Application No.: A.19-11-
Exhibit No.: SDG&E-
Witness: Sara Nordin

PREPARED DIRECT TESTIMONY OF

SARA NORDIN

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY'S

ENERGY SAVINGS ASSISTANCE PROGRAM PLANS

AND BUDGETS FOR PROGRAM YEARS 2021 THROUGH 2026

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

NOVEMBER 4, 2019

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ENERGY SAVINGS ASSISTANCE PROGRAM PLANS AND BUDGETS FOR PROGRAM YEARS 2021 THROUGH 2026

I. ESA PROGRAM PLAN AND BUDGET

A. Program Context

1. History:

Provide a brief history of the ESA Program and how it helps low-income households, how it is funded, and how the program has changed over the years, including any relevant prior guidance given by the Commission.

The Energy Savings Assistance (ESA) Program[1] has offered energy saving and no cost home improvements to income-qualified customers since the early 1980's. The ESA Program is ratepayer funded through the Public Purpose Program (PPP) surcharge, available to residential customers living in all housing types (single family, multifamily, and mobile homes), and applicable to homeowners and renters. Historically, the ESA Program has been primarily designed to meet the California Public Utilities Commission's (Commission or CPUC) equity objectives of assisting customers who are highly unlikely, or unable to participate in other residential energy efficiency programs. Over time, the focus of the ESA Program has evolved to include other goals reflecting changes in energy markets and the environment, and the needs of low-income customers and the larger community.[2] In D.07-12-051, the Commission updated its policy objectives for the ESA Program stating:

[1] The ESA Program was formerly known as the Low Income Energy Efficiency Program (LIEE).

[2] Decision (D.)07-12-051 at 3.

> [T]he key policy objective for the LIEE programs, like that of our non-LIEE energy efficiency programs, is to provide cost-effective energy savings that serve as an energy resource and to promote environmental benefits. Concurrently, we retain our commitment to ensuring the LIEE programs add to the participant's quality of life, which implicates, equity, energy affordability, bill savings and safety and comfort for those customers who participate in LIEE programs.[3]

To achieve these objectives, the Commission adopted a programmatic initiative "to provide all eligible LIEE customers the opportunity to participate in LIEE programs and to offer those who wish to participate all cost-effective energy efficiency measures in their residences by 2020."[4]

In July 2008, Commission staff issued the California Energy Efficiency Strategic Plan CEESP),[5] which provides program guidance to the utilities. The CEESP was designed to increase the opportunities for program participation and energy savings, improve leveraging and integration efforts, improve the ESA Program workforce training requirements so as to facilitate participation of minority and other disadvantaged communities, emphasize long-term and enduring energy savings, and organize program marketing, education, and outreach consistent with CEESP strategies.

In subsequent decisions since the issuance of D.07-12-051, the Commission reaffirms its key objective which is referred to in this application as the "2020 homes treated" goal. This key objective was later codified into California Public Utilities Code (P.U. Code) Section (§) 382(e) which requires;

> The commission shall, by not later than December 31, 2020, ensure that all eligible low-income electricity and gas customers are given the opportunity to participate in low-income energy efficiency programs, including customers occupying apartments or similar multiunit residential structures. The commission and electrical corporations and gas corporations shall make all reasonable efforts

[3] D.07-12-051 at 25.

[4] D.07-12-051 at 2.

[5] The CEESP adopted in D.08-09-040 and updated January 2011.

> to coordinate ratepayer-funded programs with other energy conservation and efficiency programs and to obtain additional federal funding to support actions undertaken pursuant to this subdivision. These programs shall be designed to provide long-term reductions in energy consumption at the dwelling unit based on an audit or assessment of the dwelling unit, and may include improved insulation, energy efficient appliances, measures that utilize solar energy, and other improvements to the physical structure."[6]

At present, the ESA Program strives to help income-qualified customers reduce their energy consumption and costs, while increasing their health, comfort, and safety. The ESA Program offers its low-income natural gas and electricity customers weatherization services, energy efficiency lighting, energy efficient appliances, energy education, and other services at no cost.

The ESA Program eligibility guidelines are based on several factors for participation, which include, but are not limited to, the following: household income eligibility, the utility fuel provided to the dwelling, structural feasibility, landlord approval, and the need for energy efficient measures offered through the ESA Program. San Diego Gas & Electric Company (SDG&E) uses the joint utility methodology adopted by the Commission in D.01-03-028[7] to determine the estimated eligible population for the ESA Program. As part of the approved methodology, a consultant produces population estimates for the California IOUs based on analysis of census data and other data sources. Additionally, customers must meet the requirements of at least one of the following categories to be eligible to participate in the ESA Program:

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[6] P.U. Code § 382(e).

[7] D.01-03-028, 2001 Cal. PUC Lexis 222.

1. Income Below Federal Poverty Guidelines (FPG) - For purposes of determining ESA Program income eligibility,[8] all income is considered from all household members, including but not limited to wages, salaries, interest, dividends, child support, spousal support, disability or veterans' benefits, rental income, social security, pensions, and all social welfare program benefits before deductions. Customers enrolling in the program are required to provide documentation of income. The total household income[9] must be equal to or less than 200% of the FPG, with income adjustments for family size, as set forth by the Commission.[10]

2. Categorical Eligibility - Customers may be eligible to participate under categorical eligibility and can be automatically enrolled in the ESA Program based on their current participation in certain local, state, or federal means-tested programs. Customers enrolling in the ESA Program through categorical eligibility are required to show documentation to reflect current participation in one of the following public assistance programs, as adopted by the Commission in D.08-11-031[11] and D.12-08-044:[12]

- Bureau of Indian Affairs General Assistance
- CalFresh/Supplemental Nutrition Assistance Program (SNAP)
- CalWORKS/Temporary Assistance for Needy Families (TANF)
- Head Start Income Eligible (Tribal Only)

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[8] ESA Program income guidelines are consistent with California Alternate Rates for Energy Program (CARE) income guidelines adopted by the Commission.

[9] Pursuant to D.12-08-044, by April 1 of each year, the Energy Division issues the update to the income guidelines for the CARE, ESA, and FERA programs, effective June 1 through May 31.

[10] D.05-10-044 at 7-10 (the "Winter Initiative" decision) set the program eligibility limits at 200% of the Federal Poverty Guidelines.

[11] D.08-11-031 at 29.

[12] D.12-08-044 at 212.

- Low Income Home Energy Assistance Program (LIHEAP)
- Medicaid/Medi-Cal for Families A & B
- National School Lunch Program (NSLP)
- Supplemental Security Income (SSI)
- Tribal TANF
- Women, Infant, and Children (WIC) Program

3. Self-Certification - Customers may also be eligible to participate in the ESA Program through self-certification. Self-certification is permitted in certain targeted geographic areas where 80% of the customers are likely to be at or below current ESA Program income guidelines. Customers enrolling in the program through self-certification must sign a "self-certification statement" to certify that the household meets the current income guidelines.

4. CARE Income Qualified - Customers may also be eligible to enroll in the ESA Program if they have been income-qualified through the CARE Program's random post-enrollment verification process. In this case, the utility requests income documentation from the CARE participant which demonstrates that the customer meets the income guidelines for participation in the CARE Program, and as such, the CARE customer is also income verified and is eligible to participate in the ESA Program.

2. Accomplishments and Challenges:

Provide a status update on the household treatment numbers and whether you are on track to meet the household treatment goal for the PY 2017-2020 cycle. Provide a status update on portfolio metrics such as percent of authorized budget spent, gross annual energy savings, etc. Clearly identify any unmet PY 2017-2020 annual targets and

briefly explain the challenges or barriers. (More detail is required later in the guidance.)

Tables 1 through 3, below represent portfolio metrics from Program Year (PY) 2017, PY 2018 and the first eight months of PY 2019 (collectively the "current cycle"), as reported in SDG&E's annual and monthly reports for the ESA Program. For the current cycle, SDG&E anticipates meeting the household retreatment goal and exceeding the first-time homes treated goal by the end of the 2020 program year. As of August 2019, SDG&E has reached 88% of the homes eligible for treatment under the 2020 homes treated goal and estimates completing the final remaining homes in early 2020.

Charts tracking progress of PY 2017 through 2019 annual targets, which were provided by the Commission,[13] are included below. Unmet PY 2017 through August 2019 annual targets include energy savings and demand targets (kWh, kW and therms) for each year. Notably, all of the unmet targets are highly interrelated and are largely tied to number and type of measures installed. Thus, because forecasts for PYs 2017 through 2019 included measure installation targets that were not met, budget targets, savings targets, and demand reduction targets were also unmet. As outlined below in Section D.4, challenges and barriers to measure installation include:

- Paperwork and scheduling
- Lack of trust for solutions delivery by non-SDG&E personnel
- Multiple contractor/customer touch points
- Lack of customer choice for contractors and measures (multifamily)
- Multiple program implementers in the multifamily sector
- Multifamily split incentives

[13] D.17-12-009, as modified by disposition of SDG&E's midcycle Advice Letter (AL) 3250-E/2688-G, approved December 27, 2018 and effective December 27, 2018.

Table 1: ESA Program Summary 2017[14]			
	2017 Authorized	**Actual[15]**	**%**
Budget	$34,313,691	$17,996,714	52%
Homes Treated	20,316	21,677	107%
kWh Saved	6,250,000	3,446,316	55%
kW Demand Reduced	1,398	402	29%
Therms Saved	400,000	208,384	52%
GHG Emissions Reduced (Tons)	5,778	3,115	54%

Table 2: ESA Program Summary 2018[16]			
	2018 Authorized	**Actual[17]**	**%**
Budget[18]	$33,774,223	$22,896,182	68%
Homes Treated	21,332	21,387	100%
kWh Saved	6,560,000	5,514,622	84%
kW Demand Reduced	2,148	3,627	169%
Therms Saved	380,000	178,048	47%
GHG Emissions Reduced (Tons)	5,831	4,075	70%

Table 3: ESA Program Summary through August 2019[19]			
	2019 Authorized	**Actual[20]**	**%**
Budget[21]	$34,652,791	$12,129,651	35%

[14] SDG&E's Low Income Annual Report of 2017 Activity, Program Summary Table, Section 1.2.1.

[15] Total homes treated includes CSD leveraging; multifamily common area properties tracked separately. Energy, demand, and emissions savings reflect total program savings including CSD leveraging and multifamily common area measure installations.

[16] SDG&E's Low Income Annual Report of 2018 Activity, Program Summary Table, Section 1.2.1

[17] Total homes treated includes CSD leveraging; multifamily common area properties tracked separately. Energy, demand, and emissions savings reflect total program savings including CSD leveraging and multifamily common area measure installations.

[18] Budget authorized in CPUC approval of SDG&E AL 3250-E/2688-G, approved December 27, 2018 and effective December 27, 2018 for program years 2019 and 2020.

[19] SDG&E's Low Income Monthly Report for August 2019 Activity, ESA Program Summary Table section 1.1.1.

[20] Total homes treated includes CSD leveraging; multifamily common area properties tracked separately. Energy, demand, and emissions savings reflect total program savings including CSD leveraging and multifamily common area measure installations.

[21] Budget authorized in CPUC approval of SDG&E AL 3250-E/2688-G, approved December 27, 2018 and effective December 27, 2018 for program years 2019 and 2020.

Homes Treated	22,641	7,486	33%
kWh Saved	6,880,000	2,524,609	37%
kW Demand Reduced	3,954	1,759	44%
Therms Saved	400,000	21,319	5%
GHG Emissions Reduced (Tons)	6,124	1,513	25%

3. Looking Forward:

Summarize: a) the significant need (deeper energy savings, treatment goals, etc.) for low-income energy efficiency services beyond 2020 in your service territory, taking into consideration both the cost-effectiveness of the services and the policy of reducing the hardships facing low income households, and b) your overarching proposed strategy given the historic and projected accomplishments, the remaining opportunity areas for addressing a significant need, and c) the appropriate Program design and structure to effectively provide services and comply with statute. (More detail is required later in the guidance).

Significant Need:

SDG&E anticipates meeting the Commission "homes treated" goal as established in D.07-12-051[22] in early 2020. Based on current program cycle savings results, as outlined in Section A.2 above, SDG&E sees a significant need for realizing deeper energy savings. Moving forward, SDG&E proposes a new program strategy which will help low-income customers realize full energy savings potential through enhanced and persistent education and deeper energy savings through focused measure installations. In addition, SDG&E recognizes a significant need to assist low-income customers with issues related to health, comfort and safety. Low-income customers continue to face a disproportionate burden due to the rising cost of rents, goods and services, health care, and other day-to-day costs. Often, these customers replacing a furnace or water heater may face choices between their health or the safety of their home and

[22] D.07-12-051 at 2.

their ability to make ends meet; therefore, ensuring the health, comfort and safety of customers continues to be an important element of future program design.

Overarching Strategy:

The overarching strategy for the proposed program is to: 1) provide low-income customers with the measures and persistent education they need to improve their energy savings potential and reduce their overall energy burden, and 2) create a positive impact on the health, comfort and safety of customers and their homes.

The first outcome is focused on increasing energy savings for customers and providing a portfolio which balances savings while being mindful of portfolio cost-effectiveness. The proposed design and related budget include technologies that will allow greater opportunity for behavioral changes that drive persistent energy savings via long-term education. In addition, SDG&E will examine variable costs by conducting appropriate solicitations for aspects of the program to encourage healthy competition, higher standards of installation, and innovation that may be brought by industry experts not previously involved in low-income programs.

The second outcome is addressed by continuing to deliver measures that contribute to customer health, comfort and safety. SDG&E's proposal to tailor treatment to five "Special Initiative" customer segments, as detailed in Table 5 of Section B.1 below with relevant measures that address their particular needs is a prime example of how strategy has been adapted to deliver on the health, comfort and safety mandate.

Program Design:

At a high level, SDG&E's proposed program design will effectively provide services while complying with statute via:

- Prioritizing[23] enrollments at homes with the greatest potential for energy savings, investing in delivering the program to previously untouched or unwilling customers in high-poverty areas.
- Taking a tiered approach that increases savings potential and prioritizes cost-effectiveness of measure delivery.
- Focusing on the savings potential of behavioral changes, creating persistent energy efficiency savings through online home energy audits and ongoing education.
- Shifting from providing all feasible measures via direct install toward a streamlined model that delivers measures based on customer need and results of a home energy assessment.
- Tailoring customized solutions to five specific segments of customers that are identified as high priority, these segments are outlined in Section B.1 below. SDG&E will treat these customers with measures available through the ESA Program, but also ad hoc products and other non-resource measures to further their ability to allow improvements in health, comfort and safety.

All of this will be done while continuing to serve all low-income customers with measures that improve their health, comfort and safety as long as it is recognized that these measures do not always reduce energy burden. In some cases, measures that improve a customer's health comfort and safety may increase a customer's bill. However, SDG&E recognizes that providing customers with a level of health, comfort and safety remains an important offering for vulnerable populations.

[23] Prioritizing is a targeting methodology meant to identify customers for marketing, outreach or program canvassing. Note that this does not exclude "non priority" participants from engaging with the program.

B. Program Proposal Summary

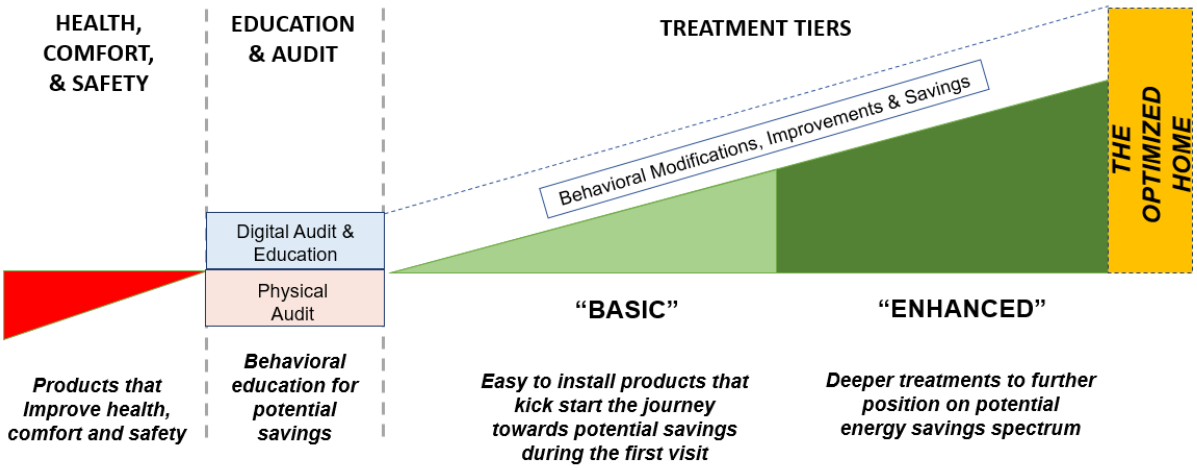
1. Proposal Summary:

Provide a concise description of the proposed ESA Program, not to extend beyond 2026, including a brief description of:

a. New program strategy (e.g. deeper energy savings and reduced hardships).

SDG&E appreciates the opportunity to step back and take a 360-degree assessment of the current processes, products and people that deliver the ESA Program to low-income customers in our service territory. Due to the anticipated accomplishment of our 2020 homes treated goal (projected for early 2020) this application proposes a shift from treating as many customers as possible with all feasible measures to a framework that prioritizes energy savings in prioritized homes that need it most. Figure 1, as described in testimony directly below, is a high-level overview of the program design in simplified form.

Figure 1: ESA Program Design



This application's proposed redesign puts forward three program elements to effectively deliver the program; these are:

- Audit & Education: A new digital platform approach for ongoing customer engagement, paired with traditional delivery to help overcome the digital divide.
- Measure & Treatment Tiers: Categorization of measures in treatment tiers in order to streamline delivery of measures for increased cost-effectiveness.
- Health, Comfort and Safety: Continued delivery of health, comfort and safety measures that may reduce hardship.

SDG&E's multi-year approach over the next program cycle hinges on SDG&E's ability to segment customers and apply targeted marketing efforts that speak to specific personal values and behavior that will lead to a higher level of conversion and program participation. Using available data, the program team will better understand the propensity of all customers, including both renters and owners, who will most likely need, implement and maximize program engagement. The program also intends to provide customers with choices related to program enrollment, installment and some measure selection; this should enable participation at every tier in order to maximize benefits that are delivered.

b. New program goals and metrics for evaluating success.

As outlined in Sections C.1 – C.4 below, SDG&E is setting measurable goals and indicators in order to set expectations for the measurable and meaningful benefits that can be delivered to low-income customers. Table 4 below summarizes the proposed goals and metrics at a high level.

Table 4: Proposed Goals And Metrics

Description	Calculation	Goal or Indicator Type
Average annual resource measures energy savings per household treated	Reduced annual kWh, kW and therm usage associated with ESA treatment during reporting year (for resource measures only)	kWh savings goal Therm savings goal kW savings goal

Average non-energy benefits (NEBs) delivered per household treated	Non-energy benefits associated with ESA treatment during the reporting year, (for non-resource measures only)	Dollars saved goal
Average hardship reduction per household	Calculate average bill savings (positive or negative) and average participant non-energy benefits	Dollar amount indicator
Total customers reached	Number of customers receiving audits, treatment or weatherization	Total number goal
Energy savings goals	Total gas and electric savings across the ESA portfolio	kWh savings goal Therm savings goal kW savings goal GHG reduction goal

If achieved as planned, the proposed program design should drive long term outcomes including a reduction of hardship, decreased energy burden, an increase in customer health, comfort and safety and persistent greenhouse gas reduction.

c. A description of the participants receiving services due to their significant need.

To determine the potential participants with significant need, SDG&E intends to segment, categorize and target potential customers based primarily on their premise, ownership status, geographic location and the premise's past enrollment status prior to an audit. This leads the program to prioritize targeting customers with highest potential for energy savings, i.e. single family, mobile home, and multifamily owners and renters with a high energy burden (derived from stated income) or high usage within SDG&E's high poverty[24] areas. Where income information is not available via enrollment in SDG&E's low-income programs, the program will

[24] High poverty zip codes are defined as the top 20 zip codes within SDG&E's service territory with the highest percentage of CARE eligible customers based on Athens Research data.

use household PRIZM information, which provides social demographic data, to make assumptions. For the non-deed restricted multifamily sector, SDG&E will use a whole building approach to target properties versus individual units only.

In addition, SDG&E has identified five groups of customers where services and solutions are needed to address the challenges of the segment. These customers and how they are defined are found in Table 5 below:

Table 5: Recommended Specialized Segments

Customer Segment	Definition
High Usage	CARE customers, in high poverty areas, exceeding 400% of baseline 3 or more times in one year in high heat climate zones (10,14,15).
Medical Baseline	Low-income eligible customers who are enrolled in SDG&E's Medical Baseline program.
California Air Resources Board "Community Air Protection Program" neighborhoods that fall in Disadvantaged Communities (DACs)	Neighborhoods that have been identified by the California Air Resources Board (CARB) Community Air Protection Program, where they overlap with existing SDG&E DAC zip codes, as identified by Cal Enviro Screen 3.0 as being one of the 20% most disadvantage census tracts in SDG&E's territory.
Areas of high disconnect	SDG&E identified zip codes having rate of disconnect above 4%.
High Fire Threat District customers	High Fire Threat District means those areas comprised of the following: (1) Zone 1 is Tier 1 of the latest version of the United States Forest Service and CAL FIRE's joint map of Tree Mortality High Hazard Zones. (2) Zone 2 is Tier 2 of the CPUC Fire-Threat Map. (3) Zone 3 is Tier 3 of the CPUC Fire-Threat Map.

d. Proposed changes to the ESA Program design and delivery.

SDG&E is proposing to streamline delivery of the program by incorporating changes to the initial intake process of the ESA Program, including relying more heavily on online platforms. Currently, the ESA Program relies heavily on contractors enrolling customers in the

home, but this approach is becoming cost prohibitive. In August 2019, San Diego's unemployment rate was 3.4%, compared to 3.8% nation-wide.[25] The low unemployment rate is driving program costs up, and the "boots-to-the-ground" approach is becoming harder to maintain for contractors.

To deal with rising labor costs and its implications, SDG&E will begin requiring that customers complete an audit at the time of enrollment. This audit, preferably completed online, will help identify priority customers and reduce the need for contractors to do in-home audits. Customers would be directed to complete these audits online, with alternative options available for contractor support to complete the audit for customers who need assistance. SDG&E estimates that up to 60% of audits could be completed online in the future delivery model, based on the information[26] that over 60% of CARE customers are currently enrolled in SDG&E's My Account, indicating an opportunity to engage customers using online tools for the ESA Program. The audits will be accessible in multiple languages, mobile friendly and easy to use. The audits will incorporate load disaggregation data in order to provide a more customized audit result. By collecting audit information prior to an in-home visit, SDG&E can inform contractors with this information and provide a head start in the process making the initial in-home visit more efficient. Once in the home, the contractor is expected to complete a thorough assessment which will inform all measure installation potential and help streamline future visits. The measure

[25] State of California Employment Development Department, Labor Market Information Division, *San Diego-Carlsbad Metropolitan Statistical Area, available at* https://www.labormarketinfo.edd.ca.gov/file/lfmonth/sand$pds.pdf.

