Report%2008252021.pdf.

[148] D.10-04-029, p. 36.

(2) Behavior-Based Support

Behavioral programs have been one of the most cost-effective ways for SCE to generate savings. The best example is SCE's Home Energy Reports (HERs) Program, which reaches millions of SCE customers, brings steady and persistent savings, and for numerous years has contributed successfully to SCE's portfolio goals as an important tool to motivate customers to save energy. In fact, the program continues to generate about one to two percent savings per participant household.[149]

Previously SCE EM&V led studies that investigated the persistence of these savings among the matured customer (having received HERs over a period of time), which demonstrated savings persistence as high as 98% after the first year of the program's cessation of paper HER. Unfortunately, these persistent savings have not been materialized mainly due to the expected useful life assigned to the HER program, which is currently capped at one year. Additional EM&V led research will seek to provide sufficient evidence to support lifting the one-year cap, which will benefit our customers who fund this program, SCE and the state's climate and savings goals.

SCE also forecasts increased utilization of Behavioral programs in nonresidential settings which have a few examples across the country. Therefore, EM&V will lead similar analytical efforts in non-residential settings for behavioral programs that have been underutilized due primarily to the heterogeneity of this sector which is one of the barriers for implementers to engage in behavioral programs in the non-residential sector. Accordingly, EM&V plans to lead research efforts that will mitigate this barrier—particularly establishing a methodological approach that will be accepted to properly design and deal with analytical issues to ease the deployment of behavioral programs using experimental or quasi-experimental methods.

[149] *See* CPUC Impact Evaluation Report, Home Energy Reports – Residential Program Year 2017, May 1, 2019, p. 43, *available at* http://www.calmac.org/publications/CPUC_Group_A_Res_2017_HER_finalCALMAC.pdf.

Furthermore, to meet the state's aggressive EE goals, SCE needs to understand its customers and their unmet needs in the EE sphere, the barriers, and opportunities for improvement in our program offerings and program design. This includes maximizing behavioral-based impacts with equity markets including low income, disadvantaged and hard to reach customers for whom energy efficient measures alone may not provide sufficient bill and energy savings.

(3) Advanced Analytics using Innovative Data Techniques

With the advancement of cloud computing and data analytics techniques and tools, as well as by using the existing data sets and advanced user experience interview techniques to speak to customers, SCE can build upon current research to provide data-driven recommendations at the very granular level. These data-driven recommendations will assist program planners in developing innovative and compelling offerings.

Additionally, to support these efforts, SCE's EM&V team will lead, assist, and support pilot studies, fundamental to the research process, in order to support effective program design and implementations in the future. In order to get the most out of the pilot or any similar studies, the pilots must include clear metrics for evaluation, and "evaluability" will be a key part of the pilot design. The successful evaluation begins in the design stage of any pilot or programs, and thus SCE's EM&V will focus on evaluation as one of the core practices.

Since SCE's Resource Acquisition portfolio reflects the new segmentation framework developed by the Commission, SCE will undertake research to support the successful development of this approach including one or more process evaluations related to the segmented delivery approach SCE is planning to implement. Because this segmentation approach is new, with more emphasis on working with third-party implementers, this research will be useful to stakeholders, including SCE.

In D.18-01-004, the Commission required the IOUs to increasingly, over a transition period, contract with third-party implementers to design, deliver and implement the EE portfolio to encourage innovative ideas with the intent of achieving EE savings and policy goals at the

lowest cost to California customers. To support these efforts, SCE has launched, and will continue to launch, solicitations for a range of sectors. SCE's EM&V experts are an integral part of the solicitation process, providing their technical support and expertise to ensure a successful portfolio. The involvement of EM&V subject matter experts ensures the design as well as evaluation and savings calculation of programs are rigorous and viable. Additionally, the SCE's EM&V will be supporting efforts of verification of the savings submitted by the third-party implementers to make sure that submitted savings and verified savings align. Considering that these programs will be implemented primarily through pay-for-performance contracts, verification of savings will be the crucial steps toward meeting our goals and protecting our customers

b) Codes & Standards

A comprehensive understanding of the progress made by, and challenges associate with, the C&S program will come from a combination of evaluation studies and analysis of metrics. Thus, SCE expects the following studies and internal data analyses will be needed to support its C&S program:

- Baseline studies to provide baseline data against progress toward code compliance and enable tracking of reach code development,
- Process evaluations to gauge program delivery and provide opportunities for improvement,
- Market characterization studies to understand the wants and needs of various market actors, and
- Program metrics to gauge program effectiveness which is essential to continued improvement of implementation efforts.

c) Market Support Research

Both the transition to majority third-party implemented programs and the efforts of the CAEECC and MSMWG require appropriate market intelligence to deliver reliable savings and

support success of the EE market.[150] A robust awareness, attitude and usage research plan would meet the majority of the research needs addressed by the MSMWG. The research will also include process and market studies to understand the programs being offered, how they impact key customer metrics, and if any service or performance gaps need attention. SCE expects to examine the effectiveness of ME&O efforts, as well as customer understanding of program benefits and incentives.

SCE also recognizes the need to support non-resource program activity. With SCE as the Statewide lead for Electric Emerging Technologies program, SCE's EM&V will provide support as needed to achieve its primary objective of accelerating the transfer of new technologies to customers as measures, by providing market intelligence and through program evaluation support. As such SCE believes that process evaluation of any programs specifically directed at this objective be undertaken which is how non-resource activity is treated within the evaluation protocols. Finally, there is considerable recent research on the performance of the Statewide Finance Pilots. SCE will integrate these findings into both process and market studies to support this sub-objective.

d) Equity Research

As equity becomes an increasingly critical component of the State's EE goals and strategy, specific programs and/or components of programs will be evaluated through the lens of equity. While the traditional EE resource programs have focused on delivering energy savings, SCE's portfolio will now include programs designated as "equity programs" which may realize EE savings, but whose key focus is on equity or similar policy benefits. As noted earlier, the Equity segment of the portfolio provides an opportunity to expand programs and markets that have historically been addressed in isolation largely through other proceedings. To this end, there are many studies and long history of evaluations that examine both energy and non-energy benefits. The Equity programs in the EE portfolio will leverage "lessons learned" as well as

[150] *See* MSMWG Final Report *available at* https://www.caeecc.org/market-support-metrics-wg.

opportunities to build off current and forthcoming evaluations that target similar markets. In addition to traditional Impact Evaluations and Process Evaluations, studies of Non-Energy Impacts (including benefits and costs) are relevant to this sector.

Nonenergy impacts (NEIs) have long been more conceptual, theoretical and difficult to reliably measure. In recent years, technical NEI research has been conducted at the direction of the IOUs by Apprise Public Policy Institute for Study and Evaluations.[151] SCE expects NEI evaluation methodologies to continue to evolve as these types of evaluations are more critical to understanding the outcomes of Equity programs that may or may not yield cost-effective energy savings.

As indicated above, the EMWG proposed that in addition to providing energy savings, Equity programs should address disparities in access to EE measures and services, workforce opportunities and information that may also promote resilience, health, comfort, safety, energy affordability. New Equity programs may also identify previously unrecognized markets that have the potential to reduce energy-related GHG, criteria pollutant emissions, and improve the overall air quality of the community.

The overall EM&V approach for Equity programs will follow the goals and strategies outlined above. In particular, Equity programs will be evaluated on the extent to which they improve access of underserved, disadvantaged, and/or hard to reach to EE resources and behavioral programs, deliver energy savings, and provide other benefits such as health, comfort, and safety. The Equity programs and/or components of programs will target HTR, disadvantaged, and/or underserved individuals, households, business and communities.

Collecting data on key metrics identified by the working groups will be valuable to track and provide important data. However, they are not a substitute for program evaluations designed to understand program outcomes tied to unique and specific program objectives. It is likely that

[151] California ESA Program Non-Energy Benefits Final Report January 2021; Applied Public Policy Research Institute for Study and Evaluations, *available at* https://pda.energydataweb.com/api/view/2471/Final%20CA%20ESA%20NEB%20Report%201-25-21_.pdf

once a program has been developed and refined some of the metrics will be obsolete and other data or metrics may be required to optimally understand the benefits or limitations of the particular program.

SCE will work with Program implementers to develop specific EM&V plans corresponding to objectives of the Equity programs proposed and developed. For example, the residential behavioral program that has typically targeted high users may be leaving behind understanding and facilitating more energy efficient behavior of low-income households that may use relatively less energy, but still have potential to modify their behavior to achieve additional savings and greater comfort. Behavioral programs targeting DAC's or hard to reach and low-income customers will include evaluation components and methods that allow for more nuanced assessments of "success".

2. PA and Energy Division Budget Allocation and Justification

SCE determines the EM&V budget based on four percent of the overall portfolio, consistent with D.16-08-019.[152] Of the EM&V total budget amount, 27.5% is allocated to SCE and 72.5% is allocated to Energy Division staff. In D.16-08-019, the Commission allowed PAs to request up to 40% of the total EM&V.[153] This budget allocation split is consistent with SCE's historical budget split and with D.16-08-019.

[152] D.09-09-047, OP 15.
[153] D.16-08-019, OP 16.

V.

Portfolio Funding and Cost Recovery

A. OBF Program Loan Pool

SCE will continue to offer its OBF Program, which provides eligible customers with zero-interest financing for the purchase and installation of qualifying energy-efficient measures. Loans are available to qualifying nonresidential customers, including commercial, industrial, government, and institutional customers who repay their OBF loan as a line item on their electric bill. SCE is authorized to use funds recovered in the current year to fund loans committed during the current year.[154] The Commission has previously granted SCE the authority to retain funds from prior EE and OBF program cycles and repayments collected from previous loans to be used in subsequent program cycles.[155] Consistent with this precedent, SCE is requesting authority to retain all unspent/uncommitted OBF funds from PY 2023 or prior (totaling $40 million), and any future loan repayments in the EEFPBA from prior funding cycles to use for the period of the application within the OBF program only. SCE requests that if in subsequent years additional funds are required to fund loans for additional projects, SCE be able would submit a Tier 2 Advice Letter to request the ability to recover additional funds.

B. Funding Forecast

SCE is requesting approval to recover the revenue requirements associated with $1,767 million on an annual basis for the period from 2024 to 2027 as shown in Table V-74 below.[156] The total expected recovery for the full period of this Application for 2024-2031 is $3,716 million.

[154] Same as ABAL.

[155] *Id.*

[156] This total does not include Franchise Fees and Uncollectibles (FF&U).

Table V-74
Budget and Cost Recovery
(in millions)

Year	Request
2024	$425
2025	$439
2026	$448
2027	$455
2028	$462
2029	$478
2030	$495
2031	$513
Total Request	**$3,716**
Request 2024-2027	**$1,767**

SCE's budget forecast includes funds to be requested by the SoCalREN and 3C-REN in their respective applications. This table also includes funds approved in D.21-11-013 for I-REN.

SCE proposes to record the revenue requirements for the Four-Year Portfolio Plan in two existing EE balancing accounts. First, SCE proposes to use the Statewide Energy Efficiency Balancing Account (SWEEBA) to track and monitor the activities related to any statewide programs for which SCE is the Lead PA, as authorized in this Application. Second, SCE proposes to use the PEEBA to track and monitor all other activities, with the exception of activities related to the OBF Loan Pool and NFO Credit Enhancements. Table V-75 shows the requested revenue by balancing account to be recovered for the period of 2024-2031 on an annual basis.

Table V-75
Budget and Cost Recovery by Funding Source
(in millions)

Year	SCE Non – Statewide	SoCalREN	3C-REN	I-REN	Total PEEBA	SCE Statewide Lead	Total SWEEBA	EEFPBA	Total
2024	$362	$36	$6	$8	$412	$12	$12	$2	$425
2025	$366	46	$6	$9	$426	10	10	$3	$439
2026	$371	49	$6	$9	$435	10	10	$3	$448
2027	$371	58	$6	$9	$443	10	10	$2	$455
2028	$381	64	$7	$0	$452	10	10	$0	$462
2029	$390	71	$7	$0	$468	11	11	$0	$478
2030	$400	78	$7	$0	$484	11	11	$0	$495
2031	$409	85	$7	$0	$502	11	11	$0	$513

SCE's total authorized required funding includes all funding for the three REN's currently approved as PAs. Table V-76 below reconciles SCE's funding forecast to the amounts submitted through CEDARS. As described in the in the following section, no additional funds will be requested to fund the OBF Loan Pool at this time.

Table V-76
SCE's 2024-2027 CEDARS Budget Reconciliation
(in millions)

Funding Source	2024	2025	2026	2027
Total SCE's Recovery Budget	$425	$439	$448	$455
Less NFO Credit Enhancements	($2)	($3)	($3)	($2)
Less SoCal REN Total	($36)	($46)	($49)	($58)
Less 3C REN Total	($6)	($6)	($6)	($6)
Less I-REN Total	($8)	($9)	($9)	($9)
Total SCE CEDARS Budget	**$374**	**$376**	**$381**	**$381**

C. Revenue Requirements and Cost Recovery (Erin Pulgar)

In this proceeding, SCE is requesting incremental funding for the 2024-2027 program cycle to support the EE, EE Financing and Statewide EE proposals as addressed herein. SCE requests that the Commission adopt a total EE Program revenue requirement of $1,735 million, a total EE Financing Program revenue requirement of $10 million and Statewide EE Program

revenue requirement of $42 million, including Franchise Fees and Uncollectibles (FF&U)[157] expense to fund the 2024-2027 EE portfolio. The revenue requirement includes FF&U expense of $20 million. SCE will utilize its existing PEEBA, EEFPBA and SWEEBA to ensure that SCE recovers no more than the actual EE portfolio costs up to the amounts authorized in this proceeding.

1. Revenue Requirements for EE Program Proposals

Starting in 2024, SCE's proposed total EE Programs revenue requirement to be recovered in rates is $1,788 million over the 2024-2027 program cycle. SCE will include the proposed annual EE Program revenue requirement in its Public Purpose Programs revenue requirement and recover the authorized amount via its Public Purpose Programs Charge (PPPC) rate levels, which apply to all customers. The 2024-2027 proposed EE revenue requirements for SCE's EE, EE Financing and Statewide EE Programs are show in Table V-77 below.

[157] The total authorized revenue requirements include FF&U, which is based on the FF&U factors adopted in SCE's most recent General Rate Case.

Table V-77
Proposed EE Programs 2024-2027 Revenue Requirements
(in millions)

	2024	2025	2026	2027	Total
EE Program Funding	$412	$426	$435	$443	$1,716
FF&U	$4.6	$4.8	$4.9	$5.0	$19.3
Total Revenue Requirement	$416.6	$430.8	$439.9	$448	$1,735.3
EE Financing Program Funding Amount	$2	$3	$3	$2	$10
FF&U	$0.02	$.03	$.03	$.02	$0.1
Total Revenue Requirement	$2.02	$3.03	$3.03	$2.02	$10.1
Statewide EE Program Funding Amount	$12	$10	$10	$10	$42
FF&U	$0.1	$0.1	$0.1	$0.1	$0.4
Total Revenue Requirement	$12.1	$10.1	$10.1	$10.1	$42.4
Total EE Portfolio Revenue Requirement	**$431**	**$444**	**$453**	**$460**	**$1,788**

2. Ratemaking Treatment

a) EE Program Ratemaking

SCE proposes no changes to the currently approved EE Program ratemaking. SCE's current ratemaking associated with the EE Program funding includes: (1) the recovery of the authorized EE Program revenue requirement through the operation of the Public Purpose Programs Adjustment Mechanism (PPPAM); and (2) recording the difference between the authorized EE Program revenue requirement and actual incurred EE Program activities (with the

exception of activities related to the OBF Loan Pool) in the one-way PEEBA. On a monthly basis, SCE records its actual EE Program expenses in the PEEBA. From this amount, SCE deducts one-twelfth of the authorized EE Program revenue requirement to determine the monthly over- or under-collection recorded in the PEEBA. Since the PEEBA is a one-way balancing account, any under-collections existing at the end of the 2024-2027 program cycle will not be eligible for recovery from customers.[158] Any unspent funds (over-collection) remaining in the PEEBA at the end of the 2024-2027 program cycle are refunded to customers upon approval by the Commission.

b) EE Financing Program Ratemaking

SCE proposes +no changes to the currently approved EE Financing Program ratemaking. SCE's current ratemaking associated with the EE Financing Program funding includes: (1) the recovery of the authorized EE Financing Program revenue requirement through the operation of the PPPAM; and (2) recording the difference between the authorized EE Financing Program revenue requirement and actual incurred EE Financing Program activities in the one-way EEFPBA. On a monthly basis, SCE records its actual EE Financing Program expenses in the EEFPBA. From this amount, SCE deducts one-twelfth of the authorized EE Financing Program revenue requirement to determine the monthly over- or under-collection recorded in the EEFPBA. Since the EEFPBA is a one-way balancing account, any under-collections existing at the end of the 2024-2027 program cycle will not be eligible for recovery from customers.[159] Any unspent funds (over-collection) remaining in the EEFPBA at the end of the 2024-2027 program cycle are refunded to customers upon approval by the Commission.

[158] *Monthly* under- or overcollections role forward in the PEEBA until the end of the 2024-2027 program cycle.

[159] *Id.*

c) Statewide EE Ratemaking

In accordance with D.18-05-041 and Advice 3860-E,[160] SCE established the one-way SSWEEBA to record: (1) funding from the IOUs for programs in which SCE is Lead PA; (2) transfers of the authorized revenue requirement from the PEEBA to fund SCE's contribution to the Statewide EE Programs; and (3) administration and market transformation expenses. In this proceeding, SCE proposes to modify the Statewide EE Program ratemaking to: (1) recover the authorized Statewide EE Program revenue requirement through the operation of the PPPAM; and (2) record the difference between the authorized Statewide EE Program revenue requirement and actual incurred Statewide EE Program activities in the SWEEBA. SCE will continue to record in the SWEEBA funding received from the IOUs to support the authorized Statewide EE Programs and repay any IOU remaining share balance, including interest, at the end of each PY. The disposition of SCE's share of the remaining SWEEBA balance (if any) will be addressed in an advice letter or EE proceeding.

d) PPPAM Ratemaking

Through the operation of the PPPAM, SCE records on a monthly basis the difference between the recorded PPPC revenue and the authorized PPPC costs, including the authorized EE Program, EE Financing Program and Statewide EE Programs revenue requirements. Any year-end over and under-collections recorded in the PPPAM are refunded to or recovered from customers through PPPC rate levels in the subsequent year through the January 1 consolidated revenue requirement change.

3. Revenue Requirement and Cost Recovery Conclusion

SCE respectfully requests that the Commission approves its proposed $1,788 million revenue requirement to fund its 2024-2027 total EE Program, EE Financing Program and Statewide EE Program cycle. Once this application is approved, SCE will file a Tier 1 advice letter to implement the annual authorized revenue requirements.

[160] *See* D. 18-05-041, p. 86 and Advice 3860-E Establishment of the Statewide Energy Efficiency Balancing Account Pursuant to D. 18-05-041.

4. Estimated Rate and Bill Impacts

Table V-78 provides the proposed average rate and bill impacts associated with SCE's total requested EE Program, EE Financing Program and Statewide EE Programs revenue requirements over the 2024-2027 cycle, based on current rates in effect as of January 1, 2022, if SCE's proposals are approved by the Commission. Because SCE's rates will include $489 million of authorized EE funding at the end of 2023,[161] the rate and bill impacts shown below reflect the incremental change associated with the decreased average annual revenue requirement proposed herein over the 2024-2027 cycle period compared to the annual EE-related revenue requirement that will be in rates at the end of 2023. Residential bill impacts assume average usage of 500 kWh/month.

Table V-78
Estimated Customer Rate and Bill Impacts[162]

Bundled Average Rates (¢/kWh)				
Customer Group	**Current Rates**	**Proposed Increase**	**Proposed Rates**	**% Increase**
Residential	25.1	(0.1)	25.0	-0.3%
Lighting - Small and Medium Power	24.0	(0.1)	24.0	-0.3%
Large Power	16.3	(0.0)	16.3	-0.3%
Agricultural and Pumping	19.2	(0.1)	19.2	-0.3%
Street and Area Lighting	25.4	(0.1)	25.3	-0.3%
Standby	13.0	(0.0)	13.0	-0.3%
Total	**22.3**	**(0.1)**	**22.2**	**-0.3%**

Residential Bill Impact ($/Month)						
Description		**Current**		**Proposed Increase**	**Proposed**	**% Increase**
Non-CARE Residential Bill	$	139.15	$	(0.33)	$ 138.81	-0.2%
CARE Residential Bill	$	94.18	$	(0.23)	$ 93.95	-0.2%

5. Use of Unspent and/or Uncommitted Funds

SCE's budget forecast does not currently include the use of unspent and/or uncommitted funds from prior funding cycles. SCE proposes that any unspent/uncommitted funding remaining at the end of 2023 would be used to offset future EE funding requests.

