BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Concerning Energy Efficiency Rolling Portfolios, Policies, Programs, Evaluation, and Related Issues.

Rulemaking 13-11-005

SAN DIEGO GAS & ELECTRIC COMPANY (U 902 M) ENERGY EFFICIENCY PROGRAMS ANNUAL REPORT 2023 RESULTS

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Pursuant to the Administrative Law Judge's Ruling Adopting Annual Reporting Requirements for Energy Efficiency (EE) and Addressing Related Reporting Issues, dated August 8, 2007, and Decision (D.) 18-01-004 and D.18-05-041, San Diego Gas & Electric Company (SDG&E) hereby submits its Annual Report for 2023 EE programs and accomplishments.

SDG&E's Annual Report provides detailed portfolio, sector, and program-level information on the accomplishments of SDG&E's EE Portfolio in 2023, including data on energy savings, budget, cost-effectiveness and metrics. Pursuant to Ordering Paragraph (OP) 9 of D.18-05-041, this Annual Report also includes Performance Metrics and 2023 performance results.

Additionally, pursuant to OP 8 of D.18-01-004, the dollar amounts of third-party contracts are included in Appendix A, Table 13 with SDG&E's Annual Report and associated documents uploaded and available for viewing on the Commission's data systems: (1) California Energy Data and Reporting System (CEDARS) website; and (2) California Energy Efficiency Statistics (EESTATs). The report is available at https://www.sdge.com/rates-and-regulatory-filing/914/energy-efficiency-filings.

Lastly, SDG&E notes that this Annual Report includes additional Appendices:

Appendix B - Final True Up Reports, Appendix C - Revisions to SDGE's 2022 Annual Report,

and Appendix D -2023 Programs Transitioned/Closed to New Enrollments.

Respectfully submitted,

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May 1, 2024



ENERGY EFFICIENCY PROGRAMS ANNUAL REPORT

2023 RESULTS

May 1, 2024

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I. <u>EXECUTIVE SUMMARY</u>

Continued collaboration with third-party implementers characterized San Diego Gas & Electric Company's (SDG&E) portfolio efforts in 2023. Decision (D.) 18-01-004 requires at least 60 percent of utilities' energy efficiency portfolio budgets be designed and implemented by third-party implementers by the end of 2022. In 2023, SDG&E surpassed the 60 percent requirement for third-party designed and implemented programs.¹

As the transition to third-party implementation continued throughout 2023, there were significant lessons learned in regulatory, technical, data collection and quality assurance as requirements continue to evolve. Third parties are now responsible for not only generating program savings but also verifying savings claims. As in recent years, ongoing policy and technical program elements require time for contractual review in addition to program ramp-up activities that often delay progress. Third-party implementers continued to struggle to deliver cost-effective programs while complying with rigorous data collection requirements and managing programs through changing technical and policy guidance that impact program efficacy.

SDG&E's portfolio of programs, inclusive of its share of statewide programs led by SDG&E and by other investor-owned utilities (IOUs), achieved savings of approximately 8.9 MW (39% of the 23 MW goal), 50.6 GWh (46% of the 111 GWh goal) and 2.6 million therms (132% of the 2 MM therms goal). In 2023, SDG&E spent \$40,612,761 on these programs, with an overall TRC of 0.81.

Through the combined program efforts of SDG&E's portfolio and the impacts of Codes & Standards, SDG&E customers saved approximately 523.3 GWh (164% of total GWh goal), 99.6 MW (151% of total MW goal) and 6.3 MM therms (158% of total therms goal). However, Codes & Standards on its own continues to carry the overall portfolio savings achieved, with 472.6 GWh, 90.7 MW, and 3.7 MM therms, whereas RA programs contributed only 10.7% GWh, 8.93% MW, and 41.2% of MM therms.

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SDG&E 2022 Energy Efficiency Annual Report, Appendix A at Table 12, attached hereto. *See also* A.22-03-005, Application of SDG&E to Adopt 2024-2031 Energy Efficiency Rolling Portfolio Business Plan Pursuant to D.21-05-031 (March 4, 2022) (A.22-02-005, Application) at 4 – 7. Note PG&E's A.22-02-005, and other parties' applications were consolidated by Administrative Law Judge ruling on March 17, 2022.

Notable 2023 highlights:

- SDG&E's third-party outsourcing ratio for 2023 was 66%.
- SDG&E received advice letter (AL) approval for Local Industrial, Quality Installation and Quality Maintenance, and Small Business Outreach programs.²
- Fuel substitution measures saw an increase in participation, resulting in approximately 6,150 units for 2023, an increase of 314% over 2022.
- The Residential Zero Net Energy Transformation (RZNET) program identified and developed process improvements including a combined effort with the San Diego County Water Authority (SDCWA) high-efficiency toilets for SDG&E RZNET customers. SDG&E and the program implementer continued to collaborate on the development of water-energy-nexus measure packages for high-efficiency toilets and other water saving measures, which when approved, will allow the program to claim the embedded electric energy saved through the reduction of water usage.
- The Home Energy Audits & Reports program launched with the new implementer to an expanded customer base of approximately 950,000 an increase of 35% over 2022, and more than 3.4 million residential customers received personalized digital insights.
- SDG&E received approval to close its K-12 program as a result of the program implementer's bankruptcy via the True Up Advice Letter.³

II. PORTFOLIO OUTLOOK

California has set ambitious climate goals via Senate Bill (SB) 100, which requires 100% zero-carbon energy by 2045.⁴ The state must undertake major transformational change to achieve these targets and mitigate the impacts of climate change. However, energy efficiency program administration, particularly for resource acquisition programs, intended to help customers reduce emissions, has become increasingly challenging and less cost-effective. Cheaper, less technical measures, such as lighting, have experienced market saturation; remaining measures with claimable savings are more complex and harder to obtain, increasing costs. It has also become progressively more challenging to develop programs that have a quantifiable impact on the market.⁵ Many of SDG&E's customers reside in climate zone 7, along the temperate Southern

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See SDG&E AL 4079-E-A, effective date of January 4, 2023, AL 4149-E, effective date of February 24, 2023, and AL 4286-E, effective October 16, 2023.

³ See SDG&E AL 4302-E, effective date of November 15, 2023.

⁴ See SB 100, Stats. 2017-2018 (Ch. 312). SB 100 requires that 100% of retail sales of electricity in California be served by eligible renewable energy resources and zero-carbon resources by 2045.

See, e.g., DNV, Impact & Process Evaluation Report, Comfortably California Statewide Third-Party Program, Program Year 2021, California Public Utilities Commission (May 15, 2023) at 5, "net-to-gross ratio of 4% (3.6%)," available at

California coast, requiring less heating and cooling, decreasing savings potential. Furthermore, the California Public Utilities Commission (Commission or CPUC) has instituted rigorous requirements on the utilities' energy efficiency portfolios at the portfolio and the program levels, intended to ensure efficacy; these requirements carry significant costs, often require extensive customer data collection and complexity, and can deter potential implementers from participation, especially for a smaller utility like SDG&E with more modest (and therefore less attractive) regional program budgets.

Despite these challenges, SDG&E worked diligently to present a portfolio that seeks to achieve the compliance targets set forth in various Decisions, including D.18-01-004, D.18-05-041, D.23-08-005, and D.23-06-055, and to develop Market Support and Equity programming that meets customer needs.

III. STATEWIDE PROGRAMS

A. Overview of Statewide Sector

D.18-05-041 assigned lead Program Administrators (PAs) to specific statewide programs and downstream pilot programs and vested each lead PA with full authority, including assignment of personnel to manage the program on behalf of the Commission.⁷ The specific statewide programs and their assigned lead PA can be found in the tables below.

The Commission identified the various areas of sole responsibility for the lead PA.⁸ Among these responsibilities is the "[p]rocurement, contract administration, and co-funding management from partner program administrators" of the SW program.⁹ In addition to these responsibilities, lead PAs collaborate with non-lead PAs to keep them informed on program progress, delivery, and budgets. SDG&E provides a status update on the statewide programs listed below. A summary narrative is also provided for SDG&E-led statewide programs.

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https://pda.energydataweb.com/api/downloads/2813/PY%202021%20Statewide%20Third%20Party%20Programs%20Evaluation%20-%20Comfortably%20California%20HVAC.pdf.

See D.21-05-031 at Conclusion of Law 8 requiring IOUs to be cost effective in the Resource Acquisition segment.

⁷ D.18-05-041 at 79 - 80 and 90 - 92.

⁸ *Id.* at Ordering Paragraph (OP) 18.

⁹ *Id.* at 186.

SDG&E provides funding to the lead PA for each program as shown in Tables 3 and 4 of D.18-05-041. SDG&E receives credit for the proportional benefits from statewide programs through the CPUC's California Energy Data Reporting System (CEDARS).

Please refer to the lead program administrators' respective 2023 Annual Reports for information on statewide programs for which they are responsible. Descriptions of SDG&E-led statewide programs follow.

Lead Program Administrator for Statewide Programs

Statewide Program	Lead PA
Plug Load & Appliance	SDG&E
HVAC (Upstream Residential and Commercial)	SDG&E
Residential New Construction	PG&E
Non-Residential New Construction	PG&E
Codes & Standards (Building Codes Advocacy)	PG&E
Codes & Standards (Appliance Standards Advocacy)	PG&E
Codes & Standards (National Advocacy)	PG&E
Emerging Technology (Gas)	SoCalGas
Emerging Technology (Electric)	SCE
Workforce Education & Training	PG&E
Higher Education	SCE
State of California	PG&E
Foodservice Point of Sale	SoCalGas
Midstream Water Heating	SoCalGas

Lead Program Administrator for Statewide Downstream Programs

Statewide Program	Lead PA	
HVAC Quality Installation/Quality Maintenance (QI/QM)	SDG&E	
Water/Wastewater Pumping Program	SCE	
Workforce Education & Training (Career and Workforce		
Readiness)	PG&E	

B. Statewide Programs

1. SDGE SW_HVAC_Up - SW Upstream HVAC Program

Program Segment: Resource Acquisition

Program Overview

SDG&E is the lead administrator for the Statewide Upstream Heating, Ventilation, and Air Conditioning (HVAC) program, an upstream and midstream program that offers HVAC measures, including high-efficiency commercial unitary and packaged air conditioners, commercial heat pumps, commercial chillers, commercial space heating boilers, residential heat pumps, residential gas furnaces, and residential gravity wall furnaces. The program captures savings through the movement of incentivized deemed measures. The Statewide Upstream HVAC Program, marketed as "Comfortably California," was proposed and designed, and is implemented and delivered by CLEAResult. Comfortably California is offered uniformly across the state and is made available to all manufacturers, distributors, and retailers executing sales for installations in all four IOU territories: SDG&E, Southern California Gas Company (SoCalGas), Southern California Edison Company (SCE), and Pacific Gas and Electric Company (PG&E).

Program Strategies and Outcomes

The program aims to influence the market through changes in stocking and selling practices at the retailer, distributor, and manufacturer levels, thus influencing the end-users and installation contractors. By promoting high-efficiency equipment, the program is designed to encourage manufacturers to develop California-specific equipment and guidelines to further influence positive change in California. As with previous upstream and midstream models, there are implementation efficiencies to be leveraged by maintaining fewer participant relationships at the higher levels of the HVAC supply chain. The program actively recruits HVAC distributors and provides online validation tools and secure portals to ensure high levels of participation, security, and customer satisfaction.