[26] *See* Prepared Direct Testimony of Horace Tantum on Behalf of San Diego Gas & Electric Company's Low-Income Customer Assistance Programs Marketing, Education and Outreach Plans for Programs Years 2021 Through 2026 (November 4, 2019) ("Prepared Direct Testimony of Horace Tantum") at Figures 1 and 2.

installation process will not end the customer ESA Program journey, as there will be ongoing educational tips and messaging to help create persistence in savings.

An additional delivery change proposed is a requirement for a Property Owner Authorization (POA) prior to an in-home assessment. Inability to obtain a POA has been one of the challenges faced by SDG&E in prior program years and one of the reasons for lower than expected measure installation. Requiring a POA to be received prior to a contractor visit, will ensure that the contractor visiting the premise is authorized to install all feasible measures, therefore optimizing the customer touch point and maximizing energy savings. Once the contractor is in the home, a review of the customized audit report will be conducted, and a full assessment of the home will be completed to ensure all feasible measures are installed with minimal touch points. The customer will be informed of the next steps in the measure installation process and have access to this information online.

The completion of a POA does not preclude customers from completing the audit and receiving reports to help the customer manage their energy usage. Customers not demonstrating a need for an in-home visit may be eligible to receive an energy and water savings conservation kit which would include low-cost simple self-installed items, such as LED light bulbs, faucet aerators, a shower head, outlet gaskets, toilet banks and water leak tablets.

Further, as part of the new delivery, customers will have the ability to schedule appointments online, view potential measure options, and make changes to appointments when needed.

2. Discussion of Results:

Describe most recent available results from the 2015-17 Impact Evaluation, 2019 Potential and Goals Study, 2016 LINA, preliminary 2019 LINA results, 2019 Non-Energy Benefits Study, recommendations of the LIOB and the Cost-Effectiveness, Mid-Cycle and Multifamily Working Groups, historical tracking efforts (such as

the IOU's monthly and annual reports), and general observations about challenges and successes in meeting ESA Program goals. Explain how these results and observations led to the changes proposed.

In developing this application, SDG&E took all input, results and recommendations to form the core of the new program design. Robust stakeholder outreach started prior to the final guidance document decision and continued throughout the drafting period of this testimony. Stakeholder feedback included meetings with organizations representing the multi-family sector, current program contractors and community partners and low-income advocates supporting local outreach for the ESA Program. SDG&E also conducted customer focus groups and multifamily property owner interviews to help inform the design of the new program. The summary information below, coupled with program team experience in implementing the ESA Program resulted in several core facets of the program design, including:

- The transition to a targeted approach using home energy audits as the ESA Program starting point. This recommendation is based on observations of program staff across SDG&E's ESA and Energy Efficiency program operations.
- Use of new ex ante savings estimates developed, using where possible, results from the 2015 – 2017 Program Impact Evaluation to calculate program savings. Further discussion can be found in the section below addressing the 2015 – 2017 Program Impact Evaluation.
- The idea that there is opportunity for more educational and behavioral intervention to assist customers in reducing their energy burden. Further discussion can be found below in the section addressing the 2016 Low Income Needs Assessment (LINA) study.
- The importance of incorporating a customer's ability to schedule appointments with ESA contractors would overcome barriers uncovered in the draft 2019 LINA study. Discussion of these barriers can be found in the section below addressing the draft 2019 LINA study.
- The continued inclusion of heating, cooling and weatherization measures due to ESA Program participants reporting significant health, comfort and safety benefits in the 2019 draft LINA study.
- Results and recommendations from working groups, including the Cost-Effectiveness Working Group, the Mid-Cycle Working Group, the

Multifamily Working Group as well as recommendations from the Low Income Oversight Board are addressed below.

2015-2017 Impact Evaluation:[27]

This statewide study used monthly billing data to perform a billing analysis on ESA participants from 2015 through 2017. Accounts with less than 12 months of continuous billing data were eliminated from the analysis. The objective of the study was to produce household and measure level savings estimates disaggregated by Investor Owned Utilities (IOU), measure, building type and climate zone.

The study was divided into two phases; phase 1 included analysis of 2015 to 2016 data; phase 2 included analysis of all three years of data. Table 6 below shows the overall modeled average and total savings for SDG&E's ESA Program participants.

Table 6: SDG&E Energy Savings Impacts 2015 through 2017[28]

Year	Total kWh	Total therms	Average kWh	Average therms
2015	1,018,996	58,811	48	3
2016	1,353,092	67,953	67	3
2017	640,831	59,877	30	3

The savings were also disaggregated by housing type and climate zone; however, the disaggregated savings estimates were, in many cases, not usable due to low sample sizes resulting in estimates that were not statistically significant. The study authors recommended not using results with low sample sizes or a p-value greater than 0.05.

[27] DNV-GL, Energy Savings Assistance (ESA) Program, *Impact Evaluation Program Years 2015–2017*, (April 26, 2019) *available at*, https://pda.energydataweb.com/api/view/2173/2015-2017%20ESA%20Impact%20Evaluation%20-%20FINAL%20-%20April%2026%20Public%20Posting.pdf.

[28] *Id.* at 53 and 54.

The IOUs were directed by Energy Division to use the phase 1 draft results in their mid-cycle filings. At the conclusion of the study, the IOUs were further directed by Energy Division to develop ex ante savings estimates from the impact study final results to use in the 2021 to 2026 program application.

The measures proposed for the 2021 through 2026 portfolio which were included in the 2015 to 2017 Impact Evaluation are shown in Table 7 along with any adjustment to the study results. Savings estimates for new measures proposed for the 2021 through 2026 portfolio which were not included in the 2015 to 2017 Impact Evaluation were sourced from workpapers. In order to develop savings values, SDG&E took the following steps:

- Started with the impact results by housing type.[29]
- Where the results were statistically insignificant, SDG&E used an alternate source if possible:
  - The statewide impact results were considered as the first alternate source.
  - Results from another IOU or from a statewide workpaper were considered second.
  - In the rare case where no alternate source was available and all results were statistically insignificant, the estimates were set to zero.

Table 7: Ex Ante Savings Estimates for Continuing Measures

Measure Name	Adjustment to Study Result for ex ante	Reason for SDG&E Adjustment to Impact Evaluation Result
Furnace Repair and Replace	Adjusted multifamily (MF) and mobile home (MH) results to zero.	Results were statistically insignificant and no alternate source of savings was available.
Water Heater Repair and Replace	Used PG&E impact result for single family (SF) and MH.	Local results were statistically insignificant.

[29] *Id. at 2.* Housing types included single family homes (SF), multi-family homes (MF) and mobile homes (MH).

Refrigerator	None	N/A
High Efficiency Clothes Washer	Used statewide impact result for SF electric and workpaper for MF & MH electric. Used statewide impact result for all gas estimates.	Local results for MF & MH electric were statistically insignificant.
Room Air Conditioner	Used workpaper	Local results were statistically insignificant.
Smart Strip	None	N/A
Duct Sealing	Used workpaper	Local results were statistically insignificant.
Air Sealing and Envelope Measures	Used a combination of SDG&E and statewide impact results.	Some SDG&E results were statistically insignificant and/or based on small sample sizes.
Attic Insulation	Used workpaper	Most SDG&E results were statistically insignificant.
Faucet Aerators, Low-flow Showerheads and Thermostatic Shower Valves	Used workpaper	Local results were statistically insignificant.

2019 Potential and Goals Study:[30]

This discussion focuses only on the low-income portion of the 2019 Potential and Goals Study. The measure level data used in the study was adapted from the measure list for residential non-low income, and the study authors assumed all measures installed would be high efficiency and result in energy savings. This limits the usability of the results for the ESA program since the program is designed to provide health, comfort and savings measures which,

[30] Navigant, 2019 Energy Efficiency Potential and Goals Study Final Public Report, (July 1, 2019).

in some cases, result in added load. In addition, while the ESA program does install gas furnaces, gas water heaters, and attic insulation in homes with gas space heating, none of these measures qualify as high energy efficiency measures (with the exception of a few high efficiency furnaces installed in select cases). As the Potential and Goals decision noted, "We agree it is more appropriate for the Commission to consider whether and how to develop savings goals for the residential low-income sector in the consolidated ESA and CARE proceeding or its successor, as this issue is more clearly within scope of that proceeding and, as parties indicate, the Commission can better align any goals it adopts for the residential low-income sector with ESA program rules and requirements in that proceeding."[31]

2016 LINA Study:[32]

The 2016 LINA study provided information for understanding customers' energy burden and insecurity, identifying beneficial energy efficiency measures, and assessing potential participation barriers including the need to provide income documentation. The study assessed energy burden in a variety of ways including.[33]

- The frequently used metric of calculating energy burden as a ratio of household income to energy costs;
- "Modified energy burden" which includes estimates of non-cash government assistance in conjunction with reported household income;
- "Energy insecurity" which reflects customers' self-reported challenges paying energy bills; and
- "Material hardship' which reflects overall household financial challenges (independent of the energy bill).

[31] D.19-08-034 at 17 (Decision Adopting Energy Efficiency Goals for 2020-2030).

[32] Evergreen Economics, Needs Assessment for the Energy Savings Assistance and the California Alternate Rates for Energy Programs, Volume 1 of 2 Final Report, (December 15, 2016).

[33] *Id.* at 4.

The study findings broaden our understanding of hardship and burden among low-income households.

As measured by the ratio of reported income to energy bill, the study found that California's low-income customers' average energy burden (total energy bills/income) is 5.6% with the median burden of 3.9%.[34] The research also found different levels of burden across and between various subgroups of the low-income population depending on the metric and calculation used. For example, when non-cash benefits, such as housing, medical and food subsidies are considered in conjunction with reported income, the energy burden for some groups of low-income households, including the very poor and multi-family dwellers, drops significantly, thus highlighting the role other subsidies play in reducing energy burden. In addition, the study found that some groups, such as low-income households in mountain and desert regions, or those including a disabled person, have a relatively higher burden on all four metrics outlined above. The research also found that households that consistently engage in low-cost energy saving practices are less likely to be delinquent in payments or receive disconnection notices suggesting there is opportunity for more educational and behavioral interventions to assist customers in reducing their energy burden.

2019 LINA Study:

The 2019 LINA study[35] focused on the following objectives for the ESA Program:

- Examine the health, comfort and safety impacts of heating, cooling and weatherization measures.
- Assess the hardship of customers who rely on alternate fuels.

[34] *Id.*

[35] Opinion Dynamics, 2019 California Low-Income Needs Assessment Draft Report Version 1: Volume 1, August 15, 2019.

- Assess the hardship of customers who reside in areas with less reliable services.

Preliminary results are available as of this Application, and the final results of the 2019 LINA study are expected in December 2019. Most of the draft results focus on the CARE Program, which is covered in that program's Direct Prepared Testimony of witness Sara Nordin.[36]

According to the preliminary results, the study found that energy burden, modified energy burden and general economic and health hardship were all significantly higher for customers using alternative fuels (*e.g.*, propane, wood, oil) than those not using alternative fuels. In addition, customers in less reliable service areas have greater energy and modified energy burdens, but similar general economic and health hardships compared to high service reliability customers.

ESA participants who received heating, cooling or weatherization measures reported these measures provided significant health, comfort and safety benefits. For example, they reported a significant reduction in the frequency of uncomfortably cool or warm temperatures, drafts, mold and mildew and pests occurring in their home compared to before their participation in ESA Program as compared to nonparticipants.

2019 Non-Energy Benefits (NEBs) Study:[37]

This statewide study was designed to update the current NEBs estimates used in ESA cost-effectiveness tests, to recommend new NEBs appropriate for ESA that are missing from the

[36] Prepared Direct Testimony of Sara Nordin on Behalf of San Diego Gas & Electric Company's California Alternate Rates for Energy Program Plans and Budgets for Programs 2021 Through 2026 (November 4, 2019) ("CARE Testimony") at Section D. 1 c.

[37] Skumatz Economic Research Associates Inc. and Navigant Consulting Inc., Non Energy Benefits and Non Energy Impact Study for the California Energy Savings Assistance Program, Volumes 1 and 2, August 2019.

current framework, and to design an Excel workbook to calculate NEBs. The study provided modifications to the calculations of the existing ESA NEBs. These modifications include input values taken from secondary research (*e.g.*, an estimated percentage of a reduced hardship or cost the program is expected to provide) and, in some cases, modified calculation structure (*e.g.*, the addition of new input values not previously used). In doing this work, the study exposed the limitations of secondary research to provide updated values relevant to the ESA Program. In many cases, the most recent estimated values found were from studies over ten years old and in some cases 15 years old. Furthermore, many of these studies involved programs in states with different climates (*e.g.*, Wisconsin, Connecticut) or different measure mixes that diminished the relevancy for the ESA Program. The study provided modifications to the calculations of the existing ESA NEBs. These modifications include input values taken from secondary research (*e.g.* an estimated percentage of a reduced hardship or cost the program is expected to provide) and, in some cases, modified calculation structure (*e.g.*, the addition of new input values not previously used). In doing this work, the study exposed the limitations of secondary research to provide updated values relevant to the ESA program. In many cases, the most recent estimated values found were from studies over ten years old and in some cases 15 years old. Furthermore, many of these studies involved programs in states with different climates (*e.g.*, Wisconsin, Connecticut) or different measure mixes that diminished the relevancy for the ESA program.

The study recommended keeping 23 NEBs from the existing framework and eliminating three. The study also recommended disaggregating four existing NEBs into 16 separate NEBs calculations and proposed eleven new NEBs not included in the original framework.

The results of the study were determined to need further review and refinement before using in the ESA cost-effectiveness tests. As a result, after this study was completed the IOUs

proposed to hire an independent evaluator to assess and verify the proposed NEBs and to update the model. The expected outcome of this additional work is a set of verified NEBs calculations that are appropriate for the ESA cost-effectiveness tests modeled in an easy to use Excel-based tool. If the additional work is approved and completed, the updated results would be available to use at the start of the new program cycle.

For this application, the IOUs and Energy Division agreed to update the existing model with a set of select findings from the 2019 Study. The elements taken from the 2019 Study for use in this application are the following:

- Program attribution percentage for the utility NEB "Reduced Arrearages and Bad Debt Write-offs;"
- Inclusion of gas benefits for the utility NEB "Rate Subsidies;"
- Estimated gallons of water saved with water measures for the participant NEB "Water/Sewer Savings;"
- Expanded calculation and updated values for the participant NEB "Fewer Fires;"
- Expanded calculation and updated values for the participant NEB "Reduced Moving Costs;" and
- Updated calculation for participant NEB "Comfort and Reduced Noise."

Recommendation of the Cost-Effectiveness Working Group:

D.16-11-022, as modified by D.17-12-009, instructed the ESA Cost-Effectiveness Working Group (Working Group) to reconvene and to provide a set of recommendations related to the ESA cost-effectiveness calculations. The direction to the Working Group from D.16-11-022, as modified by D.17-12-009, included the following:

1. Submit a proposed schedule and work plan to the low-income proceeding service list no later than 60 days after the date of Decision approval.

2. Provide recommendations on a set of issues related to ESA cost-effectiveness calculations to be used to inform the next program cycle; these recommendations or a progress report are to be distributed to the service list no later than the second quarter of 2018.

Item number one was submitted to the service list on January 11, 2017. The Working Group met monthly through 2017 both by teleconference and in-person to discuss the issues in item number two. The issues discussed by the Working Group included the following:

- Measures to include/exclude in the adjusted ESA Cost-Effectiveness Test (ESACET);
- Excluding administrative costs and NEBs associated with excluded measures from the adjusted ESACET including program costs not tied to a specific measure;
- Allocating administrative costs and NEBs across program measures;
- Incorporating revised NEBs values into the adjusted ESACET;
- Whether to incorporate into the ESACET benefits and costs for ESA investment in other programs such as Demand Response; and
- Work scope for the 2018 NEBs study.

The Working Group began drafting a set of written recommendations in the fourth quarter of 2017. The recommendations were finalized and submitted to the service list in 2018. A summary of the relevant recommendations, along with SDG&E's resulting action, are described below.

- Recommendations related to the work scope for the 2019 NEBs study were formally included in the work scope for that study.
- Not adopting the formerly recommended Adjusted ESACET, as it was determined to have minimal value beyond the already adopted ESACET. SDG&E did not include this test in the cost-effectiveness analyses for this Application.
- Recommended changing the name of the Resource TRC test to the Resource Test and excluding it from a non-resource measures identified as those having less than 1 kWh or 1 therm of annual energy savings. SDG&E renamed the test and used the Working Group's description of non-resource measures in its analyses for this Application.
- Recommended not including any potential net benefit for providing enrollment leads to other programs in the cost-effectiveness calculations at this time. SDG&E agrees with this recommendation for this Application.

The final two recommendations are not related to this Application, but apply to future work. First, the Working Group recommended continuing the Health Comfort Safety

Assessment periodically as needed to inform program planning and NEBs updates. This Assessment was completed by the IOUs in 2017 and was provided to inform the 2019 NEBs Study. Finally, the Working Group recommended the membership and participation protocols for the Working Group be reviewed and refined in the event that any future work be assigned to the Working Group. SDG&E agrees with both of these recommendations and supports the ongoing work of the ESA Cost-Effectiveness Working Group.

Recommendations of the Mid-Cycle Working Group (MCWG):

D.16-11-022, as modified by D.17-12-009, instructed the MCWG to reconvene and address the tasks outlined below. The members participating in the MCWG included representatives from the following organizations: Energy Division, California Public Advocates Office, SCE, PG&E, SoCalGas, SDG&E, Energy Efficiency Council, The East Los Angeles Community Union, and Proteus Inc.

MCWG deliverables identified in D.16-11-022, as modified by D.17-12-009, were:

- Making recommendations for updates to the ESA Program Statewide Policy and Procedure (P&P) Manual, California Installation Standards (IS) Manual, and monthly and annual reporting criteria to align with D.16-11-022, as modified by D.17-12-009.
- Provide recommendations on the adoption of Online Data Reporting Systems (ODRS) for the ESA Program to help the IOUs and Commission better understand how these systems collect and report workforce data. This assessment should help determine the value of adopting ODRS for the ESA Program into IOU operations, its cost benefits, and identify any administrative burden to implement by either contractor or utility.
- Making recommendations for the household retreatment prioritization models, implementation and outreach strategies, and other aspects of the ESA Program.
- Investigate and make recommendations on how the ESA Program may be used to deploy tools to enable greater energy efficiency and demand response participation by CARE and ESA participants in recognition of the increased State goals detailed in Senate Bill (SB) 350.

The MCWG held meetings in 2018 to address these tasks and the changes below were incorporated into the programs in 2018:

- Reviewed and commented on the monthly and annual reporting templates developed by Energy Division and incorporated into the templates for use beginning in 2018.
- Completed revisions to the ESA Program P&P Manual and the IS Manual to align them with D.16-11-022, as modified by D.17-12-009. The Manuals were submitted to the service list in A.14-11-007 et. al, and presented through a public webinar on January 31, 2018.
- IOUs provided their household retreatment prioritization models to the MCWG in March 2017. These were reviewed and discussed by the MCWG for their initial recommendations, submitted on April 3, 2017.

The MCWG submitted its final recommendations in the 2nd Quarter of 2018, in time to be considered in the IOUs' Mid Cycle Update Advice Letter,[38] which was provided to the low-income service list in July 2018 pursuant to D.17-12-009 and approved by the Commission's Energy Division on December 27, 2018.

Recommendations of the Multifamily Working Group (MFWG):

The MFWG was initially established in D.16-11-022 and further modified by D.17-12-009. The initial charter of the MFWG was to "evaluate the effect of the 65% ESA eligible tenant multifamily common area measure rule on ESA common area measure treatment, and to make recommendations for adjustment if this rule contributes to low participation levels and/or significant unspent fund balances, such 10% or more underspending of the funds anticipated per program year for this purpose, and to evaluate the data generated from the "data beyond Single Point of Contact (SPOC) effort."[39] In the MFWG Annual Report dated December 31, 2018, revised January 16, 2019 and submitted to the service list in the Low Income Proceeding, the

[38] SDG&E's midcycle Advice Letter 3250-E/2688-G, approved December 27, 2018 effective December 27, 2018.

[39] D.17-12-009 at 56-57 (citing to D.16-11-022 at 193-194, 197).

MFWG provided results of the group's activities. Preliminary recommendations in the report included:

- To exclude adding common area meters for multifamily deed-restricted properties to the CARE Expansion Program.
- Addition of a metric to record and report the number of properties that complete the common area measures (CAM) process and the number of properties reached through either the utility's initial outreach or through a direct inquiry.
- Tracking additional investment in buildings treated under ESA CAM or "leveraging," also called "comprehensiveness" by some utilities. This metric would require recording and reporting on other ratepayer or state and federal programs which are implemented concurrently with ESA CAM, as well as recording and reporting on other private investments made in the buildings at the same time as ESA CAM.

Final recommendations from the working group are pending and are expected to be submitted by December 31, 2019.

SDG&E's participation in the MFWG and the challenges faced with implementation of the ESA CAM program have helped inform SDG&E's approach with this segment. Details on this approach is included in Section D.9.

Historical Tracking Efforts:

In developing this Application, SDG&E utilized program data, specifically data reported in monthly and annual reports, to identify program challenges and make recommendations to overcome those challenges. As discussed in Section A.2 above, SDG&E has had success reaching the 2020 programmatic initiative for homes treated, but historical tracking data demonstrates a decline in the conversion ratio of homes from treated to weatherized. This impacts the ESA Program's ability to reach savings targets. These challenges helped inform SDG&E's redesign of the Program to increase weatherization efforts through changes including requiring a POA up front, and targeting customers with the highest potential for savings.

Recommendations of the Low Income Oversight Board (LIOB):

On May 19, 2019 the Low-Income Energy Assistance Program ("LIEAP") subcommittee of the LIOB issued a letter[40] to update the Commission on discussion and consensus for recommendations for the ESA program post-2020 Decision. The LIOB recommends that decision-making should provide for an added focus on identifying and helping low-income customers who are overburdened by high energy bill costs, fraud and utility disconnections. The subcommittee identified nine areas of primary focus:

1. The Cost-Effectiveness Standard;
2. ESA Program Co-Benefits to be embedded in the programs;
3. Enhanced Energy Education;
4. Building on San Joaquin Valley;
5. Multifamily Housing;
6. Workforce Education and Training;
7. Marketing Education and Outreach (ME&O) targeting hard to reach communities;
8. Bridge Funding; and
9. Additional Program Metrics.

In addition, the LIOB recommended stepping away from a "template-oriented energy saving program effort" and developing a more flexible cost-effectiveness standard and a "need-based" formula to maximize low-income energy program co-benefits and energy efficiency opportunities. Other recommended program metrics include identifying specific ways ESA can achieve more with health, comfort, safety, and resilience standards by harnessing public health and safety data.

[40] *See*, http://liob.cpuc.ca.gov/Docs/Item%209a.%20Letter%20to%20the%20Commissioners%20from%20the%20LIEAP%20Subcommittee%20Re%20the%20ESA%20Program%20Post%202020%20Decision%20LIOB062419.pdf

Through this Application, SDG&E is addressing the various concerns and priorities of the LIOB, particularly around enhanced energy education, multifamily housing, workforce education and training and ME&O that targets hard to reach communities.