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[161] *See* February 15, 2022 Energy Division disposition of Advice 4633-E-A, approving a total 2023 EE budget request of $489,200,077.

[162] Rate impacts were calculated using the following assumptions: (1) January 1, 2022 effective rates; (2) January 1, 2022 sales forecast; and (3) Baseline region 9 allocation.

Attachment 1

Program Cards

Attachment 1 – Program Cards

This attachment provides the Program Cards for all SCE and third-party implemented programs in the 2024-2027 Portfolio Plan. Programs designated as "new" include programs that will be in operation on or after January 1, 2024.

I. Residential Sector

<table>
<tr><th colspan="2">Program Name: Enervee Marketplace Program</th></tr>
<tr><td colspan="2">Program ID: SCE-3P_2020_102
New / Existing: Existing
Link to implementation plan if existing (see D.21-05-031): https://cedars.sound-data.com/programs/SCE_3P_2020RCI_001/details/</td></tr>
<tr><td>Portfolio Segment:
Resource Acquisition</td><td>Implementation Party:
Third-Party Implementer</td></tr>
<tr><td>Applicable Sector:
Residential</td><td>Market Sub-Sector:
All – Residential, Commercial, Industrial</td></tr>
<tr><td>Sector Challenge:
Overcoming market, cognitive/psychological and financial barriers that prevent customers from choosing and purchasing energy efficient products.</td><td>Sector Opportunity:
Reduce plug load & appliance consumption (largest component of residential electric load and load growth) cost-effectively at scale.</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Incremental cost of efficient products.
Lack of access to (affordable) capital.
Low rates of participation in post-purchase rebate programs.</td><td>Proposed Solutions to Equity Concerns:
Choice Engine allows consumers to choose efficient products and see personalized bill impacts and total cost of ownership (price + energy cost).
Eco Financing leads to low monthly payments, including for people with credit scores as low as 580.</td></tr>
<tr><td colspan="2">Program Description:
The Enervee program achieves savings by driving in-market shoppers to an online marketplace (featuring Choice Engine technology and Eco Financing) that eliminates market, cognitive/ psychological, and financial barriers, empowering them to choose and buy energy efficient products for their homes.</td></tr>
<tr><td>Intervention Strategy:
Enervee will offer SCE customers inclusive Eco Financing on efficient purchases with affordable, fixed terms and zero down payment. Customers will be able to secure financing and make purchases directly via the online marketplace.</td><td>Program Metrics:
For 2022 – 2024:
Net: 40,056,723 kWh, 7,233 kW
TSB: $40,138,817 TSB</td></tr>
</table>

Program Name: Enervee Marketplace Program

High-level description of delivery workforce including necessary scale and its risks:

Fulfillment of online purchase orders, including delivery, is done by major retailers that have been operational for decades. The program will initially launch with Best Buy as the primary fulfillment partner, with more to be added going forward. A closure or suspension of regular services of one or more major retailers could pose a risk to program effectiveness.

Market Actors necessary for success:

- Enervee: Enervee is the contracted Program Implementer, the platform host and operator, the marketplace merchant of record, and will be responsible for customer acquisition and program reporting to claim energy savings.
- Retail fulfillment partner: Best Buy (and other fulfillment partners in future) will be responsible for delivering orders placed on the Enervee marketplace to customers and providing bundled services such as installation and haul away.
- Lender: One Finance, Inc. provides the online application for customers to secure a loan for purchasing energy efficient products via the Enervee program and handles the loan underwriting and servicing.

Solicitation Strategy: Third-Party Solicited	**Transition Plan:** SCE has an existing EE marketplace program that will close by year end, which differs from this Enervee program that will start in Jan 2022.
Expected Program Life: Contracted for 2022 - 2024	**Short Term Plan** Ramp up Enervee program to full implementation by 2024 to achieve participation by 140,000 customers annually
Cost Effectiveness TRC: 1.0 (2022), 1.1 (2023, 2024) PAC: 2.0 (2022, 2023, 2024)	**Long Term Outlook** Expand eligible categories and scale impact by capturing 8-9% of the addressable market
Proposed Annual Budgets for 2024-2027*: 2024: $2.6 million * Program contracted through 2024.	**Anticipated directional and scale changes in budget for years 2028-2031:** Program contracted through 2024

Implementation Plan: https://cedars.sound-data.com/programs/SCE_3P_2020RCI_001/details/

<table>
<tr><th colspan="2">Program Name: ICF Residential Behavior Program</th></tr>
<tr><td colspan="2">Program ID: SCE_3P_2020RCI_002
New / Existing: Existing
Link to implementation plan if existing: (see D.21-05-031): https://cedars.sound-data.com/documents/download/2238/main/</td></tr>
<tr><td>Portfolio Segment:
Resource Acquisition</td><td>Implementation Party:
Third-Party Implementer</td></tr>
<tr><td>Applicable Sector:
Residential</td><td>Market Sub-Sector:
Single Family and Multi Family Residential</td></tr>
<tr><td>Sector Challenge:
Residents in single and multi-family homes engage in non energy efficient behaviors.</td><td>Sector Opportunity:
Increase and deepen adoption of low-cost and no-cost behavioral changes in homes.</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Lack of inclusion of HTR, LMI and DAC customers in receiving HER services. Prior behavioral programs avoided including customers who do not fit into single-family and high-energy-use categories.
Hassle and search costs: Customers are largely unaware of the benefits of energy-saving measures, specifically non-energy benefits. They have limited time and resources to search for EE solutions.
Performance uncertainty of EE activities: Customers have varying levels of knowledge and experience with EE and many do not understand how their behavior influences their home’s energy consumption.</td><td>Proposed Solutions to Equity Concerns:
Personalized, actionable support: HERs provide customers with easy low- and no-cost behavioral changes they can implement that will yield measurable home energy savings. Energy Advisor coaching provides personalized recommendations to reduce some of the uncertainty customers have with determining the best actions to take to conserve energy.
Dedicated targeting of underserved customers: The Program will target residential customers across SCE’s service territory that were not previously considered good targets for behavioral treatment, including the HTR and LMI customers, and those customers located in DACs. The Program uses advanced metering infrastructure (AMI) disaggregation analytics to target a broad portion of SCE’s customer base, including HTR and DAC customers. We leverage customer propensity analysis and disaggregation-based scoring for customer targeting to drive behavioral savings from these traditionally underserved sectors.</td></tr>
</table>

Program Name: ICF Residential Behavior Program

Known Equity Concerns in the Selected Markets:

- Misplaced or Split Incentives: The tenant-landlord problem creates a challenge for renters to adopt traditional EE measures. Because renters make up about 42% of California residential customers, this creates a major barrier to achieving energy savings.

Proposed Solutions to Equity Concerns:

- Leverage new channels and tactics for behavioral interventions and holistic customer experience: The Program design will incorporate additional tactics or channels, such as rewards and voice technology, to drive energy-saving behavioral changes by customers and meet the program objectives. Program rewards will generally come in the form of gift cards and be given to customers for taking action to save energy and engage with the program. The rewards will target customers in the HTR, LMI and DAC segments.

Program Description:

The Residential Behavioral Program will drive adoption of behavioral changes in households through personalized HERs and Energy Advisor support, targeting residential customers across SCE's service territory for behavioral treatment to generate robust, cost-effective energy savings. The objective is to achieve residential behavioral energy savings by delivering direct, relatable interventions with lasting impact for SCE customers and better connect HTR, LMI and DAC segments to SCE.

Intervention Strategy:

Downstream Behavioral HERs and Energy Advisors provide feedback on energy consumption and customized recommendations to save. Rewards and other tactics may also be targeted towards customers in the HTR, LMI and DAC segments.

Program Metrics:

2024 Energy Savings Goals:

- 38,428,202 kWh
- 17,371 kW

Additional program metrics that will be tracked in the program:

- Customers Treated and Reports Sent - Number of customers with active accounts in treatment group waves; Actual number of reports sent to customers by paper and email channels.
- Cost-effectiveness TRC Calculation - TRC actual vs. forecasted.
- TRC ratio / Levelized cost, [Incentive/non‐incentive] spend based on paid [incentive/non‐incentive] spend vs. forecasted [incentive/non‐incentive] spend.
- Customer Satisfaction and Service - Resolution of complaints or inquiries and timeliness of resolution; Overall program customer satisfaction rating of 80% or higher.
- Program Data Quality - HERs are sent to treatment group customers and not sent to control group customers, Correct personalized data display on customer reports.

Program Name: ICF Residential Behavior Program	
	Program Metrics: • Contract Compliance - Qualitative assessment by SCE representative regarding adherence to contract terms and conditions. • Brand Review Time - The total hours spent reviewing marketing materials submitted by Implementer or Implementer Parties. • Unsubscribes or opt outs - The average unsubscribe rate across direct mail and email campaigns. • Spam (Complaints) - The average spam or complaint rate across all email campaigns. • Open Rates - Email open rates. • DBE Spend - To date DBE spending as percent of total spend / DBE % commitment compared to goal. • HTR and DAC Spend - Spend on HTR Customers and DAC. • Sustainability Ratings - 50% or higher post-consumer recycled paper content. Plant trees to offset paper consumption. • GHG Emissions - MT CO2eq Net kWh savings. • Depth of interventions - Average savings per participant. • HTR and DAC - Percentage of customers in hard to reach or disadvantaged communities.

High-level description of delivery workforce including necessary scale and its risks:

The third-party implementer is responsible for overall program implementation. The implementer administers 150+ DSM programs across North America for over 50 utility clients. In addition to overall program management, the implementer will provide program tracking and reporting, IT and data ingestion services, rewards fulfillment, Energy Advisors, and customer care services. The implementer has partnered with Uplight to bring SCE a proven entity to help deliver the Residential Behavioral Program. Uplight specializes in transforming complex data into valuable appliance-level insights that help utilities deliver cost-effective energy savings, increases in DSM program participation, and augmented customer satisfaction across many third-party verified behavioral programs delivered since 2013. Uplight will provide paper and digital HERs, voice application, IT and data ingestion services, savings evaluation, reporting and tracking, and disaggregation targeting and insights for SCE's customers.

Program Name: ICF Residential Behavior Program

High-level description of delivery workforce including necessary scale and its risks:

The implementer will maintain a risk register and mitigation plan based on past experiences delivering effective and successful behavioral programs, an understanding of the risks and barriers that previous programs have encountered, and a prescribed project risk management approach. Potential risks that have been identified include measurement and verification plan approval, missed savings targets, print and email report quality or delivery issues, changes to the way behavioral savings are claimed, customer information privacy, low customer satisfaction or high opt-out rate, and double counted savings. A mitigation strategy has already been developed for each key risk area and will be implemented as part of the program operations plan and monitored on a monthly basis throughout the program term.

Market Actors necessary for success:

The program does not involve installation of physical measures or linkages to other market actors. Program will be entirely implemented by a third-party. EM&V) experts will need to be consulted and provide approval for the Measurement and Evaluation Plan and verify savings claimed.

Solicitation Strategy: Third-Party Solicited	**Transition Plan:** Not applicable
Expected Program Life: 2021 - 2024	**Short Term Plan** • Deliver the third-party program at full scale implementation to serve 1.5 Million SCE customers in 2024. • Deliver the program services to customers according to the program operations plan. • Each PY, a wave of customers will be added to receive the program's services and ensure goals are met. • Continue to monitor the quality of program delivery and customer service, and take corrective action to resolve issues as needed. • Provide monthly progress reports to track program outcomes against key performance metrics.
Cost Effectiveness: 2024 TRC: 1.14	**Long Term Outlook** Penetration and persistence of energy-efficient behaviors lead to long-term energy and demand reductions among all participants.
Proposed Annual Budgets for 2024-2027: 2024: $4.1 million 2025: $2.0 million	**Anticipated directional and scale changes in budget for years 2028-2031:** Not applicable - program not in operation those years.

Implementation Plan: https://cedars.sound-data.com/documents/download/2238/main/

<table>
<tr><th colspan="2">Program Name: Willdan Multifamily Energy Efficiency Program</th></tr>
<tr><td colspan="2">Program ID: SCE_3P_2020RCI_004
New / Existing: Existing
Link to implementation plan if existing (see D.21-05-031): https://cedars.sound-data.com/documents/download/2030/main/</td></tr>
<tr><td>Portfolio Segment:
Resource Acquisition</td><td>Implementation Party:
Third-Party Implementer</td></tr>
<tr><td>Applicable Sector:
Residential</td><td>Market Sub-Sector:
All Multifamily Customers</td></tr>
<tr><td>Sector Challenge:
At Customer's end:
Lack of capital.
Lack of information.
Lack of technical expertise.
Perception of risk.
Lack of time.
Permits and regulations.</td><td>Sector Opportunity:
Increased participation in EE program and adoption of EE measures.
Achieve deeper savings through comprehensive energy management solutions.
Increase EE adoption rates by targeting large customers, as well as small and medium customers which include many HTR customers and/or those in DACs.</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Split incentive barrier.
Lack of participation by HTR customers.
Hassle and search cost.
Performance uncertainty of EE benefits.
Access to investment capital and sufficient return on investment.</td><td>Proposed Solutions to Equity Concerns:
Split Incentive Barrier: Bring tenants and landlords together to change leasing language. Educate owners about the financial benefit, the quality of products installed and added benefits like extended equipment life and reduced maintenance.
Lack of participation by HTR customers: Partner with trusted HTR/DAC experts and CBOs to identify decision makers, build customer trust, and reduce costs
Hassle and search cost: Simplify participation by consolidating program services and assigning a SPOC. This tactic improves customer satisfaction and improves perception of SCE.
Performance uncertainty of EE benefits: QA/QC projects during pre-installation and post-installation to confirm that the equipment installed meets program requirements and customer needs.
Access to investment capital and sufficient return on investment: Offer financing options to overcome specific barriers associated with financing.</td></tr>
</table>

Program Name: Willdan Multifamily Energy Efficiency Program	
Program Description: SCE has contracted with Willdan Energy Solutions (Third-Party) to develop, implement and offer this EE Program to SCE customers. This Third-Party program provides comprehensive EE for all multifamily customer segments of the Residential sector across SCE's service territory. Customers outside of the NAICS codes specified in this Implementation Plan are not eligible. This program seeks to influence a significant increase in the adoption of EE technology and/or measures among the end-users of this market sector using the Deemed, Custom Calculated and NMEC approaches. The program goes beyond basic EE to include DR, EMTs and fully integrated DSM solutions. It complies with SCE and CPUC requirements and offers a consolidated approach.	
Intervention Strategy: Downstream: • Direct Install • Incentive • Finance • Audit • Technical Assistance	**Program Metrics:** • Program Performance: Ex Ante TRC Ratio • Program Performance: Energy Savings (kWh) • Program Performance: Demand Savings (kW) • Program Performance: Pipeline Target Energy Savings (kWh) • Program Performance: Pipeline Target Demand Savings (kW) • Customer Satisfaction: Customer Satisfaction Rating • Program Data / Engineering Quality • Supply Chain Responsibility: Safety Rating • Supply Chain Responsibility: DBE Spend, and • Compliance: HTR and DAC Penetration.

Program Name: Willdan Multifamily Energy Efficiency Program

High-level description of delivery workforce including necessary scale and its risks:
Willdan, the third-party implementer, will execute the program with a scalable workforce consisting of Willdan program staff, local Trade Professionals (through an Open Trade Pro Network), contractors/subcontractors, partners (professional services organizations that provide marketing, engineering review, and other services), and CBOs. Trade Professionals, contractors, subcontractors, partners, and CBOs report to the Deputy Program Manager. The Deputy Program Manager helps vet, recruit, and train new Trade Professionals and CBOs to maintain a high-quality workforce capable of covering a broad geography and skillset.
Regarding Willdan program staff, specifically:

- Willdan's workforce currently has more than 20 people - including program management leads, project developers, project managers, analysts, and engineers - available to support this program. They report to the Deputy Program Manager on a daily basis, who in turn reports to the Energy Services Director who manages all interaction with SCE.
- Willdan's California workforce is organized so that most program personnel can work across programs for all California IOUs. This allows for consistency in delivery as well as the ability to scale specific program staff resources up or down to accommodate variation in program goals or progress from month to month. Almost all program-related hiring was completed in 2021.

High-level description of delivery workforce including necessary scale and its risks:

- Potential risks to the program include a failure to recruit and retain high-quality, experienced personnel.
- Potential risks to SCE include failing to deliver savings due to inadequate personnel assigned to the program from Willdan.

Potential risks of not using the workforce described above are failure to deliver program savings.

Market Actors necessary for success:
Key market actors necessary for the success of the Comprehensive Multifamily Program include:

- Property managers and Homeowners Associations.
- Qualified Trade Professional, Contractor and Subcontractor Participation.
- Engaged CBO partners willing to work with Willdan and build credibility with DAC/HTR customers.

Sources of financing to provide investment capital to customers at low interest rates.

Program Name: Willdan Multifamily Energy Efficiency Program	
Solicitation Strategy: Third-Party Solicited	**Transition Plan:** Not applicable
Expected Program Life: 2021 – 2025 May extend to 2026 subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Short Term Plan** Onboard contractors and DBE. Commence direct marketing and ramp-up activities. Ramp-up kW & kWh savings deliveries from year 2 & onwards. Motivate comprehensive projects through outreach, technical assistance, and connecting customers to tailored funding and financing options.
Cost Effectiveness TRC: 1.35 (Oct 2021 – Dec 2025) TRC: 1.36 ***** (Oct 2021 – July 2026) ***** This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Long Term Outlook** 127 GWh delivered over 4.3 years (Oct 2021- Dec 2025) 151***** GWh delivered over 4.8 years (Oct 2021- July 2026) ***** This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.
Proposed Annual Budgets for 2024-2027*: 2024: $20.4 Million 2025: $20.2 Million 2026: $15.4 Million ***** This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Anticipated directional and scale changes in budget for years 2028-2031:** Not applicable
Implementation Plan: https://cedars.sound-data.com/documents/download/2030/main/	

Program Name: Residential Direct Install	
Program ID: SCE-13-SW-001G **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE-13-SW-001G/details/	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Residential	**Market Sub-Sector:** Single-Family Residential
Sector Challenge: There are a few interrelated challenges within the Residential Single-Family sub-sector: lack of capital, lack of knowledge, and lack of awareness. The program's target demographic is lower to middle income customers who do not qualify for income assistance programs. Many of these customers lack the capital needed to invest in EE improvements, and also tend to lack knowledge of EE. For this demographic, EE is generally not a priority but paying their utility bill is. This ties in with the lack of awareness; customers who are not knowledgeable in EE and lack the capital to invest in it are generally not aware of the existence of EE programs.	**Sector Opportunity:** Implementation of this program in the Residential Single-Family sub-sector provides opportunities to increase customers' knowledge of EE and awareness of EE programs. When meeting with a customer for an in-home assessment, the implementer educates the customer on EE concepts and how they relate to the customer's home. Through the assessment, the implementer identifies products and services the customer is qualified to receive, as well as other EE programs they may qualify for. This drives the adoption of EE and increases participation in EE programs.
Known Equity Concerns in the Selected Markets: This program targets lower to middle income customers who do not qualify for income assistance programs. Based on the program's targeting, there are no equity concerns.	**Proposed Solutions to Equity Concerns:** Not applicable – proposed solutions do not exist as there are no known equity concerns.
Program Description: The Residential Direct Install Program provides the direct installation of comprehensive EE measures to residential customers at no-cost, targets specific geographic areas to alleviate energy-hardship and electric system constraints, and assists the lower- to middle income population ineligible for income assistance programs. The program is designed to enhance the EE knowledge and program participation of the targeted residential single-family market segment to motivate them to undertake deeper EE activities and retrofits.	

Program Name: Residential Direct Install	
Intervention Strategy: Downstream – program leverages the Third-Party Implementer to perform the direct installation of EE measures by: 1. Targeting hotter Climate Zones within SCE's service area. 2. Isolating areas within the targeted Climate Zones to conduct door-to-door outreach for lead generation. 3. Scheduling in-home assessments for generated leads. 4. Conducting in-home assessments with customers to identify the measures and services they may qualify for. Installing measures in customer homes.	**Program Metrics:** 2022: • 10,961,962 Net kWh • 8,863 Net kW • 669,075 Therms • $32,172,098 TSB 2023: • 10,961,962 Net kWh • 8,863 Net kW • 669,075 Therms • $34,177,195 TSB
High-level description of delivery workforce including necessary scale and its risks: The delivery workforce, Synergy Companies, is a single entity acting as both the Third-Party Implementer and Contractor. There are no other Implementers or Contractors supporting this program. Synergy's workforce is comprised of Executive Management, Program Management, Operations and Logistics Management, Call Center Support, Marketing and Outreach Support, IT Support, and Field Technicians. Synergy has multiple offices throughout the State of California, including a few within SCE's service area. Synergy has an adequate number of resources to achieve the Program Metrics for 2022-23, therefore, scale is currently not necessary. However, to achieve anything above and beyond the Program Metrics, scaling would be required. The amount of scale would primarily depend upon the amount of savings needed above and beyond the Program Metrics. Scaling could be risky because it would require Synergy to invest capital in additional trucks, equipment, Field Technicians, training, etc., with the potential for not enough work to go around, resulting in idle resources. An SCE led marketing campaign would be required to generate enough leads to meet the scale. Also, scaling takes time to ramp-up, so Synergy would need assurance on the longevity of the scaled effort; a short-term effort of one to two years would not make sense because of the amount of time, effort, and capital required to scale.	
Market Actors necessary for success: With Synergy Companies being the only Third-Party Implementer/Contractor for the program, Synergy is critical for program success. Additionally, EE product manufacturers and suppliers are necessary to provide the products and measures to Synergy for installation.	