The program is designed to adapt to market changes and retains flexibility in product offerings and incentive levels as well as product support, training curriculum and contractor and customer-facing education. For instance, the program hosted partner forums to learn about challenges and successes and used these forums to pivot the implementation of the program as needed. The program also supports its partners through marketing and the implementer worked

directly with distributors on marketing projects to help promote high-efficiency products. The program saw participation from approximately 60 distributors, facilitating over 1,500 installation verifications, and reinforced market presence through vendor trade shows and by hosting more than 10 no-cost contractor training sessions. The introduction of an improved data collection tool resulted in enhancement to the user experience. This new tool simplified the process for distributors, addressed privacy concerns, and based on distributor feedback, was further refined in July 2023. After the launch of the tool in July, the program received higher distributor satisfaction scores.

Improved processes and trade ally satisfaction led to increased participation beyond what the program originally forecasted and propelled the program to exceed its contracted net kWh savings goal. However, this success led to an earlier than anticipated budget depletion, resulting in the program's closure to new sales after November 6, 2023.

Despite improvements from the simplified processing tool, distributors maintain that the cost for submitting projects due to rigid downstream data collection requirements for this upstream program and additional internal quality controls requirements had a strong negative correlation on overall program administrative costs statewide, resulting in a lower program Total Resource Cost (TRC). In addition to the data collection requirement cost, the increase in fuel substitution participation also contributed to lowering the program's TRC. The final TRC for the program was 0.82.

2. SDGE SW PLA - Plug Load and Appliances (PLA)

Program Segment: Resource Acquisition

Program Overview

The Statewide Plug-Load & Appliance program is a midstream program that offers energy efficiency measures to residential customers across the four IOU service territories; SDG&E, SoCalGas, PG&E, and SCE.¹⁰ The Statewide Plug-Load & Appliance program, marketed as Golden State Rebates, provides the expertise and infrastructure needed to maximize customer/supply chain participation and energy savings through trade professional and retail partnerships. These partnerships offer incentives for energy-efficient equipment that delivers

See SDG&E AL 3942-E/3059-G and 3942-E-A/3059-G-A, approved and effective on May 23, 2022, available at https://tariff.sdge.com/tm2/pdf/submittals/ELEC_3942-E-A.pdf.

energy savings to IOU portfolios. Ongoing data collection strategies attempt to target reliable and cost-effective offerings for residential customers throughout the state.

Program Strategies and Outcomes

The Statewide Plug-Load & Appliance program offers two pathways through the midstream model: a distributor and a retailer pathway. Both pathways focus on assisting the partners in developing a procurement strategy that enables them to meet customer demand for high-efficiency units.

- The distributor pathway enrolled 11 distributors in 2023. Additionally, an online portal was launched for distributors that enables product validation, customer eligibility, and reporting.
- The retailer pathway includes five major retailers with a chain of stores totaling over 380 brick and mortar locations across California. This retailer route promotes a seamless customer experience with an online instant rebate portal for end-use customers to receive rebate coupon(s) that are redeemed at participating retailer locations. The online rebate portal allows for instant customer validation, product validation, and reporting.

Various marketing campaigns promoted customer participation statewide. Marketing materials were refined for the program, including the program's website and in-store point-of-purchase materials. Additionally, paid media, email and search advertising continued in 2023. The program was heavily promoted for 2023 Earth Day and Black Friday sales events. The program continued to foster key partnerships with manufacturers, Energy Star, the Statewide Technology and Equipment for Clean Housing (TECH) program, and the four IOUs to further spread awareness about the program. The partnership with manufacturers and Energy Star led to promotion of the program's available rebates. The Statewide TECH program partnership promoted the program in their monthly newsletters to contractors and on their website. Additionally, the partnership amongst the four IOUs led to collaboration resulting in increased customer validation and program simplicity.

The program also promotes participation in each IOUs' demand response programs via the portal's automated communications. Additionally, the program continued to coordinate with PG&E's Smart AC thermostat program to simplify and streamline the rebate process.

Despite these efforts, the program fell short of its energy savings goals. The program has a limited variety of available measures due to past measure offerings not being cost-effective. The

program saw an increase in fuel substitution participation; however, such measures lower the program's TRC. The final TRC for the program was 0.44.

3. SDGE_SW_HVAC_QIQM - SW HVAC QI/QM Program

Program Segment: Market Support

Program Overview

The Statewide Quality Residential HVAC Quality Installation and Quality Maintenance (QI/QM) Program aims to transform the California HVAC installation and maintenance market by assisting and providing incentives to contractors who promote and install higher-value services by exemplifying best practices. This Market Support Program offers participants no-cost training, tools, and multi-tiered incentives to complete Quality Maintenance Setups, Quality Maintenance Calls, Quality Bids, and Quality Installations at basic "Quality Service" or "Enhanced Quality Service" tiers.

An industry Advisory Panel, made up of HVAC industry subject matter experts, guides the standards for services, verification requirements, and outreach and training, particularly for contractors who serve Disadvantaged Communities and hard-to-reach customers.

This program was solicited and the contract was negotiated with the implementer between June 2022 and January 2023, and Frontier Energy was selected as the third-party implementer for a four-year contract.

Program Strategies and Outcomes

The Quality Residential HVAC Services Tier 2 Advice Letter was approved by the CPUC on February 24, 2023, and launched in July 2023 with the release of initial program materials related to Quality Bids. Contractor outreach and recruitment efforts began in earnest in conjunction with a learning management system (LMS) emphasizing themes like "Building Confidence," "Advancing the Industry," and "Differentiating the Best" attracted a variety of enrollees, from entry-level to experienced companies. Program ramp up activities continued throughout 2023 with the addition of Quality Install, and Maintenance materials and trainings to a growing contractor base.

A key focus lies in addressing intersectional barriers inhibiting disadvantaged workers and businesses from participating in the energy efficiency industry. Initial outreach was targeted to HVAC contractors located in disadvantaged communities, Diverse Business Enterprise (DBE)

certified, or small businesses. Existing contractor networks participating in regional and statewide energy efficiency programs were also leveraged to promote recruitment efforts resulting in more than 5,000 unique market actors.

An eighteen-organization Industry Advisory Panel was convened to determine standards for services, verification requirements, and outreach and training. In total, nine Advisory Panel meetings were hosted in 2023, ensuring internal processes, resource development, and marketing messaging were refined and simplified for the target audience. Multi-tiered, incentivized services encourage participating contractors to "level up" by exemplifying best practices and expertise through their work. By allowing contractors to layer with other energy efficiency, demand response, and financing programs, they can maximize the program benefits.

In Q2, the implementer experienced immediate uptake with on-demand training and the enrollment of 6 HVAC contractors. By Q3, 16 trade professionals were actively participating in the program. There was significant engagement from Disadvantaged Workers and almost 30 technicians completed the training module. Outreach activities and recruitment also continued throughout 2023 including booth presence at the Institute of Heating & Air Conditioning Industries (IHACI) annual trade show, email campaigns, and distribution of program flyers. ¹¹ By Q4, Frontier enrolled 33 active HVAC contractors, held 220 trainings, and provided 1,100 incentive projects across the state including 120 SDG&E customer sites.

IV. REGIONAL AGRICULTURAL SECTOR PROGRAMS

A. Overview of Agriculture Sector

San Diego County ranks in the top 20 largest farm economies in the nation, with top crops in nursery, avocados, tomatoes, citrus, poultry, strawberries, and more. Almost 70 percent of San Diego County farms are less than 10 acres and nearly 35 percent are operated by women. San

D.18-10-008 defines "Disadvantaged Worker" as a worker that meets at least one of the following criteria: lives in a household where total income is below 50 percent of Area Median Income; is a recipient of public assistance; lacks a high school diploma or GED; has previous history of incarceration lasting one year or more following a conviction under the criminal justice system; is a custodial single parent; is chronically unemployed; has been aged out or emancipated from the foster care system; has limited English proficiency; or lives in a high unemployment ZIP code that is in the top 25 percent of only the unemployment indicator of the CalEnviroScreen Tool.

Diego County also has more certified organic growers than any other county nationally, with more than 360 certified organic farms.¹²

SDG&E's agricultural sector has significantly smaller energy consumption than the agricultural customers of other California IOUs. It is also the smallest sector in SDG&E's energy efficiency portfolio, representing 1.4 percent of total portfolio electric consumption and 0.6 percent of portfolio gas consumption. The agricultural sector provides 0.15 percent of the portfolio's electric savings and 3.4 percent of the gas savings. SDG&E's agricultural sector customer usage breaks down as follows: 81 percent of the accounts are under 20 kW (small), 18 percent of accounts are between 20-199kW (medium), with the remaining 1 percent representing customers 200kW and above (large). The SDG&E agriculture sector represents approximately 5,700 farms and can be characterized by four main features: (i) mild climate; (ii) expensive land; (iii) poor soils, and (iv) small, numerous farms.¹³

B. Agricultural Program

1. SDG&E4009 Agricultural Growers Services Program - AgEASY

Program Segment: Resource Acquisition

Program Overview

The AgEASY program offers a suite of EE services to SDG&E's entire agricultural sector, tailored to their business type, operation size, financial needs, and geography. AgEASY, implemented by Cascade Energy, provides training for customers and vendors, high-quality engineering support, creative incentives, and an innovative path to cost-effective energy savings for the small and medium businesses that make up most of SDG&E's agriculture customers. The AgEASY program also presents opportunities to integrate energy efficiency and demand response in the agriculture market segment.

Program Strategies and Outcomes

In 2023, SDG&E met regularly with Cascade Energy to review outreach, technical guidance, challenges, and successes. Cascade provided quarterly updates on program enrollments, inspections, engineering reviews, invoicing, and submitted self-service videos for review. In

See Farm Bureau San Diego County, The Voice of Local Farmers, Target Market, available at https://www.sdfarmbureau.org/our-mission/.

¹³ A.22-02-005, Application at 13 (citing Exhibit 2).

addition, SDG&E and Cascade collaborated on rebranded marketing materials, including a general program flyer, program applications, program website, and self-service videos. Additionally, Cascade Energy submitted a revised Implementation Plan reflecting the program name change which was posted to CEDARS by SDG&E.¹⁴

Cascade's staff conducted direct outreach throughout SDG&E's territory, connected with trade associations and vendors, and attended trade shows to spread awareness to eligible participants. Additionally, Cascade Energy hosted five Training Initiated Engagement (TIE) Workshops to build customer knowledge of energy efficiency opportunities for specific subsystems including, refrigeration, compressed air, pumps, and fans. The first three workshops were hosted at the San Diego County Farm Bureau. The remaining two workshops were hosted virtually.

Outreach efforts resulted in enrolling more than a dozen sites, one completed irrigation Variable Frequency Drive (VFD) project, two completed greenhouse heat curtain projects, and three completed greenhouse film projects. A project for a local meat distributor was provided a Notice to Proceed for a fan cycling and reduced defrost project for their refrigerated spaces.

The program exceeded its therms goal but fell far short of its kWh and kW goals. The final TRC for the program was 0.50.

V. <u>REGIONAL COMMERCIAL SECTOR PROGRAMS</u>

A. Overview of Commercial Sector

SDG&E's Commercial Energy Efficiency (CEE) Programs seek to provide a comprehensive group of programs and services aiming to overcome market obstacles to facilitate optimized energy management for commercial customers. These initiatives focus on integrated energy management solutions, offering strategic energy planning support, technical assistance including facility audits and design aid, as well as promoting rebates, incentives, and various financing options. The programs extend to diverse commercial sub-segments, encompassing distribution warehouses, office buildings, hotels, motels, restaurants, educational institutions, municipalities, healthcare facilities, large and small retail, and entertainment centers.

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Ag-STAR, is branded by the EPA for an agricultural program. To reduce customer confusion, the decision was made to market the program as AgEASY.