C. Program Goals and Budgets:

Goals are necessary to set expectations for the measurable and meaningful benefits to the customer and society obtained from the ratepayer funded ESA program. In the ESA Program Goals section of the application, describe the goals including a brief description of how they are achievable and linked to the CPUC's 2019 Potential and Goals Study. At a minimum your goals should include the following:

1. Depth of Energy Savings Goal:

Propose two quantitative goals per household: 1) average annual Resource measures energy savings per household; and 2) another quantitative goal to reflect benefit to customer's health, comfort, and safety resulting from Non-Resource measures. These two goals aim to encourage deep energy savings per household through Resource measures, while also encouraging the installation of Non-Resource measures that promote health, comfort, and safety. IOUs will meet the two goals on average across the IOU's ESA portfolio of households treated. On an individual basis, households may fall above or below the Resource measure energy savings goals or by customer segment. For example, by Multifamily Sector, Disadvantaged Communities, Tribal Communities, and Hard-to-Reach customers.

For the reasons stated above in Section B.2., SDG&E does not propose a link between the goals described here and the 2019 Potential and Goals study. For the two prescribed depth of energy savings goals, SDG&E's recommendations are found in Table 8 below.

Table 8: Depth of Energy Savings Goals

Goal Type	Interpretation & Expression	Report by	Formula	Recommended SDG&E Goal
Average annual resource measures energy savings per household	Reduced annual kWh, kW and therm usage associated with ESA Program treatment during reporting year (for resource measures only)	All ESA participants by housing type (Single Family, Multifamily and Mobile Home)	First year energy savings for all treated homes in the year divided by the number of housing units treated. $\frac{\text{Total energy savings}}{\text{\# housing units}}$	SF: 300 kWh, 10 therms MF: 100 kWh, 5 therms MH: 250 kWh, 20 therms
Average NEBs delivered per household	NEBs associated with ESA treatment during the reporting year (for non-resource measures only)	All ESA participants by housing type (Single Family, Multifamily and Mobile Home)	First year NEBs delivered for all treated homes in the year, divided by the # of housing units treated. $\frac{\text{Total NEBs \$ delivered}}{\text{\# housing units}}$	SF: \$60 MF: \$60 MH: \$60

The proposed goals were developed using the forecasted number of homes to be treated, the proposed budget and the estimated savings values. These elements are tied to the proposed delivery strategy for the program. If any of these elements are modified during the program cycle, the goals should be re-assessed at that time. The proposed goals were developed using the forecasted number of homes to be treated, the proposed budget and the estimated savings values. These elements are tied to the proposed delivery strategy for the program. If any of these elements are modified during the program cycle, the goals should be re-assessed at that time.

SDG&E suggests that the goals be further refined by incorporating an estimate of rebound into the energy savings goals. Research suggests there is a rebound effect for energy efficiency measures and that the effect for low-income households is larger than it is for non-low

income households.[41] SDG&E suggests this issue be further examined during the next ESA Impact Evaluation.

2. Household hardship reduction indicator:

Propose a per household metric that accounts for both Resource and Non-Resource measures installed in that it reflects overall net benefit or hardship reduction to the customer, for example, average annual net energy savings and average annual bill savings. Provide as applicable:

a. The methodology that identified the metric's baseline quantity for the household metric.

b. The potential for customer household hardship reduction (estimated opportunity improvement over baseline per this proposed metric).

ESA assists households in reducing hardship in at least two ways. First, by installing energy efficiency measures which may lead to reduced energy consumption and lower energy bills. This service provides a reduction in financial hardship that eases their energy burden. Examples of ESA services that result in reduced financial hardship are installation of resource measures such as high efficiency washing machines, LED lighting and refrigerators. A second way ESA assists households in reducing hardship is by providing measures and services that increase the safety and comfort of participants' homes but may or may not result in energy savings. This service provides a reduction in hardship related to housing stock quality. Examples of ESA services that result in reduced housing quality hardship include replacing non-working furnaces, repairing envelope integrity, and identifying and repairing gas combustion safety issues.

[41] *See*, Ecological Economics, *Who Rebounds Most? Estimating direct and indirect rebound effects for different UK socioeconomic groups,* (October 2014) Volume 106 at 12-32, *available at* https://doi.org/10.1016/j.ecolecon.2014.07.003.

Quantifying hardship reduction is problematic because so many factors contributing to a customer's hardship are outside the scope of the ESA Program. For example, economic and social issues, changes in employment and income, and increased medical and debt expenses can impact financial hardship much more than energy bill savings. For this reason, metrics such as energy burden, frequency of late bills or disconnections, or number of homes treated in vulnerable populations are not ideal indicators of the effect the program has on reducing hardship.

In response to the Commission's request for a single per household metric that reflects the net benefit or hardship reduction from all ESA measures, SDG&E proposes a preliminary household hardship reduction indicator, shown in Table 9, of average household bill savings plus average household non-energy benefits. SDG&E suggests the next LINA assess the usefulness of this indicator and provide recommendations on improving it.

As a baseline for this indicator, SDG&E proposes to calculate the metric for the 2020 program year. Each subsequent year will report the annual metric in that year's Annual Report.

Table 9: Household Hardship Reduction Indicator

Indicator	Interpretation & Expression	Report by	Formula	Recommended Baseline
Average hardship reduction per household	Calculate average bill savings (positive or negative) and average participant NEBs	All ESA participants by housing type (Single Family, Multifamily and Mobile Home)	Average bill savings plus average NEBS divided by # households treated. Bill savings ($) + NEBS ($) # Households Treated	Calculate for 2020 program year.

3. Participation Goals:

Briefly summarize the proposed criteria and process to identify and prioritize households, such as building type and customer segment with a significant need for energy efficiency services. Propose specific ESA Program participation goals for program years beginning in 2021 and continuing no longer than 2026. In what ways can new program design and approaches identify and serve households not yet served by the ESA Program and/or where a significant need for services exists?

Criteria and Process for Prioritization:

SDG&E has reevaluated program participation criteria and segmented the market as noted below to help identify and prioritize households. Criteria for evaluation includes:

- Dwelling type
- Home ownership status
- Enrollment in CARE and Medical Baseline
- Geographic location within a high poverty and/or a DAC
- Socio-demographic data from PRIZM[42] and Athens[43] Research
- Previous ESA treatment status

High priority customers are defined as those customers with residences that meet the following criteria:

- Homes in high poverty zip codes (as defined by Athens Research) that have not received ESA treatment in the past.
- Homes who have received treatment in the past where additional energy savings potential is viable based on the lack of weatherization or expiration of a previously installed measure's useful life.
- Homes where new measures with sufficient energy savings potential can be installed.

[42] PRIZM is the potential rating index for zip markets.

[43] SDG&E uses the joint utility methodology adopted by the Commission in D.01-03-028 to determine the estimated eligible population for the ESA Program. As part of the approved methodology, Athens Research produces population estimates for the California IOUs based on analysis of census data and other data sources.

This prioritization applies across all housing types. However, prioritization for the multifamily market sector has some additional considerations. Per SDG&E's proposal for the multifamily market, found in Section D.8 below, the new program will continue to serve in-unit dwellings in non-deed restricted properties, as well as a new program offering for common areas of those properties. Prioritized properties will fall within specific geographic areas, and in-unit treatments in most cases will occur where a POA is received prior to a contractor visit. This is a fundamental change – requiring POA prior to a contractor visit should reduce program cost by limiting the deployment of contractor resources until there is certainty that installation of all potential measures can be achieved with minimal visits. SDG&E's proposal for a robust SPOC, as outlined in Section D.8, includes a technology platform that will allow the SPOC to combine different sources of data to focus on buildings with higher levels of energy intensity, then layer by whether it is a new or previously treated complex along with what Athens and PRIZM data show for potential tenant eligibility.

Participation Goals:

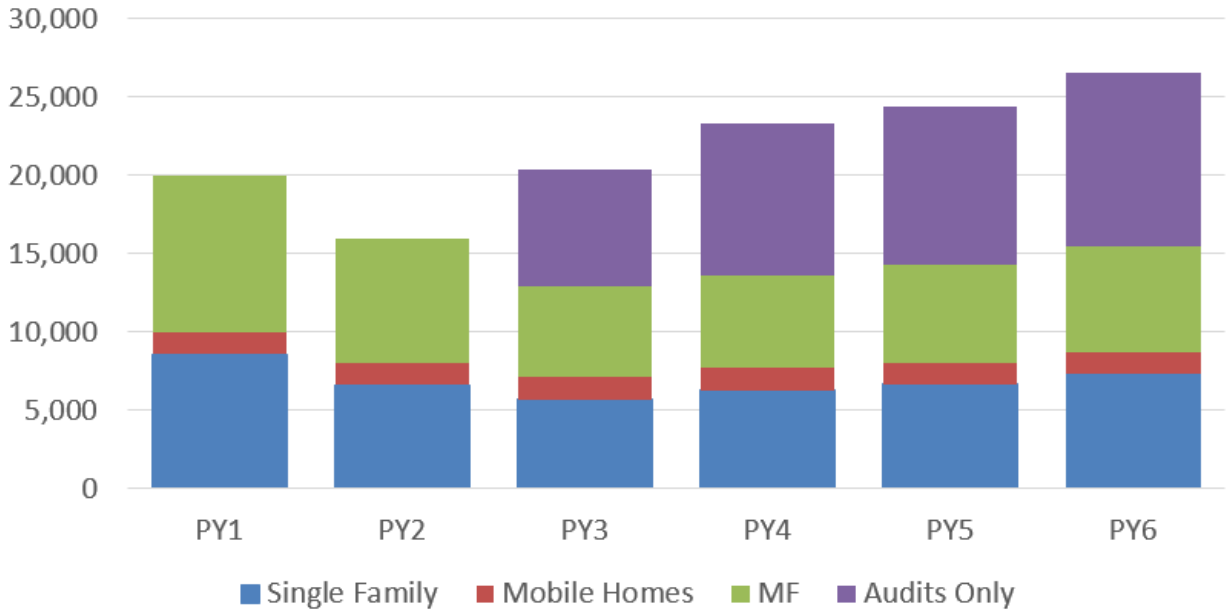
Table 10 below lays out the number of homes SDG&E intends to reach in the upcoming program cycle. This participation goal, called "Customers Reached" replaces "Homes Treated" from the previous program cycle, which is a label that has historically caused confusion in interpretation of reporting from outside stakeholders. In this new definition, a home may have undergone any single portion of ESA service, from those categorized as "audit-only" all the way through treatment with all eligible measures. Utilizing the new audit intake process, SDG&E will target program in-home visits for customers with a higher need; this results in some customers only completing the audit portion of the program, which SDG&E proposes to track separately as a "customer reached" in order to identify savings potential for customers who are only receiving this program service.

Table 10: Customers Reached / MF Common Area Goals for all Program Years

Dwelling Type	PY 1	PY 2	PY 3	PY 4	PY 5	PY 6
SF Audit + Treatment	8,600	6,600	5,699	6,299	6,648	7,348
MH Audit + Treatment	1,400	1,400	1,400	1,400	1,400	1,400
MF Audit + In Unit Treatment	10,000	8,000	5,824	5,946	6,216	6,757
Audits Only	-	-	7,467	9,709	10,150	11,032
Total	**20,000**	**16,000**	**20,390**	**23,353**	**24,414**	**26,537**
MF Non Deed Restricted CAM	0	34	115	134	145	155

As shown in Figure 2 below, SDG&E's total "Customers Reached" goal for the program is lower for the first 18-24 months of the program after a Decision has been issued. The dip is expected during the ramp-down, ramp-up period, as contractor may be transitioning out of the program and new contractors transitioning in. As indicated on Section E.2 of this testimony, SDG&E will need an appropriate amount of time for solicitation and launch, particularly for integration of new technology and systems, before truly starting up the new program. SDG&E does not intend to completely cease service during the "Ramp Down / Ramp Up" period and will continue to serve homes under the "old" model of the program. For this reason, participation goals are lower in the first two years of the program.

Figure 2: Participation Goals By Program Year



4. Portfolio Energy Savings Goal:

Propose annual energy savings goals based on impact evaluation results, the proposed measure portfolio, budget, and participation projects. Include quantitative analysis of the opportunity for savings to support the proposed goal and differentiate, as appropriate, the savings for the Multifamily Sector, Disadvantaged Communities, Tribal Communities, and Hard-to-Reach customers. Discuss alignment with California's Greenhouse Gas Emission Reduction targets. In ESA tables A-1 and A-1a provide estimated energy savings with avoided greenhouse gas emissions, kWh, therms, and combinations of electric and gas savings in equivalent kBTUs for the applicable years (Attachment B). Summarize the connections between the energy savings from different Program elements with your Program goals. For example, which activities result in the highest savings or where savings are less assured.

Portfolio Energy Savings Goals:

ESA Tables A-4 and A-5 in this Application present annual energy savings goals for SDG&E's proposed program portfolio. SDG&E's proposed program savings goals are based on results from the most recent Impact Evaluation, where values for SDG&E could be identified. As stated above in Section B. 2, the most recent results from the Impact Evaluation provided

results which in many cases were not usable due to small sample sizes leading to statistically insignificant results. Where gaps in savings values are identified, SDG&E leveraged workpapers, or engineering analysis, as appropriate. SDG&E's service territory poses a challenge in composing a measure mix which provides significant cost-effective savings to residential customers; the mild climate limits savings for many weather-related measures like air conditioners, furnaces and enclosure measures.

To address this challenge, SDG&E is projecting that in the 2021-2026 program cycle, single family properties have the greatest potential for energy savings, followed closely by mobile homes. Furthermore, owners of single family and mobile home properties will have the highest potential for energy savings. Focusing outreach activities towards these customer segments should help achieve the targeted energy savings goals. Measures that will contribute to the highest savings for this sector include domestic hot water heating, pool pumps, refrigerators and attic insulation and air sealing.

SDG&E's new program design is heavily focused on promoting customer changes in behavior which can help improve savings for the customers. Workpapers for the residential energy efficiency Universal Audit Tool and enhanced energy education are not currently approved, therefore savings from this initiative are not currently calculated or assured. However, there are initiatives in place across IOUs to help develop verifiable savings for home energy audits. Once available, SDG&E will propose an update to the portfolio and associated savings to appropriately capture program savings values.

SDG&E has included DACs as part of the prioritization and targeting for the program but has not identified separate goals specific to this population. The ESA Program has made a significant impact in reaching eligible customers in DACs already and SDG&E will continue to

target these areas throughout the next program cycle. This finding is based on data that shows that of the customers in DACs within high poverty areas, SDG&E has already treated 71% of those customers through the ESA Program, as shown in Table 11. SDG&E will continue to target the remaining customers within the overall ESA population and has established goals in ESA Program Table A-5.

Table 11: ESA Program Treated Homes in DAC Areas in High Poverty Zip Codes

SDG&E DAC Customers	Multifamily	Single family	Total
All DAC Customers	25,977	22,335	48,312
All DAC Customers Treated	12,666	12,690	25,356
Percentage of all DAC treatment	**49%**	**57%**	**52%**
High Poverty DAC Customers	**Multifamily**	**Single family**	**Total**
DAC High Poverty	12,631	20,480	33,111
DAC High Poverty Treated	9,095	14,418	23,513
Percentage of High Poverty DAC treatment	**72%**	**70%**	**71%**

With regard to native American tribes in SDG&E's service territory, approximately 20,000 Native Americans reside in San Diego County, of which, only a small percentage live on reservation land.[44] Therefore, identifying and tracking specific homes that may be occupied by Native Americans but that are not within designated tribal areas proves to be very difficult. SDG&E is committed to continuing to work with Community Based Organizations (CBOs) that target this specific population but does not set specific goals for treating homes occupied by this subset of customers.

In reference to the State's comprehensive greenhouse gas (GHG) reduction policies, SDG&E believes its portfolio objectives, measures and programs are in alignment with the

[44] University of San Diego, San Diego Native American, *Indian Reservations in San Diego County,* available at https://www.sandiego.edu/native-american/reservations.php.

successive standards set either through legislation or executive order. Specifically, SDG&E will continue to deploy various tools and methods, as part of this Low Income Application and elsewhere, to help the State meet or exceed the upcoming 2030 GHG target of reducing emissions 40% below 1990 levels. Additional details of targeted savings measures can be reviewed in the aforementioned ESA Tables A-4 and A-5a in Appendix A.

5. Additional Metrics:

Discuss whether goals associated with additional metrics such as energy burden, public health indicators, or climate change for the ESA Program are worthwhile. Why or why not? For each proposed additional metric, provide as applicable:

a. The methodology that identifies the metric's baseline quantity for the targeted participant population.

b. The potential for customer and/or societal benefit (estimated opportunity improvement over baseline for this proposed metric).

c. Evaluation of tradeoffs (i.e. consideration of the cost to ratepayers to realize the potential benefits).

SDG&E considered whether goals related to energy burden, public health, or climate change would be appropriate for the ESA Program. SDG&E is not proposing metrics related to these issues at this time. These social issues are impacted by many factors that are beyond the scope of the program. For example, while participant bill savings may alleviate some energy burden, other economic factors also affect the participant's income and tradeoffs concerning their income (*e.g.*, what bills to pay, severity of debt, etc.). SDG&E suggests that these overall social issues, and the extent to which the program can influence them, be investigated through the LINA, a study that occurs every three years.

6. Budget:

Present and justify detailed budgets in ESA tables A-2, A-2a, A-3, and A-3a for years post-2020 but not beyond 2026 (Attachment B).

Describe how the distribution or balance of funding achieves deeper energy savings and hardship reductions for prioritized low-income households.

a. The proposed budget must clearly outline the cost of each program and administrative category and break it into specific components. For example, for multifamily households, clearly show what portion will go to whole-building, in-unit, and/or communal areas/shared energy systems.

ESA Application Tables A-2, A-2a, A-3 and A-3a present detailed budgets for program years 2021through 2026. SDG&E's proposed budget was prepared by reviewing the current treatment model and historical installation rates by customer segment, making adjustments for the new treatment model in PY3-PY6, and applying anticipated installation rates under this new model, which is focused on increased savings via customer engagement though energy education and increased weatherization efforts. The distribution of the funds reflects this approach, as dollars are increased for In-Home Energy Education and Enclosures to reflect the new customized home energy audits and deeper treatment by increasing air sealing and other weatherization measures included as part of the Enclosure category in later program years.

b. Identify which components of the budget are for services that increase health, comfort, and safety (*i.e.* Non-Resource measures) vs. those that provide quantifiable energy savings (*i.e.* Resource measures).

SDG&E includes the following non-resource measures for the health, comfort and safety of customers:

- Furnace repair and replacement
- Air Sealing / Enclosure (Multifamily, Mobile Home only)

SDG&E has also included a new category for Special Initiatives, which have been included to address specific health, comfort or safety needs of customers identified in Section B.1 above. These measures are listed in Table 14 in Section D.1 below.

c. Include a table on the 2017-2020 authorized budget, comparing the costs with the proposed 2021-2026 budget. List and indicate the reasons for any increase or decrease in proposed allocations for any budget lines that are synonymous between the two cycles.

In order to compare the previously approved four-year program cycle against the proposed upcoming six-year program cycle, Table 12 below presents the annual average approved budget for 2017 – 2020 against the requested annual average budget for 2021 – 2026.

Table 12: Budget Annual Average Comparison

ESA Program Energy Efficiency	2017-2020 Annual Authorized Averages	Proposed Annual 2021-2026 Averages*	Change	Cause for Differential
Appliances	$3,088,294	$1,817,247	$(1,271,047)	Lower spending than authorized in 2017-2020 program cycle for refrigerators and clothes washers. Adjustments made for current installation rates, new measures and potential rule changes for appliances.
Domestic Hot Water	$2,138,580	$2,513,386	$374,806	Increased focus on more certain measure installations in order to increase customer savings.
Enclosure	$5,323,123	$5,521,653	$198,530	Based on current program spend with spending trends with adjustments for new treatment model.
HVAC	$4,074,745	$3,571,169	$(503,576)	Lower spending than authorized in 2017-2020 program cycle. Current cost based on program design and anticipated installation rates with adjustments for new treatment model and increased installation cost.
Maintenance	$436,107	$-	$(436,107)	The two measures included in maintenance were not cost-effective and had minimal customer impact to the program.
Lighting	$3,906,153	$2,022,625	$(1,883,528)	Removal of torchieres due to negative impact to cost-effectiveness.
Miscellaneous	$1,417,246	$717,142	$(700,104)	Adjustments to anticipated installs of Smart Strips and Pool Pumps.
Special Initiatives	$ -	$712,902*	$765,685	New health, comfort and safety measures.

(HCS)				
Customer Enrollment	$4,222,384	$3,050,246	$(1,208,074)	New program model will lower in-home enrollment cost.
In Home Education	$616,333	$1,131,447	$515,862	Increase in labor cost, new delivery of customized energy education will be more time consuming and increase cost but add more value and potential savings (in later years) to energy education.
Electrification Initiative	$ -	$120,000**	$120,000	Estimates based on serving 20 customers with a project at a cost of roughly $12K each in 2025 and 2026. Note annual average is across six years for two years of implementation.
MF CAM (non-Deed Restricted)	$ -	$3,037,090***	$3,037,090	New Initiative
MF Deed Restricted CAM	$2,000,000	$2,884,927***	$884,927	Previous program cycle used unspent funds per D.17-12-009. Current proposal is to include new program within overall ESA Program budget.
Training Center	$483,716	$257,180	$(226,536)	Lower spending than authorized in 2017-2020 program cycle. Future training efforts incorporated within program design.
Inspections	$169,638	$198,823	$29,185	Increased support for MF CAM, labor adjustments.
Marketing and Outreach	$1,200,000	$1,649,930	$449,930	Increase due to changes in program design, new initiatives for customer engagement and fulfillment of customer kits for completing audits.
Studies	$44,999	$126,875	$81,876	Based on agreed upon state-wide studies.
Regulatory Compliance	$302,507	$345,016	$42,509	Increase support for implementation, and labor/non-labor cost increases.
General Administration	$2,657,900	$3,666,569	$1,008,669	Significant spend in IT/new platform development as well as solicitations costs for program years 1-2. Remainder of the years trend similar to current authorized program cost.
CPUC Energy Division	$46,368	$64,684	$18,316	Based on ED request to increase by 25% the first year and 3% thereafter.
SPOC	$-	$494,599	$494,599	New category previously included in General Administrative costs. Costs associated with increased labor and non labor associated with a more robust

				SPOC offering.
Deed Restricted MF Admin	$-	$316,103***	$316,103	New administrative costs for SDG&E's portion of any "statewide" implementation of a Multifamily Whole Building (MFWB) program.
Reallocated Funds	$687,695	$-	$(687,695)	No longer applicable with a new program cycle.
2021 – 2026 costs averaged over the number of years expenditures are planned; six years unless indicated: * 4 years; ** 2 years; *** 5 years				

7. Project Planning and Tracking Program Expenditures:

Provide a spend plan, with quarterly expenditure projections. Correlate projected expenditures with performance milestones by clearly stating the targeted date for each performance milestone in a Gantt chart, and the anticipated amount of expenditure required to achieve performance milestone. Include at least one milestone per year. Include a short description of each performance milestone. Include a discussion on requested budget flexibility, include potential fund shifting. The intent of this section is to allow the IOUs to propose enough Program Planning and Tracking practices to allow the Commission oversight beyond 2020 to occur at a higher level (closer to programmatic or portfolio level than at the measure and units treated level).