<table>
<tr><th colspan="2">Program Name: Residential Direct Install</th></tr>
<tr><td>Solicitation Strategy:
There is currently no solicitation strategy. The Residential Single-Family market sub-sector was included in the recent Third-Party Residential, Commercial, and Industrial Solicitation; however, SCE did not receive any successful bids for this sub-sector. Therefore, this program is continuing implementation as-is until another solicitation occurs, at a time to be determined.</td><td>Transition Plan:
There are no plans to transition this program to a statewide program at the moment.</td></tr>
<tr><td>Expected Program Life:
Synergy is contracted to continue implementing this program through the end of 2023. If a solicitation does not occur prior to the end of 2023, Synergy’s contract will be extended, and the program will continue as-is through 2024 and beyond until a solicitation occurs.</td><td>Short Term Plan
The program will continue implementation to achieve the Program Metrics outlined above. Additionally, this program will continue to use unspent IDSM funds to leverage Smart Thermostat installations to enroll qualified customers onto the DR Smart Energy Program. This effort will continue until IDSM funds are no longer available.</td></tr>
<tr><td>Cost Effectiveness

TRC:
2023: 2.38
2024: 1.74
2025: 1.84
2026: 1.95
2027: 2.04</td><td>Long Term Outlook
In the long term, SCE will go out to market with a solicitation to potentially obtain a new and innovative Third-Party designed and delivered program for the Residential Single Family market sub-sector.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027*:

2024: $14.1 million
2025: $14.1 million
2026: $14.1 million
2027: $14.1 million

* The program budgets were forecasted based upon the assumption Synergy would continue program implementation through years 2024-27. The forecasts do not include SCE labor.</td><td>Anticipated directional and scale changes in budget for years 2028-2031:
To be determined based upon future needs, workpapers, and solicitations.</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-001G/details/</td></tr>
</table>

Program Name: Comprehensive Manufactured Homes	
Program ID: SCE-13-TP-001 **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE-13-TP-001/details/	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Residential	**Market Sub-Sector:** Residential Manufactured Homes
Sector Challenge: There are a few interrelated challenges within the Residential Manufactured Homes sub-sector: lack of capital, lack of knowledge, and lack of awareness. The program's target demographic is lower to middle income customers who do not qualify for income assistance programs. Many of these customers lack the capital needed to invest in EE improvements, and also tend to lack the knowledge of EE. For this demographic, EE is generally not a priority but paying their utility bill is. This ties in with the lack of awareness; customers who are not knowledgeable in EE and lack the capital to invest in it are generally not aware of the existence of EE programs.	**Sector Opportunity:** Implementation of this program in the Residential Manufactured Homes sub-sector provides opportunities to increase customers knowledge of EE and awareness of EE programs. When meeting with a customer for an in-home assessment, the implementer educates the customer on EE concepts and how they relate to the customer's home. Through the assessment, the implementer identifies products and services the customer is qualified to receive, as well as other EE programs they may qualify for. This drives the adoption of EE and increases participation in EE programs.
Known Equity Concerns in the Selected Markets: This program targets lower to middle income customers who do not qualify for income assistance programs. Based on the program's targeting, there are no equity concerns.	**Proposed Solutions to Equity Concerns:** Not applicable – proposed solutions do not exist as there are no known equity concerns.
Program Description: Comprehensive Manufactured Homes provides the direct installation of energy-efficient products in manufactured home dwellings and common areas of manufactured home parks, at no cost to the customer. The target customers for this program are residents of manufactured homes and manufactured home parks, typically of moderate or fixed income, who may not qualify for IQPs. The program is designed to increase awareness and knowledge of EE and drive participation in EE programs and adoption of EE measures.	

Program Name: Comprehensive Manufactured Homes

Intervention Strategy:

Downstream – program leverages the Third-Party Implementer to perform the direct installation of EE measures by:

1. Targeting hotter Climate Zones within SCE's service area.
2. Isolating areas within the targeted Climate Zones to conduct door-to-door outreach for lead generation.
3. Scheduling in-home assessments for generated leads.
4. Conducting in-home assessments with customers to identify the measures and services they may qualify for.
5. Installing measures in customer homes.

Program Metrics:

2022:

- 7,244,799 Net kWh
- 3,526 Net kW
- 124,726 Therms
- $16,169,458 TSB

2023:

- 7,037,486 Net kWh
- 3,522 Net kW
- 127,307 Therms
- $17,165,426 TSB

High-level description of delivery workforce including necessary scale and its risks:

The delivery workforce, Synergy Companies, is a single entity acting as both the Third-Party Implementer and Contractor. There are no other Implementers or Contractors supporting this program. Synergy's workforce is comprised of Executive Management, Program Management, Operations and Logistics Management, Call Center Support, Marketing and Outreach Support, IT Support, and Field Technicians. Synergy has multiple offices throughout the State of California, including a few within SCE's service area.

Synergy has an adequate number of resources to achieve the Program Metrics for 2022-23, therefore, scale is currently not necessary. However, to achieve anything above and beyond the Program Metrics, scaling would be required. The amount of scale would primarily depend upon the amount of savings needed above and beyond the Program Metrics. Scaling could be risky because it would require Synergy to invest capital in additional trucks, equipment, Field Technicians, training, etc., with the potential for not enough work to go around, resulting in idle resources. An SCE led marketing campaign would be required to generate enough leads to meet the scale. Also, scaling takes time to ramp-up, so Synergy would need assurance on the longevity of the scaled effort; a short-term effort of one to two years would not make sense because of the amount of time, effort, and capital required to scale.

Additionally, the population of Residential Manufactured Homes is much smaller than the Residential Single-Family sub-sector. This program has been in implementation for years, so market saturation could become a barrier to scaling. The program would need new, innovative, cost-effective measures to expand the measure mix allowing the program to visit prior program participants to scale.

Market Actors necessary for success:

With Synergy Companies being the only third-party implementer/contractor for the program, Synergy is critical for program success. EE product manufacturers and suppliers are also necessary to provide the products and measures to Synergy for installation. Additionally, engaged managers of manufactured home parks who are willing to allow Synergy to conduct outreach and perform installations are necessary for the program to be successful.

<table>
<tr><th colspan="2">Program Name: Comprehensive Manufactured Homes</th></tr>
<tr><td>Solicitation Strategy:
There is no solicitation strategy currently. The Residential Manufactured Homes market sub-sector was included in the recent Third-Party Residential, Commercial, and Industrial Solicitation; however, SCE did not receive any successful bids for this sub-sector. Therefore, this program is continuing implementation as-is until another solicitation occurs, at a time to be determined.</td><td>Transition Plan:
There are no plans to transition this program to a statewide program.</td></tr>
<tr><td>Expected Program Life:
Synergy is contracted to continue implementing this program through the end of 2023. If a solicitation does not occur prior to the end of 2023, Synergy's contract will be extended, and the program will continue as-is through 2024 and beyond until a solicitation occurs.</td><td>Short Term Plan
The program will continue implementation to achieve the Program Metrics outlined above.</td></tr>
<tr><td>Cost Effectiveness

TRC:
2023: 3.95
2024: 2.98
2025: 3.15
2026: 3.31
2027: 3.46</td><td>Long Term Outlook
In the long term, SCE will go out to market with a solicitation to potentially obtain a new and innovative Third-Party designed and delivered program for the Residential Manufactured Homes market sub-sector.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027*:

2024: $4.3 million
2025: $4.3 million
2026: $4.3 million
2027: $4.3 million

*The program budgets were forecasted based upon the assumption Synergy would continue program implementation through years 2024-27. The forecasts do not include SCE labor.</td><td>Anticipated directional and scale changes in budget for years 2028-2031:
To be determined based upon future needs, workpapers, and solicitations.</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-TP-001/details/</td></tr>
</table>

Program Name: Residential Equity Program	
Program ID: SCE_Res_Equity_001 **New / Existing:** New **Link to implementation plan if existing (see D.21-05-031):** Not yet available	
Portfolio Segment: Equity	**Implementation Party:** Third-Party Implementer
Applicable Sector: Residential	**Market Sub-Sector:** SF and MF Equity-targeted Residential Customers
Sector Challenge: Existing SF and MF homes remain inefficient and costly to implement. This is particularly challenging for Equity-targeted customers.	**Sector Opportunity:** Increased participation in EE program and adoption of EE measures.
Known Equity Concerns in the Selected Markets: Equity-targeted customers face numerous challenges including costs, time constraints, knowledge gaps, landlord-tenant issues.	**Proposed Solutions to Equity Concerns:** Direct installation of EE measures ensures that measures are installed in a timely, common method without requiring much cost or hassle for the customer.
Program Description: The Residential Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their household energy use. The Residential Equity Program offers SF and MF equity-targeted residential customers incentives or direct installation of HVAC, lighting, water heating, etc. measures.	
Intervention Strategy: • Direct Installation – Residential Equity Program will utilize direct install of efficient equipment to engage households. • Behavioral – Residential Equity Program may also use rewards program will motivate lower energy use.	**Program Metrics* (2024-2027):** • 55,240 (SF or MF unit) equity-targeted households served 2024-2027 • 1,287 MF equity-targeted buildings served by the Equity programs • 17.4 GWh • 122,107 Therms • $7.2 million TSB *All metrics are tentative until determined by third-party implementer.
High-level description of delivery workforce including necessary scale and its risks: The program requires direct installation contractors who can make installations at a wide variety of residential sites. SCE is prioritizing installation contractors from equity-targeted communities to deliver these programs. If there is an insufficient supply of these workers, SCE may need to rely on workers from other areas.	

Program Name: Residential Equity Program

Market Actors necessary for success:

- Residential Customers.
- Direct Installation Contractors.
- Manufacturers/Distributors of energy-efficient equipment (purchased by direct installation companies).

Solicitation Strategy:
Third-Party Solicited

Transition Plan:
Not applicable

Expected Program Life:
2024 - On going

Short Term Plan
Ramp up third-party program to full implementation to serve 14,440 customers per year*.

* Number of customer will be determined by third-party implementer.

Cost Effectiveness
Not Applicable

Long Term Outlook
Move 10% of the equity-targeted residential market to high efficiency equipment.

Proposed Annual Budgets for 2024-2027*:

2024	2025	2026	2027
$14.1M	$14.5M	$15.0M	$15.4M

*Program budget is yet to be available and will be confirmed after contract agreement with third-party implementer is signed and approved by Commission.

Anticipated directional and scale changes in budget for years 2028-2031:
Budget is expected to scale based on inflation.

Implementation Plan: Not yet available

<table>
<tr><th colspan="2">Program Name: Fuel Substitution Midstream Program</th></tr>
<tr><td colspan="2">Program ID: SCE_Fuel Sub_001
New / Existing: New
Link to implementation plan if existing (see D.21-05-031): Not yet available</td></tr>
<tr><td>Portfolio Segment:
Resource Acquisition</td><td>Implementation Party:
Third-Party Implemented</td></tr>
<tr><td>Applicable Sector:
Residential – Applicable to all sectors</td><td>Market Sub-Sector:
Contractors/Installers
Manufacturers/Distributors</td></tr>
<tr><td>Sector Challenge:
All sectors face the challenge of insufficient supply of cheap, widely available fuel substitution measures.</td><td>Sector Opportunity:
Increased contractor and installer awareness of and availability of fuel substitution measures, engage manufacturer and distributors to stock high efficiency equipment.</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Equity-targeted customers face numerous challenges including knowledgeable and affordable contractors, costs, time constraints, knowledge gaps, landlord-tenant issues and understanding the benefits of electric fuel switching options.</td><td>Proposed Solutions to Equity Concerns:
Provide financial incentives to overcome first cost barriers.</td></tr>
<tr><td colspan="2">Program Description:
The Fuel Substitution Midstream Program is designed to promote the technical understanding of selling and installing high efficiency fuel substitution measures. The Program will engage manufacturers and distributors to promote the warehousing of high efficiency equipment to make it readily available to the marketplace, and help educate contractors on how to effectively sell and install high efficiency electric alternatives. The Program will also provide midstream incentives that may provide time of sale discounts to end use consumers to address the first cost barriers of equipment.</td></tr>
<tr><td>Intervention Strategy:
Midstream Engagement and Incentive.
Engage Manufacturers and Distributors to stock high efficiency electric equipment options.
Provide Midstream financial incentives that can provide point of purchase discounts to end use customers to address first-cost concerns of equipment.</td><td>Program Metrics:
2024:
53,912,339 Net kWh
0 Net kW
$15,755,180 TSB</td></tr>
</table>

Program Name: Fuel Substitution Midstream Program

High-level description of delivery workforce including necessary scale and its risks:
The programs will serve contractors, installers, manufacturers and distributors in gaining the knowledge to sell and install electric fuel substitution equipment. In certain instances, certain contractors may need to engage with electricians to make panel upgrades to support the installation of fuel substitution options. The historic tendency has been to replace "like for like" equipment that will be addressed by educating contractors on selling the benefits of electric equipment and providing financial incentives to gain widespread adoption.

Market Actors necessary for success:

- Contractors/Installers
- Manufacturers/Distributors

Solicitation Strategy:
Third-Party Solicited

Transition Plan:
Not applicable - New Program

Expected Program Life:
2024 - On going

Short Term Plan
Develop solicitation materials to gain innovative, cost effective program designs from the market.

Cost Effectiveness:
TRC:
2024: 1.16
2025: 1.19
2026: 1.23
2027: 1.26

Long Term Outlook
Engage midstream market actors to promote the widespread adoption of electrification measures through market awareness and financial incentives.

Proposed Annual Budgets for 2024-2027:

2024	2025	2026	2027
$15.5M	$16.0M	$16.5M	$17.0M

Anticipated directional and scale changes in budget for years 2028-2031:
Budget is expected to scale based on inflation and could adjust due to performance of program.

Implementation Plan: Not yet available

Program Name: Contractor Demand Building Program	
Program ID: SCE_Market Support_002 **New / Existing:** New **Link to implementation plan if existing (see D.21-05-031):** Not yet available	
Portfolio Segment: Market Support	**Implementation Party:** SCE
Applicable Sector: Residential – Applicable to all sectors	**Market Sub-Sector:** Contractors/Installers Manufacturers/Distributors
Sector Challenge: All sectors face the challenge of insufficient knowledge of fuel substitution measures.	**Sector Opportunity:** Increased contractor participation in WE&T and Resource Acquisitions EE program and greater adoption of EE measures, particularly fuel substitution measures.
Known Equity Concerns in the Selected Markets: Equity-Targeted customers face numerous challenges including knowledgeable and affordable contractors, costs, time constraints, market knowledge gaps, and landlord-tenant issues.	**Proposed Solutions to Equity Concerns:** Education of additional contractors on Fuel substitution measures.
Program Description: The Contractor Demand Building Program focuses on catalyzing EE and Fuel Substitution demand among contractors and tradespeople by training them through existing WE&T programs, which would enable them to pursue EE programs and measures in Resource Acquisition programs. The program will provide coupons for discounted fuel substitution heat pumps to contractors who complete WE&T fuel substitution training in order to create demand for fuel substitution from the customers the contractors serve.	
Intervention Strategy: • Contractor fuel substitution equipment coupon to participate in WE&T programs focused on Fuel Substitution.	**Program Metrics:** • 5,020 contractors served
High-level description of delivery workforce including necessary scale and its risks: The programs will serve contractors, installers, manufacturers and distributors but will be served by SCE and third-party trainers. Coupons will be administered by SCE personnel. Minimal risk of delivery workforce necessary. Program should help encourage greater contractor/installer pool for Resource Acquisition programs.	
Market Actors necessary for success: • Contractors/Installers • Manufacturers/Distributors • Trainers	
Solicitation Strategy: Not applicable	**Transition Plan:** Not applicable - New Program

Program Name: Contractor Demand Building Program

Expected Program Life:
2024 - On going

Short Term Plan
Drive increased participation of a new contractors/implementers to the WE&T programs and EE Resource Acquisition programs.

Cost Effectiveness
Not Applicable

Long Term Outlook
Increase new contractor/implementer participants in the WE&T programs and EE Resource Acquisition programs by 20%.

Proposed Annual Budgets for 2024-2027:

2024	2025	2026	2027
$2.3M	$2.3M	$2.4M	$2.5M

Anticipated directional and scale changes in budget for years 2028-2031:
Budget is expected to scale based on inflation and could adjust due to performance of program.

Implementation Plan: Not yet available

II. Commercial Sector

Program Name: ICF Commercial Behavior Program	
Program ID: SCE_3P_2020RCI_003 **New / Existing:** Existing **Link to implementation plan if existing: (see D.21-05-031):** https://cedars.sound-data.com/documents/download/2386/main/	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Commercial	**Market Sub-Sector:** Small and Mid-Size Commercial
Sector Challenge: Wasteful energy behaviors in small and mid-sized commercial facilities -- such as how they use lighting, cooling and heating, refrigeration, office electronics, cooking and water heating -- and difficulty to reaching small and mid-sized customers at scale.	**Sector Opportunity:** Increase adoption of low-cost and no-cost behavioral changes in small and mid-sized facilities. The program will target customers across counties and climate zones in SCE territory and most occupied commercial facility types that consume under 250 kW demand will be eligible, however we expect the majority to be in retail, office and hospitality.
Known Equity Concerns in the Selected Markets: • Small business customers underserved by EE programs • Resource and language barriers: Small businesses generally do not have a person dedicated to managing energy issues. Therefore, it can be difficult to directly speak with someone about implementing energy-saving projects. Further, the primary language of many business decision-makers may not be English, making it even more challenging to communicate about EE.	**Proposed Solutions to Equity Concerns:** • Drive behavioral savings from small and mid-sized customers: This program design uses a blend of advancements in commercial buildings analytics and data collection and targeted higher-touch tactics to reach this underserved segment. Provide actionable no-cost and low-cost recommendations to save energy customized for diverse business characteristics. ICF's BERs provide these insights in a clear, concise, and actionable package with personalized energy-saving recommendations that business owners can put into effect immediately. The BERs also provide the perfect channel to promote other utility opportunities and can educate SMB customers on the value that EE and DR provide to their businesses.

Program Name: ICF Commercial Behavior Program	
• Known Equity Concerns in the Selected Markets: • Information hassle costs and performance uncertainties: small and mid-sized customers have varying levels of knowledge and experience with EE and many do not understand how their behavior and operational practices influence their facility's energy consumption. They have limited knowledge about the steps they can take to save energy in their facilities and the programs available to them. Small and mid-size commercial customers are largely unsure how to turn their energy data into actionable insights that can save energy and money in their business. Small and mid-size commercial customers cite time as their scarcest resource with finances being a close second. These customers have limited ability to spend time learning about EE and which EE actions are right for their business. • Split incentives: Many small and mid-sized businesses are renters, creating a challenge for them to adopt traditional EE measures such as upgrading large equipment or building envelope measures. • Diversity of small business activities: Small and mid-sized customers have a wide range of activity, hours of operation, and the types of equipment they use in their business, making it challenging to provide relevant energy information to all small and mid-sized customers.	**Proposed Solutions to Equity Concerns:** • High-touch strategy using Energy Advisors: Data-driven personalized messaging combined with trained coaches generates greater customer engagement in program activities and low-cost/no-cost energy-saving actions. Energy Advisors will be bilingual. ICF's high-tech/high-touch approach combines the actionable insights available in our BERs with one-on-one coaching by our Energy Advisors to give customers the right information to reduce the hassle of navigating the complex EE landscape. Ongoing stream of customer feedback: The program harnesses customer insights from targeted coaching campaigns. This behavioral intervention contributes to overall customer intelligence for cross-marketing, lead generation, and scaling to other DSM opportunity areas. Our program overcomes barriers by taking customer data provided by SCE and using it to expand two-way communication with the customer. Our BERs will prompt customers to provide information back to us to ensure future reports in the right customers' hands. We will collect email addresses to ensure we deliver digital reports to the inbox of decision-makers to drive energy-saving actions. Rewards market strategy to incent customer action and drive loyalty: The program incorporates rewards for businesses to earn and redeem gift cards or other forms of value. In turn, businesses can promote their energy savings progress to build loyalty with their community and customers.
Program Description: The Commercial Behavioral Program will target small and mid-size commercial customers of SCE, with an emphasis on HTR customers and customers within DAC. The Program will drive adoption of behavioral changes by small and mid-size commercial customers through personalized BERs, supported by additional tactics and channels such as Energy Advisors and rewards.	