B. Commercial Programs

1. SDGE3226 – Com Direct Install - Business Energy Solutions (BES)

Program Segment: Resource Acquisition

Program Overview

The Direct Install Program, also referred to as the Business Energy Solutions program, delivers no-cost or discounted energy efficiency equipment upgrades through installation contractors to reduce peak demand and energy consumption for non-residential customers. The program is designed to increase the adoption of energy efficient measures by offering an energy efficiency audit as well as energy efficiency equipment and installation at no cost or at a discounted price.

Program Strategies and Outcomes

SDG&E continued operating its legacy BES program in 2023 as various new third-party programs completed their solicitation phases. This extension not only avoided a lapse in program services but also enabled qualified small business customers to take advantage of no-cost energy efficient measure installation, allowing more directed commercial programs enough time to launch. BES measures installed included a mix of lighting, water heating and refrigeration equipment, reducing both gas and electric use.

Strategies to promote outreach efforts and comprehensive installations included:

- Providing contractors with qualifying lists of customers on a quarterly basis;
- Revising marketing and program collateral to reflect 2023 program offering(s);
- Social media, email, and postcard campaigns to support and increase program visibility to SDG&E's small business community;
- Providing program referrals when opportunities were identified; and
- Introducing the heat-pump water heater as an approved measure in 2023.

These activities resulted in an increase in customer participation compared to 2022. Additionally, due to the unanticipated closure of KEEP (K-12 Program), as well as corrective actions required as a result of KEEP implementation, BES will remain open in a limited capacity through 2024 to serve K-12 customers.¹⁵ Although these activities were important to the overall

In September 2023, SDG&E was informed of a fire in a staff locker room in a school that participated in KEEP. There were no injuries, and the fire department inspection confirmed the origin of the fire was a light fixture installed through the KEEP program. Since then, the program has closed, and the

portfolio, the program did not meet its energy savings goals. The final TRC for the program was 0.54.

2. SDGE4004 – Commercial Large Customer Services

Program Segment: Resource Acquisition

Program Overview

The Comprehensive Energy Management Solutions (CEMS) program provides implementation services, including marketing, outreach, engineering, operations, customer service, and data management and reporting to large commercial customers of SDG&E. CEMS is available to gas and electric customers on qualifying rates schedules with a monthly demand greater than 20 kW. The program is implemented by TRC Companies, Inc. and leverages the implementer's outreach staff, team of subcontractors, and network of trade professionals to provide customers with a single offering that addresses a multitude of their EE needs.

Energy savings are primarily delivered through three targeted offerings:

- Deemed Offers incentives for the installation of select EE equipment based on workpapers approved by the CPUC.
- Custom Offers incentives to customers for equipment installations not included within approved workpapers. These may also include process or procedural changes in operations. Custom projects require engineering calculations to project savings, followed by measurement and verification of those savings.
- Normalized Metered Energy Consumption (NMEC) Similar to custom projects, savings are verified over a 12-month period using data from the customer's utility meters.

Program Strategies & Outcomes

The CEMS program found some success due to its targeted approach to various customer types and their potential energy-savings opportunities. The network of trade professionals included those in the grocery, food, and hotel industries resulting in cost-effective, energy-efficient equipment installations throughout the service territory. However, the current custom/NMEC review process and protocols posed a challenge to initiate and implement custom projects, although deemed measure installations generated a significant portion of savings. Overall, the

implementer is no longer in business, for reasons outside of this incident. As an enhanced safety measure, SDG&E contracted with another company to replace all lighting fixtures installed by the original KEEP implementer across all schools that participated in the program. As a result, approximately 24,000 fixtures were replaced. SDG&E informed Energy Division of this issue on February 23, 2024.

CEMS program hit its kWh goals but did not achieve its kW or therms savings goals. The final TRC for the program was 0.64.

Continuation of Grocery Market Success (Deemed): In 2023, the CEMS program continued to leverage its network of trade professionals to install deemed measures for SDG&E's grocery customers. TRC completed more than 50 projects in 2023, an increase of 150% over 2022, primarily from deemed measures, anti-sweat heater controls and medium-temperature case doors.

Focus on Hot Water Pipe and Tank Insulation (Deemed): In early 2023, TRC established relationships with three trade professionals that focused primarily on hot water pipe and tank insulation projects. These relationships proved successful as they generated approximately 450 projects.

Fuel Substitution using Heat Pump Water Heaters (Deemed): In 2023, TRC developed processes and targeted outreach focused on installations of heat pump water heaters to replace gasfueled hot water heaters and boilers. Leveraging lessons learned from 2022 and new outreach strategies, TRC provided incentives on more than 35 projects for hospitals, grocery stores, nursing homes and hotels, a significant increase from 2022.

VI. REGIONAL INDUSTRIAL SECTOR PROGRAMS

A. Overview of Industrial Sector

Although the industrial sector is relatively small in SDG&E's service territory, it includes some of SDG&E's largest consuming individual customers, including more than 3,000 manufacturing companies from defense and aerospace to computer electronics and solar panels, to biotechnology. Many of the customers in this sector are considered small or medium sized customers, with approximately 96 percent of accounts having electric demand under 200 kW.¹⁶

Energy consumption by industrial users in the United States, primarily manufacturing-related, receives significant scrutiny because of their large scale and impact on the economy. However, although quite diverse, SDG&E's industrial sector has significantly smaller consumption than the industrial customers of other utilities, even within California. SDG&E's Industrial sector comprises roughly eight percent of the service territory's electricity consumption.

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A.22-02-005, Application at 18 (citing Exhibit 2).

Utilizing the North American Industry Classification System (NAICS) designations, SDG&E has categorized its industrial accounts by industry type, grouped them by similar energy usage patterns, and found that the majority fall into the following five main segments:

- Sand, Gravel & Contractor Industry contractors and construction (plumbing, electrical, heating, A/C, special trades, roofing, etc.), natural gas extractions, landscape, and masonry.
- General Manufacturing Commercial bakeries and breweries, machine shops, fabrication, textile, and woodworking manufacturing.
- Large Manufacturing Aircraft, engine, bicycle, turbine, A/C, and commercial refrigeration manufacturing.
- Electronics/Telecommunications Manufacturers of communications, audio/visual, TV/Radio, computer and circuit assembly, and other forms of electronic equipment.
- Biotech, Laboratories, and Research Pharmaceutical, biological, medicinal, and botanical manufacturing.

B. Industrial Programs

1. 4006 – Industrial Sector Program - Industrial Savings Measurement Assistance Rebate & Training Program (SMART)

Program Segment: Resource Acquisition

Program Overview

The SMART Industrials program is implemented by Cascade Energy. SMART Industrials offers a suite of energy efficiency services to SDG&E's entire industrial sector, tailored to their business type, operation size, and financial needs. The suite of offerings include custom, deemed, NMEC, and strategic energy management (SEM). Through these offerings, SMART Industrials provides training for customers and vendors, high-quality engineering support, incentives, and an innovative path to cost-effective energy savings for the breadth of customer size in SDG&E's industrial customer base.

Program Strategies and Outcomes

SDG&E's Advice Letter was approved in January 2023 and Cascade Energy received the notice to proceed from SDG&E shortly thereafter.¹⁷ Program ramp-up activities began in earnest and Cascade Energy participated in the Draft Implementation Plan webinar hosted by SDG&E on February 24, 2023. Cascade Energy met regularly with SDG&E to develop program reporting

¹⁷ See SDG&E ALs 4079-E and 4079-E-A, effective date of January 4, 2023.

requirements, finalize database set up, and to create marketing materials. The Implementation Plan was finalized and posted to the CEDARS website on March 10, 2023.

Upon receiving their notice to proceed, Cascade Energy began recruiting for program participation, including seven existing SEM participants (Cohort A), for Cycle 3. This effort was successful, and Cycle 3 for Cohort A started on February 1, 2023. The recruiting strategy focused on outreach for additional SEM cohorts with the candidates and SDG&E Account Executive (AEs) relationships with a variety of industry associations. While a minority of customers limited participation to a site visit for the potential of future projects, the majority elected to participate in SEM.

Despite ongoing challenges with recruiting activities, the continued efforts enabled the start of three more cohorts, Cohort B, Cohort C, and Cohort D. Cohort B consists of eight facilities and began May 1, 2023. Cohort C includes six facilities and began on August 1, 2023. Cohort D is the SEM offering focused on small and medium sized businesses and began on July 1, 2023, with seven participants.

Strategic outreach to vendors is an additional channel for other project types, however, due to challenges with a lengthy sales process, those opportunities were limited. Additionally, due to a later than anticipated launch date, SEM Cohort recruitment was not able to begin prior to 2023, resulting in delays in energy savings claims until 2024.

2023 Highlights:

- Recruited over 25 customers to participate in SEM
- Delivered over 10 SEM workshops
- Completed over 20 energy "treasure hunts" for SEM participants
- Engaged with compressed air, dust collection, boiler, and lighting vendors
- Collaborated with the following industrial associations for recruiting:
 - o San Diego Economic Development Corporation (EDC)
 - o San Diego Working Waterfront
 - o California Manufacturing Technology Consulting (CMTC)
 - o Industrial Environmental Association (IEA)

Cohort A started at Cycle 3 because that cohort had already participated in SDG&E's SEM program for two previous cycles, the last of which ended in Q3 2022.

VII. REGIONAL PUBLIC SECTOR PROGRAMS

A. Overview of Public Sector

The public sector is defined as the group of customers that are taxpayer funded, have political mandates, and must go through a public budgeting and decision-making process.¹⁹ In recent years, this sector accounted for around 15 percent of SDG&E's system electric consumption, 12 percent of portfolio electric energy efficiency spending, and 4 percent of SDG&E's portfolio electric savings. Despite this relatively small percentage of direct electric consumption and electric savings, the public sector influences and informs and therefore contributes to both residential and non-residential markets, making it important to all sectors.

SDG&E's public sector is made up of many small accounts, which SDG&E defines as having an annual peak demand of less than 20 kW. Approximately 77 percent of public sector accounts in SDG&E's territory have peak demand of less than 20 kW.

In addition to the unique characteristics of the public sector market, it is important to define and understand the market segments that make up the public sector to best meet their needs and achieve statewide goals. Market segmentation provides additional insights that can inform targeting, strategy, and program design, ensuring that program offerings meet the needs of various types of public sites. Utilizing the NAICS designations, SDG&E has categorized its public sector customers into four segments: local government, state, federal, and education.

These segments show the diversity of SDG&E's public sector energy consumption, as the military, government and water/sewage entities representing approximately three quarters of SDG&E's public sector's electric consumption.

B. Public Programs

1. SDGE4010 – Local Government Customers Program - CAP4ZNE Program

Program Segment: Resource Acquisition

Program Overview

The Climate Action Plan for Zero Net Energy (CAP4ZNE) program provides a concierge approach tailored to the unique needs of each customer for energy efficiency and greenhouse gas

A.22-02-005, Application at 19 (citing Exhibit 2).

reductions. This one-stop-shop approach includes a comprehensive assessment of the customer's facilities for the Local Government segment within the SDG&E service territory. The program offers individual Partner Climate Action Paths tailored for participating Local Governments aimed at the customer's top energy-consuming facilities.

The CAP4ZNE implementer, Okapi, identifies and facilitates the implementation of energy efficiency upgrades for SDG&E's local government customers. Customers who install energy efficient systems and equipment receive incentives based on the annual kWh or therm savings achieved, as well as on peak demand reductions (kW) and deemed incentive measures. The CAP4ZNE program is designed to work with decision makers directly, whether it be with local government officials, general managers, or facility personnel to:

- Identify if climate action goals have been established;
- Gain a mutual understanding of how the CAP4ZNE program will help to reach set goals;
- Educate local government leaders on the benefits of establishing a climate action plan by development of a Partner Action Plan; and
- Identify the greatest potential and barriers for implementation and energy savings.