SDG&E has included a quarterly spend plan based on major milestones associated with different workstreams proposed with this Application. These workstreams are Technology, Local Program and MFWB. Each workstream has associated milestones as proposed in Exhibit ESA-01 to this Application. All milestones should be considered to be contingent upon a decision in December 2020. Descriptions of each milestone and assumptions for budgeting are found in Table 13 below

Table 13: Milestones and Associated Milestones for the 2021 – 2026 Quarterly Spend Plan.

Milestone	Description	Assumption
Technology: Contractor and Customer Platform/Portal	Project encompasses the design, build and validate phase of new technologies associated with proposed program design.	Kickoff is contingent on contracts awarded in Q2 of PY2. (See milestone below) The work will begin concurrently in Q2. All invoicing to occur before year end, Q4 of PY2.

Local Program and MFWB: Request for Proposal (RFP) in Market	Project encompasses time needed to kick off, develop and launch RFPs for all program solicitations.	Unknown when Procurement Review Group (PRG) will submit invoices. Heavy lift is Q1 and Q2 of PY1. Milestone invoicing expected no later than Q4 of PY1
Local Program and MFWB: Contracts Awarded	Project encompasses time needed to score RFPs, select winning proposals and execute contracts with selected vendors.	Unknown when PRG will submit invoices. Heavy lift is Q4 of PY1 and Q1 of PY2. Milestone invoicing expected no later than Q4 PY2.
Local Program: SF/MF New Launch	Project includes onboarding, training on new tools, new program design and new measures.	Training/onboarding to occur during Q3 and Q4 of PY2 as well as Q1 and Q2 of PY3. Invoicing for PY2 in Q4, invoicing for PY3 by Q2.
Local Program: Additional Measures (Electrification / Generators)	Implementation of limited/select measures for Special Initiatives	Measure costs spread across final two years of program, invoicing expected quarterly.

SDG&E recommends that an updated expenditure and project tracking plan be completed, if necessary, after a final Decision is received. Without a full picture of which budgets will be approved and which projects to move forward with, spend projections here are premature and will need to be adjusted once a final Decision is issued.

To provide budget flexibility, SDG&E requests authorization to shift funds between ESA Program budget categories and subcategories when needed to accommodate budget shortfalls necessary to provide additional measures and services provided under the program. Currently, there is fund shifting flexibility in the energy efficiency budget category to shift funds within the category up to 15% of the total authorized budget without Commission approval.[45] Any costs above the 15% threshold of the total authorized budget require Commission approval through the advice letter process. The exception to shifting budgets within the energy efficiency category is

[45] D.12-08-044 at OP 135 and D.17-12-009 at OP 130-134.

for the In-Home Education subcategory which does not allow budget shifting without Commission approval through the advice letter process. In addition, current fund shifting does not allow fund shifts between the other "Below the Line" program categories, which includes General Administration, Training, Regulatory Compliance, Measurement and Evaluation, etc. The ESA Program fund shifting rules are more stringent than the CARE program and only allow funds to be shifted under certain conditions without prior Commission approval. SDG&E must dedicate resources to prepare and submit an advice letter requesting to shift funds and then wait for approval from Energy Division. To allow for better program management and budget oversight, SDG&E proposes that the Commission align the ESA Program fund shifting rules with the fund shifting rules of the CARE Program by allowing similar shifting of funds between budget categories and subcategories and to report ESA Program fund shifts in the Low Income Monthly and Annual reports rather than through an advice letter.

8. Unspent Funds

Discuss unspent funds, and any failure to meet household treatment goals, for each completed year of the prior budget cycle. Explain: 1) the reasons for these unspent funds and/or failure to meet goals, and 2) how you will track progress in a timely manner to meet approved performance and spending milestones. Discuss how these unspent funds, accrued over 2017-2020, should be handled. Discuss how you will more accurately budget upfront for activities through 2026 and take actions, where necessary, to mitigate performance shortfalls before the end of the annual period to avoid failing to meet annual performance targets.

SDG&E expects to meet the 2020 programmatic initiative for homes treated goals for the program cycle and has exceeded the homes treated goals in both 2017 and 2018. SDG&E's primary reason for the accumulation of unspent funds is due to the forecast of measure installations for homes treated and weatherized in the previous application. Forecasting is often challenging because it is subject to the assessment of measures needed once a contractor actually

visits a home. During 2017, the number of homes treated which converted to weatherization was 25%[46] which was a factor in spending only 58% of the projected Energy Efficiency budget. Realizing this, SDG&E worked with Outreach & Assessment (O&A) contractors to improve conversion, and during the 2018 program year, that number significantly increased to 43%.[47] However, measure installations still fell short and SDG&E spent 72% of the projected energy efficiency budget.

As we move to a new ESA Program delivery model, there will remain a level of uncertainty with the impact that program changes on forecasting models. Any analysis we could conduct using previous program cycles no longer applies, therefore it becomes even more challenging than it has been in the past to have accurate forecasts. Should we overestimate targets, unspent funds remain; however, if we underestimate, we may impact delivery of the program to those who need it most. As stated above, SDG&E has met homes treated targets, yet still did not meet the projected budget levels from the previous application.

D.17-12-009 directs the IOUs to utilize unspent, uncommitted ESA Program funds to offset revenue requirements.[48] SDG&E is currently offsetting its future ESA Program revenues with unspent, uncommitted carryover funds that occurred through 2017 and 2018 and will continue to do so through 2020. For unspent, uncommitted funds at the end of the 2020 program cycle, SDG&E proposes to continue to flexibility to offset its future revenue collections by utilizing those funds.

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[46] SDG&E's Low Income Annual Report of 2017 Activity, ESAP Table 2.

[47] *Id*.

[48] D.17-12-009 at Ordering Paragraph (OP) 106.

D. Program Design and Delivery

1. Proposed Program Design:

Describe your approach to reach each of your stated Goals during the 2021-2026 program years. Responses to this Section D.1 Proposed Program Design, addressing the overall program structure, and Section D.2 Proposed Program Delivery, addressing the program's execution, can be answered together in your application.

SDG&E's proposed ESA program design is focused on providing customers with energy savings through meaningful and ongoing energy education, flexible customer engagement, and potential optimization of energy savings with each customer touchpoint. As outlined in Section B.1 above, the basic strategies of the new program can be broken into three sections; (1) a new platform for Audits & Education, (2) Offering measure & treatment tiers, and (3) continued delivery of Health, Comfort and Safety.

For the majority of customers, the program journey will begin through a new home energy audit that provides customer education while delivering data to the program; this data on measure and savings potential then drives a cost benefit analysis of measure installation. Ideally, the information is collected via customers who self-serve the audit, but customers who require an "offline" experience delivered via contractor will still have that option. SDG&E estimates that up to 60% of customers may engage with the program through the new online version; this is based on the fact that 64% of CARE customers and 55% of current program ESA customers are enrolled in SDG&E's online platform – My Account. For either audit path, SDG&E plans to incorporate the disaggregated load profile data available[49] in order to provide a more customized and meaningful report to both contractors and customers.

[49] D.17-12-009 at OP 97.

The next step in the customer journey will depend on the program's ability to provide a customer with energy savings measures for installation. Some customers may have low savings potential and therefore may only be eligible for a no-cost energy conservation starter kit that may be offered as an incentive for audit completion. The starter kit not only serves as a way to engage and educate a customer and provides some easy-to-install measures, but it underscores the importance of completing the audit for effective delivery of the program. Customers where the audit determines higher potential for energy savings will be provided with information on the next steps of program eligibility and participation including POA requirements for renters, income documentation. appointment scheduling, measure selection and installation.

Post-installation, the program design is adding a new proposal for ongoing energy education. Recognizing the potential for savings within general residential energy efficiency, particularly around behavioral programs, SDG&E recommends fundamentally changing the way energy education is delivered for the ESA Program. Rather than a short educational visit delivered via a contractor representative, SDG&E proposes to capture information from a participating customer and then make sure that the program's education follows the customer to help create more persistent energy savings. Acknowledging that many low-income customers move from home to home, a program with this incorporated into design could "follow" a customer to a new home, and if the home is not treated make sure the customer knows about the potential to bring the program with them. Conversely, if a new tenant moves into a home previously treated, that customer should get messaging related to how to make the best use of their energy efficiency space or technologies. In this way. customers are part of a continuous cycle of engagement that not only delivers energy efficiency messaging but helps to ensure that all relevant messaging from SDG&E can effectively be delivered.

Though the program and most associated goals and metrics are centered on achieving deeper energy savings, SDG&E recognizes the need for continued delivery of health, comfort and safety measures as well. Customers who qualify for health, comfort and safety measures will continue to receive NEBs, and their participation will be tracked against the household hardship reduction indicator proposed in Section C.2.

In addition, the proposed program design incorporates an additional layer of program targeting to provide eligible low-income customers that are part of identified special initiative populations with measures outside of traditional ESA measure offerings. Not only will the additional measures entice participation from potentially hard-to-reach populations, the identified measures have been selected to overcome issues experienced by low-income customers specific to their circumstances. These potential offerings include:

Table 14: Special Initiative Segment Measure Offers

Customer Segment	Recommended Measures	Rationale
High Usage	In-home displays	In home displays can alert customers of current usage levels to help prevent crossing high usage thresholds later on.
Medical Baseline	Air Purifiers Portable AC units in climate zones 10, 14 and 15 or where need is identified	Air purifiers keep homes cleaner and more comfortable, particularly in medical customers with breathing conditions. Portable AC units in warmer climate zones offer health, comfort and safety to temperature sensitive customers without AC or with inoperable units.

Disadvantaged Community and California Air Resources Board "Community Air Protection Program" neighborhoods	Air Purifiers Electric heat pump water heaters and associated electrification upgrades	Air purifiers keep homes cleaner and more comfortable; in neighborhoods where pollution factors are high this is especially important. Electrification of water heaters may help reduce GHG emissions in neighborhoods identified as those experiencing high pollution.
Areas of high disconnect	In-Home Displays	In home displays can alert customers of current usage levels to help prevent crossing high usage thresholds later on.
High Fire Threat District customers	Solar-powered generators	Generators can help low-income customers during a Public Safety Power Shutoff to maintain basic levels of comfort (*e.g.* refrigeration to avoid food loss.)

a. Discuss lessons learned from the current cycle program design.

SDG&E has conducted a thorough analysis of data from previous program years that illustrates areas for improvement. The primary lessons are all somewhat related but lead to different substantive changes to program design. These lessons learned include:

1. Homes treated does not equal energy savings.

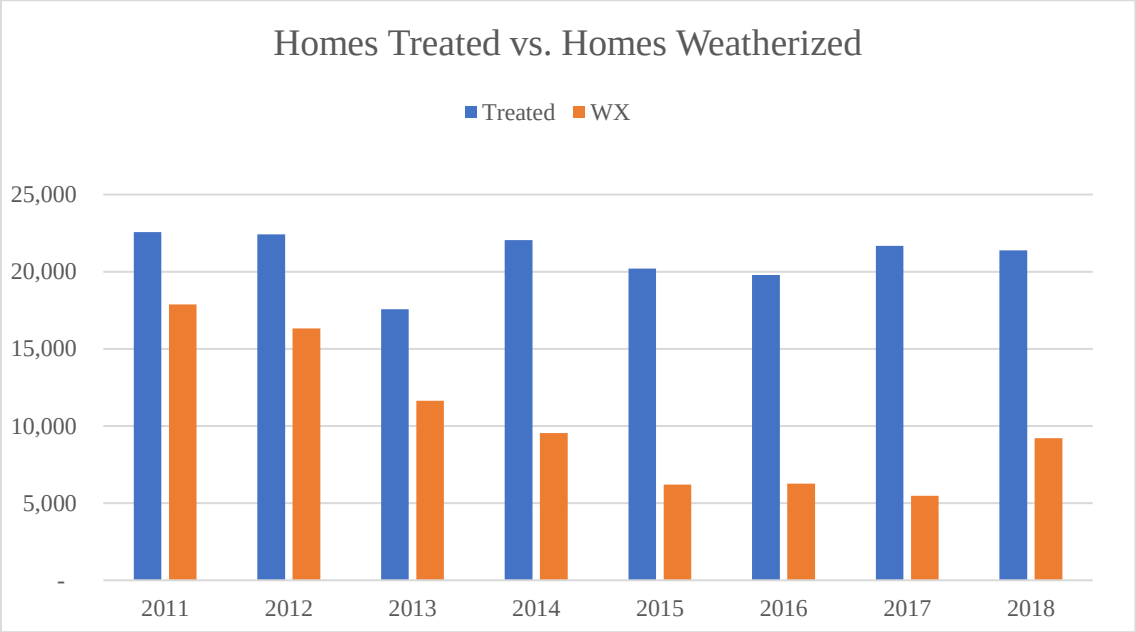
When a significant number of homes with renters receive just simple measures[50] due to the lack of a signed POA, the average energy savings per household is reduced from what was forecasted. The 2015 to 2017 ESA Impact Evaluation estimated average electric energy savings for ESA treated households at 61 kWh. The majority of homes included in the evaluation sample were those receiving simple measures, predominantly light bulbs and smart strips.

2. Lack of POA equates to lower weatherization conversion.

As illustrated in Figure 3 below, SDG&E saw a significant decline in the conversion ratio of homes where an O&A contractor performed simple measure installations to a home fully weatherized starting in 2013/2014. Lesson learned number (3) below regarding removal of the three-measure minimum requirement has an interactive effect here as well. Once observed, program staff worked with contractors to emphasize the importance completing the POA in order to drive additional enrollments in the program. Moving forward, if a POA is required prior to any treatment at a property, then the program should be able to maximize all units treated with the measures that will garner the highest level of energy savings.

[50] Simple measures are LED night lights, microwaves, power strips, faucet aerators and low-flow showerheads.

Figure 3. Historical Homes Treated vs. Weatherized



3. <u>The three measure minimum impacts overall program cost-effectiveness.</u>

Elimination of the three-measure minimum continues to put a focus on installing a minimum number of measures in order to count a home as "treated" versus truly assessing and delivering on all measure that can provide energy savings. This was evident in program observations where the O&A contractors were able to achieve homes treated targets via many short/simple visits. In essence, when O&A contractors ran into difficulty obtaining a POA after following proper protocol (three attempts with the last attempt being by mail) they would turn to the next property and leave the first for a "revisit." SDG&E observed that many of these properties never provided POA and it was unclear if additional follow ups were effective or efficient. SDG&E observed this pattern and took corrective action within the bounds of the existing O&A contracts in order to mitigate this effect.

4. Single family and mobile homes are weatherized at a higher rate.

The mobile home population in San Diego is driven by high ownership, where the resident is most often the owner of the property. For this reason, treatment trends within the mobile home segment closely align with treatment trends of the single-family owner segment, which also sees higher levels of conversion from treatment to weatherization. The mobile home population has been treated consistently through the ESA Program in past years but are a prime target for optimization as new measures are considered or as retreatment opportunities are realized.

5. Satisfaction with Home Comfort remains high.

SDG&E conducts bi-annual[51] program surveys that are specific to enrollment in the ESA Program. The report of survey results[52] from the second half of 2018 finds that 75% of customers rate their home as "More Comfortable" as a result of the work that ESA did on the home. In that same report, the measure that scored highest as "most valuable" was lighting, at 30% of the responses. This indicates that customers attribute even the most basic energy efficiency measures with a level of comfort. But it also reinforces the needs for even the most basic health, comfort and safety measures as key drivers to program participation.

6. Current program education and outreach does not create persistent energy savings.

The O&A visit to a home provides customers with energy education, and customer recall of receiving the educational tips remains high, at 82% as of the H2 2018 survey[53]. Of those customers, 69% report receiving the tips "via conversation with an employee" and 57% recall a

[51] Prior to 2018, surveys were conducted quarterly.

[52] MDC Research report for SDG&E's Energy Savings Assistance Program H2 2018 Tracking.

[53] MDC Research report for SDG&E's Energy Savings Assistance Program H2 2018 Tracking.

brochure. However, only 54% report being "informed of other SDG&E services." SDG&E would like to see greater tracking and engagement with the information from across the utility that can benefit the low-income population, including information on TOU, collection of important contact information for power outage notifications, or other critical information that may arise in the future. This presents the foundation of SDG&E's recommendation to create a digital platform for customers that centralizes energy education through an online platform that delivers a simple home audit, collects important customer information and then delivers persistent and ongoing energy education alongside delivery of other important utility information. Data on current My Account and Behavior program penetration supports the shift to a digital platform. In addition to high rates of low-income customers using SDG&E's My Account, over 34,000[54] customers were enrolled online for the CARE Program. SDG&E currently utilizes a single intake application for CARE, ESA and Family Electric Rate Assistance (FERA), using CARE applications to generate leads for the ESA Program. Considering this, SDG&E believes there is opportunity to engage low-income customers utilizing online tools, which are easy to use and available in multiple languages.

SDG&E recognizes that a digital divide remains in the population, so in parallel to the digital platform, all efforts to deliver a similar offline experience through a customer's preferred method of communication will be maintained in order to function for customers with accessibility issues or needs for information in an offline manner. In order to achieve maximum cost-effectiveness, the effort to create this new digital experience, including reconfiguration of

[54] Annual Report Activity of San Diego Gas and Electric Company on Low-Income Assistance Programs for 2018, Appendix B, CARE Table 2.

existing technology or contracting with new vendors should be undertaken at the beginning of the new program cycle.

b. Note program design modifications to garner increased energy savings and reduce hardships.

SDG&E is proposing the following program design modifications to garner increased energy savings and reduce hardships:

Table 15 : Proposed Modifications and Expected Results

Modification	**Expected Result**
Use energy usage and/or high energy burden to identify customers with the greatest need to target for program participation.	Increased energy savings and cost-effectiveness.
Custom ongoing energy education to help improve customers engagement with energy efficiency.	Persistent energy savings.
POA received prior to in-home assessments to optimize visits and install all feasible measures.	Increased program savings and cost-effectiveness.
Modify measure offerings to exclude measures negatively impacting energy savings which do not provide health comfort and safety to customers.	Increased cost-effectiveness.
Additional "special initiative" measures for targeted low-income populations (*i.e.*, customers in high fire threat districts.)	Reduced hardship, increased health, comfort and safety, attainment of other IOU policy objectives (wildfire mitigation, GHG, etc.)

c. Discuss expected accomplishments and potential obstacles to your proposed design. What are the recommendations to overcome any identified obstacles?

With the proposed program design, SDG&E intends to accomplish the following:

- Increase energy savings for customers by improving opportunity for weatherization services and measure installation.
- Improve the customer experience by providing flexible and personalized solutions.

- Reduce hardship for customers with the greatest need through targeting efforts.
- Promote ongoing customer behavior changes to increase persistent EE savings.
- These accomplishments and anticipated obstacles are discussed below.

1. Increase energy savings for customers by improving opportunity for weatherization services and measure installation.

The program will do this by targeting homes with higher usage and/or energy burden or energy efficiency potential through creation of an upfront, simplified POA approval process for property owners. This should increase approval for installation of measures and therefore increase potential savings per home. The potential barriers to this include:

- Unattractive choices with regard to measure selection that do not provide renters or homeowners alike with a sense of "pride of ownership."
- Reduced measure selection due to low savings values.
- The multifamily split incentive problem.
- The idea that energy efficiency is not a priority for renters and owners alike.
- SDG&E's ability to effectively reach decision makers for POA.

The program design should overcome these barriers by providing landlords with a selection of measures available for co-pay, through leveraging Emerging Technology to identify additional innovative measures, by providing property owners with a high return on investment through audits and through the leveraging of local multifamily association relationships.

2. Improve the customer experience by providing flexible and personalized solutions.

The program will accomplish this through the use of Home Energy audits to provide online energy education, the addition of post treatment education through alerts and messaging, minimization of customer visits by providing the customer with options for how they receive their energy education, the use of disaggregation reports to personalize audit reports and by creating the ability to schedule online visits with contractors. The biggest potential barriers to this approach will be specific to certain customer segments not as likely to go online. Recent

surveys indicate that only 10% of Americans are not online, however the group of customers not online are seniors and those with less than a high school education.[55] SDG&E will overcome the digital divide through:

- Continued utilization of the Energy Solutions Partner (ESP) network and other CBOs to help facilitate audit completion.
- Providing an option for in-home or phone energy audits to be completed.
- Using customer experience research to help design an easy-to-use process prior to roll-out.
- Providing multiple language options and accessibility options for customers with language or other accessibility functional needs.

3. Reduce hardship for customers with greatest need.

SDG&E has identified customers with the greatest need as those living in single family and mobile homes in high-poverty zip codes where the home has not previously been treated. While the program cannot control all factors that go into hardship, the new program does intend to reduce hardship through both energy savings and non-energy benefits. The most common obstacle to reducing hardship may be seen where a home receives measures that potentially increase a customer bill; this can happen in cases where an appliance like a non-working furnace is replaced. While a home is made more comfortable and is therefore the recipient of non-energy benefits, the program cannot understate the risk of causing bills to rise in households that may not be able to afford the added expense. In order to overcome this barrier, the program must closely leverage all applicable customer assistance programs, including leveraging with LIHEAP, the CARE discount, Medical Baseline and the new Disadvantaged Communities Green Tariff (DAC-GT) rate (as appropriate.)

[55] Pew Research Center, *10% of Americans don't use the internet. Who are they?* (April 22, 2019), *available at* . https://www.pewresearch.org/fact-tank/2019/04/22/some-americans-dont-use-the-internet-who-are-they/.

2. Provide customers with persistent Energy Efficiency (EE) savings.

The program design plans to maximize savings potential based on providing ongoing customer education about energy usage, rates, and program options. Ongoing engagement will be the key to reduction in consumption. As discussed in Section C.4, the greatest barrier is the program's ability to claim savings for the home energy audit. Though savings from this initiative are not currently calculated or assured, SDG&E is confident that customers do save energy with these tools and intends to deliver the audit to customers and deliver unclaimed savings in the absence of a workpaper.

2. Proposed Program Delivery:

Describe the proposed delivery of the program per the proposed design approaches above. Discuss lessons learned from the current program cycle; note that the lessons learned from delivering ESA Common Area Measures will be answered in the section on Multifamily Sector.

SDG&E's proposal to improve program delivery starts through collection of customer specific data to provide a more customized approach to energy education and measure delivery. In order to streamline program delivery, the proposed program includes several steps to refine targeting, provide energy analysis and relevant premise information prior to reaching out to home occupants. This additional step will help the program categorize and target homes in a way that increases overall cost-effectiveness for delivery of services. Within SDG&E's EE portfolio, the Universal Audit Tool also known as a "Home Energy Audit," allows customers to provide valuable information on the potential for energy savings at their home. Currently, only 7% of ESA program customers have also completed the EE Home Energy Audit.[56] This is

[56] Based on SDG&E data.

compared to 55% of ESA customers who are enrolled in SDG&E's My Account.[57] ESA intends to leverage much of the existing EE UAT with modifications and improvements to ensure accessibility and to streamline and simplify the audit process further for low-income customers.

Within SDG&E's energy efficiency (EE) portfolio, the Universal Audit Tool (UAT) also known as a "Home Energy Audit," allows customers to provide valuable information on the potential for energy savings at their home. Currently, only 7% of ESA program customers have also completed the EE Home Energy Audit. This is compared to 55% of ESA customers who are enrolled in SDG&E's My Account. ESA intends to leverage much of the existing EE UAT with modifications and improvements to ensure accessibility and to streamline and simplify the audit process further for low-income customers.