Program Name: ICF Commercial Behavior Program	

Intervention Strategy:
Downstream Behavioral Business Energy Reports and Energy Advisors provide feedback on energy consumption and customized recommendations to save. Small rewards will be offered to nudge customers to engage and drive savings.
	Program Metrics:
	• 2024 Energy Savings Goals:
	  ○ 17,799,076 kWh
	  ○ 9,015 kW
	• 2025 Energy Savings Goals:
	  ○ 11,767,984 kWh
	  ○ 5,961 kWh
	• Additional program metrics that will be tracked in the program:
	• Customers Treated and Reports Sent - Number of customers with active accounts in treatment group waves; actual number of reports sent to customers by paper and email channels.
	• Cost-effectiveness TRC Calculation - TRC actual vs. forecasted
	• TRC ratio / Levelized cost, [Incentive/non-incentive] spend based on paid [incentive/non-incentive] spend vs. forecasted [incentive/non-incentive] spend.
	• Customer Satisfaction and Service - Resolution of complaints or inquiries and timeliness of resolution; Overall program customer satisfaction rating of 80% or higher.
	• Program Data Quality - HERs are sent to treatment group customers and not sent to control group customers, Correct personalized data display on customer reports.
	• Contract Compliance - Qualitative assessment by SCE representative regarding adherence to contract terms and conditions.
	• Brand Review Time - The total hours spent reviewing marketing materials submitted by Implementer or Implementer Parties
	• Unsubscribes or opt outs - The average unsubscribe rate across direct mail and email campaigns.
	• Spam (Complaints) - The average spam or complaint rate across all email campaigns.
	• Open Rates - Email open rates.

Program Name: ICF Commercial Behavior Program	
	Program Metrics: • DBE Spend - To date DBE spending as percent of total spend / DBE % commitment compared to goal. • HTR and DACs Spend - Spend on Hard-to-Reach Customers and Disadvantaged Communities. • Sustainability Ratings - 50% or higher post-consumer recycled paper content; Plant trees to offset paper consumption. • GHG Emissions - MT CO2eq Net kWh savings. • Depth of interventions - Average savings per participant. • HTR and DACs - Percentage of customers in hard to reach or disadvantaged communities
High-level description of delivery workforce including necessary scale and its risks: As prime contractor, ICF is responsible for overall program design and implementation. ICF administers 150+ DSM programs across North America for over 50 utility clients. In addition to overall program management, ICF will provide program tracking and reporting, IT and data ingestion services, rewards fulfillment, Energy Advisors, and customer care services. ICF will partner with a subcontractor for printing and mailing services that has a proven track record of success in California and is a DBE. ICF maintains a risk register and mitigation plan based on past experience delivering effective and successful behavioral programs, an understanding of the risks and barriers that previous programs have encountered, and a prescribed project risk management approach. Potential risks that have been identified includes: missed savings targets, lack of eligible customers, print and email report quality or delivery issues, procedural workpaper approval or changes to the way behavioral savings are claimed, customer information privacy, low customer satisfaction or high opt-out rate, and double counted savings. A mitigation strategy has been developed for each key risk area and will be implemented as part of the program operations plan and monitored on a monthly basis throughout the program term.	
Market Actors necessary for success: The program will require support from experts from SCE, Cal TF, CPUC, potentially other IOU's and third-party evaluation firms to develop the measure workpaper and ensure program success to measure and claim energy savings.	
Solicitation Strategy: Third-Party Solicited	**Transition Plan:** Not applicable

<table>
<tr><th colspan="2">Program Name: ICF Commercial Behavior Program</th></tr>
<tr><td>Expected Program Life:
2023 - 2025</td><td>Short Term Plan
Deliver the third-party program at full scale implementation to serve 80,000 small and mid-size customers between 2023-2025, including:
Deliver the program services to customers according to the program implementation plan.
More customers may be added each year to maintain the size of the program and ensure goals are met.
Continue to monitor the quality of program delivery and customers service and take corrective action to resolve issues as needed.
Provide monthly progress reports to track program outcomes against key performance metrics.</td></tr>
<tr><td>Cost Effectiveness
2024: 1.07
2025: 1.19</td><td>Long Term Outlook
Penetration and persistence of energy-efficient behaviors lead to long-term energy and demand reductions among all participants.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:
2024: $2,395,872
2025: $1,987,157</td><td>Anticipated directional and scale changes in budget for years 2028-2031:
Not applicable - program not in operation those years</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/documents/download/2386/main/</td></tr>
</table>

Program Name: Willdan Commercial Energy Efficiency Program	
Program ID: SCE_3P_2020RCI_005 **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/documents/download/2031/main/	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Commercial	**Market Sub-Sector:** All Commercial > 20kW
Sector Challenge: At Customer's end: • Lack of capital. • Lack of information. • Lack of technical expertise. • Perception of risk. • Lack of time. • Permits and regulations.	**Sector Opportunity:** • Increased participation in EE program and adoption of EE measures. • Achieve deeper savings through comprehensive energy management solutions. • Increase EE adoption rates by targeting large customers, as well as small and medium customers which include many HTR customers and/or those in DACs.
Known Equity Concerns in the Selected Markets: • Lack of participation by HTR customers. • Hassle and search cost. • Performance uncertainty of EE benefits. • Access to investment capital and sufficient return on investment.	**Proposed Solutions to Equity Concerns:** • Lack of participation by HTR customers: Partner with trusted HTR/DAC experts and CBOs to identify decision makers, build customer trust, and reduce costs. • Hassle and search cost: Simplify participation by consolidating program services and assigning a SPOC. This tactic improves customer satisfaction and improves perception of SCE. • Performance uncertainty of EE benefits: QA/QC projects during pre-installation and post-installation to confirm that the equipment installed meets program requirements and customer needs. • Access to investment capital and sufficient return on investment: Offer financing options to overcome specific barriers associated with financing.

Program Name: Willdan Commercial Energy Efficiency Program

Program Description:

SCE has contracted with Willdan Energy Solutions (third party) to develop, implement, and offer this EE Program to SCE customers. This Third-Party Program provides comprehensive EE for all commercial customers segments: retail, technology industries, lodging, restaurants, grocery stores, warehouses/refrigerated warehouses and office & miscellaneous with a monthly maximum demand greater than 20 kW across SCE's service territory. This program seeks to influence a significant increase in the adoption of EE technology and/or measures among the end-users of this market sector using the Deemed, Custom Calculated and NMEC approaches. The program goes beyond basic EE to include DR, EMTs and fully integrated DSM solutions. It complies with SCE and CPUC requirements and offers a consolidated approach.

Intervention Strategy:

Downstream-

- Direct Install
- Incentive
- Finance
- Audit
- Technical Assistance

Program Metrics:

- Program Performance: Ex Ante TRC Ratio.
- Program Performance: Energy Savings (kWh).
- Program Performance: Demand Savings (kW).
- Program Performance: Pipeline Target Energy Savings (kWh).
- Program Performance: Pipeline Target Demand Savings (kW).
- Customer Satisfaction: Customer Satisfaction Rating.
- Program Data / Engineering Quality
- Supply Chain Responsibility: Safety Rating.
- Supply Chain Responsibility: DBE Spend.
- Compliance: HTR and DAC Penetration.

High-level description of delivery workforce including necessary scale and its risks:

Willdan, the third-party implementer, will execute the program with a scalable workforce consisting of Willdan program staff, local Trade Professionals (through an Open Trade Pro Network), contractors/subcontractors, partners (professional services organizations that provide marketing, engineering review, and other services), and CBOs. Trade professionals, contractors, subcontractors, partners, and CBOs report to the Deputy Program Manager. Deputy Program Manager helps vet, recruit, and train new Trade Professionals and CBOs to maintain a high-quality workforce capable of covering a broad geography and skillset.

Program Name: Willdan Commercial Energy Efficiency Program

High-level description of delivery workforce including necessary scale and its risks:
Regarding Willdan program staff, specifically:

- Willdan's workforce currently has more than 50 people - including program management leads, project developers, project managers, analysts, and engineers - available to support this program. They report to the Deputy Program Manager on a daily basis, who in turn reports to the Willdan Energy Services Director, who manages all interaction with SCE.
- Willdan's California workforce is organized so that most program personnel can work across programs for all California IOUs. This allows for consistency in delivery as well as the ability to scale specific program staff resources up or down to accommodate a variation in program goals or progress from month to month. Almost all program-related hiring was completed in 2021.
- Potential risks to the program include a failure to recruit and retain high-quality, experienced personnel.
- Potential risks to SCE include failing to deliver savings due to inadequate personnel assigned to the program from Willdan.

Potential risks of not using the workforce described above are failure to deliver program savings.

Market Actors necessary for success:

- Qualified Trade Professionals, Contractor and Subcontractor Participation.
- Engaged CBO partners willing to work with Willdan and build credibility with DAC/HTR customers.
- Sources of financing to provide investment capital to small businesses at low interest rates.

Solicitation Strategy: Third-Party Solicited	**Transition Plan:** Not applicable
Expected Program Life: 2021 – 2025 May extend to 2026 subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Short Term Plan** Onboard contractors and DBE. Commence direct marketing and ramp-up activities. Ramp-up kW & kWh savings deliveries from year 2 & onwards. Motivate comprehensive projects through outreach, technical assistance, and connecting customers to tailored funding and financing options.
Cost Effectiveness TRC: 1.27 (Oct 2021 – Dec 2025) TRC: 1.27 ***** (Oct 2021 – July 2026) ***** This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Long Term Outlook** 752 GWh delivered over 4.3 years (Oct 2021- Dec 2025) 887 GWh* delivered over 4.8 years (Oct 2021- July 2026) ***** This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.

Program Name: Willdan Commercial Energy Efficiency Program	
Proposed Annual Budgets for 2024-2027*: 2024: $94.3 Million 2025: $94.4 Million 2026: $72.0 Million * This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Anticipated directional and scale changes in budget for years 2028-2031:** Not applicable
Implementation Plan: https://cedars.sound-data.com/documents/download/2031/main/	

<table>
<tr><th colspan="2">Program Name: Commercial Energy Advisor Program</th></tr>
<tr><td colspan="2">Program ID: SCE-13-SW-002A
New / Existing: Existing
Link to implementation plan if existing (see D.21-05-031) https://cedars.sound-data.com/programs/SCE-13-SW-002A/details/</td></tr>
<tr><td>Portfolio Segment:
Market Support</td><td>Implementation Party:
SCE</td></tr>
<tr><td>Applicable Sector:
Commercial and Multifamily</td><td>Market Sub-Sector:
Commercial & Multifamily buildings
>/=50,000 square feet
>/=17 Residential utility accounts
Some exceptions apply: Buildings under 50,000 square feet and buildings with less than 17 residential apartments may participate in benchmarking.</td></tr>
<tr><td>Sector Challenges:
The CEC’s Building Energy Benchmarking Program requires owners of large commercial and multifamily buildings to report energy use to the CEC by June 1 annually.
Lack of awareness from customers: Some building owners are unaware of or do not know how to comply with AB 802 requirements, specifically on how t o report energy use data every year to the CEC.
Under reported California building energy usage: Not all building owners of large commercial and multifamily buildings in California with more than 50,000 square feet of gross floor area are submitting energy usage data requests to SCE by March 1. In addition, building owners must submit usage data to CEC by June 1 each year.</td><td>Sector Opportunity:
California’s Building Energy Benchmarking Program requires the owners of buildings to report energy use data every year to the CEC. This information is shared on the CEC website for building owners and operators to compare their building’s energy use to other similar buildings and take action to improve the EE of their building, reduce GHG emissions, and lower their utility bills.
This Commercial Energy Advisor Program is a useful service offering available to building owners that can help them manage their energy usage and potentially save money, through activities such as benchmarking. The opportunity for SCE is to continue to provide the ABS that provides usage data to customers electronically and to support customer activities in this effort. Customers must set up their buildings in SCE’s Benchmarking Dashboard through SCE.com and link them to the corresponding buildings they set up in the Energy Star Portfolio Manager (ESPM) website.</td></tr>
</table>

<table>
<tr><th colspan="2">Program Name: Commercial Energy Advisor Program</th></tr>
<tr><td>Sector Challenges:
Lack of knowledge (technology expertise and access) from customers: Some building owners and building managers do not know how to use the websites and technology to set up building benchmarking and it is a challenge for them to complete the process.</td><td>Sector Opportunity:
The websites include:
• SCE's Benchmarking Dashboard.[1]
• The CEC website which includes Benchmarking Program information and resources to assist building owners with compliance.[2]
ESPM.[3]</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
The success of this program is dependent on the participation of all eligible commercial and multi-family buildings. This will ensure a true benchmarking rating for participating customers.
• Not all building owners of large commercial and multifamily buildings in California with more than 50,000 square feet of gross floor area are submitting energy usage data requests to SCE by March 1. In addition, building owners must submit usage data to CEC by June 1 each year.
• Some building owners and building managers do not know how to use the websites and technology to set up building benchmarking and it is a challenge for them to complete the process.</td><td>Proposed Solutions to Equity Concerns:
The goal of this program is 100% participation of all eligible commercial and multifamily buildings.
• The role of the CEC is to promote the Benchmarking program and maintain participation rates. SCE will maintain the relationship with CEC and keep communication channels open.
• SCE Benchmarking supports each benchmarking request for assistance to set up buildings in the SCE Benchmarking Dashboard and establish automated usage data flow to the ESPM.</td></tr>
<tr><td colspan="2">Program Description:
The Commercial Energy Advisor Program complies with the AB 802 mandate, CEC benchmarking regulations, which require utilities to maintain records of energy usage data of all nonresidential buildings. The CEC's Building Energy Benchmarking Program requires owners of large commercial and multifamily buildings to report energy use to the CEC by June 1 annually. The information is shared on the CEC website for building owners and operators to compare their building's energy use to other similar buildings and take action to improve the EE of their building, reduce s GHG emissions, and lower their utility bills.</td></tr>
</table>

[1] SCE Benchmarking Dashboard *available at* https://www.sce.com/hy/business/tools/benchmarking-how-do-i-compare

[2] CEC website, *available at* https://www.energy.ca.gov/programs-and-topics/programs/building-energy-benchmarking-program

[3] ESPM , *available at* https://portfoliomanager.energystar.gov

Program Name: Commercial Energy Advisor Program

Intervention Strategy:

Upon request, SCE provides customers access to aggregated building meter data through the SCE Benchmarking Dashboard on SCE.com. SCE data is aggregated and shared (via the ABS system). Then the building owner (or authorized third party) can access their data through the ESPM online tool and submit data to the CEC.

The websites include:

- SCE's Benchmarking Dashboard. [4]
- The CEC website includes Benchmarking Program information and resources to assist building owners with compliance. [5]
- ESPM.[6]

Program Metrics:

- Energy usage is provided to building owners in kWh.
- Number of Participating Buildings = 7,345

Multifamily	1,592	22%
Commercial	5,753	78%
Total Bldgs.:	7,345	100%
Eligible Bldgs.:	TBD	TBD

Benchmarking Purpose

CEC Compliance Benchmarking	2,152	29%
Other Benchmarking	5,193	71%
Total Buildings	7,345	100%

High-level description of delivery workforce including necessary scale and its risks:

Workforce requirements include an SCE Program Manager, analyst, and IT support. From March through June of each year there is a surge of data requests, questions, and issues given the June 1 reporting deadline to the CEC. Additional support may be needed to timely address all requests and inquiries.

Market Actors necessary for success:

- Building Owners: Building Owners need to participate and provide their energy usage.
- Third-Party Agents: Third-Party Agents, such as consultants, energy companies, and property management companies, may assist building owners with the Benchmarking process.
- ESPM: External interface or online system used to store aggregated usage data of buildings and accessible by customers. A functioning ESPM system is needed for overall program success.
- CEC

4 SCE's Benchmarking Dashboard *available at* https://www.sce.com/hy/business/tools/benchmarking-how-do-i-compare

5 CEC website, *available at* https://www.energy.ca.gov/programs-and-topics/programs/building-energy-benchmarking-program

6 ESPM, *available at* https://portfoliomanager.energystar.gov

<table>
<tr><th colspan="2">Program Name: Commercial Energy Advisor Program</th></tr>
<tr><td>Solicitation Strategy:
Not applicable</td><td>Transition Plan:
Not applicable. SCE does not plan to solicit for this program.

The Commercial Energy Program was launched in 2017 to meet AB 802 compliance, which requires utilities to maintain records of energy usage data of all nonresidential buildings.</td></tr>
<tr><td>Expected Program Life:
2017 - Ongoing until termination of AB 802 legislation or direction from the CPUC.</td><td>Short Term Plan:
Support commercial and multifamily building benchmarking using SCE’s ABS for 2021 data requests.
Continue to serve existing and new large building owners and agents with Benchmarking Program information, building setup in the SCE Dashboard and ESPM systems, and usage data.
Improve SCE’s Benchmarking program system to function more effectively given the changes with SCE’s Customer Service Re-platform implementation by working with IT to troubleshoot delays and issues.</td></tr>
<tr><td>Cost Effectiveness
Not Applicable</td><td>Long Term Outlook:
System enhancement of SCE’s ABS for a more user-friendly experience.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027*:
2024: $0.63 million
2025: $0.64 million
2026: $0.66 million
2027: $0.68 million

*Non-labor budget only</td><td>Anticipated directional and scale changes in budget for years 2028-2031:

Anticipate stable budget for each year moving forward and until further notice.</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-002A/details/</td></tr>
</table>

<table>
<tr><th colspan="2">Program Name: Small/Medium Business Equity Program</th></tr>
<tr><td colspan="2">Program ID: SCE_SMB_Equity_001
New / Existing: New
Link to implementation plan if existing (see D.21-05-031): Not yet available</td></tr>
<tr><td>Portfolio Segment:
Equity</td><td>Implementation Party:
Third-Party Implementer</td></tr>
<tr><td>Applicable Sector:
Commercial</td><td>Market Sub-Sector:
SMB Equity-targeted customers</td></tr>
<tr><td>Sector Challenge:
Existing SMBs remain inefficient and costly to operate. This is particularly challenging for Equity-targeted customers.</td><td>Sector Opportunity:
Increased participation in EE program and adoption of EE measures.</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Equity-targeted SMB customers face numerous challenges including costs, time constraints, knowledge gaps, landlord-tenant issues.</td><td>Proposed Solutions to Equity Concerns:
Direct installation of EE measures ensures that measures are installed in a timely, common method without requiring much cost or hassle for the customer.</td></tr>
<tr><td colspan="2">Program Description:
The SMB Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their household energy use. The SMB Equity Program offers small and medium business equity-targeted agricultural customers incentives or direct installation of HVAC, lighting, water heating, etc. measures.</td></tr>
<tr><td>Intervention Strategy:
• Direct Installation – SMB Equity Program will utilize direct install of efficient equipment to engage households.
• Behavioral – SMB Equity Program may also use a rewards program to motivate lower energy use.</td><td>Program Metrics* (2024-2027):
• 21,450 small and medium business (SMB) equity-targeted participants served
• 9.8 GWh
• -13,116 Therms
• $3.3 million TSB

*All metrics are tentative until determined by third-party implementer.</td></tr>
<tr><td colspan="2">High-level description of delivery workforce including necessary scale and its risks:
The programs require direct installation contractors who can make installations at a wide variety of residential sites. SCE is prioritizing installation contractors from equity-targeted communities to deliver these programs. If there is an insufficient supply of these workers, SCE may need to rely on other sources.</td></tr>
</table>

Program Name: Small/Medium Business Equity Program

Market Actors necessary for success:

- SMB Customers
- Direct Installation Contractors
- Manufacturers/Distributors of energy efficient equipment (purchased by direct installation companies)

Solicitation Strategy:
Third-Party Solicited

Transition Plan:
Not applicable

Expected Program Life:
2024 - On going

Short Term Plan
Ramp up third-party program to full implementation to serve 5,600 customers*.

*Number of customers will be determined by third-party implementer.

Cost Effectiveness
Not Applicable

Long Term Outlook
Move 20% of the SMB market to high efficiency equipment.

Proposed Annual Budgets for 2024-2027*:

2024	2025	2026	2027
$8.1M	$8.4M	$8.6M	$8.9M

*Program budget is yet to be available and will be confirmed after contract agreement with third-party implementer is signed and approved by Commission.

Anticipated directional and scale changes in budget for years 2028-2031:
Budget is expected to scale based on inflation.