Program Strategies and Outcomes

The intended strategies include empowering leaders by equipping them with knowledge and tools to make informed decisions on energy efficiency upgrades, providing incentives for energy efficiency upgrades, eliminating barriers to public sector participation by developing tailored solutions and financing options, and influencing private sector participation through reach codes and engagement.

Okapi collaborated on facility audits in remote and historically underserved sites. These audits were conducted to identify potential energy and water saving opportunities and to improve systems outside of the on-going retro-commissioning process. Outreach efforts and facility audits provided opportunities for cross-promotion of On-Bill Financing, Demand Response offerings, and electrification and fuel substitution measures that were ultimately included in program offerings.

Regarding outcomes, in 2023, the program met all ramp-up requirements in the first quarter and commenced customer-facing activities in the second quarter. However, the program encountered significant obstacles, including the following:

- Third-party Contracting: Most municipalities have their own procurement and solicitation practices. During program implementation, it became evident that these practices do not align with the CPUC's third-party implementer model for IOUs within the energy efficiency portfolio, in which SDG&E selected Okapi to manage the program. In order to work with Okapi, the local government would be required to issue their own solicitation and Okapi would be required to bid on it. SDG&E investigated the feasibility of mitigating this issue, however, no viable solutions have been identified. As a result of this misalignment, several municipalities chose not to participate in the program.
- **ESCO Collaboration**: Certain municipalities directed Okapi to exclusively partner with their established Energy Service Companies (ESCOs), which posed challenges for SDG&E's internal processes. These municipalities required their ESCOs to sign customer applications on their behalf. A crucial step in the project process for this program involves the SDG&E account holder confirming and signing the customer application. Without this authorization, projects cannot move forward.
- **Fiscal Budget**: Municipalities typically earmark their capital and operation and maintenance budgets per fiscal calendar year (from July 1 to June 30). This resulted in most funding already allocated for 2023. Therefore, the municipalities did not have funding to allocate for projects under the CAP4ZNE program.

These challenges affected most of the qualifying customer pool. SDG&E has continued to explore alternative approaches to overcome these hurdles, and Okapi proactively engaged with approximately twenty municipalities, as well as water and wastewater districts operating outside the standard procurement practices. Unfortunately, the challenges encountered made it difficult to proceed, resulting in zero projects.

2. SDGE4012 - Federal Customer Services Program - SD EnergyLink/Federal Energy Program (FEP)

Program Segment: Resource Acquisition

Program Overview

The SD EnergyLink program provides program implementation services, including marketing, outreach, engineering, operations, customer service, and data management and reporting to federal customers of SDG&E. Energy savings were primarily delivered through direct customer outreach of targeted offerings including, deemed, custom, and NMEC. Federal customers eligible for incentives within this program include:

- Federal buildings (including hospitals owned and/or operated by the federal government);
- Department of Defense (DoD) facilities, including military bases; and

• Tribal nations that are electric and/or gas customers of SDG&E on qualifying rate schedules.

Program Strategies & Outcomes

The primary focus was achieving energy savings for federal customers through fostering key partnerships with stakeholders including SDG&E's Federal Turnkey team. This relationship facilitated deemed, custom and NMEC projects for over 20 DoD and federal sites.

To ensure a seamless customer experience from legacy program offerings, the SD EnergyLink program team initiated formal assessments of customer sites. These audits, primarily led by TRC's subcontractor, Information Energy Specialist (IES), filled gaps to perform technical aspects of project delivery. The TRC/IES team completed ASHRAE Level II audits of more than 2.6 million square feet of space for DoD sites in 2023. The program achieved some kWh savings in 2023; findings are expected to transition into more energy savings projects in 2024.

Targeted outreach to Tribal customers was also a focus in 2023. GC Green, a Native American, Woman, and service-disabled veteran owned small business (SDVOSB), supported TRC with outreach and project development for this important customer segment. GC Green identified and relayed the unique needs of Tribal customers by providing more than a dozen program presentations, several site visits, and participation in several energy summits and community events within the Tribal space. The program continued to develop a go-to-market strategy for residential and direct-install measures and used feedback from two test markets to guide strategy for 2023 and beyond.

However, the program year was not without its challenges. Program staff and customers dealt with procurement misalignment, ongoing confusion regarding interpretation of code requirements, custom review protocols and contract terms. Additionally, many customers have more potential opportunities than they can analyze or consider for implementation at any given time. These opportunities require the customer to support data collection, identify potential vendors, and complete feasibility studies. These issues may have resulted in missed opportunities and declined projects, due to customer's lack of time and program education. The program did not meet its energy savings goals. The final TRC for the program was 0.20.

VIII. REGIONAL RESIDENTIAL SECTOR PROGRAMS

A. Overview of Residential Sector

Residential customers consume over a third of all electricity and over half of all natural gas in SDG&E's service territory. More specifically, the single-family homeowner segment consumes the most electricity and gas, while multifamily owners consume the least, thus single-family homeowners are a critical component of SDG&E's EE portfolio.

SDG&E has categorized its residential accounts by number of units and ownership status, which yields four customer segments: single-family owners, single-family renters, multifamily owners, and multifamily renters. Most of SDG&E's residential customers by account are single-family owners (46 percent) and multifamily renters (28 percent).

B. Residential Programs

1. SDGE4040 – IDSM Local Residential Behavioral Program - Home Energy Audits & Reports (HEAR)

Program Segment: Resource Acquisition

Program Overview

The HEAR program provides comparative home energy reports to residential customers to engage and empower them to reduce energy usage. The reports, sent on a standard cadence, prompt behavioral changes at both the whole home and appliance-use level encouraging demand shifting and peak conservation. Strategies for changing these behaviors leverage comparisons to similar homes, increasing awareness of energy use, and providing relevant tips and program offers. The reports are delivered to residential customers by mail, email, web portal or any combination of the three channels.

The HEAR customer offering includes:

- A normative comparison contextualizing a household's energy use with that of a set of comparable homes.
- A comparison showing both whole-home and individual appliance usage over time.
- Energy efficiency recommendations comprised of personalized tips, program promotions and energy-saving purchase guidance.

Program Strategies and Outcomes

Program year 2023 was a transition year for the HEAR program. After a successful bid and selection of a new implementer in 2022, 2023 first quarter activities focused on a smooth ramp down of the former implementer. Parallel activities in Q1 and Q2 included preparations for the current implementer, which required an advice letter submission, set up of new data integrations, system configuration, and approval of new reports. This program requires the secure transfer of significant amounts of SDG&E residential customer information. Several data challenges were identified and resolved in 2023, which led to a pause in implementation between the predecessor and successor implementers. The program launched with the new implementer in June 2023 to an expanded customer base of approximately 950,000 – an increase of 35% over 2022. The program was able to meet its kW and therms energy savings goals but fell short with kWh savings. The final TRC for the program was 0.67.

Key activities and highlights included:

- Sent more than 3.4 million personalized digital insights to residential HEAR participants on a monthly cadence;
- Promoted four additional SDG&E programs on HEAR reports sent to customers;
- Launched hyper-personalized integrated home assessment platform;
- Launched new, stand-alone, solar reports to new participants;
- Printed Home Energy Reports mailed to customer homes included a QR code to allow customers to update their home profile survey and to convert their paper report to 100% digital experience; and

Maintained high levels of engagement with open rates of more than 60% – more than a 10% increase over the 2022 average open rate.

2. SDGE4001 – Single Family Program - Residential Energy Solutions (RES)

Program Segment: Resource Acquisition

Program Overview

The SDG&E Single Family program is a Zero Net Energy (ZNE)-focused residential resource program. The ZNE path begins with installing persistent cost-effective direct install measures that transition the customer into complimentary home energy surveys/sales consultations for higher levels of energy efficiency and renewable technologies that can potentially be financed by the participant and installed by the implementer.

See SDG&E AL 4109-E, effective date of December 16, 2022, available at https://tariff.sdge.com/tm2/pdf/submittals/ELEC_4109-E.pdf.

The RES program strategies include:

- Maximizing energy savings;
- Forging the pathway to zero net energy;
- Constructing a demand response resource; and
- Developing cost-effective measure packages for ongoing program success.

The RES program also presents opportunities to integrate energy efficiency and demand response in the single-family market segment. These opportunities originate from the direct installation of smart thermostats with required demand response enrollment. Over time, a demand response resource is constructed through individual enrollment and provisioning of smart thermostats. This demand response resource is ready to assist SDG&E during peak demand periods to maintain grid reliability and prevent customer power disruptions.

Program Strategies and Outcomes

The single-family market sector is a new frontier for direct installation energy efficiency programs in SDG&E's service territory. To promote the program in 2023, the SDG&E public relations team coordinated a television press release with the local networks. The press release generated significant program interest resulting in over a thousand customers requesting program services.

To maximize energy savings opportunities, the RES program participated in SDG&E technical review meetings where measure package development is advanced and savings updates are reviewed. These meetings provided valuable insights and knowledge for current implementation of measures to maximize energy savings. They also are an important ongoing platform for development of new measures and revisions of current measures for future implementation. As a result of the meetings, lifecycle refrigerant management and smart fan controller measure packages were identified for 2024 implementation.

The 2023 RES program outcomes included:

- Approximately 1,000 single-family homes treated with cost-effective EE measures;
- Established a presence in the SDG&E single-family market segment for success in future years; and
- Lifecycle refrigerant management and smart fan controllers were added for 2024 implementation.

Despite these efforts, the RES program did not meet any of its energy savings goals and achieved a TRC of 0.75.

3. SDGE4002 – Multifamily - Residential Zero Net Energy Transformation (RZNET)

Program Segment: Resource Acquisition

Program Overview

The RZNET program is an innovative way of serving multifamily and manufactured homes with a path to ZNE focus. The RZNET program design is a turnkey, cost-effective, zero net energy, end-to-end solution that transforms multifamily and manufactured home community owners, operators, and residents into knowledgeable stewards of water, electricity, and natural gas. RZNET program participants are put on the path to zero net energy, beginning with direct install measures, complimentary ASHRAE Level 1 audits, sales consultations acting as catalysts for advanced energy efficiency, solar Photo Voltaic (PV) installations, and battery storage opportunities for multifamily and manufactured housing properties.

Program Strategies and Outcomes

Energy efficiency measure package development is a vital piece to a resource program's health and success and, in 2023, SDG&E continued to make EE program measure development an important part of RZNET's implementation strategy. To promote and facilitate measure development and proper implementation of approved measure packages, stakeholders held regular meetings throughout 2023. These ongoing discussions led to the measure coordination of smart fan controllers, lifecycle refrigerant management, and heat pump water heaters to the program's future design.

Leading with no cost direct install measures immediately followed by an offer of a complimentary energy assessment and sales consultation continued to yield results, particularly in therms savings. The RZNET program identified opportunities for upgrading inefficient water heating and HVAC equipment that resulted in the sale and installation of high efficiency water heating and HVAC systems.

The implementer continues to maintain contact with RZNET participants through email campaigns that typically generate additional ZNE upgrades. There were also regular coordination meetings with large multifamily portfolio managers supporting the ongoing implementation of direct install energy efficiency and ZNE opportunities.