SDG&E conducted focus groups in August 2019 to get feedback from customers on the existing audit tool's ease of use in order to understand a customer's willingness to use the tool as an entry point to the ESA Program. Overall, customers indicated that the audit questions are easy to answer and were comfortable with completing the audit as the entry point. Completion of the audit creates the opportunity to evaluate the premise for measure installations and associated energy savings and allows for much more effective delivery of service via a contractor who can go into an appointment already armed with information. Key findings of the focus groups are listed below:

Table 16: Customer Focus Group Findings and Recommendations

Key Findings	Recommendation
Customers who had participated in the ESA Program were largely satisfied, though satisfaction has relation to the level of treatment received.	Ensure program is providing customers with the program steps; delivering clearly stated qualification criteria for enrollment and measures.

[57] Based on SDG&E data.

Those who haven't participated face awareness barriers, misconception and mistrust of the program.	Overcome awareness and misconception barriers through education and communication.
Common misconception among renters that the program is not for them - most don't feel "home improvement" measures are applicable to them, and landlord approval remains a barrier.	Improve communications to renters. Utilize the SPOC and whole building approach, when applicable.
Online enjoyment is not a barrier if value proposition is clear, and the process is intuitive and not a heavy lift.	Clearly deliver value proposition and engage usability testing to delivery an intuitive and user-friendly audit.

SDG&E will be focusing on driving up to 60% of customers to complete audits online. However, it is recognized that the portion of the population with accessibility needs and/or lack of technology leads to the proposal to continue to conduct audits with assistance from outreach or contractor support if required or requested. SDG&E will also have assistance available to help customers through the process when they are unable to complete the audit on their own. Tenants of submetered facilities would continue to primarily be enrolled in person

Another improvement in program delivery is through an improved customer experience; this comes through providing customers with the opportunity to have more access to their enrollment information, upload customer enrollment documentation, and track program enrollment status. The program will be brought to current digital standards that customers are used to from other service and/or shopping experiences. This addresses a current operational challenge that comes from the fact that a customer must contact either a contractor or SDG&E in person to get information regarding current enrollment status and scheduled appointments. SDG&E will look to improve the overall customer experience by giving them more access and control on how they engage with the program.

For single family renters and multifamily properties, SDG&E will require POA from landlords prior to home assessment to ensure all feasible measures can be installed by contractors. As discussed, this is currently a significant barrier to deep treatment for renters. By

automating and improving the POA process, property owners can engage through more efficient means and obtain more information regarding the benefits of the program. Once that POA is received or if the occupant is an owner themselves, they will receive the benefits of an innovative and improved customer experience, including:

- A clear understanding and expectations for the ESA Program.
- The ability to view appointments online and make changes if their schedules change.
- Program delivery of email and text reminders about appointment times and follow ups.
- A list of products that may be installed during the initial assessment which allows customers to select from a limited, pre-approved group of products.
- Minimized customer visits using a "primary" contractor model as the single point of contact for each home.

d. For new delivery approaches, where prior experience is limited, detail thoroughly the delivery approach, associated risks, and risk mitigation strategy.

Table 17 below presents SDG&E's strategies to overcome delivery risks.

Table 17: Strategies To Overcome Delivery Risks

New Delivery Approach	Associated Risk	Mitigation Strategy
Using online audits as an entry point for program participation	Goals not achieved	Simplify the audit process and leverage CARE online enrollments as marketing for ESA Program Audits. Use local CBO's to encourage customers to complete audits. Provide energy and water conservation kits as an incentive for audit completion. Make modifications mid-cycle to program design if not effective.
Using online tools for customer /property owner engagement -	Customers do not engage as expected through online channels	Use focus groups and customer surveys to adjust as needed. Continue to provide in-home visits for customers not willing to engage online and provide education on the ease of online access/engagement with new tools.
Mailing customer Energy and Water Conservation Kits	Customers may not install measures	Have customers attest to measure installation. Conduct random installation inspections. Revisit the strategy with the mid-cycle advice letter and remove if not successful.

Post treatment Energy Education	Customers may not engage or stop engaging after time	Use focus groups to ensure messaging has meaning and application. Leverage best practices from Residential Behavior program for ongoing engagement.

e. Describe how the proposed program delivery approach will achieve energy savings and hardship reduction program goals for each prioritized population.

As discussed in Section D.3, the prioritized population is primarily made up of single family and mobile home renters and owners that live in high-poverty areas. Additionally, multifamily properties are prioritized using a whole-building approach that determines the greatest potential for energy savings. The proposed program delivery, which brings a more data-driven approach to targeting and measure delivery will help each prioritized population achieve energy savings and hardship reduction. The new delivery approach allows the program to understand the inventory in each dwelling, the potential savings opportunity, and if the customer will meet specific criteria that allows for measures to be installed to enhance health, comfort and safety. SDG&E will be able to target customers proactively based on results and service them in such a way that benefits the customer.

f. As applicable, respond to the following questions as it related to your specific program delivery approach:

i. What additional workforce development opportunities should be employed to ensure hiring within local communities, especially the disadvantaged communities and, where possible, career-ladder jobs? How can the IOUs partner with CBOs, community colleges, and workforce investment boards?

The ESA Program intends to fully leverage the existing Workforce, Education and Training (WE&T) program in the energy efficiency proceeding. This program is designed to support the training and educational needs of California and SDG&E's workforce in order to help meet its energy efficiency potential. WE&T programs offer energy efficiency education to

incumbent and potential workers and customers so that they may recognize and act on opportunities to save energy. WE&T has primarily focused on upskilling incumbent workers, but the new Career & Workforce Readiness (CWR) program will address the unique needs of the disadvantaged worker. PG&E is the lead IOU on this statewide program and regional needs of all the IOUs will be addressed through the Request for Abstract and Request for Proposal (RFA/RFP) process as the program is bid out for statewide implementation. CWR is intended to address the unique needs of the disadvantaged worker seeking to enter and remain employed in California's energy efficiency workforce. Desired outcomes include;

- Increased awareness of and appreciation for EE jobs;
- Increased awareness of workforce development organizations' services and programs;
- Programs that include relevant and current EE content with a focus on adult learning best practices to impart technical knowledge and skills;
- Solutions that incorporate training programs and services across all IOU territories to address the unique needs of disadvantaged workers and local economies;
- Programs that leverage workforce development organizations' social services to address participants' unique barriers to program participation and employment;
- Programs that create the opportunity for "high road" employment; and
- Programs that prepare participants to support the IOUs EE and low-income resource programs.

The solicitation timeline is underway; work on the RFA began in July 2019 with estimated completion by during 2019. The RFP is estimated to start late 2019 with estimated completion by July 2020.

ii. Discuss how your Marketing, Education, and Outreach (ME&O) plans support the Program Goals, including plans for improving participation to meet participation goals and targeting multifamily households. Include proposed ME&O cost per household for program years 2021-2026; how does this compare to the current cycle? Discuss the history of your ME&O methods' effectiveness and modifications or opportunities for further streamline existing ME&O initiatives.

Based on D.17-12-009, which ordered a separate marketing, education and outreach plan to be served, SDG&E is choosing to address the current low-income programs ME&O plans in a separate chapter. Please see the Prepared Direct Testimony of Horace Tantum for details.

3. Prioritization of Target Participants:

Detail the proposed approach (criteria and process) to identify and prioritize your participant categories or housing types with significant need for energy efficiency services. Provide a detailed explanation to support your proposed approach.

a. Are households prioritized for service based on housing type, energy usage, energy costs, energy burden, location, amount of potential energy savings, and/or health, comfort, and safety criteria?

SDG&E will be prioritizing households based on housing type, focusing first on single family, multifamily and mobile home owners and renters in high poverty areas with high energy usage or energy burden. With that as a starting point, the Program will then focus on enrolling homes never receiving ESA Program services for homes who may have been treated by the program but did not receive all measure installations at the time of previous enrollment. In addition, consideration will be given to homes treated more than 10 years ago where the potential for new measure installation is greater. Customers in need of heating and hot water heating measures will be prioritized for health, comfort and safety.

b. Will you prioritize households not treated in the current cycle due to unwillingness to participate?

Households not treated in the current cycle due to unwillingness to participate will be prioritized as part of the model presented directly above. In addition, SDG&E intends to include CARE customers who enrolled in CARE more than six years ago who live in a premise not previously treated through the ESA Program as part of program targeting. Approximately 44% of SDG&E's active CARE customer population lives in housing not previously treated by the ESA Program.[58] These customers may or may not live in high-poverty areas, which may put them outside of primary targeting. However, due to their enrollment status with CARE and ongoing engagement with the utility, delivery of services to this population should be included. SDG&E will start with this population and combine this with information on estimated energy burden and high poverty areas to target customers most likely eligible and in need.

c. How will energy efficiency services offered to the households vary to maximize savings and assist households to reduce or better manage energy bills, minimize disconnections, and foster affordability of energy costs?

SDG&E's proposed program design puts forth a categorization of measures into two treatment tiers, basic and enhanced, in order to streamline delivery of measures for increased cost-effectiveness and maximizing savings potential. Measures in the basic tier are the "easy-to-install" measures that may be installed during an initial visit. This may include some lighting, air sealing measures, power strips, smart thermostats and some domestic hot water measures. The enhanced tier includes measures that require additional investment of time (e.g., secondary visits) and resources; these will be delivered to the homes where measure installation qualifies in order to maximize savings.

[58] Based on SDG&E data.

The key to delivering the program this way is completion of the audit prior to program engagement. This step in the process is important to prepare contractors for the initial visit, where they can begin delivery of measure that help customers maximize savings, reduce bills and minimize disconnections. Upon successful completion of a home energy audit, SDG&E's program team will have a thorough understanding of what the premise is eligible for, and then be able to offer the measures that deliver energy savings based on the premise's need or based on the household need for additional health, comfort and safety measures. In addition, SDG&E will use the results of the ongoing disaggregated load profile data to help provide more customized reports which will be leveraged by contractors during in-home visits. Finally, the data collected by SDG&E in this process can be leveraged across different programs and services to help customers at risk.

d. Will you prioritize providing services for households that previously participated in ESA?

Yes, as indicated above, SDG&E will include customers previously receiving ESA Program services as part of the prioritization model. Within this population, the program will prioritize those with higher energy burden or energy usage in order to optimize saving potential.

e. What are the risks associated with your proposed prioritization and how do you plan to mitigate risks?

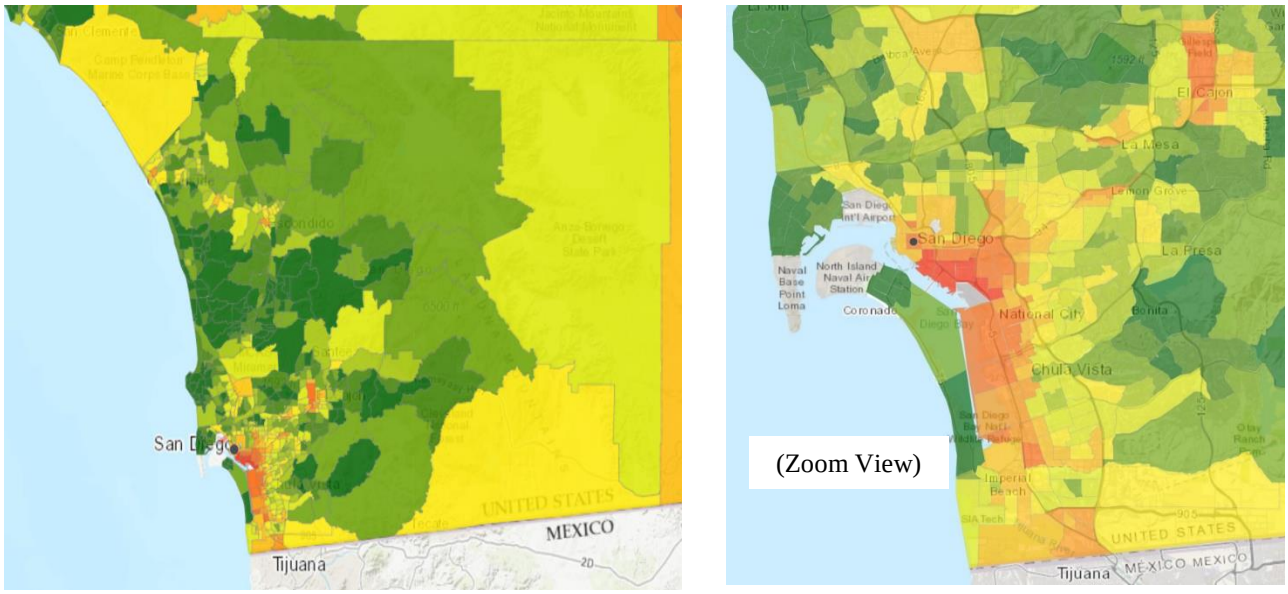
The primary risk to SDG&E's prioritization model is not having enough customers targeted to achieve program savings goals. As the program gets underway and is able to begin reporting on savings, there will be constant evaluation of expansion of the priority segments (SF/MF/MH owners and renters in high poverty areas with high energy usage or burden) so that as the population widens, the goals can be met. SDG&E also sees some risk in using the audit as an entry point to the program. As outlined in Table 17, SDG&E has plans to mitigate this risk through use of CBOs and the ESP network, by providing incentives for audit completion (*i.e.*,

the energy and water conservation kit) and by conducting ongoing analysis of where the program is meeting desired savings goals.

f. Explain whether the program should transition to uniform criteria for all the IOUs to prioritize households for service.

As SDG&E has stated in this witness testimony in support of the Application filed concurrently, and in others, the unique needs of this small service territory do not lend themselves to statewide uniformity. Such an approach most often causes real challenges in program operations and can result in populations that should be prioritized here being underserved. For example, our DAC makeup, shown in Figure 4, is primarily urban and coastal.

FIGURE 4: Disadvantaged Communities in SDG&E's Service Territory



The highest percentage zones shown on these maps are closest to San Diego's "downtown" district, moving south along the Port of San Diego to the border with Mexico. This is in contrast to the rest of California where DACs are primarily agricultural and rural communities. Having flexibility to adjust prioritization and service delivery based on service territory need provides the utilities with the ability to improve program delivery and best serve local customers.

g. Detail any needed changes to ESA Program eligibility guidelines as a result of the proposed prioritization approach.

At this time, SDG&E does not anticipate a need for a change to ESA Program eligibility guidelines based on the prioritization model presented herein.

4. Participation Barriers:

Discuss current cycle attempts to address participation barriers, your lessons learned, and how your proposed approach is improved to ensure prioritized households participate. Include potential alternatives to mitigate challenges faced by single fuel utilities, SCE and SoCalGas, or challenges for customers located where only one fuel is offered.

In addition to lessons learned described in Section D.1.a above, SDG&E has identified barriers to participation based on current cycle program design and is proposing a number of activities and outputs that should help decrease these barriers. The lessons learned that have the greatest impact on proposed program design are as follows:

Table 18: Program Barriers, Insights and Solutions

Barrier	Primary Insight	Proposed Solutions
Paperwork / Scheduling	Program surveys report that "trouble understanding documentation," "too much documentation," and "time spent to complete" application are the primary enrollment pain points for customers. Customers also report challenges in waiting for multiple appointments, issues with a lack of communication on scheduled visits and installations as additional areas for improvement.	• Improve communication to set customer's expectations. • Streamline program enrollment documents, starting with an easy to use method for online submittal of necessary documents and links to a POA (where needed). • Allow for appointment scheduling and changing, language choices, and a simple home energy online audit. Provide online education to reduce need to have a contractor conduct in-home visit.

Lack of trust for solutions delivered by non-SDG&E personnel	SDG&E is widely recognized in its service territory, but the program is delivered via a workforce that are not readily identifiable as utility sponsored. Cultural challenges including a lack of language selection and a fear of "government program" enrollment due to the current political climate continues to hinder enrollment in hard-to-reach communities.	• Reduce unscheduled door-to-door visits and allow customers to have more visibility and notifications for appointments. • Leverage partnerships with organizations that provide in language services. • Create program awareness through paid media. • Leverage the SDG&E brand for the Program. • Create a secure portal for income documentation. • Create greater Program recognition and community advocates via word of mouth.
Multiple contractor/customer touch points	Current ESA Program design involves the need for multiple in-person touch points. The Program is served by multiple contractors depending on what services are provided; from O&A to weatherization, HVAC and inspection.	• Improve the initial in-home assessment to be more comprehensive and allow for "Basic" measure installation. • Provide customers control to coordinate visits for "Enhanced" measure installation. In multi-family properties, a similar approach should be undertaken for both in-unit tenants and common area measures. • Streamline program contractors to minimize touch points.

In the multifamily market, lack of customer choice, both in contractor (MF) and depth of measure choices	A current barrier for multi-family property owner participation is the inability to choose contractors they know and trust.[59] Measure choice is something that affects both primarily Multifamily property owners and single-family property owners.[60]	• For measure choice, create co-pay opportunities for property owners. • For contractor choice, develop a trade professional program with a list of pre-selected contractors.
Multiple program implementers in the multifamily sector	Multifamily property owners are approached by various program implementers offering services with little leveraging or coordination as a result of contractor delivery.	A full and robust SPOC delivered via the utility presents all available programs via a trusted source of energy information. A robust SPOC will also be able to offer seamless integration with financing programs to overcome additional barriers related to lack of capital.
Multifamily Split Incentives	Property owners are not invested in tenant energy bills when they are not the ones who have to pay. Low attainment of POA exacerbates the issue when customers are willing to save but owners are unwilling to allow access to program contractors.	Expand the Common Area Measure program to non-deed restricted properties in order to provide incentives for property owner participation. Create an online portal to collect POA and provide education on the benefits of the ESP Program for multifamily owners and tenants.

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[59] SDGE Multi-Family Property Program Engagement Research (Pg. 19) – MDC Research.

[60] SDGE Multi-Family Property Program Engagement Research - no participants expressed the need for an extensive list of products, but most voiced a preference for some limited set of choices. As the size, reliability, and functionality vary greatly between models, refrigerators were the one product where brand seemed to matter.

5. Referrals, Leveraging, and Coordination:

Provide and review data about the ESA referral pipeline received from other programs and those made to other programs. Describe how this informed program design, delivery approach, and/or prioritization of targeted participants. Include statistics on completed referrals and those that did not choose to participate in ESA. These programs include, but are not limited to: CARE, Low Income Weatherization Program (LWIP), Solar on Multifamily Housing (SOMAH), Multifamily Single Point of Contact (SPOC), Multifamily Energy Efficiency Rebates, Multifamily Upgrade Program, Multifamily Electric Vehicle Programs, etc.

For inbound referrals, Table 19 below shows the importance of continued leveraging with the CARE Program and LIHEAP. These referral sources are important elements of the program and have been considered as part of future program design. CARE Program participation is included in the program prioritization model, and the LIHEAP program will be utilized to increase measure offerings available to customers, specifically renters, as discussed in Section D.5.e below.

Table 19: ESA Program Referral Intake

Pipeline Source	ESA Program Leads	Enrollments	Conversion	Lesson Learned	Future Plan
CARE Income Verification (includes High Energy Usage (HEU))	5,725	959	17%	Income verifications provide qualified leads and opportunities for enrollment.	Continue leveraging systems and streamline verification processes to simplify enrollment for customers.
Low Income Weatherization Program (LIWP)	0	0	0	SDG&E's Service territory did not receive LIWP Projects during 2018 or 2019.	Continue to discuss opportunities with CSD to identify future potential as more LIWP funding becomes available.

SOMAH	0	0	0	The SOMAH program launched in July 2019 and to date SDG&E has not received any referrals from the SOMAH Program Administrator.	SDG&E's proposed SPOC model will provide ongoing contact and coordination, currently performed monthly, in order to ramp up leads to and from the SOMAH program.
LIHEAP	2,333	1,269	54%	Partnering closely with local LIHEAP agencies provides customers with an opportunity to received comprehensive services by leveraging programs.	Continue leveraging efforts with LIHEAP agencies and identify opportunities to improve through streamlined enrollment and intake processes.
Multifamily Energy Efficiency Rebates (MFEER)	161	16	10%	The whole building approach is a very effective way to obtain enrollments.	Utilize the SPOC to develop processes for the new third party administrator for the MF EE program as it launches in 2020 and beyond.
SPOC	201	19	9%	Acquiring POA signature can be difficult due to the split incentive barrier.	Owners of non-deed restricted properties with high ESA in-unit potential will be offered no-cost or significant co-pay rebates on common area measures, incentivizing their authorization of ESA In-unit participation.

ESA in-unit enrollments are closely coordinated with the CARE program, as well as other relevant SDG&E program offerings. During the current program cycle, if a tenant who enrolls in ESA was not already enrolled in the CARE program, then that customer is automatically enrolled if they opt to do so on their ESA enrollment agreement. From 2017 through August 2019, approximately 4,831customers were enrolled in CARE this way.[61]

Also, as part of in-home energy education, ESA Program contractors provide customers information regarding other programs, such as, Level Pay Plan, Medical Baseline, FERA and Community Help and Awareness of Natural Gas and Electric Services (CHANGES). Results from those referrals are not tracked, therefore SDG&E does not have statistics associated with these efforts.

a. Address how San Joaquin Valley Pilot Program efforts to leverage the ESA Program, per D.18-12-015, impact the utility's application.

The San Joaquin Valley Pilot Program does not affect SDG&E's Application. This pilot project is located outside of SDG&E's service territory and does not impact its customers.

b. Consider how the ESA Program may partner or leverage new offerings for building electrification for low income customers that are approved by the Commission in Rulemaking 19-01-011.

The Commission anticipates issuing a decision in fourth quarter 2019 in Rulemaking (R.) 19-01-011, which proposes the Technology and Equipment for Clean Heating (TECH) initiative. SDG&E intends to leverage the technologies that are identified and targeted by the TECH initiative, using ESA funding to install those identified measures to a limited number of customers in selected areas in the program years that follow the proposed mid-cycle advice

[61] 2017 Low Income Annual Report of Program Activity, CARE Table 2 reports 2,449; 2018 Low Income Annual Report of Program Activity, CARE Table 2 reports 1,713; Low Income Monthly Report of Program Activity for August 2019, CARE Table 2 reports 669.

letter. The limit to the number of customers is projected based on the necessary budget required to not only replace technology, but to provide necessary home upgrades (*e.g.*, electrical panels) that come as part of electrification to these customers at no cost. SDG&E recommends waiting until program years five and six in order to give the TECH program time to launch and implement its program strategies to identify appropriate areas for leveraging.

SDG&E's efforts toward decarbonization using the ESA Program will be focused on replacement of water heating for the TECH program. As indicated at a Joint Public Workshop on Building Decarbonization – SB 1477 Pilots, 41% of emissions in the residential sector come from water heating.[62] However, as stated by the CPUC and California Energy Commission in the draft staff proposal for implementation of SB 1477 Pilots:

> "[P]er SB 1477, it is essential that program interventions in new and existing buildings also improve energy and housing affordability, particularly in low-income communities. Among the requisite performance metrics for both BUILD and TECH programs, per SB 1477, are the projected utility bill savings. Calculation of this metric requires estimates of annual energy consumption for impacted fuels and end uses, which when combined with the appropriate tariffs will produce an estimate of utility bill impacts. Per the text of SB 1477, projects are eligible to receive incentives under the BUILD and TECH programs only if they result in utility bill savings for the building occupant."[63]

In light of this, SDG&E's proposal is to take this measured approach by first focusing on replacement of natural gas water heaters for a limited number of customers in neighborhoods that have been identified by the CARB Community Air Protection Program.[64] The information

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[62] California Public Utilities Commission, *Technology and Equipment for Clean Heating (TECH), SB 1477 Pilot Proposal*, (July 30, 2019) at 2, *available at* https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442462149.