Implementation Plan: Not yet available

Program Name: New Program Design Pilot Program	
Program ID: SCE Market Support_001 **New / Existing:** New **Link to implementation plan if existing (see D.21-05-031):** Not yet available	
Portfolio Segment: Market Support	**Implementation Party:** SCE
Applicable Sector: Commercial – Applicable to all sectors	**Market Sub-Sector:** Customers (potentially all sectors) Contractors/Installers Manufacturers/Distributors
Sector Challenge: All sectors face challenges of novel program designs that are not proven but which may be beneficial for meeting the State's EE and GHG emissions reduction goals.	**Sector Opportunity:** Pursue novel program designs through a dedicated budget to show proof of concept. If successful, can be transitioned to a full-fledged program.
Known Equity Concerns in the Selected Markets: Equity-targeted customers face numerous challenges including knowledgeable and affordable contractors, costs, time constraints, knowledge gaps, landlord-tenant issues.	**Proposed Solutions to Equity Concerns:** Test the effectiveness of novel program designs that may deliver savings and other environmental benefits to equity-targeted populations.
Program Description: The New Program Design Pilots Program seeks to test the effectiveness of novel program designs targeted at delivering near-term TSB savings. If these programs prove to be successful, they can be transitioned to third-party Resource Acquisition or Equity programs.	
Intervention Strategy: • To be determined by pilot design.	**Program Metrics:** • 2 proposed new program design pilots per year. • TSB, kW, kWh TBD upon pilot start.
High-level description of delivery workforce including necessary scale and its risks: The programs will be delivered by SCE personnel or contractors/program implementers under contract to SCE. SCE does not perceive much risk to workforce due to the small scale of these pilots.	
Market Actors necessary for success: • Contractors/Installers/Implementers • SCE program management	
Solicitation Strategy: Not applicable – though SCE may approach market for pilot design ideas	**Transition Plan:** Not applicable - New Program

<table>
<tr><th colspan="2">Program Name: New Program Design Pilots Program</th></tr>
<tr><td>Expected Program Life:
2024 - On going</td><td>Short Term Plan
2-4 pilots that have completed proof of concept.</td></tr>
<tr><td>Cost Effectiveness
Not Applicable</td><td>Long Term Outlook
Incorporation of pilots into mainstream programs and funnel of new pilot ideas.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:
<table><tr><th>2024</th><th>2025</th><th>2026</th><th>2027</th></tr><tr><td>$5.1M</td><td>$5.2M</td><td>$5.4M</td><td>$5.6M</td></tr></table></td><td>Anticipated directional and scale changes in budget for years 2028-2031:
Budget is expected to scale based on inflation and could adjust due to performance of program.</td></tr>
<tr><td colspan="2">Implementation Plan: Not yet available</td></tr>
</table>

III. Industrial Sector

<table>
<tr><th colspan="2">Program Name: Willdan Industrial Energy Efficiency Program</th></tr>
<tr><td colspan="2">Program ID: SCE_3P_2020RCI_006
New / Existing: Existing
Link to implementation plan if existing (see D.21-05-031): https://cedars.sound-data.com/documents/download/2032/main/</td></tr>
<tr><td>Portfolio Segment:
Resource Acquisition</td><td>Implementation Party:
Third-Party Implementer</td></tr>
<tr><td>Applicable Sector:
Industrial</td><td>Market Sub-Sector:
All Industrial > 20kW</td></tr>
<tr><td>Sector Challenge:
At Customer's end:
Lack of capital.
Lack of information.
Lack of technical expertise.
Perception of risk.
Lack of time.
Permits and regulations.</td><td>Sector Opportunity:
Increased participation in EE program and adoption of EE measures.
Achieve deeper savings through comprehensive energy management solutions.
Increase EE adoption rates by targeting large customers, as well as small and medium customers of which include many HTR customers and/or those in DACs.</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Lack of participation by HTR customers.
Hassle and search cost.
Performance uncertainty of EE benefits.
Access to investment capital and sufficient return on investment.</td><td>Proposed Solutions to Equity Concerns:
Lack of participation by HTR customers: Partner with trusted HTR/DAC experts and CBOs to identify decision makers, build customer trust, and reduce costs.
Hassle and search cost: Simplify participation by consolidating program services and assigning a SPOC. This tactic improves customer satisfaction and improves perception of SCE.
Performance uncertainty of EE benefits: QA/QC projects during pre-installation and post-installation to confirm that the equipment installed meets program requirements and customer needs.
Access to investment capital and sufficient return on investment: Offer financing options to overcome specific barriers associated with financing.</td></tr>
</table>

Program Name: Willdan Industrial Energy Efficiency Program

Program Description:

SCE has contracted with Willdan Energy Solutions (third party) to develop, implement, and offer this EE Program to SCE customers. This Third-Party Program provides comprehensive EE for all industrial customers (segments: mining, utilities and construction industries, manufacturing, wholesale trade, transportation and warehousing, and other services except public administration) with a monthly maximum demand greater than 20 kW across SCE's service territory. This program seeks to influence a significant increase in the adoption of EE technology and/or measures among the end-users of this market sector using the Deemed, Custom Calculated and NMEC, where applicable, approaches. The program goes beyond basic EE to include DR, energy management technologies and fully integrated DSM solutions. It complies with SCE and CPUC requirements and offers a consolidated approach.

Intervention Strategy:

Downstream-

- Direct Install
- Incentive
- Finance
- Audit
- Technical Assistance

Program Metrics:

- Program Performance: Ex Ante TRC Ratio
- Program Performance: Energy Savings (kWh)
- Program Performance: Demand Savings (kW)
- Program Performance: Pipeline Target Energy Savings (kWh)
- Program Performance: Pipeline Target Demand Savings (kW)
- Customer Satisfaction: Customer Satisfaction Rating
- Program Data / Engineering Quality
- Supply Chain Responsibility: Safety Rating
- Supply Chain Responsibility: DBE Spend
- Compliance: HTR and DAC Penetration.

Program Name: Willdan Industrial Energy Efficiency Program

High-level description of delivery workforce including necessary scale and its risks:

Willdan, the third-party implementer, will execute the program with a scalable workforce consisting of Willdan program staff, local Trade Professionals (through an Open Trade Pro Network), contractors/subcontractors, partners (professional services organizations that provide marketing, engineering review, and other services), and CBOs. Trade professionals, contractors, subcontractors, partners, and CBOs report to the Deputy Program Manager. The Deputy Program Manager helps vet, recruit, and train new Trade Professionals and CBOs to maintain a high-quality workforce capable of covering a broad geography and skillset.

Regarding Willdan program staff, specifically:

- Willdan's workforce currently has more than 50 people - including program management leads, project developers, project managers, analysts, and engineers - available to support this program. They report to the Deputy Program Manager on a daily basis, who in turn reports to the Director of Willdan Energy Services who manages all interaction with SCE.
- Willdan's California workforce is organized so that most program personnel can work across programs for all California IOUs. This allows for consistency in delivery as well as the ability to scale specific program staff resources up or down to accommodate a variation in program goals or progress from month to month. Almost all program-related hiring was completed in 2021.
- Potential risks to the program include a failure to recruit and retain high-quality, experienced personnel.
- Potential risks to SCE include failing to deliver savings due to inadequate personnel assigned to the program from Willdan.
- Potential risks of not using the workforce described above are failure to deliver program savings.

A combination of trade professionals (using an Open Trade Pro network), contractors/subcontractors, partners (professional services organizations including marketing and engineering) and CBOs. Trade professionals will be scaled with program goals, increasing through 2021 and 2022 as the program develops greater capacity for training and onboarding.

Market Actors necessary for success:

- Qualified trade professional, contractor and subcontractor participation.
- Engaged CBO partners willing to work with Willdan and build credibility with DAC/HTR customers.
- Sources of financing to provide investment capital to small businesses at low interest rates.

Solicitation Strategy:	**Transition Plan:**
Third-Party Solicited	Not applicable
Expected Program Life*: 2022 – 2025 *May extend to 2026 subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Short Term Plan** Onboard contractors and DBE. Commence direct marketing and ramp-up activities. Ramp-up kW & kWh savings deliveries from year 2 & onwards. Motivate comprehensive projects through outreach, technical assistance, and connecting customers to tailored funding and financing options.

Program Name: Willdan Industrial Energy Efficiency Program	
Cost Effectiveness TRC: 1.32 (Jan 2022 – Dec 2025) TRC: 1.34 * (Jan 2022 – July 2026) * This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Long Term Outlook** 317 GWh delivered over 4 years (Jan 2022 - Dec 2025) 382 GWh* delivered over 4.6 years (Jan 2022 - July 2026) * This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.
Proposed Annual Budgets for 2024-2027*: 2024 – $41.0 Million 2025 – $41.0 Million 2026 – $32.0 Million * This is subject to SCE receiving the EE Funding Approval through December 31, 2026 from CPUC on or before December 31, 2023.	**Anticipated directional and scale changes in budget for years 2028-2031:** Not applicable
Implementation Plan: https://cedars.sound-data.com/documents/download/2032/main/	

Program Name: Small/Medium Industrial Equity Program	
Program ID: SCE_SMI_Equity_001 **New / Existing:** New **Link to implementation plan if existing (see D.21-05-031):** Not yet available	
Portfolio Segment: Equity	**Implementation Party:** Third-Party Implementer
Applicable Sector: Industrial	**Market Sub-Sector:** Small/Medium Industrial Equity-targeted customers
Sector Challenge: Existing small/medium industrial businesses remain inefficient and costly to operate. This is particularly challenging for Equity-targeted customers.	**Sector Opportunity:** Increased participation in EE program and adoption of EE measures.
Known Equity Concerns in the Selected Markets: Equity-targeted small and medium industrial business customers face numerous challenges including costs, time constraints, knowledge gaps, landlord-tenant issues.	**Proposed Solutions to Equity Concerns:** Direct installation of EE measures ensures that measures are installed in a timely, common method without requiring much cost or hassle for the customer.
Program Description: The Small/Medium Industrial Equity Program will offer small and medium business equity-targeted industrial customers incentives or direct installation of HVAC, lighting, water heating, etc. measures. The Small/Medium Industrial Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their energy use.	
Intervention Strategy: Direct Installation – Small/Medium Industrial Equity Program will utilize direct install of efficient equipment to engage industrial customers. Behavioral – Small/Medium Industrial Equity Program may also use rewards program to motivate lower energy use.	**Program Metrics* (2024-2027):** • 3,470 small/medium industrial equity-targeted participants served • 1.5 GWh 2024-2027 • -2,054 Therms • $0.51 million TSB *All metrics are tentative until determined by third-party implementer.
High-level description of delivery workforce including necessary scale and its risks: The program requires direct installation contractors who can make installations at a wide variety of industrial sites. SCE is prioritizing installation contractors from equity-targeted communities to deliver these programs. If there is an insufficient supply of these workers, SCE may need to rely on workers from other areas.	
Market Actors necessary for success: • Small and medium industrial business Equity customers. • Direct installation contractors. • Manufacturers/distributors of energy efficient equipment (purchased by direct installation companies).	

Program Name: Small/Medium Industrial Equity Program

Solicitation Strategy:
Third-Party Solicited

Transition Plan:
New program that will ramp up upon approval of new contract.

Expected Program Life:
2024 - On going

Short Term Plan
Ramp up third-party program to full implementation to serve 910 customers*.

*Number of customers will be determined by third-party implementer.

Cost Effectiveness
Not Applicable

Long Term Outlook
Move 20% of the small/medium industrial business market to high efficiency equipment.

Proposed Annual Budgets for 2024-2027:

2024	2025	2026	2027
$1.3M	$1.4M	$1.4M	$1.4M

*Program budget is yet to be available and will be confirmed after contract agreement with third-party implementer is signed and approved by Commission.

Anticipated directional and scale changes in budget for years 2028-2031:
Budget is expected to scale based on inflation.

Implementation Plan: Not yet available

IV. Agricultural Sector

Program Name: Agricultural Energy Efficiency Program	
Program ID: SCE-13-TP-030 **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031) –** Not yet available	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Agricultural	**Market Sub-Sector:** The Agricultural Energy Efficiency Program (AgEE) targets specific segments within the Agricultural Sector agricultural sector that have high savings potential and includes livestock operations, irrigated crops, Controlled Environment Agriculture (CEA), and on-farm post-harvest processing. These customers comprise the majority of SCE's Agricultural market sector.
Sector Challenge: • Information or search costs: Customers have varying levels of knowledge regarding EE opportunities. • Performance uncertainties: Customers are hesitant to adopt new or unfamiliar farming methods because of unknown risk to product yield and quality. • Hassle or transaction costs: EE ranks low in priority compared to other operating costs. • Access to financing: Customer lack capital to fund projects. • Organization practices or custom: Traditional farming practices and multiple decision makers result in a long project sales cycle. • Misplaced or split incentives: Landowner and lessee have different cost/benefit criteria. • Product or service unavailability: Whole system opportunities are missed by individual equipment vendors. • Seasonality: Project installation needs to be timed to align with growing season. • Biosecurity: Contamination of food product introduces potential catastrophic business risk.	**Sector Opportunity:** • Provide a comprehensive suite of technical and program support services. • Provide case studies and other evidence of project results. • Promote EE solutions tailored for unique customer subsegments. • Provide financial incentives to reduce project costs. • Utilize agricultural subject matter experts to deliver program services. • Deliver comprehensive project solutions that benefit both parties. • Work directly with customers to develop projects and coordinate project completion through a trade ally network. • Develop segment specific marketing and outreach efforts. • Develop program policies and procedures that address potential customer concerns.

<table>
<tr><th colspan="2">Program Name: Agricultural Energy Efficiency Program</th></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Customers in DACs and HTR customers experience similar barriers to the rest of the Ag sector and may require additional support to increase program participation.</td><td>Proposed Solutions to Equity Concerns:
DAC and HTR customers, provides higher levels of incentives and technical support to overcome participation barriers.

Note that additional Equity programs are anticipated to support known equity challenges.</td></tr>
<tr><td colspan="2">Program Description:
The AgEE Program cost-effectively serves SCE’s agricultural customers by delivering relevant EE solutions that meet the diverse needs of the sector. The Program objective is to increase customer participation and achieve greater savings within the agriculture sector by maximizing energy savings through customized solution sets that provide quantifiable operating cost reductions. AgEE identifies and works with agriculture customers to help them understand the benefits of implementing energy saving projects and measures; provides technical and project development assistance as needed; leverages financing solutions such as OBF, if such solutions are available; and for DAC and HTR customers provides higher levels of incentives and technical support to overcome participation barriers.</td></tr>
<tr><td>Intervention Strategy:
General examples of “delivery approach” innovation could include but are not limited to:
New strategy for customer engagement and enrollment.
Competition (e.g., “golden carrot” used for refrigerators).
New partnership/relationship to reach different/additional customers.
New approach to customer targeting that allows the program to focus on high-value savings opportunities or to specifically reach key customer groups.
More streamlined implementation process.
Strategy that addresses a persistent market barrier.
Program delivery strategy that promotes comprehensive integrated site-specific energy solutions across demand side resources such as EE, DR and distributed generation.</td><td>Program Metrics:
56 GWh (net)
13 MW (net)
N/A Therms
$28.1 million TSB</td></tr>
</table>

Program Name: Agricultural Energy Efficiency Program

Intervention Strategy:

General examples of "technology" innovation could include but are not limited to:

- Measure that is no longer considered "emerging technology" but not yet fully in the market.
- More advanced energy-saving technology.
- Novel combination of technologies, including strategies that integrated EE with other demand side technologies such as DR and distributed generation.

General examples of "market strategy" innovation could include, but are not limited to:

- Online systems or new software strategies that support and promote comprehensive energy resource management.
- Creative incentives or prizes for participation.
- Embedded in other transactions (e.g., in post office mailers when moving).

High-level description of delivery workforce including necessary scale and its risks:

AgEE will employ a multi-level outreach strategy that leverages the third-party implementer's (ICF) account management team, local contractors, equipment vendors, key industry associations including universities, and other types of trade allies and service providers that engage with the agricultural communities. Farmers are, to a large degree, viewed as belonging to a tight-knit community that bases their decision on word-of-mouth knowledge and use a handshake to close deals. It is very important to gain their trust in order to influence their decision to invest in new energy savings technologies and/or processes.

AgEE will use specific members of their account management team to build the farmer's knowledge and trust in the specific EE technology or process that will provide financial and operational benefits to their business.

Knowledge of New Technologies:

- Farmers tend to trend later in the adoption of new technologies and/or growing/processing processes. Normally, they require proof of the potential of success before they integrate it into their operations.
- AgEE will establish a strategy targeting potential early adopters and use them as "trusted" influencers for the technology and/or process.

Program Name: Agricultural Energy Efficiency Program

High-level description of delivery workforce including necessary scale and its risks:

Costs:

- Based on a study performed by the USDA Census of Agriculture, it identified a majority of California farmers cannot finance energy improvements or have doubts that cost reductions will offset the costs to implement new technologies or processes. This, coupled with the fact that utility costs comprise roughly 4.9 percent of a farm's total operating cost, does not make reducing energy use a high priority.
- AgEE will use financial incentives and technical support to enhance farmers' understanding of the comprehensive benefits that EE can bring to their operations and increase their confidence that the benefits will happen.

Access to Financing:

- Farmers often lack the capital to fund projects that will increase the efficiency of their operations.
- AgEE will provide financial incentives that will reduce the project costs. AgEE will offer no interest loans through SCE's OBF Program, if they are available.

Different Cost/Benefit Criteria:

- Landowners and lessees will often times have different cost/benefit criteria.
- AgEE will offer comprehensive project solutions aimed at meeting the cost/benefit criteria of both parties. AgEE will offer a mix of approaches – Direct Installation, Deemed, Custom and NMEC measures - which will offer near-term benefits for the farmer and long-term benefits for the landowner.

Missed Whole System Opportunities:

- Many times, equipment vendors are focused on a single or select pieces of equipment in a process.
- AgEE identifies that vendor support is critical to the successful delivery of program EE solutions for the customer. Therefore, AgEE will work directly with customers to develop and coordinate projects while integrating strategically needed trade allies in the process.

Project Timing:

- A critical component is to minimize any project activity's interference with the customer's operations.
- AgEE will develop and implement segment specific marketing and outreach efforts which are aligned with agricultural preparation, input, growth and harvesting seasons. Understanding the timing of when customer's operations are most accessible will drive greater levels of participation.

Program Name: Agricultural Energy Efficiency Program

High-level description of delivery workforce including necessary scale and its risks:
Contamination of Food Products:

- In order to provide the best recommendations to customers, access to their product processing areas is critical. Farmers will have concerns of external visitors potentially causing contamination of their food products. This would result in a major negative impact on their business operations.
- AgEE will develop and implement policies and procedures (POPs) to address the customer's concerns and will be based on standard industry precautions. By establishing and implementing these POPs, AgEE will demonstrate to the customer their understanding of the customer's operations which in turn will help build a sense of trust and partnership with the customer.

Risks:

- AgEE team does not establish the necessary and expected trust relationships with customers in their target market.
- AgEE erroneously selects or misrepresents the benefits of promoted technology and process solutions.
- AgEE is overcommitting their resources with their multi-faceted, comprehensive approach.

AgEE's financial incentives are not significant enough to overcome the customer's financial barriers.

Market Actors necessary for success:

- AgEE Account Managers.
- Local Contractors.
- Equipment Vendors.
- Key Industry Associations including Universities.
- Trade Allies.
- Other Agricultural Service Providers as necessary.

Solicitation Strategy:	**Transition Plan:**
Third-Party Solicited	SCE's transitional strategy was to close programs before implementing the new third-party program. SCE closed its Agricultural Calculated and Deemed EE Programs to new applications as of 12/23/2021. SCE will continue to manage pipeline projects until their completion, which is expected to extend through December 2023.

<table>
<tr><th colspan="2">Program Name: Agricultural Energy Efficiency Program</th></tr>
<tr><td>Expected Program Life:

2022 to 2025</td><td>Short Term Plan

• Submit required documentation for CPUC approval of the Local Agricultural Program contract.
• Develop and submit an Implementation Plan to CEDARS.
• Launch and ramp-up program implementation activities.</td></tr>
<tr><td>Cost Effectiveness

PY 2023: 1.22
PY 2024: 0.98
PY 2025: 1.02
PY 2026: 1.00
PY 2027: 1.02</td><td>Long Term Outlook

Deliver a total of 25,555,140 kWh (net).</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:

PY 2024: $ 3.2 million
PY 2025: $ 3.2 million
PY 2026: $4.2 million
PY 2027: $11.0 million</td><td>Anticipated directional and scale changes in budget for years 2028-2031:

Not Applicable at this time.</td></tr>
<tr><td colspan="2">Implementation Plan: Not yet available.</td></tr>
</table>

<table>
<tr><th colspan="2">Program Name: Small/Medium Agricultural Equity Program</th></tr>
<tr><td colspan="2">Program ID: SCE_SMA_Equity_001
New / Existing: New
Link to implementation plan if existing (see D.21-05-031): Not yet available.</td></tr>
<tr><td>Portfolio Segment:
Equity</td><td>Implementation Party:
Third-Party Implementer</td></tr>
<tr><td>Applicable Sector:
Agricultural</td><td>Market Sub-Sector:
Small/Medium Agricultural Equity-targeted customers</td></tr>
<tr><td>Sector Challenge:
Existing small/medium agricultural businesses remain inefficient and costly to operate. This is particularly challenging for equity-targeted customers.</td><td>Sector Opportunity:
Increased participation in EE program and adoption of EE measures.</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Equity-targeted small and medium agricultural business customers face numerous challenges including costs, time constraints, knowledge gaps, landlord-tenant issues.</td><td>Proposed Solutions to Equity Concerns:
Direct installation of EE measures ensures that measures are installed in a timely, common method without requiring much cost or hassle for the customer.