To meet demand, additional funding was required to fulfill multifamily projects in the 2023 pipeline resulting in thousands of multi-family customers benefiting from quality energy efficiency technology installations. Additionally, implementers identified and developed process improvements including a combined effort with SDCWA high-efficiency toilets for SDG&E RZNET customers. Providing both programs simultaneously not only improved customer satisfaction but also resulted in fewer customer touches and a reduced carbon footprint delivery. SDG&E and the program implementer continued to collaborate on the development of water-energy-nexus measure packages for high-efficiency toilets and other water saving measures, which if approved, will allow the program to claim the embedded electric energy saved through the reduction of water usage.

The supporting LED tube measure packages expired at the end of 2023. The addition of the smart fan controller, lifecycle refrigerant management, and heat pump water heater measures is intended to fill the void created by the expiration of the LED tube lighting measure package.

Geotagged timestamped photos continued to be an integral part of RZNET's quality assurance plan. Geotagged timestamped photos provided assurance that program measures reported are installed and they allow for SDG&E inspectors to review program projects virtually thus improving the efficiency, health, and safety of program operations.

Overall, the program had a strong TRC of 1.8 and exceeded its therms goals but did not meet its electric savings goals.

IX. CROSS-CUTTING PROGRAMS

A. Overview of Cross-Cutting Sector

The Cross-Cutting sector includes Finance, Workforce Education & Training, Codes & Standards and Emerging Technologies.

B. Cross Cutting Programs

1. SDGE3251 – SW C&S - Compliance Enhancement

Program Segment: Codes and Standards

Program Overview

The Compliance Enhancement (CE) subprogram supports increased compliance with the adopted Building Energy Efficiency Codes and the Appliance Standards. Compliance

enhancement and improvement activities complement advocacy work by maximizing verified, persistent savings from C&S activities. The CE subprogram targets market actors throughout the entire compliance chain, providing education, outreach, technical support, and resources to improve compliance with both building and appliance energy standards.

Strategies and Outcomes

Under the Energy Code Ace (ECA) brand, CE drives higher compliance rates by enacting behavior change throughout the building and appliance efficiency supply chains. Training develops knowledge and skills, Tools and Resources empower desired action, and Outreach increases awareness and motivation. 2023 activities in each category include:

Delivery of 203 training sessions to more than 5,800 students;

- Launched new resources, industry brochures, and 2022 Title 24 energy code fact sheets, garnering over 93,000 file views;
- 145 promotional email campaigns with a 42% open rate, and participated in 55 events yielding more than 7,000 people;
- Managed Energy Code Ace social media engagement across three platforms; and
- Earned 129,221 total post impressions on LinkedIn, 21,283 post impressions on X, and 175,449 post impressions on Facebook.

2. SDGE3252 – SW C&S - Reach Codes (RC)

Program Segment: Codes and Standards

Program Overview

In addition to state and national building codes, the C&S Program provides technical support and stakeholder outreach and education to local governments that wish to adopt local energy ordinances (reach codes) that exceed statewide Title 24 Building Energy Code (Part 6) minimum EE, PV, storage, Electric Vehicle, and Distributed Energy Resource (DER) requirements and meet Title 24 CALGreen (Part 11) for new buildings, additions, or alterations. The Reach Code (RC) subprogram supports for local governments and other key stakeholders including research and analysis to establish performance levels and cost effectiveness relative to Title 24 by climate zone, drafting model ordinance templates to facilitate adoption and encourage regional consistency, assistance for completing and expediting the application process required for approval by the CEC and Building Standards Commission (BSC), and supporting implementation once effective through trainings, tools, videos, and resources.

Program Strategies and Outcomes

Many local jurisdictions have established goals within their Climate Action Plans (CAPs) to reduce energy use and greenhouse gas (GHG) emissions from buildings through adopting and implementing local energy ordinances. Given the changing policy and funding priorities at the state and federal levels, cities and counties are experiencing an increased sense of urgency for local action to meet statewide goals. This has translated to a greater interest in reach codes as a path to achieve these goals. The RC program supported multiple efforts across California and SDG&E's service territory to increase adoption of reach codes to support local jurisdictions seeking to achieve their climate action goals:

- Supported 11 jurisdictions in San Diego County and 63 across California to evaluate and develop reach codes policies and ordinances for new construction and existing buildings;
- Assisted jurisdictions in transitioning reach code development strategies after the 9th Circuit Court Ruling on *California Restaurant Association* v. *City of Berkeley*²¹ slowed reach code adoption and implementation;
- Developed a new reach code strategy based on the 'Hourly Source Energy' metric approved by the CEC's 2022 Title 24 Building Energy Codes;
- Worked with multiple jurisdictions in San Diego County to develop existing buildings reach code strategies through the evaluation of energy audits, benchmarking, and building performance standards;
- Developed multiple implementation strategies to facilitate the education of stakeholders on the reach codes and CALGreen requirements; and
- Direct Technical Support, which includes both general, and customized, support for individual jurisdictions for local ordinances and CALGreen adoption. These efforts included:
- Three statewide cost-effectiveness studies with technical analyses and executive summaries, customer analyses with local utility rates, supported active regional energy network (REN) and Community Choice Aggregator (CCA) reports via technical analysis;
- Developing model language, staff reports, checklists, fact sheets, and implementation resources;
- Updating the Cost-effectiveness Explorer Tool with a revised landing page, adding the 2022 Title 24 cost-effectiveness study data, created a policy comparison tool, and refined the analysis tool for existing buildings stock and refined estimates by occupancy types;
- Developing customized jurisdiction-specific videos, website content, and resources for the cities of Encinitas and Chula Vista to support compliance with their adopted ordinances; and

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²¹ Cal. Rest. Ass'n v. City of Berkeley, 89 F.4th 1094 (2024).

 Developing measure-specific fact sheets for the 2022 Title 24 Interim CALGreen code cycle requirements including: Light, Medium, and Heavy-Duty EV charging requirements, and Embodied Carbon reporting requirements.

Education, Communications and Events:

- The LocalEnergyCodes.com RC program web site landing page had an average of 2,150 views per month, the Adopted Ordinance page had 342 average views per month, and the RC map on the website had an average of 493 views per month;
- Reach Code News Briefs had 489 subscribers;
- The RC team continued to develop and expand its social media presence with 224 followers on LinkedIn and 16 subscribers on the YouTube Channel with 13 videos; and
- The RC Program presented and participated in four conferences, held four technical webinars, hosted the 'CA Reach Codes Monthly Meeting' with 48 average participants per month, and had one article published in a blog in 2023.

3. SDGE3253 – SW C&S - Planning and Coordination

Program Segment: Codes and Standards

Program Overview

The planning element of the Planning and Coordination (PC) subprogram includes long-term planning and scenario analyses, modeling of impacts from potential C&S program activities relative to California policy goals and incentive programs, development of business and implementation plans, responses to CPUC and other data requests, updating the incremental measure costs for C&S measures, and maintenance of a C&S savings database consistent with evaluation protocols.

The coordination element includes internal and external alignment with other groups. Internal activities have traditionally included collaboration with several departments: a) incentive, training, and demand response programs; b) policy, regulatory, and corporate affairs; and c) emerging technology and product teams. More recently, as building codes have begun to incorporate distributed generation, electric vehicles and batteries, coordination has expanded to strategy integration, distributed generation programs, clean transportation and others involved in grid management.

Program Strategies and Outcomes

The integrated PC subprogram approach requires managing perspectives, relationships, and expectations of multiple market actors. Codes and standards impact the entire state and most

building types, occupancy categories, and related technologies. The PC subprogram requires collaboration with a significant number of stakeholders who either influence or implement codes and standards for buildings and appliances.

With the absence of a formal C&S ZNE or decarbonization subprogram, the C&S PC subprogram has taken the lead to coordinate the various EE and non-EE aspects necessary to effectively support customers and the building industry to meet the state's ZNE and decarbonization goals. The ZNE effort is not limited to Title 24 and also supports the California Department of General Services' ZNE and decarbonization goals and the design and construction industry's efforts to meet the various ZNE goals.

The PC subprogram created multiple ZNE market resources to move the construction market toward ZNE, GHG and climate goals including, updating the "Energy Education and Resource Hub for the San Diego Region" which was designed to target the local governments, Port of San Diego, San Diego International Airport, SANDAG (San Diego Association of Governments), and other key local agency stakeholders. The site gives quick access to energy code trainings and workshops (CE subprogram), Title 24 Part 6 resources (CE subprogram), reach codes resources (RC subprogram), ZNE and decarbonization resources (PC subprogram), and a selection of regional Case Studies to showcase high profile ZNE and decarbonization projects in the San Diego Region. This website is part of the ongoing work with the "San Diego Regional Climate Collaborative" to achieve GHG climate goals.

Additionally, the PC program is in the process of developing electrification fact sheets to educate all market stakeholders in understanding the code requirements and benefit of electrification end-uses including heat pump water heaters, heat pump air conditioners, electric induction cooktops, heat pump dryers, and commercial electric cooking technologies. These fact sheets will also include references to rebate, incentive, and financing programs that are available to align the code requirements with funding sources.

The PC subprogram continues to support the development of recommendations to update the electric vehicle infrastructure and electric vehicle supply equipment (EVSE) requirements in CALGreen (Title 24, Part 11) for the Interim Code Cycle (effective 7/1/2024) using the CASE report methodology, including a cost/benefit analysis. The PC team coordinated with clean transportation team members within SDG&E and with staff from SCE and PG&E. The work involved analysis and supporting information on expanding requirements for electric vehicle

infrastructure and EVSE in multifamily and non-residential new construction scenarios for light, medium and heavy-duty vehicles. This analysis was developed to support CARB's request for enhancements to the electric vehicle infrastructure and EVSE requirements in the CALGreen Interim Code Cycle (Title 24, Part 11) to the California Building Standards Commission (BSC) and California's Housing and Community Development (HCD).

The planning and coordination activities require a strong ability to develop, manage and deliver codes and standards strategies to meet the ZNE and decarbonization goals in the future years. This PC subprogram will continue to adapt as more market actors look to the building and appliance standards to meet California climate goals. These planning and coordination activities will continue to become more important as more stakeholders and market actors begin to drive the innovation needed to deliver aggressive climate and emission reduction goals.

4. SDGE3254 – Local WE&T Integrated Energy Education Training (IEET)

Program Segment: Market Support

Program Overview

The Workforce, Education & Training (WE&T) program, also named Integrated Energy Education and Training (IEET) Subprogram, focused on skills and market development training and education. IEET was composed of specific market sectors including commercial and residential sectors. There were two components to IEET: Technical Upskill and Core Energy Education Collaboration (CEEC). Technical Upskill provided training and education courses to promote industry trends and developments for advancing energy efficiency as a professional discipline. Technical Upskill was tailored towards people in a job/career, seeking energy-focused upskilling. CEEC was an initiative to reach training and educational organizations with the goal of forming strategic partnerships to reach a broader range of the workforce. SDG&E collaborated with various partners to infuse EE curriculum or add it as a stand-alone option to promote the advancement of EE as a professional discipline.

Program Strategies and Outcomes

SDG&E continued to offer virtual training through the Technical Upskill component of the WE&T program. Certification training and certificate programs were offered through several workshops. The Building Operator Certification, North American Technician for Excellence (NATE), and Building Performance Institute (BPI) Analyst Certification are examples of exam

prep and proctored exam trainings offered in 2023. SDG&E offered Home Energy Rating System (HERS) certification courses to home performance professionals that provided an overview of the California Home Energy Rating System Program. These courses covered residential, non-residential, solar, new construction as well as California Residential Energy Services Network (CA RESNET). In the BPI Analyst Certification course, students learned how to perform comprehensive, whole-home assessments, identify problems at their root cause, and prescribe and prioritize solutions based on building science. The certification verified the knowledge, skills and abilities needed to conduct comprehensive building performance audits, including assessing whole-building ventilation, measuring airflows, combustion safety, and testing/data collection. SDG&E continued EPA 608 Type II and EPA 608 Universal certification courses in 2023. These included topics such as environmental impacts of various materials, regulations, and how to provide a safe and eco-friendly outcome with each service. The Type II Certification Preparation course was geared towards leak detection, equipment testing, and recovery techniques and requirements.