[63] California Public Utilities Commission and California Energy Commission Staff Proposal for Building Decarbonization Pilots – Draft, *In compliance with SB 1477 (2018) and with CPUC R.19-01-011* (July 16, 2019), *available at* https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442462255.

[64] Available at https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program.

provided in this approach will help add to growing data on the full impacts of electrification to all customers. As a separate undertaking, the utility and the Commission should be exploring rate design that helps mitigate any potential bill increases due to increased use of electricity, as the cost-effectiveness of GHG reductions is dependent on having the appropriate rate structure in place.

c. Discuss lessons learned from leveraging efforts to date, including but not limited to Tribal Communities, Disadvantaged Communities, other organizations and communities, and propose improvements to current coordination efforts.

SDG&E's leveraging efforts in these areas has been highly successful due to the breadth and scope of its ESP network. This network of over 190 CBOs delivers news, information and outreach to vulnerable populations, serving as a trusted voice in their community that delivers relevant information about how SDG&E's low-income programs can help eligible customers.

SDG&E's outreach team has been successful in finding community-based tribal organizations like Southern California American Indian Resources and Southern California Tribal Chairmen's Association to partner with and bring them on as ESPs to reach tribal populations. SDG&E has been very successful in reaching tribal customers through these agencies by building trust and exceptional partnerships. SDG&E's outreach team has increased the communication to tribal customers through presentations, training, messaging, and collateral distribution in TANF offices and at tribal events. As described in the Prepared Direct Testimony of Horace Tantum, the Outreach team plans to continue to look for opportunities to bring programs and information by continuing to leverage the ESP network. In addition, in 2018, SDG&E brought on a Regional Public Affairs Tribal Liaison who works directly with tribal governments in our service territory. As this role continues to develop and forms long lasting

relationships with tribal governments, programs should have an increased opportunity to connect with tribal customers.

SDG&E's outreach team has increased the number of ESPs in DACs and continues to look for new partnerships that can help bring information on CARE and ESA to these communities. As with tribal outreach, the outreach team has been successful in reaching DAC customers through presentations, events, and distributed messaging. In the new program cycle, the outreach team will continue to look for ESPs in SDG&E's urban core that can continue to reach the disadvantaged community members and hard to reach populations.

Finally, with such a large focus on serving the multifamily sector with ESA, the program recognizes the importance of reaching the person who is authorized to make energy efficiency decisions on a property. Many of these property owners and management companies are members of various apartment and housing associations. Collaborating with these associations is important as it allows SDG&E to effectively reach these decision makers and raise awareness of programs. SDG&E has partnered with the San Diego Housing Federation to host an annual Multifamily Energy Solutions Roundtable, targeting property managers and owners who are members of the association. The Roundtable provides information on State Assembly Bills that impact the energy landscape, as well as information on energy efficiency rebates and incentives to the Multifamily sector. In 2018, there were 36 attendees coming from 18 organizations. As SDG&E builds relationships with other apartment associations, further roundtable events will be held for continued outreach efforts to this segment.

d. Describe the benefits, if any, of California Department Community Services and Development (CSD) co-funding for efficient delivery of energy efficiency services to low-income tenants in your territory in the current cycle. If there is a potential for such benefits, explain how to include CSD co-funding.

During the current program cycle, SDG&E and CSD have not entered into a co-funding agreement to install measures through the LIWP program. This is due to a lack of LIWP projects in the SDG&E service territory. As reported in the California Climate Investments Annual Reports for 2017[65] and 2018,[66] only three out of a reported 63 projects for the Large Multi-Family Energy Efficiency and Renewables program were built in San Diego county. SDG&E is open to finding opportunities to leverage measure installations with CSD. To be cost-effective for CSD, SDG&E and contractors implementing the LIWP program, the number of projects would need to be significant enough to justify the cost of implementation, which includes development of data sharing processes, invoicing processes, changes to legal documents, and other significant program processes and procedures. Clearly identifying potential properties and measure potential will help ensure that a proper cost-benefit analysis can be completed prior undertaking co-funding agreements.

There are three LIHEAP agencies in SDG&E's service territory, Campesinos Unidos (CUI), Metropolitan Area Advisory Committee (MAAC) and Community Action Partnership (CAP) of Orange County. SDG&E has developed strong partnerships with both MAAC and CUI and have O&A and Weatherization contracts with these two agencies. The partnership allows the agencies to maximize the leveraging of measure installation for both programs in an

[65] Available at https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/ggrf_project_list_for_2017_annual_report.xlsx

[66] Available at https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/arsupportdata/dl/ccirts_all_projects_march2018.xlsx

effective way. Through relationship management and regular coordination with these agencies/contractors, SDG&E can deliver energy efficiency services in partnership to best serve all eligible customers. SDG&E has also been working closely with other O&A contractors to identify leveraging opportunities at the time of the initial assessment to identify jobs which can be leveraged, and have them properly assigned to LIHEAP contractors. SDG&E will be exploring system enhancement options which will automate the referral process for ESA Program jobs with the best leveraging opportunities.

e. Describe the benefits, if any, of co-funding with water agencies for efficient delivery of energy efficiency services to low-income tenants in your territory. If there is potential for such benefits, explain how to include similar co-funding.

The San Diego County Water Authority (SDCWA) and SDG&E entered into a Joint Memorandum of Understanding in October of 2016, which provides the ability for the utilities to enter into program contracts to facilitate energy and water usage efficiencies for customers in their common service areas. In 2018, SDCWA and SDG&E entered into an agreement to implement a residential low-income water-energy collaboration to promote energy and water efficiency by cost sharing certain measures that save both energy and water, thereby expanding the number of customers served and the amount of energy and water saved.

Currently, as part of the ESA Program, water saving measures such as clothes washers and domestic hot water measures are installed by program contractors. SDG&E provides the necessary account and measure information to SDCWA for review and validation of eligibility. Once the information is validated, SDG&E bills SDCWA for their portion of the water measures. Upon receipt of payment, SDG&E applies the funds to the ESA Program. SDG&E then tracks and reports on activity as part of the Low-Income Monthly and Annual reports.

Additionally, SDG&E and SDCWA leverage opportunities to raise awareness together regarding their respective programs. SDCWA promotes the ESA Program as part of their customer education efforts, while SDG&E includes SDCWA water saving educational materials as part of its ESA Program education.

SDCWA's total contribution to this effort is $395,000, which will fund the agreement through 2020. As of August 2019, SDG&E has billed SDCWA over $123,000 toward their contract commitment resulting in approximately 20,600 measures delivered. These efforts are contracted through December 2020.

For the 2021 through 2026 program cycle, SDG&E plans to continue participating in these leveraging activities with the San Diego County Water Authority and will look to expand efforts should additional water savings measures and funding from SDCWA become available.

f. Placeholder.[67]

g. Discuss coordination with entities with existing affordable clean energy programs including agencies such as California Energy Commission and California Air Resources Board (CARB), which adopted a 2018 Community Air Protection Blueprint identifying communities most impacted by air pollution pursuant to Assembly Bill 617 (Garcia, 2017). Describe the potential benefits to delivery of energy efficiency services to low-income households with significant need, if any, through coordinating with CARB's Community Air Protection Program, and/or prioritizing the first ten communities identified by CARB. If there is a potential for such benefits, describe any policies or programs to achieve these benefits.

As described above in Section D.5.c, SDG&E is proposing to focus replacement of natural gas water heaters to electric water heaters, as potentially identified through the TECH program, in neighborhoods that have been identified by the CARB Community Air Protection

[67] Heading 5f was blank in the Guidance Document, including placeholder here to maintain formatting.

Program. Once the TECH program has developed the list of appropriate technologies, SDG&E will move forward with implementation in neighborhoods identified by CARB. If the neighborhoods change (the 2019 evaluation is currently underway) then SDG&E will update targeting for these measures as well. The population within these neighborhoods is considered a "prioritized" population based on the prioritization model describe above that calls for CARB neighborhoods to receive the ESA Program and additional services.

h. Identify any additional programs that provide opportunities to promote public health and energy efficiency in tandem. Examples may include, but are not limited to, lead and asbestos programs, asthma reduction programs, etc.

SDG&E has an existing partnership with the San Diego County Health and Human Services Agency (HHSA); a CARE application is included in every new client intake packet. All efforts are source coded and no capitation fee is paid. SDG&E partners with HHSA to include program information on HHSA's website to ensure that anyone applying for or renewing health and social service programs will also be connected with ESA, CARE, and FERA.

SDG&E intends to explore additional partnership opportunities with agencies that focus on public health specific to the region's local need. For example, the Meals on Wheels program in San Diego serves over 3,000 seniors, many of whom are low-income and experience health issues due to food insecurity.[68] Representatives from Meals on Wheels attended a community forum in August 2019 to solicit feedback on early program design, and provided preliminary input on the potential for a partnership that can leverage their mobile app. Meals on Wheels sends a volunteer army directly into homes, and now has technology available through the use of

[68] Meals on Wheels San Diego County, *2018 Annual Report, Driving the Wave of the Future* (2018) at 3, *available at* https://www.meals-on-wheels.org/sites/meals-on-wheels.org/files/MOW%202018%20Annual%20Report%20Online%20Edition.pdf

this mobile app to track individual "overall well-being".[69] Their clients are "monitored in real time each day they receive meals, whether it is physical or mental changes, environmental conditions or transportation challenges…".[70] Meals on Wheels can help coordinate support services and once a new cycle of program funding is approved, SDG&E can explore opportunities to leverage data in a partnership that can make use of their volunteers to note situations where energy efficiency services may be needed and where the health, comfort and safety of residents can be improved through the program.

6. ESA Measure and Portfolio Composition

Discuss the proposed measure mix. Include discussion of the below topics:

a. Identify specific measures that reduce the utility's program costs in offering ESA services and/or increase the benefit to the customer. Include new technologies.

After review and consideration, Table 20 below presents the complete measure mix SDG&E has included as part of the 2021 through 2026 program cycle. The measures were selected for the contribution they offer customers towards energy savings, or for health, comfort and safety reasons, or for the contribution they make to addressing one of the Special Initiative customer segments defined in Table 5 of Section B.1.c.

Table 20: Proposed 2021 through 2026 Measure List

Standard Measure List	Gas	Electric
Faucet Aerator	X	X
Low Flow Showerhead	X	X
Thermostatic Shower Valve	X	X
TSV and Tub diverter	X	X
High Efficiency Clothes Washer	X	X
Duct Test and Seal	X	X

[69] *Id.* at 2.

[70] Id.

Combined Showerhead/TSV	X	X
Water Heater Repair/Replacement	X	
Air Sealing / Enclosure	X	
Attic Insulation	X	
Furnace Repair or Replacement	X	
High Efficiency Clothes Dryers (new)	X	
Heat Pump Water Heater		X
Smart Strip		X
Smart Strip Tier II		X
Refrigerators		X
Air Sealing / Enclosure		X
Attic Insulation		X
Pool Pump		X
Room AC		X
Refrigerators		X
Exterior Hardwired Fixture		X
Interior Hardwired Fixture		X
Energy Efficient Fan Control		X
LED PAR Lamps		X
LED A Lamps		X
Interior Hardwired Fixture		X
Exterior Hardwired Fixture		X
Whole House Fan (new)		X
Special Initiative Measures		
Air Purifiers	n/a	n/a
In- Home Displays		X
Portable AC		X
Solar Powered Generator	n/a	n/a

SDG&E explored the opportunity to add a large variety of new measures to the ESA Program portfolio, working with the internal Emerging Technology team, Energy Efficiency engineering team, outside consultants and other IOUs to identify potential new measures. SDG&E also reviewed the Potentials and Goals study to identify potential measures for installation. SDG&E teams researched over 20 measures identified through these various sources for potential program integration. Unfortunately, SDG&E encountered significant

roadblocks in adding new measures to SDG&E's portfolio due to the mild climate of its service territory, which limits savings values and negatively impacts the program cost-effectiveness.

The measures which most positively impact SDG&E's cost-effectiveness are domestic hot water measures, air sealing, and attic insulation. Furnace repair and replacement is a high cost non-resource measure which puts negative pressure on the program's cost-effectiveness but significantly impacts customer health, comfort and safety. Additionally, SDG&E's is anticipating that its new home energy audit approach to program delivery will help improve the cost of delivering the program to customers and have a significant and positive impact to customer's bills.

As a result, SDG&E proposes to include only two additional resource measures for the 2021 through 2026 program cycle. These new measures are whole house fans and energy efficient clothes dryers.

- **Whole House Fans:** Whole house fans provide customers in the hotter climate zones of SDG&E's territory with significant savings when customers are properly educated on how to properly use the fan to save energy. SDG&E installations for this measure are limited to SF/MH and MF property owners, in climate zones 10, 14 and 15, where installation is feasible.
- **Energy Efficient Clothes Dryers**: SDG&E is proposing to include energy efficient clothes dryers into its measure portfolio. This gas savings measure will be available to SF/MH and MF renters and owners in households of four or more where the appliance is owned.

SDG&E is also requesting to provide eligible low-income customers identified in the special initiative populations listed in Table 5 of Section B.1.c of that section with measures outside of traditional ESA measure offerings. The new offerings in include:

- **In-Home Displays:** In-home displays will be offered to eligible customers who have reach HEU levels, as defined by the CARE Program, three or more times in a 12- month period, and to ESA eligible customers who live in zip codes identified as having high disconnection.[71] In addition to the ESA Program

[71] Based on SDG&E data, zip codes with a rate of disconnect above 4%.

treatment, which should lower energy usage, in-home displays are additional tools which can be used to provide a simple display to alert customers of current usage levels that can provide education to help prevent crossing high usage thresholds later on.

- **Portable ACs** – SDG&E proposes to offer portable A/C units to ESA Program eligible SF/MH/MF owners and renters who are Medical Baseline customers in climate zones 10, 14 and 15 when there are homes with without an A/C or an inoperable central or room A/C systems for health, comfort and safety reasons.
- **Portable air purifiers** – Air purifiers can help keep homes cleaner and more comfortable, by efficiently purifying indoor air and getting rid of harmful pollutants, such as dust, pollen, smoke, odor and mold spores. This measure will be offered to ESA Program eligible SF/MH/MF owners and renters who are on Medical Baseline, or to ESA Program eligible SF/MH/MF owners and renters in neighborhoods of high pollution, specifically those who live in DACs or in CARB-identified areas.

As part of potential new technologies, SDG&E's Emerging Technology team undertook a "Voice Assistant Project" for a few select customers in low-income areas in mid-2019. The intent of the project was to explore how voice activation technology could pair with real time usage information and the installation of smart energy efficiency measures. Results of this effort are still pending. Voice Activation technology is relatively new and smart homes for low-income customers are, at a minimum, a few years away. However, this area continues to grow at a quick pace, and it may be something the program looks to in the future, particularly for low-income customers with mobility impairments. Future inclusion of this type of emerging technology helps the program meet the mandates of Assembly Bill (AB) 793[72] and provides access to energy management tools for low income customers.

In Section D.1, SDG&E describes a tiered approach to measure delivery. The division of measures between these two tiers is presented in Table 21 below. SDG&E may adjust the tier

[72] Stats. 2015-2016, Ch. 589, *codified in* Cal. Pub. Util. Code § 717.

offerings between the basic and/or enhanced list based contract negotiation with contractors once the Program setup process begins.

Table 21: Measure Mix by Tiers

Basic	Enhanced
Faucet Aerator Kitchen	Appliances
Low Flow Showerhead	Water Heater Repair/Replacement
Thermostatic Shower Valves	Heat Pump Water Heater (electric)
Combined Showerhead/TSV	Furnace Repair/Replacement
LED PAR Lamps	Room AC Replacement
LED R/BR	Duct Testing and Sealing
LED A Lamps	Energy Efficient Fan Control
Smart Strip	Whole House Fan
Smart Strip Tier II	Pool Pump
Smart Thermostat	Tub Diverter W/Shower Valve
	Interior LED Hardwired Fixture
	Exterior Led Hardwired Fixture
	Air Purifiers
	In Home Displays
	Portable AC
	Generators

b. Cost-Effectiveness and Other Criteria for Program Measures.

i. Describe the criteria used to compose the portfolio.

SDG&E used the following criteria to compose the measure portfolio offered for program years 2021 through 2026:

- Energy Savings: Measures providing energy savings values were included as part of the initial measure review process.
- ESACET: ESA Program cost-effectiveness was utilized to identify the overall portfolio outcome, with measures providing negative impact being reviewed against overall portfolio savings and removed if a significant negative impact on the overall portfolio was observed.
- Health, Comfort and Safety: Measures negatively impacting the portfolio cost- effectiveness were also reviewed to identify the potential for the measure to alternatively offer health, comfort and safety to customers.

ii. Describe how the portfolio composition results in deeper energy savings.

SDG&E's measure portfolio composition has not significantly changed from previous years. Two new measures identified above have been included, and five measures, detailed below, are slated for removal. SDG&E sees the greatest opportunity for deeper savings in changing the strategy for how and to whom the program is delivered. By targeting customers with the greatest potential for savings, using home energy audits and ongoing customer education to increase persistence of energy savings, and by collecting the POA up front to improve opportunities to install all feasible measures, the program should deliver deeper energy savings to all eligible customers.

iii. Describe how criteria used to compose the portfolio effectively selects measures to include that will have a positive impact on customer bills and hardship reduction.

The criteria for energy savings versus health, comfort and safety are considered separately. The approach described above is effective in identifying measures that may have a positive impact on customer bills because the primary indicator for measure consideration is cost-effectiveness with the potential to increase energy savings. However, health, comfort and safety are an additional important consideration for measure inclusion, because, as described in the NEBs study,[73] there is potential for positive benefit to customers overall through inclusion of these measures. The household hardship reduction indicator proposed in Section C.2 should provide a way to measure the overall portfolio balance between energy savings and health,

[73] Skumatz Economic Research Associates Inc. and Navigant Consulting Inc., Non Energy Benefits and Non Energy Impact Study for the California Energy Savings Assistance Program, Volumes 1 and 2, August 2019.

comfort and safety; the indicator will be shown in the Annual Reports which provides opportunity for adjustment in the future if the correct balance is not achieved.

iv. Discuss the cost-effectiveness results of proposed measures (consistent with methodology adopted in D.14-08-030). Explain assumed values and variables and other model components. Identify specific source for each measure's anticipated energy savings (e.g. deemed workpaper ID), and whether a measure is a Non-Resource or "equity" measure (i.e. may result in negative savings but improves health, comfort, and safety).

Background

Decision 14-08-030 adopted certain recommendations from the ESA Cost-Effectiveness Working Group for ESA cost-effectiveness tests.[74] These include:

- The Decision adopted the recommendation that program approval will be based on cost-effectiveness results at the program level rather than at the measure level; however, the Decision did not adopt a cost-effectiveness threshold to be used for program approval.
- The Decision adopted the recommendation of categorizing measures as resource or non-resource based on their ability to provide energy savings.
- The Decision approved two new tests to replace the previously used tests: the Energy Savings Assistance Cost-Effectiveness Test (ESACET) and the Resource Test.[75] The ESACET was designed to include all benefits and costs, including avoided costs, non-energy benefits, measure costs and administrative costs for all program measures. The Resource Test was designed to include only the avoided costs and measure costs for measures categorized as resource measures.

The Decision also tasked the Working Group with developing a recommendation for an approval threshold for the newly adopted cost-effectiveness tests. In response, the Working

[74] *See* D.14-08-030 at OP 43.

[75] This test was originally named the Resource Cost Test. The ESA Cost-Effectiveness Working Group later recommended changing the name to the Resource Test to avoid confusion with the Total Resource Cost (TRC) test from the Standard Practice Manual.

Group reconvened and provided a set of recommendations including a modified version of the ESACET (called the "adjusted ESACET") and a proposed threshold for that test only; however, the Working Group was not in consensus with these recommendations and they were not formally adopted.[76]

At the direction of D.16-11-022, the ESA Cost-Effectiveness Working Group met again in 2017 to provide additional recommendations on the tests. The Working Group recommended defining non-resource measures as measures when providing less than 1 kWh or 1 therm of annual energy savings. In addition, the Working Group recommended not including any potential net benefit for providing enrollment leads to other programs in the cost-effectiveness calculations at that time.[77]

D.19-05-019 adopted new cost-effectiveness policies for all resources including low-income. This Decision established the Total Resource Cost (TRC) test as the primary test for all distributed energy resources and required the Program Administrator Cost (PAC) and Ratepayer Impact Measure (RIM) test results also be provided for consideration. SDG&E includes the results of these tests, along with the ESACET and Resource Test, in Table A-7.

Inputs

A primary input to the cost-effectiveness tests is the ex ante energy savings estimates. Historically, these estimates were developed as part of the ESA Impact Evaluation. The 2015 to 2017 ESA Impact Evaluation recommended the IOUs develop ex ante savings estimates using the study results. The study also recommended not using results for any values that were not

[76] The report was emailed to the low-income service list on June 17, 2015 and subsequently provided as Appendix B to D.16-11-022.

[77] Recommendations of the Energy Savings Assistance Program Cost-Effectiveness Working Group, June 1, 2018. Submitted to Service Lists for A.14-11-007 et. al. on June 13, 2018. See D.17-12-009 at OP 47-50.

statistically significant. As demonstrated in Table 7 in Section B.2, for SDG&E, most of the results from the impact evaluation were not statistically significant. For these measures, SDG&E sourced estimates from workpapers. For these cases, a statewide workpaper approved for the mainstream energy efficiency programs was used whenever possible. In cases where measure level savings may vary by climate zone, the most conservative climate zone estimate was used.

The measures proposed for this Application are categorized as resource and non-resource measures for the purposes of running the tests. SDG&E used the definition for non-resource recommended by the ESA Cost-Effectiveness Working Group: a measure that provides less than one kWh or one therm of energy savings. Table 22 below shows the resource or non-resource category and the source of the savings estimates for the proposed measures. For all measures, the kW values were developed using the factors provided in the 2015 to 2017 ESA Impact Evaluation.[78]

Table 22: Source of Savings Estimates and Resource vs Non-Resource Designation

Measure	Source of Savings	Resource (R) or Non-Resource (NR)[79]
High Efficiency Clothes Washer	SWAP004C and 2015 to 2017 ESA Impact Evaluation	R
Refrigerators	2015 to 2017 ESA Impact Evaluation	R
High Efficiency Clothes Dryers	SWAP003	R
Faucet Aerator Kitchen	SWWH001	R
Faucet Aerator Lavatory	SWWH001	R
Low Flow Showerhead	SWWH002L, SWWH002B	R

[78] DNV-GL, Energy Savings Assistance (ESA) Program, Impact Evaluation Program Years 2015–2017, (April 26, 2019) at Appendix C, *available at*, https://pda.energydataweb.com/api/view/2173/2015-2017%20ESA%20Impact%20Evaluation%20-%20FINAL%20-%20April%2026%20Public%20Posting.pdf .