Note that additional Equity programs are anticipated to support known equity challenges.</td></tr>
<tr><td colspan="2">Program Description:
The Small/Medium Agricultural Equity Program will offer small and medium business equity-targeted agricultural customers incentives or direct installation of HVAC, lighting, water heating, etc. measures. The Small/Medium Agricultural Equity Program focuses on implementing direct installation strategies designed to deliver energy savings to equity-targeted customers and to help them manage their energy use.</td></tr>
<tr><td>Intervention Strategy:
• Direct Installation: Small/Medium Agricultural Equity Program will utilize direct install of efficient equipment to engage agricultural customers.
• Behavioral: Small/Medium Agricultural Equity Program may also use rewards program will motivate lower energy use.</td><td>Program Metrics* (2024-2027):
• 6,900 agricultural equity-targeted participants served
• 3.1 GWh
• -4,169 Therms
• $1.0 million TSB

*All metrics are tentative until determined by third-party implementer.</td></tr>
<tr><td colspan="2">High-level description of delivery workforce including necessary scale and its risks:
The program requires direct installation contractors who can make installations at a wide variety of agricultural sites. SCE is prioritizing installation contractors from equity-targeted communities to deliver these programs. If there is an insufficient supply of these workers, SCE may need to rely on contractors from other areas.</td></tr>
</table>

Program Name: Small/Medium Agricultural Equity Program

Market Actors necessary for success:

- Small and medium agricultural business customers.
- Direct installation contractors.
- Manufacturers/distributors of energy efficient equipment (purchased by direct installation companies).

Solicitation Strategy:
Third-Party Solicited

Transition Plan:
New program that will ramp up upon approval of new contract.

Expected Program Life:
2024 - On going

Short Term Plan
Ramp up third-party program to full implementation to serve 1,800 customers*.

*Number of customers will be determined by third-party implementer.

Cost Effectiveness
Not Applicable

Long Term Outlook
Move 20% of the small/medium agricultural business market to high efficiency equipment.

Proposed Annual Budgets for 2024-2027:

2024	2025	2026	2027
$2.6M	$2.7M	$2.8M	$2.9M

*Program budget is yet to be available and will be confirmed after contract agreement with third-party implementer is signed and approved by Commission.

Anticipated directional and scale changes in budget for years 2028-2031:
Budget is expected to scale based on inflation.

Implementation Plan: Not yet available.

V. Public Sector

Program Name: SW Higher Education Program (UC, CSU. CCC)	
Program ID: SCE_SW_IP_Colleges **New/Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** Not yet available.	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Public sector	**Market Sub-Sector:** Higher Education
Sector Challenge: TBD	**Sector Opportunity:** Increased participation in EE program and adoption of EE measures
Known Equity Concerns in the Selected Markets: To be determined	**Proposed Solutions to Equity Concerns:** To be determined
Program Description: The Statewide Higher Education Program, also known as the UC/CSU/CCC Program, is a resource program that will serve the statewide Public Higher Education Institutions including the UC, CSU, and CCC customer segments. The objective for this program is to have the third-party offer innovative and cost-effective EE opportunities to these three customer segments. This program is scheduled to launch Q3 2022.	
Intervention Strategy: To be determined – Will be based on approved proposed program.	**Program Metrics:** To be determined – Will be based on approved proposed program.
High-level description of delivery workforce including necessary scale and its risks: To be determined	
Market Actors necessary for success: • UC/CSU • CCC	
Solicitation Strategy: Third-Party Solicited	**Transition Plan:** Transition the UC/CSU and CCC partnerships to the new Statewide Higher Education Program.

Program Name: SW Higher Education Program (UC, CSU, CCC)	
Expected Program Life: Q3/Q4 2022 – 12/31/2025	**Short Term Plan** Ramp up third-party program to full implementation to serve the UC/CSU and CCC customers.
Cost Effectiveness TRC: 2023 - 1.29 2024 – 1.01 2025 – 1.01 2026 – 1.01 2027 – 1.04	**Long Term Outlook** To complete cost-effective projects within the UC/CSU and CCC campuses.
Proposed Annual Budgets for 2024-2027: 2023 - $1.9 million 2024 - $1.3 million 2025 - $1.3 million 2026 - $1.3 million 2027 – $1.3 million *Program budget will be confirmed after contract agreement with third-party implementer is signed and approved by Commission.	**Anticipated directional and scale changes in budget for years 2028-2031:** Not applicable
Implementation Plan: Not yet available	

<table>
<tr><th colspan="2">Program Name: Statewide Lighting Energy Efficiency Program</th></tr>
<tr><td colspan="2">Program ID: SCE_SW_UL
New / Existing: Existing
Link to implementation plan if existing (see D.21-05-031): https://cedars.sound-data.com/documents/download/1932/main/</td></tr>
<tr><td>Portfolio Segment:
Resource Acquisition</td><td>Implementation Party:
Third-Party Implementer</td></tr>
<tr><td>Applicable Sector:
Commercial, Industrial</td><td>Market Sub-Sector:
Commercial and Industrial (C&I) customers with a monthly maximum demand of greater than (>) 20 kW.</td></tr>
<tr><td>Sector Challenge:
Commercial:
Capturing energy savings, GHG Emissions, depth of interventions, penetration of EE programs in the eligible market, cost per unit saved, program satisfaction, and investment in EE.
Industrial:
Capturing energy savings, GHG Emissions, penetration of EE programs in the eligible market, new participation, cost per unit saved, and baseline/consumption reduction.</td><td>Sector Opportunity:
Increase distributor awareness of higher efficiency equipment.
Create motivation for distributors to stock and sell more efficient equipment.
Improve customer EE decision making.
Reduce market barriers leading to an overall increase in the purchase of more efficient products.
Result in energy savings over the short, mid and long term.
Increase broader adoption of higher efficiency equipment leading to market transformation.
Contribute to the collective achievement of energy savings.
Move California closer to the target of doubling statewide EE savings in electricity and natural gas end uses by 2030 as set by SB 350.</td></tr>
</table>

<table>
<tr><th colspan="2">Program Name: Statewide Lighting Energy Efficiency Program</th></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Not applicable.

Nevertheless, Third-Party Implementer is obligated to collect critical data addressing equity. Throughout the Contract Term, within 10 Business Days after SCE's request, the Implementer shall identify the amount spent on Administrative Costs, Disadvantaged Worker Requirements, HTR Customers, DACs, and any component of the Program or any Project. Additionally, within the Monthly Report the Implementer must provide SCE strategies that have been implemented on Disadvantaged Workers, DAC, HTR Customers, and Workforce Standards.</td><td>Proposed Solutions to Equity Concerns:
Not applicable</td></tr>
<tr><td colspan="2">Program Description:
The California Statewide Lighting Program serves all eligible electric customers in the participating IOUs' service territories – SCE, San Diego Gas & Electric Company, and Pacific Gas & Electric Company. The objective of the Program is to promote the sale and installation of high efficiency lighting products through midstream (distributor) channels. The Implementation Contactor, TRC Solutions, will achieve the Program's objectives through implementation of a cost-effective midstream program for the non-Residential, C&I market throughout the IOUs' territories.</td></tr>
<tr><td>Intervention Strategy:
Midstream Incentive:
TRC partners with wholesalers and distributors to offer mark-downs/buy-downs for approved lighting measures to serve the C&I Sectors. Sales of these products are made to trade professionals who ultimately install them at the end-user's site.</td><td>Program Metrics:
• Energy Savings (kWh/kW)
• Cost Management (TRC ratio)
• Goal and Expenditure Alignment (kWh/kW and program spend)
• Customer Satisfaction (Survey Scoring)
• Inspections (Commercial end-use customers)
• Marketing Activities (Events, Retailer and Distributor Visits)
• Reporting Accuracy
• Diverse Business Enterprises Spend
• Safety Ratings</td></tr>
<tr><td colspan="2">High-level description of delivery workforce including necessary scale and its risks:
TRC Solutions partners with wholesalers and distributors to offer mark-downs/buy-downs for approved lighting measures to serve the C&I Sectors. Sales of these products are made to trade professionals who ultimately install them at the end-user's site.</td></tr>
</table>

<table>
<tr><th colspan="2">Program Name: Statewide Lighting Energy Efficiency Program</th></tr>
<tr><td colspan="2">Market Actors necessary for success:
Midstream market actors are regionally focused qualifying lighting distributors. They stock many brands and products which provide market neutrality. Utilizing the incentive Program will help differentiate themselves from other midstream competitors. Also, these market actors have self-benefiting reasons to sell high-efficiency equipment and possess the process-driven capabilities and industry knowledge needed to implement and promote the Program to their dealer/installer customers.</td></tr>
<tr><td>Solicitation Strategy:
Third-Party Solicited</td><td>Transition Plan:
SCE sunset the Midstream Point of Purchase lighting program effective June 25, 2021 in support of the third-party administered Statewide Lighting Energy Efficiency Program that rolled out July 1, 2021.</td></tr>
<tr><td>Expected Program Life:
July 2021 – June 2024</td><td>Short Term Plan
TRC Solutions recruited new Program Partners through virtual and in-person outreach during the 2nd quarter of 2021 with a focus to have new Partner Memorandums of Understanding executed by the end of June 2021. New Partners will continue to be vetted and enrolled on an ongoing basis throughout the Program term.

Short-term promotions and additional marketing efforts will be scheduled as needed to achieve Program goals and introduce any new measures that are added to the eligible products list. TRC Solutions will communicate the addition of new measures to Program Partners within 30 days of approval to add the new measure(s).</td></tr>
<tr><td>Cost Effectiveness

TRC:
2023: 1.23
2024: 0.57</td><td>Long Term Outlook
Delivered over four years:
10,122 Gross Demand Reduction (kW)
9,211 Net Demand Reduction (kW)
69,750,000 Gross Energy Savings (kWh)
63,472,500 Net Energy Savings (kWh)</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:

2023: $5.0 million
2024: $1.7 million
2025-2027: Not applicable</td><td>Anticipated directional and scale changes in budget for years 2028-2031:
Not applicable</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/documents/download/1932/main/</td></tr>
</table>

Program Name: Statewide Water/Wastewater Pumping Program	
Program ID: SCE_SW_WP **New/Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** Not yet available	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Public	**Market Sub-Sector:** Water Distribution, Clean and Wastewater Treatment
Sector Challenge: Existing single-family homes remain inefficient and costly to implement	**Sector Opportunity:** Increased participation in EE program and adoption of EE measures
Known Equity Concerns in the Selected Markets: To be determined	**Proposed Solutions to Equity Concerns:** To be determined
Program Description: SCE, on behalf of itself, Pacific Gas and Electric Company, San Diego Gas and Electric Company, and Southern California Gas Company, (collectively the "IOUs"), as the statewide lead will administer the Statewide Water/Wastewater Pumping Efficiency Program through a third-party designed and delivered program. The program targets water extraction, distribution and treatment, wastewater treatment, and oil and gas clear water pumping throughout each of the IOUs' service territories and comply with the CPUC-established EE policies within Article 3 of the Solicitation Instructions.	
Intervention Strategy: To be determined – Will be based on approved proposed program.	**Program Metrics:** To be determined – Will be based on approved proposed program.
High-level description of delivery workforce including necessary scale and its risks: SCE on behalf of all the IOUs will seek offers for EE Resource Programs that provide EE, including gas EE or EE coupled with IDSM, savings solutions for the Program customers in compliance with, and support of, the CPUC's EE decisions and other relevant documents.	
Market Actors necessary for success: • Third-party implementer and partner subcontractors.	
Solicitation Strategy: Third-Party Solicited	**Transition Plan:** The local Water/Wastewater EE program closed on June 30, 2019 and existing projects are anticipated to be completed by 2024, in preparation for Statewide third-party program entry.
Expected Program Life: 2021-2025	**Short Term Plan** To be determined– Will be based on approved proposed program.

<table>
<tr><th colspan="2">Program Name: Statewide Water/Wastewater Pumping Program</th></tr>
<tr><td>Cost Effectiveness
TRC: > 1.0</td><td>Long Term Outlook
To be determined – Will be based on approved proposed program.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:

2023 - $1.9 million
2024 - $1.7 million
2025 - $1.7 million
2026 - $1.7 million
2027 - $1.7 million

*Program budget will be confirmed after contract agreement with third-party implementer is signed and approved by Commission.</td><td>Anticipated directional and scale changes in budget for years 2028-2031:
To be determined – Will be based on approved proposed program.</td></tr>
<tr><td colspan="2">Implementation Plan: Not yet available</td></tr>
</table>

Program Name: Local Public Sector Program	
Program ID: SCE-13-TP-029 **New/Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** Not yet available	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Public	**Market Sub-Sector:** Municipal public sector

Sector Challenge:
• Wide range of technical expertise and organizational maturity, lack of tools and expertise.
• Rigid financing and procurement hurdles.
• Security and access restrictions.
• Limited resources for data collection.
• Lack of organizational commitment to SEM.
• Commitment of resources.
• Changes in site personnel, production, or facilities.
• Frustration with standard offerings.
	Sector Opportunity:
	• Increased participation in EE programs and adoption of EE measures.
	• Targeted SEM recruitment and tailored program services such as audits, virtual assessments, engineering support. Cohort workshops introduce proven, highly refined tools and process for energy management system.
	• Integration of OBF, alternative funds sourcing, and direct incentives.
	• Personnel & subcontractor prescreening and robust IT security policies.
	• Intuitive and secure online platforms.
	• Participating organizations have a full understanding of what participation entails and are committed to the process.
	• Peer interactions through cohort workshops strengthen commitment.
	• Mitigating turnover risk by ensuring:
	  ○ Two or more personnel at each customer facility attend each workshop.
	  ○ Establishing and maintaining executive sponsor contact.
	  ○ Well documented work products.
	  ○ Establishing succession plans for key roles on an energy team.
	• Skillful facilitation of workshops to maximize engagement and participation.

Program Name: Local Public Sector Program	
Known Equity Concerns in the Selected Markets: In traditional downstream program designs, direct program outreach and technical assistance in HTR markets and DACs is often costly due to the fact that many of these customers are located in smaller, rural communities spread out across SCE's vast territory. Rural and DAC areas offer unique barriers to participation.	**Proposed Solutions to Equity Concerns:** The Program will use webinars and virtual peer-to-peer learning events to reach remote locations and help them feel connected to a community. This virtual capability minimizes travel and increases the number of events we can deliver. SEM cohorts offers a pathway to reach diverse communities and organizations with high levels of service and rapid realization of low/no cost energy savings, encouraging a collective increase of enthusiasm for EE and a recognition that gains in efficiency are available to all customers. In addition, including these smaller communities within the program cohorts helps not only reduce the cost of serving each customer, but also reduces the savings delivery risk for the program by spreading the contribution of savings across a more diverse group of participants.
Program Description: The Local Public Sector Program, also known as the Public Energy Performance Program, combines traditional efficiency programs with supported energy action plan implementation and SEM. SEM is a holistic, whole facility approach that uses NMEC and dynamic baseline model to determine energy savings from all program activity at the facility, including capital projects, custom and deemed calculated retrofits, maintenance and operation, and retro-commissioning projects. The SEM Program for the public sector requires a multi-year customer commitment to participation in multiple cohort-type training workshops, individual or cohort energy analysis site and measurement and evaluation activities based on information and characteristics of the facility's specific operations.	

Program Name: Local Public Sector Program

Intervention Strategy:

Downstream – Local Public-Sector third-party program will leverage traditional interventions including Incentives, Financing, Audits and Technical assistance, etc.

Program Metrics:

- Capturing energy savings – Fist year annual and lifecycle ex-ante electric and demand savings (gross and net).
- DAC - Fist year annual and lifecycle ex-ante electric and demand savings (gross and net) in DAC.
- HTR Markets - Fist year annual and lifecycle ex-ante electric and demand savings (gross and net) in hard-to-reach markets.
- Cust per unit Saved – Levelized cost of EE per kWh and kW.
- GHG Emissions – GHGs (MT CO2eq) based on net lifecycle kWh and Therms savings, reported on an annual basis, incorporating average fuel/technology mix.
- Penetration of EE programs and benchmarking in the eligible market - Percent of Public sector accounts participating in programs.
- Energy Intensity:
  - Average energy use intensity of all public sector buildings.
  - Percent of Public sector building with current benchmark.

High-level description of delivery workforce including necessary scale and its risks:

Leadership in SEM and EE with sharp focus on California-specific requirements. The Program will build a staff of 18.6 led by a Senior Program Manager to support the deployment of this program, leveraging both our national scale and more than 80 staff already located in California. Part of this workforce have a focus on SEM but can shift into traditional EE if SEM for the public sector is not approved by the CPUC.

Market Actors necessary for success:

- Third-party program implementer and partner subcontractors.
- Financing program(s).
- Coordination with RENs to avoid duplication of efforts.
- Coordination with Statewide Program to avoid market confusion.

<table>
<tr><th colspan="2">Program Name: Local Public Sector Program</th></tr>
<tr><td>Solicitation Strategy:
Third-Party Solicited</td><td>Transition Plan:
Local Government Partnership Programs that used to serve this sector shut down to prepare for Third-Party Implementer entry. SCE will continue to manage Partnership Program legacy projects to completion concurrent to Third-Party Implementer transition.</td></tr>
<tr><td>Expected Program Life:
2022 - 2025</td><td>Short Term Plan
Request and receive approval for Public sector contract, submit Implementation Plan to CEDARS to ramp-up operation.</td></tr>
<tr><td>Cost Effectiveness
TRC:
2024:1.03
2025:1.13
2026:1.00
2027: 1.04</td><td>Long Term Outlook
Implement the Local Public sector Program and assess for future needs in sector including market gaps.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:
2024 - $6.8 million
2025 - $5.0 million
2026 - $4.8 million
2027 - $12.6 million</td><td>Anticipated directional and scale changes in budget for years 2028-2031:
SCE leverages similar program cost, savings potential for outer PYs to build of the initial savings levels of the 2024 forecast.</td></tr>
<tr><td colspan="2">Implementation Plan: Not yet available</td></tr>
</table>

Program Name: California's Analysis Tool for Locational Energy Assessment (CATALENA/Energy Atlas)	
Program ID: SCE_SW_CATALENA **New/Existing:** New as standalone program **Link to implementation plan if existing:** Not yet available	
Portfolio Segment: Market Support	**Implementation Party:** Third-Party Implementer
Applicable Sector: Public sector (but valuable across sectors)	**Market Sub-Sector:** Not applicable
Sector Challenge: Limited information of community energy usage.	**Sector Opportunity:** Increased availability of public information on community energy usage.
Known Equity Concerns in the Selected Markets: None	**Proposed Solutions to Equity Concerns:** Not applicable
Program Description: CATALENA is a website/database system that will enable users to view and download aggregated electric and gas energy use profiles of investor-owned utility (IOU) service territory customers in cross cutting sectors including residential, commercial, industrial, and agricultural. It combines electric and gas energy use data with other relevant information such as average building characteristics (sq. ft, vintage), EE program deployment, EV and charging station data, behind-the-meter solar and storage capacity, census data and display it through multiple data visualization formats including graphs, charts and potentially an interactive map. It is also expected to be designed to cross-link with other information systems to produce energy use profiles that support targeted, effective EE strategies and programs, performance over time, and reliable analysis and reporting.	
Intervention Strategy: Community Data Access	**Program Metrics:** Not applicable.
High-level description of delivery workforce including necessary scale and its risks: Information Technology personnel to develop and deliver the CATALENA Platform.	
Market Actors necessary for success: • Third-party to design and deliver CATALENA platform	
Solicitation Strategy: Third-Party Solicited	**Transition Plan:** Transition the Energy Atlas to the new CATALENA platform.
Expected Program Life: 2024-ongoing	**Short Term Plan** Start solicitation process once CPUC provides solution for interval data level needs.
Cost Effectiveness Not applicable	**Long Term Outlook** Produce energy use profiles that support targeted, effective EE strategies and programs.