SDG&E also offered more than 200 self-paced training modules for various segments, including HVAC NATE Certification. This on-demand training option allowed participants to attend training during a time that best suited their schedules. These classes provided an in-depth understanding of HVAC quality maintenance and installation for both commercial and residential systems. More than 2,500 participants viewed on-Demand training courses.

SDG&E continued to offer a comprehensive homeowner series that addressed utility bills, benefits of a high-performance home by installing energy efficient equipment and learning how to correctly size a solar system. The advanced multi-part Home Energy series for Home Professionals was offered and geared toward contractors, real estate professionals, and jobseekers who are intending on upskilling to enter the building performance/energy efficiency industries. Topics included key components of a home energy audit, creating an integrated whole home project strategy, building science theory, heat pumps, sizing solar systems and energy storage.

Real estate professionals, which include agents, appraisers, lenders, and related industries were offered training on the value of energy efficiency when buying and selling in the residential market. Training included the fundamental benefits of carbon free high-performance homes and the added value of solar powered all-electric homes. New offerings in 2023 to the real estate

segment included a series of one-on-one mentoring sessions to advance the value of energy efficiency in the market.

SDG&E continued to grow partnerships with several organizations in 2023, which resulted in several collaborations for the CEEC component of the WE&T program. Energize Colleges was a new collaboration for faculty and staff to share resources, best practices, integrate project-based learning experiences and expanded career preparation with a focus on IDSM. While this collaboration had moderate success, there were issues with schedules, planned activities and competing priorities. As in previous years, the challenge of competing priorities led to some collaborations not able to fulfill all planned activities.

SDG&E's marketing campaigns, including banner ads and emails, focused on directing customers to the WE&T program landing page for registration. As a result of 2023, marketing efforts included:

- Average open rate of 23%;
- Nine certification workshops offered to approximately 8,400 students through Technical Upskill;
- Ten training courses for residential real estate professionals;
- 100 residential customers participated in the home energy training; and
- 95% customer satisfaction rate.

SDG&E began the solicitation process at the end of 2022 and closed the program at the end of 2023.²²

5. **SDGE3280 – 3P-IDEEA**

Program Segment: Market Support

Program Overview

SDG&E, along with the other IOUs, established IDEEA, a cross-cutting third-party solicitation program that supports the "rolling" solicitation concept and is focused on new, innovative programs. The program was designed to allow for continuous introduction of innovative ideas and technologies into the energy efficiency portfolio by drawing from the skill, experience, and creativity of the energy efficiency community and third-party implementers. The IDEEA Program creates a mechanism for competitive, year-round solicitations for new third-party programs under the three portfolio segments:

See SDG&E AL 4355-E, effective date of February 11, 2024.

- Resource Acquisition: programs that produce cost effective energy savings and demand reduction.
- Market Support: programs that focus on educating customers, training contractors, building government partnerships, or moving beneficial technologies towards greater cost effectiveness.
- Equity: programs aimed at improving access to energy efficiency programs for hard-to-reach or underserved customers and disadvantaged communities.

Program Strategies and Outcomes

D.16-08-019 clarified that the new third-party programs must be designed and presented to the utility program administrator by the third-party, however, utilities may consult and collaborate, using their expertise, on the ultimate program design implemented by the third-party.

In 2018, SDG&E began the implementation of these solicitations, which included setting up its Energy Efficiency Procurement Review Group (EE PRG), hiring Independent Evaluators (IE) and developing best practices with other utilities. In 2023, SDG&E continued to develop and refine internal processes and procedures, utilizing supply management best practices and an experienced team to ensure that all the guidelines and requirements of the Commission and the EE PRG were met.

Pursuant to Commission direction, SDG&E continued to develop and launch third-party solicitations. Engagement continued with the EE PRG and the pool of Independent Evaluators to monitor the solicitation process and provide input and feedback. The collaboration resulted in best practices and lessons learned. In 2023, SDG&E executed contracts for the following programs, which contributed to SDG&E exceeding the 60% compliance requirement:

SOLICITATION	ADVICE LETTER FILED	ADVICE LETTER APPROVED	IMPLEMENTATION PLAN WEBINAR
SW Residential HVAC QI/QM	1/25/2023	2/24/2023	4/11/2023
Small Business Outreach	9/15/2023	10/16/2023	12/05/2023

6. SDGE3262 – SW- FIN - On-Bill Finance (OBF)

Program Segment: Market Support

Program Overview

The OBF Program is SDG&E's interest-free, unsecured finance offering designed to facilitate the purchase and installation of comprehensive qualified energy efficiency and demand response measures for non-residential customers, including multifamily property owners or

management companies, who might not otherwise install EE measures, primarily due to capital constraints. Approved customers who install qualified equipment are eligible to receive a full rebate or incentive by participating in SDG&E or third-party programs and financing for the project cost balance. Customer loans are repaid through a fixed monthly installment repaid through the customer's utility bill.

Program Strategies and Outcomes

OBF coordinates with SDG&E and third-party programs to support financing of approved measures and projects. The OBF staff works closely with third-party program implementers and IOU programs advisors by offering support resources throughout the customer's energy efficiency journey, enabling SDG&E to provide alternative options for customers who may have financial constraints to install EE projects. By enabling qualified customers to complete energy efficiency projects with no up-front costs, OBF eliminates one of the major barriers to participation in energy efficiency. SDG&E has seen a reduction in projects as legacy and core programs have transitioned to new program implementers. SDG&E continues to implement a customer cap to ensure that funding remains available for more customers.

SDG&E's OBF Program continues to be a practical and efficient means for customers to install energy efficiency measures they may not otherwise be able to afford. SDG&E's 2023 existing loan default rate of one percent is consistently low year over year. Projects that were facilitated by an OBF loan enabled savings of approximately 1.3M kWh, 56 kW and 2,500 therms. Payback and eligibility requirements for business projects to qualify continue to be a challenge for some customers. For comprehensive, multi-measure projects, the payback tends to be much longer than the 15-year maximum required for business projects to qualify. SDG&E will continue to review protocol to ensure that the correct policies are in place while allowing the maximum number of qualified customers to participate.

Since its inception in 2006, SDG&E's OBF program has funded nearly 1,650 projects/loans totaling approximately \$70 million as of year-end 2023.

X. OTHER PROGRAMS AND ACTIVITIES

SDGE3281 – EM&V Evaluation Measurement and Verification A.

EM&V activities are designed to 1) inform the program selection process, 2) provide early feedback to program implementers, 3) produce impact evaluations at the end of the funding period, and 4) provide feedback into the planning process for future program cycles.

- SDG&E took part in the development of the statewide EM&V 2021-2023 roadmap that outlines the various EM&V studies that the Commission's Energy Division and utilities will manage in 2022 and 2023. SDG&E either managed or participated in statewide studies through the various Project Coordinating Groups (PCGs) that support these studies in 2023.
- SDG&E completed its EE Residential Market Study and renamed it EE Residential Pulse Check Study. This study was proposed in the previous EM&V roadmap and the CPUC approved use of the contracted vendor, Opinion Dynamics. By the end of 2023, the study was completed, and the final version of the report was posted to California Measurement Advisory Council (CALMAC).
- SDG&E also commenced a co-funded study with the lead PA, PG&E, for Early Home Energy Reports (HER) Measurement and Verification study.
- Pursuant to D.23-04-035, SDG&E participated in the IOU-led market studies where the lead PA, SCE, has contracted the services of Opinion Dynamics.
- Pursuant to D.23-04-035 and D.23-06-055, the SDG&E EM&V team participated in various working groups including the viable electric alternatives (VEA) FS infrastructure cost and Market Rate Non-Energy Benefits (NEBs). SDG&E's EM&V team worked with internal stakeholders to communicate the Request for Recommendations from impact evaluations.
- SDG&E EM&V team members contributed to the third-party EE Solicitations.

In D.16-08-019, the Commission increased the portion of the EM&V budget assigned to program administrators from 27.5% to a maximum of 40%.²³ Additionally, D.16-08-019 states, "[a]dditional budget beyond the current 27.5 percent earmarked for program administrators, and up to the 40 percent cap allowed herein, should be designated only for the additional activities associated with the change in EM&V priorities and activities articulated in this decision."²⁴ In 2023, SDG&E submitted adjustments to the EM&V budget in its True-Up Advice Letter.²⁵

Resolution (Res.) E-5152 also notes that the Energy Division "agree[s] with SDG&E that support for CalTF may be considered either program- or evaluation-related, and therefore grants

D.16-08-019 at 80-81.

²⁴ *Id.* at 81.

SDG&E AL 4302-E, effective date of November 15, 2023 at 32 - 35.

the IOUs the discretion to determine whether to categorize the activity as program implementation funding or EM&V for budgeting purposes."²⁶

1. Market Transformation

D.19-12-021 requires the IOUs co-fund a \$310 million dollar initiative to transform the energy efficiency market. PG&E is the lead fiscal agent and selected Resource Innovations as the third-party Program Administrator. SDG&E's portion of the Co-Funding Agreement is \$43.4M paid over 8 years, with cost recovery through the Public Purpose Program charge. Resource Innovations is partnering with Cadmus Group, 2050 Partners, Ortiz Group, BRIO, and Unrooz Solutions to design market transformation initiatives and then bid out their implementation.

As part of this process, a Market Transformation Advisory Board (MTAB) reviews and opines on initiatives. The MTAB consists of subject matter experts representing stakeholders and includes a rotating IOU representative. Over the long term, the efforts launched by Resource Innovations are intended to transition to an independent, nonprofit organization dedicated solely to market transformation in California.

2. California Analysis Tool for Locational Energy Assessment (CATALENA)

The CATALENA tool is intended to expand the previously approved Energy Atlas to statewide use including both the public-facing database and the back-end geospatial relational database, making disaggregated demand data accessible to qualifying users.

In preparation for the launch of the SW CATALENA project, IOUs have created a work scope for the CATALENA website and database system that provides users access to aggregated energy use profiles of residential, commercial, industrial, and agricultural customers within the IOUs' service territories. CATALENA may also combine energy use data with other relevant information, potentially including (i) energy efficiency program deployment; (ii) electric vehicle and charging station data; (iii) behind-the-meter solar and storage capacity, and (iv) other relevant public data. CATALENA is anticipated to be capable of displaying data through graphs, charts, and (potentially) an interactive map.

Changes for 2023

On February 3, 2023, the Commission issued D.23-02-002, which indicates the Commission's intent to seek a memorandum of understanding with the CEC to implement CATALENA. The Decision also "directs the IOUs to allocate \$2 million specified in D.18-05-

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²⁶ Res. E-5152 (August 5, 2021) at 26.

041 to a new accounting mechanism (e.g., a balancing account or sub-balancing account) for the purpose of transferring those funds to the CEC to develop and maintain the tool."²⁷

On April 3, 2023, pursuant to OP 16 of D.23-02-002, PG&E submitted a joint Tier 1 advice letter on behalf of PG&E, SDG&E, SoCalGas, and SCE to document the process for jointly funding CATALENA.²⁸ The Advice Letter was subsequently approved by Disposition on May 5, 2023.