[79] MF indicates multi-family homes; MH indicates mobile homes; SF indicates single family homes. Electric indicates electric water heating; Gas indicates gas water heating.

Water Heater Repair/Replacement	2015 to 2017 ESA Impact Evaluation	R
TSV and Tub diverter	SWWH023C	R
Combined Showerhead/TSV	SWWH003	R
Heat Pump Water Heater	SWWH014E	R
Air Sealing / Enclosure	2015 to 2017 ESA Impact Evaluation	MF & MH: NR SF: R
Attic Insulation	WPSDGEREHC1066-0	R
Furnace Repair/Replacement	2015 to 2017 ESA Impact Evaluation	NR
Room AC Replacement	SWAP007A	R
Duct Testing and Sealing	WPSDGEREHC0032-2	R
Energy Efficient Fan Control	SWHC029	R
Smart Thermostat	SWHC039	R
Whole House Fan	SWHC030-Msr03	R
LED Lighting	PGECOLTG R3 LED Lamp Workpaper	R
Pool Pump	SWRE002-Msr01	R
Smart Strip	2015 to 2017 ESA Impact Evaluation	R
Smart Strip Tier II	2015 to 2017 ESA Impact Evaluation (used result for Smart strip as conservative estimate)	R

Decision 17-12-009 required the IOUs to include results from the CPUC Water Energy Calculator in their mid-cycle advice letters. The Water Energy Calculator was adopted by the Commission to estimate the embedded energy in water savings resulting from measures that reduce water consumption.[80] SDG&E included the embedded energy in water estimates in the cost-effectiveness tests for this application.

[80] Navigant Energy, Water-Energy Cost Effectiveness Tools, Public Workshop Presentation (February 11, 2015).

The ESA Cost-Effectiveness tests have included estimates of NEBs since 2003.[81] The approved model for estimating NEBs is a modified version of the Low Income Public Purpose Test (LIPPT) model developed in 2001.[82] The model estimates benefits for the utility and the participant at the program or household level and then allocates them to program measures based on their proportion of total energy savings. The inputs to the model are largely taken from secondary research, most of which was done prior to the creation of the model in 2001.

In 2018, the IOUs procured a Consultant Team[83] to update the NEB calculations and create a new model. The work scope and corresponding budget for the study anticipated basing the updates on more recent secondary research. During the course of the study, it was discovered that the available literature was insufficient to completely update the model and many of the calculation inputs remained outdated. The IOUs and Energy Division agreed on a set of results from the 2018 to 2019 NEB Study that could be used to update the existing model for this Application. In addition, SDG&E updated many of the IOU data inputs. Table 23 below shows the updates made to the NEB model for this application.

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81 At that time the program was known as the Low Income Energy Efficiency (LIEE) program.

82 *See*, The Low Income Public Purpose Test (LIPPT) (May 25, 2001) *available at,* http://calmac.org/publications/Final_LIPPT_Report_v4.pdf; Final Report for LIEE Program and Final Report for LIEE Program and Measure Cost-Effectiveness, *in response to D.01-12-0200, ordering paragraph #9 ((*March 28, 2002), *available at* http://calmac.org/publications/Final_LIEE_CE_Report_V2.pdf; and LIEE Measure Cost-Effectiveness, submitted to the CPUC by the Cost-Effectiveness Subcommittee of the RRM Working Group and the LIEE Standardization Project Team (June 2, 2003).

83 Skumatz Economic Research Associates Inc. and Navigant Consulting Inc., Non Energy Benefits and Non Energy Impact Study for the California Energy Savings Assistance Program, Volumes 1 and 2, August 2019.

Table 23: NEB Model Updates

Update	Source
Discount rate	Cost Effectiveness Tool
Participant kWh and therm rates	SDG&E residential average rates with and without CARE discount.
Forecasted measure quantities, costs, EULs and ex ante savings estimates	SDG&E proposed portfolio
Minimum wage value	California minimum wage requirements
Average arrearage, number of shutoffs, number of reconnects, number of calls per low-income customer, and average reconnect fee.	Estimates based on SDG&E data
Program induced reduction for arrearages and bad debt	2019 NEB Study recommendation
Inclusion of CARE gas discount	2019 NEB Study recommendation
Gallons of water saved for water saving measures	2019 NEB Study recommendation
Enhanced calculation and inputs for fewer fires and fewer moves	2019 NEB Study recommendation
Revised calculation for Comfort	2019 NEB Study recommendation

SDG&E also modified the allocation of the NEB values to measures for the HVAC and envelope measures. These measures are primarily offered for health, comfort and safety reasons and do not provide significant energy savings. Therefore, SDG&E allocated the value of NEBs for these end uses across individual measures using measure installation cost as the allocation base. This method does not change the overall value of NEBs, and it allows each measure to share a portion of the NEBs.

Testing

To conduct the tests, SDG&E used the latest available version of the Cost-Effectiveness Tool (CET) on the California Energy Data and Reporting System (CEDARS) website. The

version of the CET available for this Application requires that each run start with a program year no later than 2020. The CET output provides the electric and gas benefits based on the most recently adopted avoided costs. SDG&E combined the CET results with the estimated non-energy benefits and water benefits to provide the test results shown in Application Tables A-7, A-8 and A-9.

The forecasted installation quantities, measure installation costs, and program administration costs are primary inputs to the cost-effectiveness tests. Certain categories of the administration cost budget, namely the Special Initiative water heater electrification, and proposed statewide MFWB Program (which will be administered by a third party) were omitted from the tests as these are ancillary to the main program. In addition, the special initiative health, comfort and safety measures for certain customer segments were omitted from the cost-effectiveness tests as they are not expected to result in energy savings and the health, comfort and safety benefits for these measures have not been quantified.

Cost-Effectiveness Analysis for ESA MF CAM Treatments

All proposed measures for SDG&E's proposed local MF CAM program were tested using deemed ex ante savings estimates taken from workpapers. Wherever possible, a statewide workpaper approved for the mainstream energy efficiency programs was used. Table 24 lists the sources of savings estimates used in the analysis.

Table 24: Source of Savings Estimates for MF Non-deed Restricted CAM Measures

	Source of Savings Estimates
Energy Star Efficient Refrigerator	SWAP001J
Faucet Aerator Kitchen	SWWH001E, SWWH001A

Faucet Aerator Lavatory	SWWH001F, SWWH001B
Low Flow Showerhead	SWWH002L, SWWH001B
Boiler	SWWH010A, SWWH010B
Commercial Inst. Heaters	SWWH006A, SWWH006B
Commissioned Variable-speed pumps	SWRE002C
Duct Seal and Test	SWSV001B, SWSV001A
Interior Hardwired Fixture	PGECOLTG R3 LED Lamp Workpaper
Torchiere Lamps	PGECOLTG R3 LED Lamp Workpaper
LED PAR Lamps	PGECOLTG R3 LED Lamp Workpaper
LED R/BR Lamps	PGECOLTG R3 LED Lamp Workpaper
LED A Lamps	PGECOLTG R3 LED Lamp Workpaper
Smart Strip Tier II	WPSDGEREHE0004_Rev1.1
Pipe Insulation	SWWH017A, SWWH017S
Tank Insulation	SWWH018B, SWWH018A
HEAT Pump Split System	RE-HV-ResHP-16p0S-9p0H
High Efficiency Furnace	SWHC031A, SWHC031C
Residential Smart Thermostat	SWHC039A
Residential Interior LED Direct/Indirect Linear Ambient 2 ft. Luminaire	SWLG012M – R
Residential Interior LED Direct Linear Ambient 2 ft. retrofit kit	SWLG012S – X
LED T8 Lamp UL Type A 4 foot	SWLG009C
LED Outdoor Pole/Arm-Mounted Fixture	WPSDGENRLG0181-Rev04-Msr018 – 21
LED Outdoor Parking Garage Fixture	WPSDGENRLG0181-Rev04-Msr024 – 27
LED Outdoor Wall-Mounted Fixture	WPSDGERELG0182-Rev00-Msr006 – 8
LED Pool Light	WPSDGENRLG0028-Rev01-Msr003, 5, 7

LED Spa Light	WPSDGENRLG0028-Rev01-Msr004, 6, 8

With the exception of lighting measures, all proposed MF CAM measures are provided at 50% of the total measure installation cost with participants paying the remaining cost. For lighting measures, the program pays the full installation cost of the measure. The MF CAM analysis does not include non-energy benefits or non-resource measures. Therefore, results for this analysis are reported using the same cost-effectiveness tests used for the mainstream energy efficiency programs. The TRC, PAC and RIM test results for this program can be found in Application Table A-7.

v. Provide justification for measures included in the portfolio (if any) that do not meet the current cost-effectiveness criteria but serve other important policy objectives (such as to reduce hardships).

SDG&E proposes to provide a selection of measures to provide health, comfort and safety benefits where needed. For the Special Initiatives identified in Section B.1.c, the health comfort and safety measures include air purifiers, in-home displays, portable air conditioners, and solar powered generators. Additional health, comfort and safety measures include furnace repair and replacement and air sealing for mobile home and multifamily customers. None of these measures are expected to save energy and some may add load; however, non-energy benefits are expected.

vi. For all measures identify which are in-unit or common area.

For the complete list of measures, differentiated by whether they are in-unit or common area, *see* Application Exhibit ESA-002.

c. Identify measures from the prior portfolio for retirement along with the measure's values and explain the requested retirement.

SDG&E is requesting to retire the measures listed in the Table 25 below.

Table 25: Proposed Measures For Retirement

Measure Requested for Removal	
Measure Name	Reason
Torchieres	High program cost, low savings, low customer impact and negative impact to portfolio cost-effectiveness.
Water Heater Blanket	No workpapers to claim savings, low install rate and low customer impact.
Water Heater Pipe Insulation	Savings are negligible for most customer segments. Limited installation and minimal impact to customers.
Furnace Clean and Tune	No workpaper to claim savings. Low installation rates and low impact to customers.
AC Tune Up	No workpaper to claim savings. Low installation rates and low impact to customers.

d. For each of the following provide quantitative and/or qualitative analysis of benefit to customer in comfort and safety and impact to customer bill. If proposed in the Application, include the associated impacts to the ESA budget and portfolio energy savings and household average annual energy savings as a result.

i. Discuss findings from programable communicating thermostats/smart thermostats through pilot studies and/or temporary allowance (mid-cycle advice letter non-standard dispositions).

For Programmable Communicating Thermostats (PCTs) aka smart thermostats, SDG&E does intend to continue to offer smart thermostats in the upcoming program cycle. With the focus on providing solutions to help customers improve their opportunity to save through increased energy education and behavioral changes, smart thermostats provide a solution for customers to manage energy usage with easy to use technology.

The PCT TOU Pilot is currently in progress, with results due the first quarter of 2020. The relatively small sample size for this pilot will limit the ability to apply any quantitative results such as energy or bill savings estimates to the larger population. At this stage of the pilot the IOUs have one interim memo from the statewide pilot evaluator; findings include potential barriers to scaling up installations to the low-income population:

- Barriers to participation include general lack of interest in PCTs
- Incompatible equipment in homes
- Elderly or health related reasons for disinterest in the PCT offering
- Potential AC savings may not be realized, given that 50 percent of survey respondents reported that they only use their AC on very hot days.
- Respondents to the first survey were very accustomed to turning on fans instead of using air conditioning

At the same time, the pilot provides useful directional information regarding the viability and uptake and potential value of providing PCT's to low-income customers. SDG&E proposes to continue installing smart thermostats in the coming program cycle based on the savings estimates as documented in Statewide workpaper (SWHC-039-01).

Due to its reasonably good cost-effectiveness, SDG&E proposes to include PCTs as a measure for ESA Program eligible customers with an HVAC climate zones 10, 14 and 15, or for CARE HEU customers in Climate Zone 7. In addition, SDG&E will continue to educate all customers on smart energy use and how to improve behaviors that will reduce HVAC usage. SDG&E also recognizes that smart thermostats have capabilities to help customers increase energy savings during the times when behavioral savings or optimal savings may not be top of mind. Smart thermostats add an additional layer of support for low-income customers to reduce their HVAC use, which is generally the highest single source of energy usage in the home.

Additionally, Wi-Fi connected smart thermostats also provide many low-income customers the option to participate in demand response events that not only reduces their energy

usage, but provide alerts that can translate into additional bill credits for customers that participating in demand response programs. This provides an additional way for customers to put more money back in their pockets for other financial needs they may have.

Over the course of the six-year cycle, this measure has an estimated first year energy savings potential of 4.5 GWh and an impact to the budget of $7.9 million.

ii. Discuss whether to expand the existing policy that only operable air conditioning units are eligible for repair and replacement, to also authorize repair or replacement of inoperable units.

SDG&E does not currently replace central air conditioning systems as part of the ESA Program. Due to the mild climate in SDG&E's service territory, adding central ACs significantly impacts the measure portfolio. In general, SDG&E would not support expanding repair and replacement of central systems. However, SDG&E is proposing to provide vulnerable customers, such as customers with medical needs, a portable AC in the climate zones 10, 14 and 15 if their current AC is inoperable.

iii. Discuss potentially offering heating and cooling measures to new climate zones to reduce hardships.

As discussed above, SDG&E has not offered central AC as part of its measure mix, but proposes to offer portable AC units as specified herein. Additionally, SDG&E will be offering whole house fans to customers in climate zones 10, 14 and 15, to help reduce use of central systems.

SDG&E also proposes to focus on identifying and increasing leveraging opportunities with LIHEAP to customers to increase the opportunity to reduce hardship. SDG&E does not provide furnace or water heater replacement for renters. By utilizing the home energy audit as part of the intake process for the ESA Program, customers can self-identify their ownership status and disclose issues related to heating or cooling. With such information, SDG&E can then

proactively deploy the appropriate LIHEAP contractor who can maximize the benefits for that customer.

7. Proposed Rule Modifications:

Applications for 2021-2026 may propose modifications to rules in the ESA Policy and Procedures Manual or prior Commission decisions. List here all proposed rule modifications necessary to implement your proposed design and delivery. For each rule modification:

a. **Provide justification for the rule modification if not already discussed in the design and delivery section(s).**

b. **Provide quantitative and/or qualitative analysis of the benefit to customers in hardship reduction and impact to customer bills.**

c. **Provide associated impact to the ESA portfolio budget and energy savings.**

SDG&E's new program design and delivery will require several foundational program changes in order to achieve success. SDG&E proposes changes to the P&P Manual in order to effectively deliver the new program m described in this application. The justifications for these changes have been discussed throughout. The majority of these changes are to support the customer intake process and allow for the use of home energy audits and online education in lieu of traditional program delivery. As stated in Section D.2, SDG&E believes that there will be significant energy and bill savings to customers with this change. Once there is sufficient information to provide an analysis of customer impacts, SDG&E can provide this information to the Commission.

<u>Proposed changes to the Statewide ESA Program Policy and Procedures Manual P&P Manual</u>

SDG&E's proposes changes to the P&P Manual in order to effectively deliver the new program described in this application are as follows:

Section 2 - Customer and Structural Eligibility:

Section 2.2.3.1 – Actual Income Documentation Required: SDG&E proposes to modify the policy which requires income documentation to be reviewed prior to the installation of measures for prospective participants. SDG&E requests that customers currently participating in CARE or customers in self-certification PRIZM codes be determined eligible for energy conservation savings kits without the need for the review of income documentation. This change will enable SDG&E to allow customers to complete an in-home audit and enroll online. Customers not currently enrolled in CARE or not in self-certification PRIZM codes will be able to submit all necessary documentation through a secure online portal, which can be validated by a contractor prior to the visit, should a visit be warranted.

Section 2.6.1 – Property Owner Approval: With the challenges associated with obtaining property owner approval for rental units, SDG&E is requesting to change section 2.6.1, which sets the validation date for property owner approval for one year. SDG&E proposes extending the validation date for up to two years to provide the opportunity to go back and treat units which may not have been previously served due to scheduling issues, without delay. SDG&E would make the validation period of authorization transparent to the property owner.

Section 2.8 - Need for ESA Program Services: As part of SDG&E's new program delivery, SDG&E is proposing to modify Section 2.8, which requires all feasible measures be offered under the ESA Program. Customer participation in the ESA Program will begin with the self-audit, which will identify energy burden and customer need. Based on this, customers may only receive energy savings conservation kits as an incentive, and not all feasible measures will be installed.

Section 4 - Procedures for Customer Visits:

Section 4.2 – Description of Program Services: As part of the new delivery of the ESA Program, SDG&E is proposing the modification of program services to be performed by the contractor in the customer's home. Many of these services can be performed online and would not require a contractor for completion. Energy education, CARE enrollment, level payment plans, and other utility services can all be part of online education. Additionally, much of the data collected during the visit can be self-identified by a customer as part of the online home energy audit.

Section 4.3 - Data Collection: This section indicates that the outreach worker will collect the needed data to document customer eligibility. SDG&E proposes to allow for customers to self-enter this information, saving time and also improving the likelihood of collecting valuable information, such as disability status.

Section 4.4 - In-Home Energy Education: This section should be significantly modified to address SDG&E's new ESA Program delivery. Energy education will become a larger component of the customer's program experiences and will be available to customers as part of the online ESA Program customer engagement process. As the program moves away from "homes treated" goals, a home should be considered served by the program, regardless of whether or not the home may only benefit from a home energy audit and a customized energy report. The topics covered as part of In-Home Energy Education should be more focused on customer need and not as prescriptive as defined within the P&P.

Section 4.5 - In-Home Energy Assessment: This section should be modified to allow for customers to self-assess their home, along with contractors. Additionally, SDG&E requests that customers be allowed to self-install the water energy conservation kit measures, such as

faucet aerators, outlet gaskets, LED light bulbs, low-flow shower heads, and water savings measures.

Section 7 - Measure Installation Policies and Procedures:

Section 7.2.2 – Installation by Contractor - to support SDG&E's new program design and delivery, SDG&E proposes to allow customers to self-install low-cost measures included as part of energy and waters savings conservation kits, as described in in the change to P&P Section 4.5 above. However, contractors visiting customer homes would still be required to install measures at the time of the visit and should not be allowed to drop off materials.

Section 7.2.5, Installation of Feasible Measures – This section should be modified to address SDG&E's new program design that considers a home served by receiving energy education and in-home audit.

Section 10 - Natural Gas Appliance Testing:

Sections 10.4 – Timing of Combustion Appliance Testing - SDG&E is proposing modifying Section 10.4 in order to leverage the LIHEAP Combustion Appliance Zone (CAZ) testing when homes are jointly being weatherized by the ESA Program and by LIHEAP. The LIHEAP CAZ testing is comprehensive, with testing before and after measure installation. This would reduce the duplication of efforts and reduce ESA Program cost.

Proposed changes to other ESA Program Policies

SDG&E's proposed changes to previous ESA Program Decisions that establish program policies as follows:

1. *Delivery of measures via a more streamlined method, using a tiered approach.*

SDG&E proposes a new tiered approach ESA Program design that increases savings potential and prioritizes cost-effectiveness of measure delivery. Each tier will be structured around ability to maximize opportunities during customer visits and minimize the number of

overall customer touchpoints. Additionally, the tiered approach will make it easier for customers to initially participate in the program and is designed to keep them engaged in saving energy. Proposed tiers range from "basic" measures that provide an entry level potential of energy efficiency savings all the way to a customer being "optimized" with the maximum set of measures installed that provide the deepest possible level of *energy* savings, reduction in greenhouse gases and overall improvement to customer health, comfort and safety. Table 21 in Section D.6 contains information on the proposed tiers and associated delivery of measures.

2. *Multifamily Whole Building Program (Third Party)*

The Commission has directed the investor-owned utilities (IOU) to focus on "innovative program designs for the multifamily sector, which shall include a low-income Multifamily Whole Building energy efficiency program that is a third party program (*i.e.*, proposed, designed, implemented, and delivered by non-utility personnel)."[84] SDG&E's proposes to include a MFWB Program designed and implemented by one or more third parties that is exclusive to the deed-restricted multifamily property market in the SDG&E service territory. The proposed MFWB Program, detailed in Section 9, combines (1) the existing ESA Common Area Measures (CAM) initiative for deed-restricted properties with (2) in-unit treatments for deed-restricted properties, to be wholly redesigned and delivered as a statewide program with a single implementer. As demonstrated through lessons learned and in conversations within the multifamily working group, it is generally recognized that deed-restricted multifamily properties come with common challenges related to re-syndication and other tax issues that may best be served by a single implementer.

[84] D.19-06-022 at 9.

3. *Non-Deed Restricted Multifamily Properties (SDG&E)*

Additionally, in Section 8 c, SDG&E proposes continued local administration and implementation of the ESA Program for non-deed restricted multifamily properties; this program would include CAM treatment in addition to treatment of individual units. SDG&E maintains that the non-deed restricted market in its service territory is primarily locally owned and at-risk of being underserved by any program that is administered statewide. SDG&E has experienced significant success in delivering treatment to tenants of multifamily properties in its service territory, and by adding Common Area Measures, SDG&E expects to further increase penetration and service to customers in the multifamily non-deed restricted market. In addition, with the prevalence of customers who move housing within the low-income community, maintaining delivery of a local ESA program across single family and non-deed restricted multifamily markets allows for ease of customer interaction, follow up and potential for the program to "follow" a customer, no matter which type of housing they choose to move into.

4. *Approval of new ESA Program measures*

SDG&E proposes to modify its existing mix of measures offered through the program by adding new measures that provide benefits to customers and removing measures that no longer provide cost-effective energy savings benefits. For additional details see Section D.6.

5. *Changing ESA Program Appliance Eligibility Criteria.*

SDG&E is proposing modification of the rule setting the replacement criteria for refrigerator replacement to pre-2001 and washing machine replacements to pre-2004. SDG&E request that the Effective Useful Life (EUL) be used as the determining factor for the replacement of all appliances, including the newly proposed clothes dryers. In addition to savings, there is significant need for low-income customers to receive these measures for health,

comfort and safety reasons. This change would reduce much of the cost burden of low-income customers with inefficient and failing refrigerators, washers and dryers.

6. *Allowing modification and clarification to ESA Program fund shifting rules.*

SDG&E proposes changes to the existing fund shifting rules. Details and rationale for this proposed change is in the Prepared Direct Testimony of Alex Kim.[85]

7. *Clarifying ESA Program uncommitted unspent funds cap for carry-over.*

SDG&E seeks Commission clarification on the uncommitted unspent funds cap for the amount to carry-over to the following program year. Details on this clarification request are presented in the Prepared Direct Testimony of Alex Kim.

8. *Continuance of the advice letter process for ESA Program changes.*

SDG&E seeks Commission authorization to continue using the advice letter process for additional budget requests, program modifications, and/or policy modifications as approved in D.17-12-009. Details on this request are presented in the Prepared Direct Testimony of Alex Kim.

8. Multifamily Sector Design:

The Multifamily Sector Design section here, and Section 9, uses the following key terms and definitions. The IOUs are requested to use these terms in their Applications. The terms are: "in-unit" is an attached household dwelling unit; "common area" refers to communal spaces, such as a community room or hallways, shared energy systems or the exterior envelope and excludes "in-units" spaces; and "whole building" refers to the entirety of a multifamily property including both the common areas and in-unit spaces.