Program Name: California's Analysis Tool for Locational Energy Assessment (CATALENA/Energy Atlas)	
Proposed Annual Budgets for 2024-2027: 2024 - $204,670 2025 - $210,618 2026 - $216,744 2027 – $223,054	**Anticipated directional and scale changes in budget for years 2028-2031:** Not applicable
Implementation Plan: Not yet available	

<table>
<tr><th colspan="2">Program Name: Public Equity Program</th></tr>
<tr><td colspan="2">Program ID: SCE_Public_Equity_001
New / Existing: New
Link to implementation plan if existing (see D.21-05-031): Not yet available</td></tr>
<tr><td>Portfolio Segment:
Equity</td><td>Implementation Party:
Third-Party Implementer</td></tr>
<tr><td>Applicable Sector:
Public</td><td>Market Sub-Sector:
Public equity-targeted local governments, K-12 schools, community colleges, and tribal lands</td></tr>
<tr><td>Sector Challenge:
Existing Public sector buildings remain inefficient and costly to operate. This is particularly challenging for equity-targeted customers.</td><td>Sector Opportunity:
Increased participation in EE program and adoption of EE measures.</td></tr>
<tr><td>Known Equity Concerns in the Selected Markets:
Equity-targeted Public sector customers face numerous challenges including costs, time constraints, competing priorities, and knowledge gaps.</td><td>Proposed Solutions to Equity Concerns:
Direct installation of EE measures ensures that measures are installed in a timely, common method without requiring much cost or hassle for the customer.

Note that additional Equity programs are anticipated to support known equity challenges.</td></tr>
<tr><td colspan="2">Program Description:
The Public Equity Program focuses on implementing direct installation and turn-key strategies designed to deliver energy savings to equity-targeted customers and to help them manage their energy use. The Public Equity Program offers equity-targeted Public sector customers incentives or direct installation of HVAC, lighting, water heating and plug load measures in DACs and vulnerable communities.</td></tr>
<tr><td>Intervention Strategy:
• Direct Installation: Public Equity Program will utilize direct install of efficient equipment in Municipal Buildings and facilities.
• Behavioral: Public Equity Program may also use rewards program will motivate lower energy use.</td><td>Program Metrics* (2024-2027):
• 6,120 equity-targeted public facilities and equipment or community projects served
• 2.8 GWh
• -3,681 Therms
• $0.92 million TSB

*All metrics are tentative until determined by third-party implementer.</td></tr>
</table>

Program Name: Public Equity Program

High-level description of delivery workforce including necessary scale and its risks:
The Program requires direct installation contractors who can make installations at a wide variety of Public sector sites such as city halls, parks & recreation, court buildings, schools and other public facilities. SCE is prioritizing installation contractors from equity-targeted communities to deliver these programs. If there is an insufficient supply of these workers, SCE may need to rely on additional resources to meet program objectives.

Market Actors necessary for success:

- Public Equity customers
- Direct installation contractors
- Manufacturers/distributors of energy efficient equipment (purchased by direct installation companies)

Solicitation Strategy:
Third-Party Solicited

Transition Plan:
New program that will ramp up upon approval of new contract.

Expected Program Life:
2024 - On going

Short Term Plan
Ramp up third-party program to full implementation to serve 1,600 customers*.

*Number of customers will be determined by third-party implementer.

Cost Effectiveness
Not Applicable

Long Term Outlook
Move 20% of the equity-targeted public sector market to high efficiency equipment

Proposed Annual Budgets for 2024-2027*:

2024	2025	2026	2027
$2.3M	$2.4M	$2.5M	$2.5M

*Program budget will be confirmed after contract agreement with third-party implementer is signed and approved by Commission.

Anticipated directional and scale changes in budget for years 2028-2031:
Budget is expected to scale based on inflation.

Implementation Plan: Not yet available

VI. Cross-cutting sector – Codes and Standards

Program Name: Codes and Standards - Compliance Improvement	
Program ID: SCE-13-SW-008C **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE-13-SW-008C/details/	
Portfolio Segment: Codes and Standards	**Implementation Party:** SCE Local Program
Applicable Sector: Cross-Cutting	**Market Sub-Sector:** Residential, Commercial, Industrial, and Public
Sector Challenge: California has over 500 jurisdictions enforcing the energy code. This necessitates code compliance to be deployed as consistently as possible throughout the state to avoid market confusion, especially for those market actors who are active in multiple jurisdictions.	**Sector Opportunity:** Identify needs of the various market actors in the compliance supply chain and work with each actor group to identify, guide development of, and test potential compliance improvement solutions, tools, resources, and training class materials, including for all-electric options that the code allows.
Known Equity Concerns in the Selected Markets: Existing educational offerings and resources may not reach traditionally underserved market actors within the compliance supply chain, such as low-income customers who would benefit from improved EE (and cost saving) outcomes of code-compliant buildings.	**Proposed Solutions to Equity Concerns:** Partner with industry organizations, local governments, and nonprofits whose membership and mission includes underserved market actors, for targeted delivery of consistent code compliance education and resources within their communities.
Program Description: The Compliance Improvement Subprogram assists with improving compliance for both the Building EE and CALGreen Standards (Title 24, Part 6 and Part 11)[7], and California's Appliance Standards (Title 20).[8] Compliance improvement activities complement advocacy work by enabling potential savings from C&S to be realized and persist over time. The Compliance Improvement subprogram targets market actors throughout the entire compliance supply chain by providing needs-based tools, training, resources and outreach.	

7 See https://www.dgs.ca.gov/BSC/CALGreen#codes

8 See https://www.energy.ca.gov/rules-and-regulations/appliance-efficiency-regulations-title-20

Program Name: Codes and Standards - Compliance Improvement	
Intervention Strategy: 1. Coordinate compliance improvement strategies and deployment with the other California utilities. 2. Lead and develop a plan to improve and disseminate resources supporting compliance with building and appliance efficiency standards. 3. Design and offer classes to support various market actors in the compliance supply chain in consideration of their unique roles and responsibilities in compliance. Support development of successful standards by helping Codes and Standards Enhancement authors address code implementation issues during the code development process.	**Program Metrics:** 1. Milestones achieved in the plan to develop tools and materials, including all-electric buildings. 2. Number (#) of C&S related classes offered, including all-electric buildings; number of training participants per year, average knowledge swing achieved per year. 3. Percent (%) of submitted advocacy documents that include plan to address implementation barriers.
High-level description of delivery workforce including necessary scale and its risks: Not applicable	
Market Actors necessary for success: • Code-setting entities: CEC, HCD, BSC. • Other state agencies: Other state agencies, such as the California Air Resources Board, the Division of the State Architect, and the Department of General Services support compliance improvement efforts for state funded buildings not subject to local building department permitting processes. • Investor Owner Utilities: PG&E and SDG&E, WE&T, and DR. • Utilities: Public Owned Utilities and water districts. • Code enforcement community. • Design, construction, energy consultant community members. • Manufacturing community representatives. • State and local governments. • Regional Energy Networks. • Research community members. • California's higher education institutions. • Energy and sustainability non-profit organizations.	
Solicitation Strategy: Not applicable	**Transition Plan:** Not applicable
Expected Program Life: 2024 - On going	**Short Term Plan** Update 2022 Title 24 and Title 20 tools, resources, and class training materials, including all-electric options.

Program Name: Codes and Standards - Compliance Improvement	
Cost Effectiveness TRC: Not applicable (Compliance Improvement saves energy. but the savings are not tracked separately, rather they are imbedded in the advocacy energy savings).	**Long Term Outlook** Continually update tools, resources, and class training materials for Title 24, Title 20, and reach out to various market actors for improving code compliance.
Proposed Annual Budgets for 2024-2027: 2024 - $3.0 million 2025 - $3.0 million 2026 - $3.1 million 2027 - $3.1 million	**Anticipated directional and scale changes in budget for years 2028-2031:** Moderately increasing (i.e. less than 15%)
Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-008C/details/	

Program Name: Codes & Standards - Reach Codes	
Program ID: SCE-13-SW-008D **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE-13-SW-008D/details/	
Portfolio Segment: Codes and Standards	**Implementation Party:** SCE Local Program
Applicable Sector: Cross-Cutting	**Market Sub-Sector:** Residential, Commercial, Industrial, and Public
Sector Challenge: Most jurisdictions have adopted climate action plans to reduce their overall carbon emissions. One significant policy tool for achieving carbon reductions is through more stringent and/or electrification building energy codes. State law enables jurisdictions to enact local ordinances that exceed statewide building energy standards (Title 24, Part 6); however, doing so requires municipalities to demonstrate cost-effectiveness. Many jurisdictions seeking to advance reach code measures lack the financial resources or technical capability to execute their plans.	**Sector Opportunity:** Coordinate with other utilities statewide and state agencies to author cost-effectiveness studies for common reach code measures by climate zone, which can be leveraged by jurisdictions to simplify their adoption pathway. Support jurisdictions with model ordinance language, compliance checklists, training materials, and other technical assistance.
Known Equity Concerns in the Selected Markets: GHG emissions, criteria pollutants, and indoor pollutants, and their effects are demonstrated to disproportionately impact low-income communities. Costs of reach code requirements may impose a disproportionate financial burden on residents in these communities.	**Proposed Solutions to Equity Concerns:** Support efforts to include outreach to jurisdictions in disadvantaged communities. Support use of the California Utility Allowance Calculator for deed-restricted affordable housing that would allow builders to recover the additional cost for above-code construction while not adding monthly cashflow burdens to tenants.
Program Description: The C&S Reach Codes Subprogram continually supports local government reach code activities by developing cost-effectiveness studies, and by tracking their various activities for addressing climate action plans and adopting reach codes.	

Program Name: Codes & Standards - Reach Codes

Intervention Strategy:

1. Conduct research and analyses to establish performance levels and cost-effectiveness relative to the base Title 24, Part 6 (Energy) and Part 11 (CAlGreen) requirements by climate zone.
2. Draft model ordinance language to encourage consistency and to minimize duplication.
3. Aid jurisdictions with technical support to complete submittal required for the CEC's approval process.
4. Develop and continuously update a web-based database of various local government activities to track progress and support needs.

Program Metrics:

1. Number (#) of cost-effectiveness studies completed and made available.
2. Number (#) of jurisdictions requesting support for draft ordinance language.
3. Percent (%) of jurisdictions who have initiated the CEC application process who successfully complete their submissions.
4. Percent (%) of jurisdictions as a share of total cities and counties with activity toward reach code adoption noted on the tracker.
5. Number (#) of jurisdictions pursuing all-electric, electric-ready, or partial electric reach codes

High-level description of delivery workforce including necessary scale and its risks:

Not applicable

Market Actors necessary for success:

- State and local governments.
- Energy and sustainability non-profit organizations.
- Code, standard, and certification-setting entities: CEC, HCD, BSC, ASHRAE, International Living Future Institute, Passive House institute United States , and USGBC.
    - ASHRAE and other partners, publish the Advance Energy Design Guidelines as well as other documents which support reach codes.
- Other state agencies: Department of General Services, Division of the State Architect, Office of Statewide Health Planning and Development, are other state agencies that support compliance improvement efforts for state-funded buildings not subject to local building department permitting processes.
- Investor Owner Utilities: IOUs, Statewide C&S Team, other EE Programs, WE&T, and DR .
- Utilities: POUs and water districts.
- Code enforcement community.
- Design, construction, energy consultant community members.
- Manufacturing community representatives.
- State and local governments.
- RENs, including but not limited to I-REN, 3CREN, and SoCalREN.
- Research community members.
- Internal and external organizations.

Program Name: Codes & Standards - Reach Codes	
Solicitation Strategy: Not applicable	**Transition Plan:** Not applicable
Expected Program Life: 2024 - Ongoing	**Short Term Plan** Support local jurisdictions with identified tools and resources.
Cost Effectiveness TRC: Not applicable (Reach Codes save energy but the savings are not tracked by impact evaluation studies).	**Long Term Outlook** Update cost-effectiveness studies for 2025 Title 24 standards. Coordinate which existing adopted measures require new data to support continued adoption, and what technical assistance is needed for new target measures cities may be considering for reach codes beyond the 2025 standards.
Proposed Annual Budgets for 2024-2027: 2024 - $1.3 million 2025 - $1.3 million 2026 - $1.3 million 2027 - $1.3 million	**Anticipated directional and scale changes in budget for years 2028-2031:** Moderately increasing (i.e. less than 15%)
Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-008D/details/	

Program Name: Codes and Standards – Planning and Coordination Subprogram	
Program ID: SCE-13-SW-008E **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE-13-SW-008E/details/	
Portfolio Segment: Codes and Standards	**Implementation Party:** SCE Local Program
Applicable Sector: Cross Cutting	**Market Sub-Sector:** Residential and Commercial
Sector Challenge: The energy efficient building decarbonization vision is much broader than the traditional C&S activities focused on code adoption, reach code adoption, and compliance improvement.	**Sector Opportunity:** The P&C subprogram will continue to engage a broad range of stakeholders to ensure that California's energy efficient building decarbonization goals are adequately supported.
Known Equity Concerns in the Selected Markets: Environmental impacts continue to disproportionally impact DACs.	**Proposed Solutions to Equity Concerns:** The P&C subprogram coordinates with affordable housing organizations standards and developers to reduce burdens on DACs, by commissioning studies and stakeholder summits to make progress on equity issues.
Program Description: This P&C subprogram will consist of five elements: 1) Decarbonization; 2) Strategic Planning and Coordination; 3) Grid Harmonization; 4) Code Harmonization; and 5) Program Coordination. SCE's P&C subprogram will continue to lead the way to meet California's challenging but urgent decarbonization goals by integrating and coordinating various programs and activities—including, but not limited to the ET Program, EM&T) Program, WE&T, Education and Outreach, EM&V, various incentive programs including the CEC's BUILD and TECH Initiatives, SGIP, DR programs, EE Programs, ESA Programs, BE pilots, demand flexibility, and grid integration — as envisioned by the CPUC (Decision 12-05-015[9]). The focus of P&C has expanded to include market adoption research, development, and support requiring collaboration with BE, TE, DERs, and T&D planning activities.	

[9] *See*, Decision 12-05-015. Page250 states " The subprogram plan should include an outline of the functions of each codes and standards subprogram and their roles relative to each other and other utility programs, including but not limited to, the Emerging Technology Program, incentive programs targeting retrofits and major renovations, Residential New Construction, Savings By Design, Workforce, Education, and Training, Marketing, Education and Outreach, Zero Net Energy pilots, and the residential Zero Net Energy Roadmap initiative directed in this decision."

Program Name: Codes and Standards – Planning and Coordination Subprogram

Program Description:

Going forward, P&C will continue its support of decarbonization and energy efficient BE and will expand these efforts to include greater coordination with other state agencies such as the CARB, BSC, and Department of Health Services on topics such as: embodied carbon, low-global warming climate refrigerant use; DER control strategies to maximize renewable energy use and allow greater grid harmonization, existing buildings, and gather data from EV charging infrastructure, induction cooktops, etc.

The P&C subprogram leads and funds CalBEM, an industry collective and an annual statewide event focused on three core goals: simplify and streamline modeling processes, educate modeling users, and improve capabilities and accuracy of modeling software.

Intervention Strategy:

- Support the building industry on meeting new construction Title 24 Part 6 and 11[10] requirements.
- Research, data collection, and market analysis, including lab testing, field surveys, tear down analyses, collection of cost data from the web, etc.
- Through CalBEM, support reform to energy modeling practices in California and improve and update the California Building Energy Code Compliance compliance software.
- Coordinate with other programs to maximize GHG reduction.
- Coordinate with internal and external organizations to support the grid harmonization objectives in Title 24, Part 6.
- Coordination with statewide and local EE resource and non-resource acquisition programs, Regional Energy Networks (RENs), and the selected Market Transformation Administrator.

Program Metrics:

1. Number of technologies (#) with readiness levels that are tracked in accordance with CEC priorities. Readiness levels will be presented to CEC and CPUC to show how the market is currently transforming on an annual basis.
2. Number of initiatives to support advancing readiness levels. Minimum of three active initiatives per year.
3. Completed annual Market Readiness status reports.
4. Number of Events to support the five focus elements. Includes participating in CARB and South Coast Air Quality Management District (SCAQMD) meetings and workshops.

High-level description of delivery workforce including necessary scale and its risks:

The Planning and Coordination team works with DSM incentive and EM&V staff, along with other cross-cutting programs (including the ET, TE, SGIP, DR, IQP, TECH, and the BUILD programs), and IOU T&D staff to establish long-term goals for certain building types, systems, and equipment. Combining the policy goals with the program's vision, the teams develop integrated plans with clearly identified activities to support statewide policy goals.

[10] *See*, Part 6, Title 24 (link) **The Building Energy Efficiency Standards For Residential and Nonresidential Buildings** for new construction and existing buildings. Part 11, Title 24, California Code of Regulations California Green Building Standards Code known as CALGreen is the first mandatory green buildings standards code in the country.

<table>
<tr><th colspan="2">Program Name: Codes and Standards – Planning and Coordination Subprogram</th></tr>
<tr><td colspan="2">Market Actors necessary for success:
Programs within the EE portfolio.
Other internal and external code-impacted programs outside of the EE portfolio: T&D, SGIP, TE, DR, ESA, CCA entities, CEC, CARB, SCAQMD, ET, EM&T, EM&V, etc.
Agencies and code-setting entities: CPUC, CEC, CARB, U.S. Department of Energy (DOE), The American Society of Heating, Refrigerating and Air-Conditioning Engineers, International Code Council, National Fire Protection Association, California BSC.
Municipal utilities and organizations: SMUD, LADWP, SCPPA, NCPA.
External progressive utilities and other entities: NEEA, NRDC, Earthjustice, Sierra Club, USGBC, US Environmental Protection Agency, DOE, National Grid, APS, West Coast Collaborative, Association for Energy Affordability, water agencies, etc.
New construction industry leaders.</td></tr>
<tr><td>Solicitation Strategy:
Not applicable</td><td>Transition Plan:
Not applicable</td></tr>
<tr><td>Expected Program Life:
2024 - On going</td><td>Short Term Plan
Lead strategic planning activities and enhance coordination across the EE portfolio, decarbonization efforts, and other programs by developing tools to communicate existing standards and future work.</td></tr>
<tr><td>Cost Effectiveness
Not applicable as a non-resource program.</td><td>Long Term Outlook
Facilitate communications with regulatory agencies and critical stakeholders to structure and phase in DERs to advance codes and standards.
Expand the support of decarbonized buildings, appliances, transportation, and DERs.
Facilitate communications with internal T&D organizations, including grid operations, grid planning, distribution and transmission planning, load forecasting, and line extension policies.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:
2024 - $7.8 million
2025 - $7.8 million
2026 - $7.8 million
2027 - $7.8 million</td><td>Anticipated directional and scale changes in budget for years 2028-2031: Less than 1% annual increases.</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-008E/details/</td></tr>
</table>

VII. Cross-cutting Sector – Workforce, Education, and Training

Program Name: WE&T Integrated Energy Education and Training	
Program ID: SCE-13-SW-010A **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031)** https://cedars.sound-data.com/programs/SCE-13-SW-010A/details/	
Portfolio Segment: Market Support	**Implementation Party:** SCE
Applicable Sector: Residential	**Market Sub-Sector:** Non-Resource
Sector Challenge: Meeting the workforce needs to reach California's Clean Energy goals. Specific challenges include: • Workforce Knowledge Gap. • Market Adoption. • Evolving Customer Needs.	**Sector Opportunity:** To provide educational resources and training necessary to: • Bridge workforce knowledge gaps. • Promote market adoption of EE technologies. • Enhance consumer education.
Known Equity Concerns in the Selected Markets: Equity barriers include: • Hard to reach communities. • Language barriers. • Lack of knowledge of EE programs. • Lack of access (technology, broadband access, distance, finance).	**Proposed Solutions to Equity Concerns:** Possible solutions include: • Partnering with CBOs. • Online offerings/ options. • Additional SCE Energy Education Center Hubs in outlying areas. • MEU accessible to communities.
Program Description: The WE&T IEET subprogram is generally organized around market sectors and cross-cutting segments to facilitate WE&T appropriate to achieve the energy savings, demand reductions, and related energy initiatives required of the IOUs . The sub-program consists of two main categories, Core Energy Education and Technical Upskills. Core Energy Education provides opportunities for SCE to collaborate with other educational providers to address the needs of people seeking a post-secondary education with an energy job/career focus. Technical Upskills provides upskilling for incumbent workers in EE related jobs/careers. The Energy Education and Food Technology Centers represent the largest component of this subprogram group, have many years of experience in creating and disseminating high-quality programs, and provide the following WE&T curriculum and related deliverables: training courses, seminars, workshops, clean energy technology demonstrations, equipment efficiency testing, interactive training exhibits, and lectures to promote industry trends and developments for advancing EE as a professional discipline. The Energy Education Center's intent is to develop and deliver curriculum aimed at providing attendees with the foundational knowledge and skills necessary to successfully participate in the clean energy movement.	