Pursuant to AL 4197-E/3184-G, SDG&E has complied with D.23-02-002 by establishing an accounting mechanism for tracking and managing that IOU's share of the \$2 million total authorized budget. CATALENA funding will be tracked separately from other EE funding. "The advice letter also confirms that SDG&E will comply with OP 17 of D.23-02-002 and will 'transfer the full amount in the accounting mechanism required by Ordering Paragraph 16 to the CEC within 15 days after the CPUC provides notice to the service list that the CPUC and the CEC have executed a memorandum of understanding or other agreement for the CEC to implement the CATALENA."

XI. <u>CONCLUSION</u>

In 2023, SDG&E's portfolio strove to meet the requirements set forth in various Decisions. The portfolio surpassed the 60 percent third-party implementation spend goal and its therms goal. The portfolio also kept Market Support & Equity spend under the 30 percent cap and energy efficiency administrative spend under 10 percent. However, the portfolio fell short of achieving overall portfolio cost-effectiveness (TRC) of 1.0, did not meet the statewide program spend goal for 2023 goal of 25 percent (revised to 20 percent for 2024), and did not succeed in meeting its MW or GWh savings goal despite the efforts of SDG&E and its third-party implementers. Market Support and Equity programs are providing significant customer support and training, but do not produce calculable energy savings. SDG&E's behavioral and Codes & Standards programming produces the supermajority of energy savings within SDG&E's portfolio.

SDG&E looks forward to working with the CPUC and the other energy efficiency program administrators to thoughtfully consider the future administration and management of energy

²⁸ *Id.*; see also SDG&E AL 4197-E/3184-G.

²⁷ D.23-02-002 at 60.

²⁹ SDG&E AL 4197-E/3184-G, effective date of April 23, 2023, at 2 (citation omitted).

efficiency programming in the 2024-2027 program cycle, with a focus on affordability and efficacy, in support of customers' transition to electrification and decarbonization.

APPENDIX A Annual Report Tables

https://www.sdge.com/rates-and-regulations/regulatory-filing/914/energy-efficiency-filings and For greater accessibility, files and data tables are available on SDG&E's website at: on CEDARS at: https://cedars.sound-data.com/documents/standalone/list/.

SECTION 1 -	The purpose of Table 1 is to report the savings achievements of the energy efficiency portfolio of programs
SAVINGS & GOALS	
	impacts are reported for 2023 in terms of annual and lifecycle energy savings in GWh (gigawatt hours), annual and lifecycle natural gas savings in Mth (million therms), and peak demand savings in MW (megawatts). The table shows
SECTION 2 - FUEL	The purpose of Table 2 is to report the annual incremental savings and building infrastructure costs by use category
SUBSTITUTION	for fuel substitution measures. This table provides for separate accounting of reductions in energy savings goals due
SAVINGS	to fuel substitution.
SECTION 3 -	The purpose of Table 3 is to report the annual incremental environmental impacts of the energy efficiency portfolio
ENVIRONMENTAL	(for both electricity and natural gas) of programs implemented by SDG&E during the 2023 program year. The impacts
IMPACTS	should be in terms of annual and lifecycle tons of CO2, NOx, and PM10 avoided and should come from the Cost Effectiveness Tool calculator.
SECTION 4 -	The purpose of Table 4 is to report the annual costs expended by SDG&E in implementing the Energy Efficiency
PROGRAM DATA	portfolio of programs. The report shows the "Total EE Portfolio Expenditures" broken out into the Administrative
	Costs, Marketing/Advertising/Outreach Costs, Direct Implementation Costs, and Evaluation, Measurement and
	Verification (EM&V) Cost categories. This table also includes budget and expenditure dollars for Financing Programs/Pilots
SECTION 5 -	The purpose of Table 5 is to provide sector and segment level energy savings metrics and data with expenditures.
SEGMENT	
SUMMARY	
SECTION 6 - COST	The purpose of Table 6 is to provide an annual update on the cost effectiveness of the energy efficiency portfolio of
EFFECTIVENESS	programs being implemented in the 2023 program year.
SECTION 7 - BILL	The purpose of Table 7 is to report the annual impact of the energy efficiency activities on customer bills relative to
IMPACTS	bills without the energy efficiency programs, as required the Energy Efficiency Policy Manual version 3, adopted in
	D.05-04-051.

SECTION & -	The purpose of Table 8 is to show annual portfolio savings by end-use category, including those savings attributable
SAVINGS BY USE	to the Codes and Standards programs.
CATEGORY	
SECTION 9 -	The purpose of Table 9 is to allow the utilities to report commitments (contractual or incentive) that will produce
COMMITMENTS	savings after December 2023. This information will be useful for the Commission's resource planning purposes by
	enabling program activities to be linked to a particular funding cycle.
SECTION 10 - CAP &	The purpose of Table 10 is to show the annual Cap & Target performance of the energy efficiency portfolio by budget
TARGET	category (Administrative, Marketing & Outreach, Direct Implementation, and EM&V) as defined in D.09-09-047 and
	clarified in D.12-11-015.
SECTION 11 - BP	The purpose of Table 11 is to show portfolio savings for numerous key elements based on the activity of SDG&E's
METRICS TABLE	local portfolio and the service territory customer population.
SECTION 12 - 3P	The purpose of Table 12 is to demonstrate compliance with Commission D.18-01-004 and D. 16-08-019 regarding
CALCULATION	SDG&E's Third-Party Program solicitations.
SECTION 13 – 3P	The purpose of Table 13 is to provide detail on Third Party contract information including program sector, contract
CONTRACT	start and end dates, contract length and contract amount.
INFORMATION	
SECTION 14 - PG&E's	This table is specific to PG&E. As such, it is not included in the SDG&E annual report.
MARKETPLACE	
METRICS	

APPENDIX B Final True Up Reports

True Up Reports

The purpose of the following tables is to show the Annual True-Up Report submitted to each funding IOU by the other IOUs following a program year and included in the program year Annual Report, as required by the various Co-Funding Agreement. The Annual True-Up Report outlines the following:

- amounts funded by each of the IOUs, per the Co-Funding Agreement;
- a summary of program expenditures and the allocation of these expenditures to each of the IOUs;
- a calculation of interest applicable to each IOUs balance after program funding and expenditure amounts; and
- a calculation of any applicable refund to the IOUs.

Section 1 – HVAC

Annual True-Up Report												
Program Name: SW Upstream and Midstream Heating, Ventilation, and Air Conditioning (HVAC) Program												
Program Year: 2023												
Lead: San Diego Gas & Electric												
	Note on Row Content											
Proportional Contribution per Load-Share	45.60%	32.08%	8.36%	13.96%	100.00%	For each IOU: its proportional share per CFA Exhibit B						
Total Monthly CFA Payments Made	\$ 6,238,877.09	\$ 5,006,035.24	\$ 1,304,565.00	\$ 2,178,436.78	\$14,727,914.11	For each IOU: total dollar amount of payments for that Program Year for this SW Program						
Total Interest Payment Accrued *	\$ 45,696.63	\$ 30,352.36	\$ (1,206.31)	\$ 16,496.97	\$ 91,339.65	For each IOU: dollar amount of interest accrued on that IOU's Total Monthly Payments made						
Program Costs Actually Spent	\$ 6,544,238.58	\$ 4,603,929.25	\$ 1,199,777.07	\$ 2,003,455.49	\$14,351,400.39	For each IOU: proportional share of the total program implementer contract costs spent for that Program Year						
Program Costs Committed	\$ 79,766.42	\$ 56,116.38	\$ 14,623.84	\$ 24,419.72	\$ 174,926.36	For each IOU: proportional share of the total program implementer contract costs committed for that Program Year						
Annual True-Up Payment Accrued	\$ (339,431.28)	\$ 376,341.97	\$ 88,957.78	\$ 167,058.54	\$ 292,927.01	For each IOU: dollar amount calculated as: [Total Monthly Payments Made + Total Interest Payment Accrued - Program Contract Costs Spent - Program Contract Costs Committed]						
* Interest is calculated through December 31, 2023 by multiplying the following factors:												
i. the average of the account balance at the beginning of the month and the balance in the account after the program funding and expense but before interest at the end of month ii. one-twelfth of the interest rate on three-month nonfinancial Commercial Paper for the previous month, as reported in the Federal Reserve Statistical Release. H.15. or its successor												

Section 2 – PLA

Annual True-Up Report												
Program Name: SW Plug Load Appliances Program Program Year: 2023												
												Lead: San Diego Gas & Electric
PG&E SCE SCG SDG&E Total Note on Row Content												
Proportional Contribution per Load-												
Share	45.60%	32.08%	8.36%	13.96%	100.00%	For each IOU: its proportional share per CFA Exhibit B						
Total Monthly CFA Payments Made	\$ 6,959,306.47	\$ 4,895,933.15	\$ 1,275,872.88	\$ 2,130,524.53	\$ 15,261,637.03	For each IOU: total dollar amount of payments for that Program Year for this SW Program						
Total Interest Payment Accrued*	\$ 99,516.89	\$ 68,299.99	\$ 12,016.34	\$ 32,246.88	\$ 212,080.10	For each IOU: dollar amount of interest accrued on that IOU's Total Monthly Payments made						
Program Costs Actually Spent	\$ 3,975,034.87	\$ 2,796,471.90	\$ 728,756.39	\$ 1,216,918.57	\$ 8,717,181.73	For each IOU: proportional share of the total program implementer contract costs spent for that Program Year						
Program Costs Committed	\$ 485,678.17	\$ 341,678.85	\$ 89,041.00	\$ 148,685.69	\$ 1,065,083.71	For each IOU: proportional share of the total program implementer contract costs committed for that Program Year						
Annual True-Up Payment Accrued	\$ 2.598.110.32	\$1.826.082.39	\$ 470,091,83	\$ 797.167.15	\$ 5,691,451,69	For each IOU: dollar amount calculated as: [Total Monthly Payments Made + Total Interest Payment Accrued - Progra Contract Costs Spent - Program Contract Costs Committed						
* Interest is calculated through Decemb	\$2,598,110.32 \$1,826,082.39 \$ 470,091.83 \$ 797,167.15 \$ 5,691,451.69 Contract Costs Spent - Program Contract Costs Comm Interest is calculated through December 31, 2023 by multiplying the following factors:											
i. the average of the account balance and expense but before interest at the ii. one-twelfth of the interest rate on	at the beginning o	of the month and t	the balance in the									

Section 3 – HVAC QI/QM

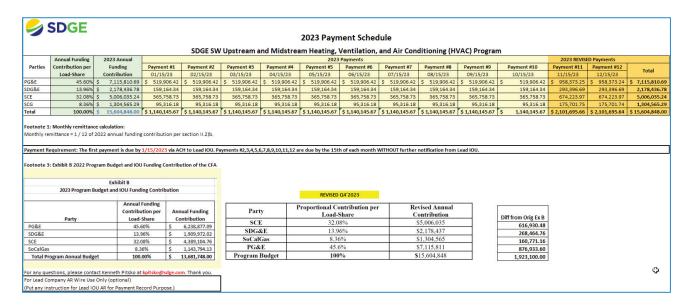
Annual True-Up Report												
Program Name: SW Residential HVAC Quality Installation/Quality Maintenance Program (ENERGY EFFICIENCY)												
Program Year: 2023 Energy Efficiency												
Lead: San Diego Gas & Electric												
	PG&E SCE SCG SDG&E Total Note on Row Content											
	Proportional Contribution per											
Exhibit B	For each IOU: its proportional share per CFA Exhibit B	100.00%	13.96%		8.36%	32.08%		45.60%	Load-Share			
s for that	For each IOU: total dollar amount of payments for tha Program Year for this SW Program	\$ 6,900,000.03	963,240.00	\$	\$ 576,840.00	2,213,520.03	.00 \$	\$ 3,146,400.00	Total Monthly CFA Payments Made			
ed on that IOU's	For each IOU: dollar amount of interest accrued on the Total Monthly Payments made	\$ 59,170.09	9,258.29	\$	\$ 5,540.21	11,455.18	.41 \$	\$ 32,916.41	Total Interest Payment Accrued *			
	For each IOU: proportional share of the total program implementer contract costs spent for that Program Ye	Program Costs Actually Spent \$ 1,061,058.53 \$ 746,463.98 \$ 194,527.40 \$ 324,832.83 \$ 2,326,882.74										
	For each IOU: proportional share of the total program implementer contract costs committed for that Progra	\$ -										
rued - Program	For each IOU: dollar amount calculated as: [Total Mon Payments Made + Total Interest Payment Accrued - Pr Contract Costs Spent - Program Contract Costs Comm	Annual True-Up Payment Accrued \$ 2,118,257.88 \$ 1,478,511.23 \$ 387,852.81 \$ 647,665.46 \$ 4,632,287.38										
	* Interest is calculated through December 31, 2023 by multiplying the following factors:											
		ogram funding	unt after the pr	ccou	alance in the a	nonth and the b	g of the	t the beginning of	i. the average of the account balance at			
		and expense but before interest at the end of month ii. one-twelfth of the interest rate on three-month nonfinancial Commercial Paper for the previous month, as reported in the Federal Reserve Statistical Release, H.15. or its successor										
	For each IOU: proportional share of the total implementer contract costs spent for that Pro For each IOU: proportional share of the total implementer contract costs committed for the For each IOU: dollar amount calculated as: [To Payments Made + Total Interest Payment Acc	\$ 2,326,882.74 \$ - \$ 4,632,287.38 ogram funding	S 32,916.41 S 11,455.18 S 5,540.21 S 9,258.29 S 59,170.01									

Annual True-Up Report												
Program Name: SW Residential HVAC Quality Installation/Quality Maintenance Program (DEMAND RESPONSE)												
Program Year: 2023 Demand Response												
Lead: San Diego Gas & Electric												
PG&E SCE SCG SDG&E Total										Note on Row Content		
Proportional Contribution per												
Load-Share		44.40%		40.10%		0.00%		15.50%		100.00%	For each IOU: its proportional share per CFA Exhibit B	
Total Monthly CFA Payments Made											For each IOU: total dollar amount of payments for that	
Total Monthly CFA Payments Made	\$	25,816.38	\$	23,316.15	\$	-	\$	9,012.47	\$	58,145.00	Program Year for this SW Program	
											For each IOU: dollar amount of interest accrued on that IOU's	
Total Interest Payment Accrued *	\$	332.49	\$	115.71	\$	-	\$	93.52	\$	541.72	Total Monthly Payments made	
Dungung Control Antoni No. Superst											For each IOU: proportional share of the total program	
Program Costs Actually Spent	\$	3,058.94	\$	2,762.69	\$	-	\$	1,067.87	\$	6,889.50	implementer contract costs spent for that Program Year	
Program Costs Committed										For each IOU: proportional share of the total program		
Program costs committed	\$	_	\$	_	\$	-	\$	_	\$	_	implementer contract costs committed for that Program Year	
Annual True Un Dayment Assrued											For each IOU: dollar amount calculated as: [Total Monthly	
Annual True-Up Payment Accrued											Payments Made + Total Interest Payment Accrued - Program	
	\$	23,089.93	\$	20,669.17	\$	-	\$	8,038.12	\$	51,797.22	Contract Costs Spent - Program Contract Costs Committed]	
Interest is calculated through December 31, 2023 by multiplying the following factors:												
i. the average of the account balance	at th	e beginning of	the	month and the	bal	ance in the a	ccou	unt after the pr	ogr	am funding		
and expense but before interest at th												
ii. one-twelfth of the interest rate on	three	e-month nonfir	anc	ial Commercial	Pa	per for the pr	evic	ous month, as r	repo	orted in the		
Federal Reserve Statistical Release, H.15. or its successor												

Section 4 - 2023 PAYMENT SCHEDULE

The purpose of the following tables is to show the timing of the amounts funded by each IOU for the 2023 program year for each SDG&E Lead SW program.

SW HVAC



SW PLA



PG&E SDG&E SCE

2023 Payment Schedule

SW Plug-Load and Appliance Program Tribution Cartification (a Controlling Con

Footnote 1: Monthly remittance calculation: Monthly remittance = 1 / 2 of 2023 annual funding contribution per section II.2.b.

2023 Annual Funding Contribution

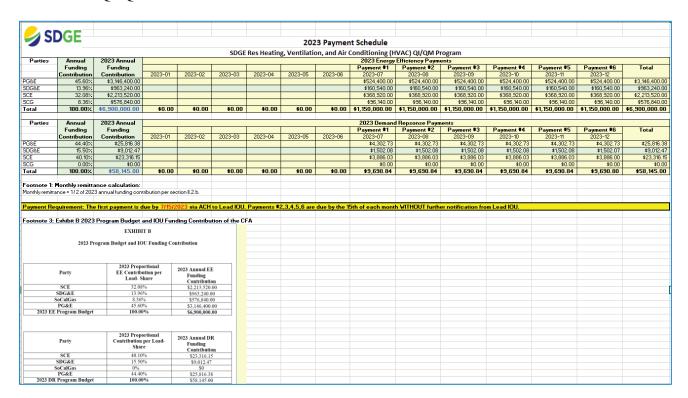
Payment Requirement: The first payment is due by 1/15/2023 via ACH to Lead IOU. Payments #2,3,4,5,6,7,8,9,10,11,12 are due by the 15th of each month WITHOUT further notification from Lead IOU.

Footnote 3: Exhibit B 2023 Program Budget and IOU Funding Contribution of the CFA

	Exhibit B									
2023 Program Budget and IOU Funding Contribution										
Annual Funding Contribution per Annual F										
PG&E	45.60%	\$ 6,955,706.47								
SDG&E	13.96%	\$ 2,130,524.53								
SCE	32.08%	\$ 4,895,933.15								
SoCalGas	8.36%	\$ 1,275,872.85								
Total Program Annual Budget	100.00%	\$ 15,261,637.00								

For any questions, please contact Kenneth Pitsko at kpitsko@sdge.com. Thank you.

SW HVAC QI/QM



APPENDIX C Revisions to SDG&E's 2022 Annual Report

SW PLA & HVAC

SDG&E discovered that certain Publicly Owned Utility (POU) electric customers were enrolled in the SW PLA (2 project) and HVAC programs (21 projects) for program years 2022 and 2023 for fuel substitution measures. After review of D.19-08-009, SDG&E determined these customers do not qualify for fuel substitution measures because they receive electric service from POUs. 30 As such, these enrollments and all associated savings have been cancelled and paid with non-ratepayer funds and contracts have been amended accordingly. SDG&E is not claiming savings for these electric fuel substitution POU enrollments in 2023.

RCx

As part of the 2022 Commercial Industrial Agricultural Custom (CIAC) Evaluation, SDG&E received a question regarding the reported claims for a HOPPs RCx project, which led to SDG&E identifying certain inconsistencies with reporting methods for the program. SDG&E then met with Commission Staff and discussed further at a Reporting Project Coordination Group (PCG) meeting, to determine the appropriate approach for claiming projects with multiyear savings. It was agreed upon that for active projects, SDG&E would utilize the Parent Claim ID and report the difference in savings claims each year using the previous year's verified savings as the baseline, and that for closed projects SDG&E would do a final true-up in the 2023 Annual Report.

Please see the table below with the adjusted numbers for closed projects.

	Difference Between Final	Difference Between Final	Difference Between Final	Difference Between	Difference Between Final	Difference Between Final
	AdjNetkWh1stBaseline	AdjNetkW1stBaseline	AdjNetTherm1stBaseline	FinalAdjLifecyleNetkWh	AdjLifecyleNetkW Versus	AdjLifecyleNetTherm
ParentClaimID	Versus Reported ▼	Versus Reported ▼	Versus Reported ▼	Versus Reported ▼	Reported	Versus Reported ▼
SDGE-2018-3317-10732239-9209562	(404,457)	17	(51,232)	(1,213,370)	50.09	(78,635)
SDGE-2018-3317-10737532-1930361	(216,710)	(8)		(497,249)	(22.97)	(27,696)
SDGE-2019-3317-10739477-11500606	(373,623)	-	(84,072)	(1,120,869)	-	(252,216)
SDGE-2018-3317-10739649-9056814	(446,248)	(43)	-	(1,338,743)	(129.38)	-
SDGE-2019-3317-10786858-12107627	(385,285)	(76)	(21,780)	(1,155,856)	(227.25)	(65,340)
SDGE-2018-3317-10786859-9146200	(413,059)	-	(60,657)	(1,239,178)	-	(181,972)
SDGE-2019-3317-10793127-11525537	(763,740)	(198)	(24,084)	(2,291,220)	(593.99)	(72,251)
SDGE-2018-3317-10812859-9056820	(409,027)	(34)	(3,962)	(1,202,050)	(100.65)	(11,887)
SDGE-2020-3317-10868092-12619436	(480,630)	(13)	(23,706)	(480,630)	(12.90)	(27,534)
SDGE-2020-3317-10873228-13108199	(1,365,217)	(39)	(10,326)	(1,365,217)	(38.50)	(10,326)
	(5,257,997)	(393)	(279,819)	(11,904,382)	(1,076)	(727,857)

Disadvantaged Communities (DAC)

It was discovered during KPI analysis that SDG&E's project management system was referencing CalEnviroScreen 3.0 and not the most recent DAC list, CalEnviroScreen 4.0.³¹ Once the issue was identified, the current version was uploaded, revealing a group of participating customers' addresses are no longer categorized as being within a DAC. According to reporting criteria, these projects no longer qualify for the higher hard-to-reach net to gross ratio. Therefore, the savings for 2022 for one program was inadvertently overstated by 937 Therms (0.10% of overall program Therms saved).

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D.19-08-009 at OP 5, which states: "Fuel substitution measures and associated program costs shall be funded by the ratepayers of the new fuel, not ratepayers of the fuel being substituted."

See Office of Environmental Health Hazard Assessment, Scoring & Model, available at https://oehha.ca.gov/calenviroscreen/scoring-model.

Multifamily

During a quality assurance review of enrollment documentation, SDG&E discovered that the implementer did not collect the necessary preponderance of evidence for one advanced replacement lighting project in 2022. As such, the project was cancelled, and a manual credit was applied to the December 2023 invoice.

APPENDIX D 2023 Programs Transitioned/Closed to New Enrollments

The following list includes those programs that have been closed via SDG&E's September 2023 True Up AL 4302-E. The programs have been closed to new enrollments or otherwise transitioned to a new statewide offering during 2023.

The limited activity in 2023 related to these programs may include: final payments on legacy enrollments, ramp down activities, associated contracted events or training, or final monitoring. Program descriptions and outcomes may be found in 2022 Annual Report Narrative or the recent True Up Advice Filing.

- 3201 HERs Home Energy Audit
- 3222 Savings By Design
- 4011 K-12 EE Program
- 3246 Technology Introduction Support
- 3247 Technology Assessment Support
- 3248 Technology Development Support
- 3261 Residential Behavioral Program
- 3317 HOPPs Retrocommissioning
- 3237 / 3220 / 3231 Energy Efficiency Business Incentives
- 3327 Commercial Retrocommissioning
- 3322 SAE
- 3227 Industrial Strategic Energy Management
- 3267 Community College Partnership
- 3268 UC/CSU/Partnership