<table>
<tr><th colspan="2">Program Name: WE&T Integrated Energy Education and Training</th></tr>
<tr><td>Intervention Strategy:
Downstream: In person, on location, online, outreach activities.
Behavioral: Through Energy Education Center programs and activities, adoption and efficient use of specific technologies to support decarbonization efforts and mindful energy use.</td><td>Program Metrics:
Attendance goal.
Reach of DAC participation goal.
Number of partnerships with community-based organizations, educational institutions, and other external training organizations.</td></tr>
<tr><td colspan="2">High-level description of delivery workforce including necessary scale and its risks:
The current delivery workforce for the WE&T IEET subprogram includes the existing WE&T IEET team and associated third-party contractors, industry organizations and experts. A potential risk would be finding subject matter experts to support subprogram expansion.</td></tr>
<tr><td colspan="2">Market Actors necessary for success:
Electricians, HVAC technicians, plumbers, architects, designs, builders, maintenance personnel, consumers, energy educational partners, and CBOs.</td></tr>
<tr><td>Solicitation Strategy:
Online trainings, collaborations, on demand, hands on workshops, tours, demonstrations, consultations, tool loans, unique events, and outreach activities.</td><td>Transition Plan:
Not applicable</td></tr>
<tr><td>Expected Program Life:
2024 - On going</td><td>Short Term Plan
Ramp up curriculum development and training (online) with a focus in areas of BE and Fuel Switching for 2022-2023.</td></tr>
<tr><td>Cost Effectiveness
TRC: Not applicable</td><td>Long Term Outlook
Develop “Hubs” for training and displays. Continue to increase training and outreach annually to market program opportunities with an emphasis on BE and other subjects to support Pathway 2045.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:

2023 - $8.8 million
2024 - $8.7 million
2025 - $9.0 million
2026 - $9.3 million
2027 - $9.5 million</td><td>Anticipated directional and scale changes in budget for years 2028-2031:

3% increase year over year.</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-010A/details/</td></tr>
</table>

VIII. Cross-cutting Sector – Emerging Technologies

Program Name: Statewide Electric Emerging Technologies Program	
Program ID: SCE_SW_ETP_Elec **New/Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE_SW_ETP_Elec/details/	
Portfolio Segment: Non-Resource, Market Support	**Implementation Party:** Third-Party Implementer
Applicable Sector: Cross-Cutting	**Market Sub-Sector:** Cross-Cutting
Sector Challenge: PAs and program implementers are reluctant to offer emerging technologies measures when their impact on overall portfolio cost-effectiveness is uncertain. It is also necessary to continuously identify and assess those potential measures that possess the following characteristics: • Cost-effective. • Higher potential for energy savings on a measure and/or aggregate level. • Provide deeper energy savings opportunities for customers. • Measures suitable for low income and hard to reach communities. • Measures that help meet California's legislative goals.	**Sector Opportunity:** The SWEETP supports the EE program portfolio in their need to offer new EE measures to customers by: • Providing a comprehensive set of suitable technology options for new EE measures. • Providing actionable market and market barrier information to inform program delivery. • Conducting outreach to disseminate new technology assessment and demonstration findings and information.
Known Equity Concerns in the Selected Markets: The highest efficiency products including emerging technologies are typically the highest cost products.	**Proposed Solutions to Equity Concerns:** Support migration of new technologies into portfolio where economies of scale, aided by incentives, can lower cost over time.

Program Name: Statewide Electric Emerging Technologies Program

Program Description:

The SWEETP supports the advancement of knowledge technology performance, market knowledge and characteristics, and effective program interventions. SWEETP's vision is to identify and bring commercially-available technologies promptly to the EE program portfolio by determining the latest emerging technology trends. It is important for SWEETP to be at the forefront of these trends because it allows SWEETP to identify, prioritize, and vet these technologies, products, and solutions through a variety of program tactics to:

- Assess and confirm their potential energy savings and operational performance
- Help estimate measure cost-effectiveness
- Identify potential barriers to market adoption, and recommend promising technologies, solutions, and market interventions

The SWEETP supports the CA IOU EE portfolios in identifying and evaluating promising innovations and delivery mechanisms to help drive energy and demand savings across the portfolio. This program is composed of the following components:

Scanning and Screening: SWEETP conducts broad stakeholder outreach with structured guidance to encourage a wide range of high-quality idea submissions that are aligned with portfolio needs. SWEETP reviews Project ideas on a frequent basis to support the portfolio.

Planning and Prioritization: SWEETP develops new and revised TPMs and Revised TPMs to inform program direction. SWEETP also develops the Prioritization Framework and publish quarterly technology area reports that summarize the program's results for each TPM technology area.

Technology Development Research and Technology Support Research Projects: SWEETP executes Technology Development Research and Technology Support Research Projects to assess emerging technologies for technology transfer to the portfolio and increase market adoption.

Focused Pilots: Focused Pilots focus on overcoming supply chain and market barriers for high-impact, new technologies.

Workpaper Development: SWEETP develops workpapers for a subset of Technology Research Projects, subject to CPUC review and approval, to support the launch of new measures to facilitate successful adoption of technologies into the portfolio.

Dissemination: SWEETP disseminates program-level process information and results through webinars, emails, events, the program website, and other marketing media as needed to promote public visibility and engage stakeholders.

Technology Transfer: SWEETP facilitates technology transfer to the portfolio through Final Reports, new measures, technology transfer meetings with key stakeholders, and dissemination of program information to the broader emerging technology audience.

Intervention Strategy:

SWEETP does not intervene directly in the market. SWEETP assesses technical performance, market barriers, and program intervention effectiveness of suitable technologies and market approaches.

Program Metrics:

- Program includes tracking metrics for various types of project activities and their support of measure introduction. Metrics were also adopted by CPUC as part of the last Business Plan.
- 2022-2025 Program metrics are described in detail in the Business Plan, third EE Power Purchase and Sales Agreement and later in the Implementation plan.
- Tracking of advancement of knowledge about technical performance, market barriers and program interventions.

Program Name: Statewide Electric Emerging Technologies Program

High-level description of delivery workforce including necessary scale and its risks:

SCE Program Administration: SCE is staffing the program to administer the third-party agreement as well to provide oversight related to contractual obligations and other program administration duties per CPUC D.18-05-041 Ordering Paragraph 18. Because of the nature of the program, program oversight will include but is not limited to ensuring contract adherence, review of project level deliverables, payment authorization and processing, program metrics and other project and program related oversight activities. SCE anticipates to address scaling with current staff supplemented with internal matrix organization staff as well with external professional services providers, as needed.

Third-Party Implementer: The implementer designed and is responsible for all implementation activities including scanning and screening, planning and prioritization, project implementation, dissemination, technology transfer and other program related goals and metrics. The implementer is responsible for the necessary acquisition and oversight of subcontractors necessary to meet the program goals, objectives and any scaling or special staffing needs related to projects with unique requirements.

Market Actors necessary for success:

Technology developers, National Labs, other research organizations, regional and national collaboratives, manufacturers, receptive program designers and implementers, and community-based organizations.

Solicitation Strategy: (for 2024-2027) Third-Party Solicited; awarded in Q3 2021 and approved by CPUC in November 2021.	**Transition Plan: (for 2024-2027)** • Re-bid Third-Party Solicited program and ramp-down 2022-2025 program (project would ramp-down through 2027). • Or re-up existing implementer and re-negotiate agreement.
Expected Program Life: 2024 – 2027 (current agreement is for 2022-2025 with project specific ramp-down until 2027).	**Short Term Plan** • Implementer developed Implementation Plan (January 2022). • Issues to resolve: Continue supporting portfolio needs and provide support for TSB metric; and resolve any new guidance by CPUC during the 2024-2027 implementation years.
Cost Effectiveness Not Applicable for Non-Resource Programs	**Long Term Outlook** Continue supporting portfolio needs and provide increasing support for TSB metric.

Program Name: Statewide Electric Emerging Technologies Program	
Proposed Annual Budgets for 2024-2027: $71,510,946 total or $16,888,462 average annual Statewide Budget for years 2022-2025 (Funded amongst the three funding IOUs, SCE's budget is approximately 40% of total statewide budget) Note: Program could be expanded to address emerging needs elsewhere in areas lacking emerging technology support currently such as electrification or decarbonization; both in buildings and other sectors.	**Anticipated directional and scale changes in budget for years 2028-2031:** In order to support TSB metric, program may have to expand or remain proportional relative to the portfolio.
Implementation Plan: https://cedars.sound-data.com/programs/SCE_SW_ETP_Elec/details/	

Program Name: Strategic Energy Management	
Program ID: SCE-13-SW-003D/SCE_Com_001 **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE-13-SW-003D/details/	
Portfolio Segment: Resource Acquisition	**Implementation Party:** Third-Party Implementer
Applicable Sector: Industrial	**Market Sub-Sector:** Industrial (Annual usage above 7 MM kWh)
Sector Challenge: The industrial sector in California faces ongoing economic pressure from high labor costs, high land costs, and ongoing regulations. In addition, the sector is working through the decarbonization of California's energy system – leading to uncertainty in energy prices and reliability.	**Sector Opportunity:** Industrial plants welcome the opportunity to cut energy costs and learn more about managing their energy resources wisely. At the same time, precious investment dollars are often being spent on keeping up with market demand, increasing productivity, improving product quality, ensuring worker health and safety, and meeting regulations. As a result, there is an opportunity to provide services and incentives that focus on BRO changes at industrial plants.
Known Equity Concerns in the Selected Markets: Industrial facilities in California are typically sited in existing DACs. These communities often perceive that sophisticated EE programs are targeted at commercial facilities or residential buildings in more advantaged locations.	**Proposed Solutions to Equity Concerns:** Promoting EE in industrial facilities improves the economic standing of these facilities, ensuring ongoing employment in their local communities. Industrial facilities are found in urban, suburban, and rural DACs. Focusing on BRO activities engages the wider workforce at plants, which improves overall skillset while also promoting energy saving at home.
Program Description: CPUC D.16-08-019 directed the IOUs to implement strategic-energy-management programs. The decision defines SEM as a holistic, whole-facility approach that uses NMEC and a dynamic baseline model to determine savings from all program activities at the facility, including BRO and custom projects. The Decision calls for IOUs to administer their programs based on a consistent, statewide program design.	

Program Name: Strategic Energy Management

Intervention Strategy:

Industrial SEM is a downstream program that does not require direct participation of manufacturers, retailers or distributors. Participants work with their chosen vendors or implement energy projects using in-house staff.

Program Metrics:

- Ex Ante TRC Ratio
- Energy Savings (56.7 GWh 2024-2027)
- Demand Savings (7.5 MW 2024-2027)
- Customer Satisfaction Rating (4.8 average rating from customers after workshops)
- Program Data/ Engineering Quality

High-level description of delivery workforce including necessary scale and its risks:

A combination of trade professionals (using an Open Trade Pro network), partners (professional services organizations including marketing and engineering) and CBOs. Trade professionals will be scaled with program goals, increasing through 2021 and 2022 as the program develops greater capacity for training and onboarding.

Market Actors necessary for success:

Mixed industrial Customers:

- Aerospace
- Beverages
- Cardboard Packaging
- Construction Materials
- Food processing
- Industrial Gases
- Metal Smelting
- Plastic Formulation
- Plastic Packaging
- Water Bottling

Solicitation Strategy:

Third-Party SW

Transition Plan:

Not applicable

Expected Program Life:

2017 - On going

Short Term Plan

Continue to identify industrial customers for and expand SEM program.

Cost Effectiveness

	TRC	
	Industrial SEM	**Commercial SEM**
2024	1.01	1.40
2025	1.08	1.81
2026	1.13	1.88
2027	1.18	1.89

Long Term Outlook

Long term outlook for SEM focuses on:

- GWh delivered over 2 years
- Expand SEM to Commercial sector customers, as discussed in SCE's Business Plan. SCE received direction on its proposal to expand SEM to other adjacent markets (Commercial, Public, Agricultural) to file a tier two Advice Letter in order to expand SEM to these sectors.

Program Name: Strategic Energy Management

Proposed Annual Budgets for 2024-2027:

	Budget	
	Industrial SEM	**Commercial SEM**
2024	$3.3 million	$1.1 million
2025	$3.4 million	$1.9 million
2026	$3.5 million	$2.4 million
2027	$2.4 million	$2.9 million

Anticipated directional and scale changes in budget for years 2028-2031:

SEM program budget for 2028-2031 is similar to 2024-2027 and SCE expects to expand/add more SEM cohorts in different sectors.

Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-003D/details/

IX. Cross-cutting Sector – Finance

Program Name: On Bill Financing	
Program ID: SCE-13-SW-007A **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE-13-SW-007A/details/	
Portfolio Segment: Market Support	**Implementation Party:** SCE
Applicable Sector: Non-Residential	**Market Sub-Sector:** Cross-Cutting
Sector Challenge: Upfront costs make EE projects difficult to adopt for some customers, including small businesses and public sector customers.	**Sector Opportunity:** Increased participation in EE programs and adoption of EE measures by reducing the challenge of upfront costs related to the purchase and installation of EE measures by offering financing with zero percent interest and convenient repayment through the customer's utility bill.
Known Equity Concerns in the Selected Markets: Small Business Customers may face financial challenges such as limited credit history or low credit scores that may prevent this type of customer from having access to competitive financing solutions. Although the OBF program offers zero percent financing, the program is limited to the EE measures available for rebates or incentives offered by utility customers. This reduces program eligibility and leaves a gap in the EE measures available for financing.	**Proposed Solutions to Equity Concerns:** A solution for equity customers would be to offer OBF without the limitations of bill neutrality, and to expand program eligibility to EE measures that do not qualify for incentives or rebates for small business customers that meet pre-determined criteria.
Program Description: The OBF Program offers interest-free, unsecured EE loans to qualified non-residential customers with qualified projects. OBF loans are bill-neutral, and loans are repaid through the customer's utility bill. Requires customer to participate in a rebate/incentive program. Loan terms vary depending on customer segment.	
Intervention Strategy: Downstream – Customers and Trade Professionals can submit applications for the financing of eligible EE projects. Zero percent interest loans facilitate the installation of EE measures by reducing the burden of upfront costs.	**Program Metrics:** OBF is a Non-Resource program and does not have associated metrics. Energy savings are claimed by the incentive program used to qualify for OBF.

<table>
<tr><th colspan="2">Program Name: On Bill Financing</th></tr>
<tr><td colspan="2">High-level description of delivery workforce including necessary scale and its risks:
Trade professionals are the main drivers for OBF. There are high quantities of these workers in place. A reduction of eligible incentive/rebate measures, or closure or suspension of existing eligible programs could pose a risk to program effectiveness.</td></tr>
<tr><td colspan="2">Market Actors necessary for success:
• Trade Professionals</td></tr>
<tr><td>Solicitation Strategy:
Not applicable; SCE local program</td><td>Transition Plan:
Not applicable</td></tr>
<tr><td>Expected Program Life:
2025 - On going</td><td>Short Term Plan
Offer OBF financing for the financing of Third-Party and Statewide implemented projects.</td></tr>
<tr><td>Cost Effectiveness
Not applicable; Not subject to TRC requirements</td><td>Long Term Outlook
The program is in place until 2025 or until a program closing is determined through a Commission’s Decision. The Clean Energy Financing Proceeding (R.20-08-022) seeks to expand existing financing programs, such as OBF to clean technologies beyond EE to offer financing for DR, solar generation, battery storage and transportation electrification measures</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:

The operational budget for OBF is:
2024: $0.4 million
2025: $0.4 million
2026: $0.5 million
2027: $0.5 million

The loan pool budget for OBF is:
2024: $10,000,000
2025: $10,000,000
2026: $10,000,000
2027: $10,000,000</td><td>Anticipated directional and scale changes in budget for years 2028-2031:
N/A;
Program budget is anticipated to become available to customers participating in the new local third-party programs and new Third-Party Statewide EE programs in 2022. The OBF program is expected to remain consistent for the financing of EE projects until 2027</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-007A/details/</td></tr>
</table>

Program Name: New Finance Offerings	
Program ID: SCE-13-SW-007C **New / Existing:** Existing **Link to implementation plan if existing (see D.21-05-031):** https://cedars.sound-data.com/programs/SCE-13-SW-007C/details/	
Portfolio Segment: Market Support	**Implementation Party:** CAEATFA
Applicable Sector: Cross-Cutting	**Market Sub-Sector:** • Single Family Residential • Non-Residential Small Business • Affordable Multifamily
Sector Challenge: Upfront costs make EE projects difficult to adopt for some customers, including low and moderate-income customers. The EE program faces a few challenges such as lack of customer awareness and contractor participation. Lack of contractor participation results from the challenge of selling EE projects that have a cost to the customer, even if the cost is reduced, especially when compared to interest free financing options such as OBF.	**Sector Opportunity:** Increased adoption of EE measures by reducing the challenge of upfront costs related to the purchase and installation of EE measures by offering financing solutions at competitive terms Ease of application, fast turnaround times, and being able to finance EE measures outside of SCE's portfolio are some of the main opportunities offered by the NFOs. The GoGreen Small Business and GoGreen Affordable Multifamily programs offer convenient loan repayment through the customer's utility bill.
Known Equity Concerns in the Selected Markets: It is especially difficult for low-income residential customers to finance EE measures since their financial resources are mostly used to cover basic needs such as food and housing. The challenge for small businesses is similar and it is hard for third-party financing to compete with interest-free financing options, such as OBF. For multifamily customers, the split incentive issue between property owners paying for improvement and tenants receiving the energy savings benefit has been an ongoing deterrent to customer participation in the Affordable Multifamily program.	**Proposed Solutions to Equity Concerns:** Although the NFOs provide financing terms than are better than market rate options, it is reasonable to focus on Direct Install solutions to support the low-income residential customers, rather than promoting financing in order to avoid adding financing burden to already disadvantaged households. CAEATFA and SCE plan to increase program awareness across small business customers, especially in disadvantaged communities. For multifamily customers, CAEATFA will start offering interest buy down and a way to incentivize participation in the GoGreem Affordable Multifamily program.

Program Name: New Finance Offerings

Program Description:

The NFO Program is administered by CHEEF and led by CAEATFA with the support of the large California IOUs . Program financing is provided from third-party capital with a ratepayer funded Loan Loss Reserve to reduce lender risk and allow them to offer better financing terms to customers. The NFO includes three different sub-programs:

- Residential Energy Efficiency Loan Program (REEL)
- Small Business Finance Program (SBF)
- Affordable Multifamily Program (AMF)

REEL was approved as a full program in 2020, while SBF and AMF remain pilots. All programs require that at least 70% of loan proceeds are used for EE upgrades, 30% can be applied to non-EE equipment. SMF and AMF will allow an OBR option for customers to repay loans through on their utility bill.

Intervention Strategy:

Downstream: Customers submit applications for the financing of eligible EE projects. Ratepayer funded loan loss reserve reduces lender risks and allows for lower interest rates and better loan terms.

Program Metrics:

Non-Resource: NFO is a Non-Resource program and does not have associated energy savings metrics at this time. However, CAEATFA plans to collect and report energy savings information in the future. Additionally, CAEATFA issues quarterly reports on loan volume, finance amounts, and types of measures financed by IOU.

High-level description of delivery workforce including necessary scale and its risks:

- Contractors: There are high quantities of contractors in place but they must register in order to participate in the Program.
- Third-Party Financial Institutions: Financial Institutions must apply to become approve lenders.
- IOUs: Provide program support and funding for Loan Loss Reserve.

A reduction of eligible measures could pose a risk to program effectiveness. Split incentives between tenants and landlords are a challenge for the success of multifamily projects.

Market Actors necessary for success:

- **CAEATFA**

The NFOs are administered by the CHEEF and led by CAEATFA with the support of the large California IOUs.

- **Financial Institutions**

This is a third-party funded program, all NFO loans and other financing products are underwritten and issued directly to customers.

- **Contractors**

All projects financed by the NFO are completed by authorized program contractors. It is the program contractors that usually reach out to customers to propose new EE projects.

Solicitation Strategy:

Not applicable

Transition Plan:

Not applicable

<table>
<tr><th colspan="2">Program Name: New Finance Offerings</th></tr>
<tr><td>Expected Program Life:
2027 - On going</td><td>Short Term Plan
Expand program eligibility to non-IOU customers.
Implementation of the OBR option for the Small Business Finance Pilot.
Offering micro-loans for residential customers through SCE’s Marketplace.</td></tr>
<tr><td>Cost Effectiveness
Not subject to TRC requirements</td><td>Long Term Outlook
Potentially expand program to clean technologies beyond EE to offer financing for DR, solar generation, battery storage and transportation electrification measures.</td></tr>
<tr><td>Proposed Annual Budgets for 2024-2027:
The operational budget for the NFO is:
2024: $1.7 million
2025: $2.3 million
2026: $2.3 million
2027: $1.5 million
The Credit Enhancement budget for the NFO is:
2024: $1.6 million
2025: $2.8 million
2026: $3.0 million
2027: $1,5 million</td><td>Anticipated directional and scale changes in budget for years 2028-2031:
The NFO program scope and budget could potentially expand in future years, which is currently being considered in the Clean Energy Financing Proceeding (R.20-08-022). As a result, program changes may be implemented including program and budget expansion outside of EE.</td></tr>
<tr><td colspan="2">Implementation Plan: https://cedars.sound-data.com/programs/SCE-13-SW-007C/details/</td></tr>
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