In the following section (Section 9), the IOUs are directed to propose a third party designed and implemented Multi-family Whole Building Program. Section 9 does not limit the IOUs from additionally

[85] Prepared Direct Testimony of Alex Kim Policy Witness on Behalf of San Diego Gas & Electric Company's Energy Savings Assistance Program, California Alternate Rates for Energy Program, and Family Energy Rate Assistance Program Plans and Budgets for Program Years 2021 Through 2026 (November 4, 2019) ("Prepared Direct Testimony of Alex Kim").

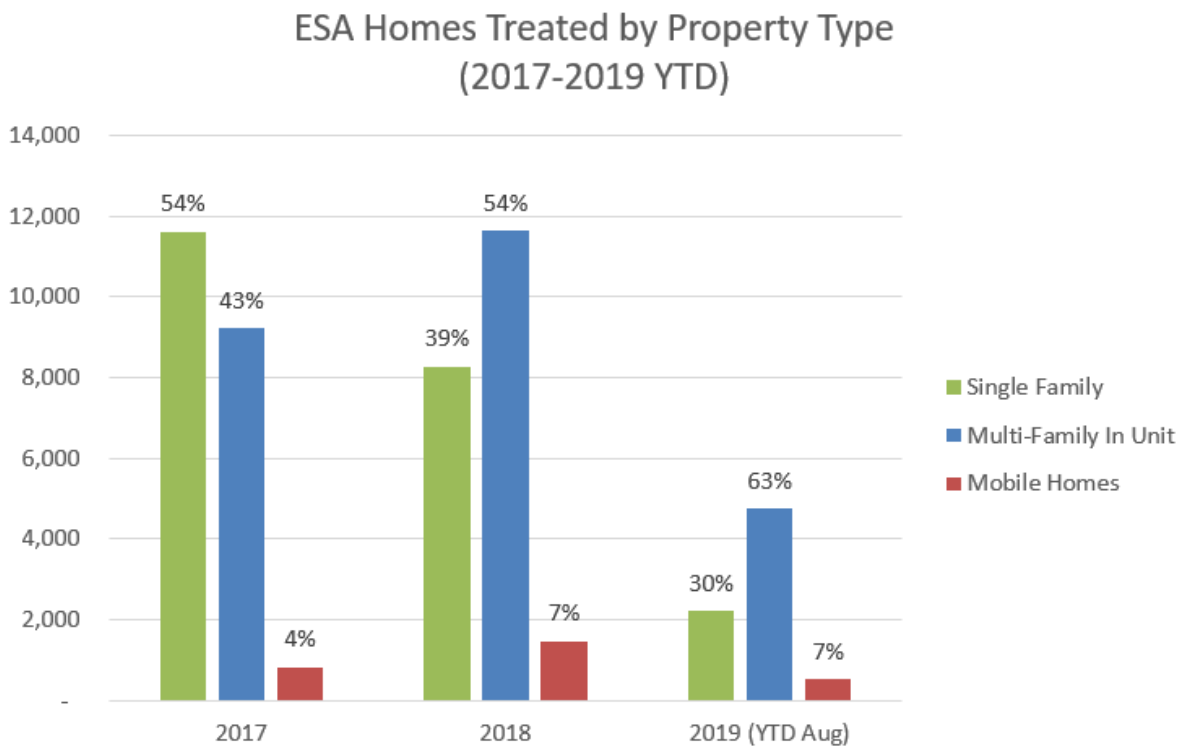
proposing to serve multifamily tenants and/or common areas by the ESA Program, but any such proposals shall not duplicate services provided through the third party Multifamily Whole building Program.

a. History

i. Describe how the ESA Program in-unit and Common Area Measures (CAM) efforts served multifamily households, buildings, and/or properties during the current program cycle. Summarize successes and challenges with current cycle multifamily efforts' measures, targeted marketing tactics, eligibility rules, and alignment with other energy efficiency and financing programs.

ESA Program in-unit: During the current program cycle, the ESA Program has successfully served the multifamily in-unit market; Figure 5 below shows that the majority (51%) of total homes treated in 2017, 2018 and year-to-date through August 2019 are for residents of multifamily properties.

Figure 5: ESA Homes Treated by Property Type



While SDG&E has been successful in treating multifamily in-unit dwellings, the primary challenge has been fully optimizing dwellings with all measures as enclosure measures and appliances owned by the property owner require a signed POA form, and the barrier still exists where decision makers are not always readily available or accessible. This issue exists for both in-unit enrollment efforts as well as for the deed-restricted ESA CAM initiative. Additional challenges and barriers to overcome when addressing multifamily properties, particularly those characterized by the relationship between tenant and landlord, as well as SDG&E's solutions to continue to overcome the challenges are outlined in Section D.4 Table 18.

The most successful ESA in-unit outreach activities consist of canvassing multifamily properties identified as having a high potential of low-income tenant population. Further successes and targeting strategies are outlined in the Prepared Direct Testimony of Horace Tantum IV.

ESA CAM initiative: SDG&E launched the ESA CAM initiative in October 2018. There are approximately 390 deed restricted properties in SDG&E's service territory. The ESA CAM initiative provides eligible deed restricted properties with no-cost measures in common areas. In order to be eligible for ESA CAM, a property must be deed-restricted,[86] at least 65% of in-unit tenants must be income eligible for the ESA Program and the property must be benchmarked. When integrated with the traditional ESA in-unit measures, these offerings connect multifamily property owners with comprehensive energy saving improvements to help provide the whole building with long-term reductions in energy consumption. The integration of CAMs provides a whole building approach which includes building envelope, domestic hot water, heating/cooling, lighting, appliances, plug loads, and other end-uses.

[86] Deed restriction criteria established in D.17-12-009

The timeline for launch of the ESA CAM initiative is as follows:

- SDG&E's ESA CAM initiative approved by the Commission in May 2018.
- Vendor solicitation and contracting took place between June and September 2018.
- The initiative launched to the market in October 2018, while the implementer set up internal systems and processes, established ESA CAM web and marketing information and developed procedures and marketing & outreach tactics.
- One audit was completed in December 2018 for a property that enrolled in early 2019.
- As of August 2019, SDG&E is close to completing five projects, has two in progress and an additional 26 properties in the immediate pipeline[87] (ranging from completed application/qualified to pre-construction planning).

Marketing for ESA CAM takes a top down approach by directly targeting property owners and asset managers. This targeting strategy allows program staff to reach the appropriate person authorized to make decisions on property improvements. In addition, ESA CAM targets property owners who are enrolling or have enrolled to benefit from the tax credit offered by the California Tax Credit Allocation Committee. Properties benefitting from this tax credit may be eligible for the ESA CAM initiative. SDG&E has also been successful in creating relationships through multifamily property housing associations and in leveraging contacts from one property owner who is undergoing treatment to help spread the word about the program.

A notable success with ESA CAM eligibility rules is that in order to participate in the program, a property owner must allow SDG&E to provide technical assistance and benchmark their property using Energy Star's Portfolio Manager. Out of the seven properties that have had energy audit assessments, SDG&E has been able to assist six in completing benchmarking for those who would have been mandated to benchmark their properties per AB 802. On the other

[87] Pipeline includes properties pending audits, those where audit reporting is in process, pre-construction planning, and measure installation in progress.

hand, the income qualification and housing eligibility requirements have posed challenges for program uptake. As of August 2019, 63 properties have been assessed for ESA CAM participation, 21 properties did not qualify because they did not meet the requirement of housing at least 65% of tenants who are income qualified.

Alignment with other programs:

If a property does not qualify for ESA CAM, SDG&E has processes in place to align and connect property managers with other energy efficiency and/or financing programs through direct collaboration with SDG&E's SPOC. The SPOC can determine all other eligible programs and financing options, and may assist the property owner with additional program applications while referring leads to the appropriate internal or externally administrated programs. SDG&E is also currently coordinating with the SOMAH program to share ESA CAM and ESA in-unit enrollments via the SPOC, as directed in D.19-03-015.

ii. Discuss how ESA Program in-unit and CAM efforts coordinated, or did not, services including the customer in-take process, auditing, measure installation, and post-installation quality assurance. Show the numbers of actual and estimated treated multifamily units and properties, in ESA (in-unit) and ESA CAM, served each year for program years 2017-2020.

The numbers (actual and estimated) of treated multifamily units and properties through coordination between ESA in-unit and ESA CAM are shown in Table 26 below.

Table 26: Coordination in Multifamily Properties

	2017	2018	2019 through August	2020 (Estimated)
Multifamily in-unit treatments[88]	9,238	11,633	4,751	1,300
ESA CAM properties treated	0	0	5[89]	80

As of August 2019, SDG&E has completed five ESA CAM projects.[90] The SDG&E ESA CAM contractor reports that property owners wished for the CAM audit and installation to occur prior to in-unit tenant enrollment. Ideally, this would be done in tandem and SDG&E continues to coordinate between contractors to work down this path. For the five ESA CAM projects, auditing has only occurred for ESA CAM per the property owner request. The ESA in-unit enrollments, including in-unit assessment, will come later in the process. SDG&E will continue to facilitate coordination between ESA-CAM and ESA in-unit program contractors for all aspects of multifamily program treatment. As in-unit treatments have not actually occurred as of this application, coordination has not yet occurred on post-installation quality assurance.

iii. <u>Single Point of Contact (SPOC)</u>: What level of ESA funding, staff, time, and resources went to the SPOC directive for program years 2017-2020? What lessons learned, or best practices resulted from this activity? How will you carry forward best practices (beyond 2020) and at what funding level?

Table 27 below provides the current level of funding and resources for the SDG&E SPOC. Per D.17-12-009, SDG&E has one full time resource dedicated as the SPOC.

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88 As reported in the 2017 and 2018 Low Income Annual Reports, and the 2019 Low Income Monthly Report for August, ESA Table 2.

89 In the mid-cycle advice letter, SDG&E estimated that 50 properties would be treated through ESA CAM in 2019. SDG&E is revising that estimate at this time; and expects to treat 20 properties through ESA-CAM through year end 2019, with the remaining 80 properties undergoing treatment in 2020.

90 Projects have been installed, but not yet invoiced.

Table 27: SPOC ESA Funding And Resources 2017-2020

	Actual			Forecast		
	2017	**2018**	**2019 (through August)**	**2019 (Sep-Dec)**	**2020**	**Total**
Total	**$20,086**	**$72,736**	**$53,662**	**$33,414**	**$73,242**	**$253,141**

This represents only a portion of the total SPOC budget, as the SPOC is also funded through Energy Efficiency and CARE.

SDG&E has several primary lessons learned related to refinement of the SPOC. The lessons learned are presented in Table 28 below.

Table 28: SPOC Lessons Learned

Lesson Learned	**Proposed Solution**
Changing measures in the EE portfolio resulted in outdated offerings to customers	Recommendation for an enhanced technology foundation, tied with SDG&E's internal energy efficiency program system to provide active and available measures in the multifamily EE programs.
Property owners are not incentivized to participate	Non-deed restricted properties with the highest potential for ESA in-unit assistance would be eligible for comprehensive solutions in common areas under the proposed new program design for multifamily; this will incentivize property owners to participate in the in-unit program and allow SDG&E to provide a more comprehensive whole building solution.
Limited data for insightful and accurate multifamily property targeting	SDG&E is performing a robust market characterization effort that pairs external real estate data to SDG&E accounts. This allows for better targeting of properties. Improved data will allow the program to effectively streamline the evaluation process for a given property by auto-populating many of the questions required to evaluate a property for program eligibility and savings potential.
Program coordination with external administrators requires time and effort	Appropriate processes, data sharing agreements and two-way coordination are critical to ensure property owners are receiving benefits from all programs. The proposed SPOC budget includes necessary

	funding from externally administrated programs to effectively coordinate all relevant offers to property owners.
Relationships through associations are necessary for effective program outreach	Large multifamily property association networks allow SDG&E to reach property owners and effectively raise awareness of all coordinated program offerings. SDG&E will continue its successful annual multifamily energy solutions roundtable to build and foster ongoing relationships.

SDG&E has taken the lessons learned that are summarized above and conducted stakeholder outreach and best practices research[91] in order to develop this application's recommendation for a full and robust SPOC to be delivered via the utility. With the changing landscape in energy efficiency, multiple implementers that serve the multifamily market, and the insight that SDG&E is a top-of-mind resource when property owners are considering their energy needs, having a true "one-stop-shop" to deliver and coordinate across all programs is a model that will best serve the local market. Proposed changes to the SPOC include full project management, both internal and external to utility programs, in order to effectively coordinate and deliver a seamless application and enrollment experience no matter who the implementer is. A robust SPOC will also be able to offer seamless integration with financing programs to overcome additional barriers related to lack of capital.

Figure 6 below illustrates how SDG&E's proposed SPOC will coordinate across all programs and implementers for the local multifamily market:

[91] *See*, https://www.energyefficiencyforall.org/resources/one-stop-shops-for-the-multifamily-sector/

Figure 6: Proposed SPOC Model

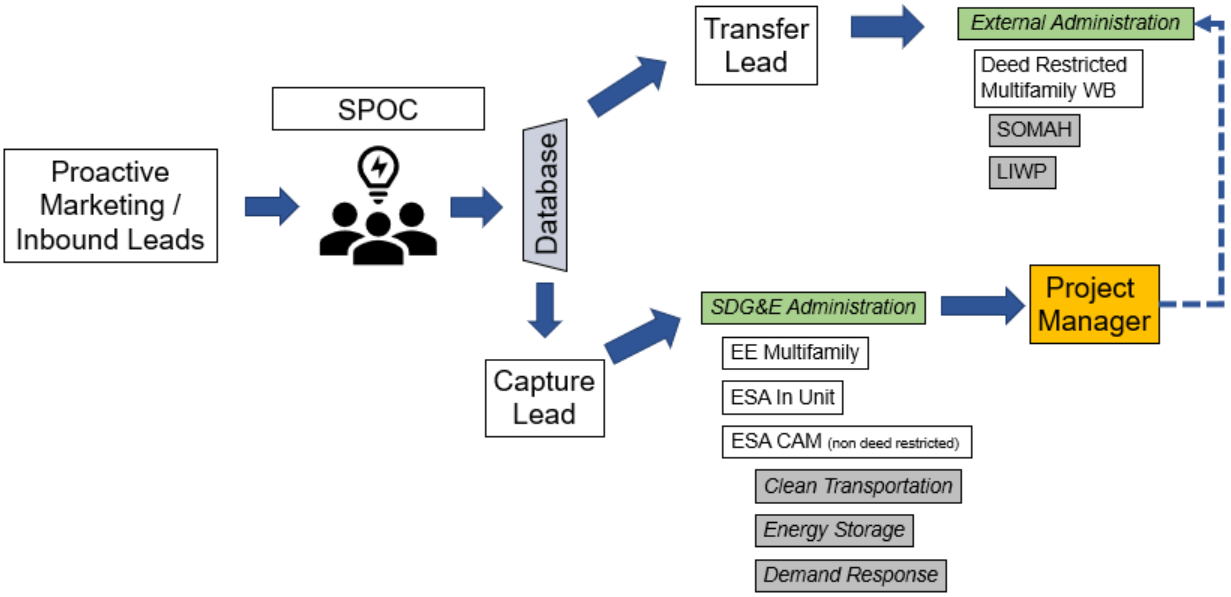


Table 29 below proposes funding for expanding SDG&E's SPOC process to meet the needs of the market as outlined above in order to facilitate program coordination through externally or internally administrated programs.

Table 29: 2021-2026 Proposed SPOC ESA Program Funding levels

	Program Year 1	Program Year 2	Program Year 3	Program Year 4	Program Year 5	Program Year 6	Total
Total	**$182,908**	**$356,134**	**$379,024**	**$555,450**	**$735,890**	**$758,184**	**$2,967,592**

This table represents funding from the ESA Program only. Additional funding is expected from programs that are relevant to the multifamily market, including energy efficiency, CARE, SOMAH and the proposed statewide Deed Restricted Multi Family Whole Building program, as outlined below in Section D.9.

SDG&E recommends assessing the effectiveness of the SPOC process and program coordination with any directed mid-cycle advice letter prior to expansion of the office via associated headcount/labor projections that begin in PYs 4-6. SDG&E would utilize funding from the "rapid feedback" line item for this purpose.

b. SPOC Finance Technical Assistance Proposal

Per D.16-11-022 Ordering Paragraph 45, as modified by D.17-12-009, create a proposal for financial technical assistance, from the SPOC, to help building owners navigate the financing options available through your on-bill finance program or other finance programs.

If a multifamily property owner is considering participation in a multifamily program, SDG&E's SPOC will inform and educate them of financing options that they may be eligible for, including SDG&E's On-Bill Financing (OBF) Program and the California Hub for Energy Efficiency Financing (CHEEF) pilot programs. The CHEEF pilot programs include the Residential Energy Efficiency Loan Assistance Program (REEL), Small Business Financing (SBF) Program, and the Affordable Multifamily Financing Program (AMFP) for Deed Restricted properties.

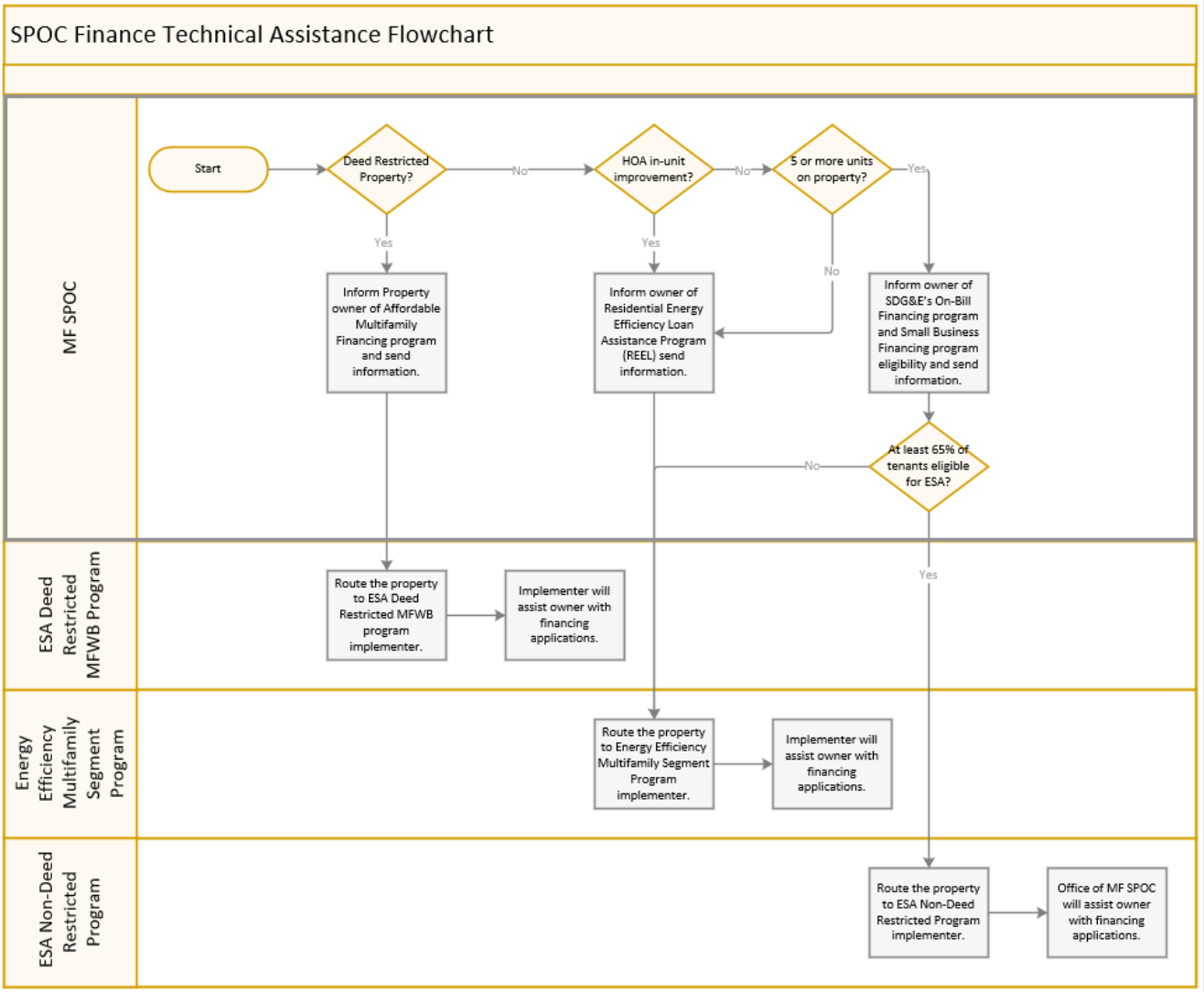
Table 30 below summarizes each financing option's eligible customer base and necessary qualifications to apply for each offer.

Table 30. Multifamily Financing Options

	SDG&E OBF	CHEEF REEL	CHEEF SBF	CHEEF AMFP
Customer	Non-residential accounts; multifamily properties may have common area meters on non-residential rates.	For customers with a single-family, townhome, condo, duplex, triplex, fourplex or manufactured home.	Residential rental buildings with 5 or more units looking to renovate common areas.	Affordable multifamily properties of five or more units.
Qualifications	Active for minimum two years, account must be in good credit standing.	At least 70% of the loan amount is for measures which save energy.	Property is receiving IOU service and at least 70% of the loan amount is for measures which save energy.	50% of the units are restricted to income-eligible households for a minimum of 10 years. The property must be subject to deed restrictions that require the owner to keep rents affordable.

The SPOC proposal for technical assistance is detailed in Figure 7 below. SDG&E intends to set up a referral and leveraging service, based on the type of project that a property is interested in and the qualifications that the property and its tenants meet. For programs that are not implemented by SDG&E, financing needs to occur after a project scope is complete. Therefore, the referral happens to those outside program implementers to assist with financing once they have completed the pre-work that determines the project. SDG&E is able to fully assist with financing for the proposed non-deed restricted multifamily common area program via the utility OBF or CHEEF SBF financing programs if the project qualifies.

Figure 7: SPOC Financing Technical Assistance Model



c. Non-deed Restricted Multifamily Properties

Ordering Paragraph 41a of D.16-11-022, as modified by D.17-12-009, required an analysis of non-deed restricted multifamily buildings with a high percentage of low-income tenants in your territory. Provide a brief statement of the energy efficiency potential in your territory for this sector. Do you recommend extending direct install services, for whole building or common areas only, to these properties? What requirements, such as rent increase restrictions, can maintain affordability in treated properties?

Based on SDG&E's findings from interviews[92] with multifamily property decision makers and the required analysis of the energy efficiency potential for common area treatment in non-deed restricted properties, this application proposes a new program to provide common area measure treatment, to be locally administered and implemented by SDG&E. The rationale and justification for local administration of a program to serve non deed-restricted properties with both CAM and in-unit treatments can be found in Section E.2 below. The ESA "Non-Deed Restricted Common Area Measures" program will extend direct install services to common areas, in conjunction with in-unit services, to participating multifamily buildings that meet the following criteria:

- The property owner must allow an ESA contractor to benchmark through Energy Star Portfolio Manager.
- The property owner must authorize the implementer to perform common area audits and in-unit assessments. .
- At least, 65% of the property's tenants must meet the ESA Program income eligibility guidelines.

If the multifamily property can meet these criterion, SDG&E proposes to offer no-cost direct install services for common area lighting, audit services for qualified properties, and benchmarking services to assist in compliance with AB 802. The program would also provide rebates of up to 50% for direct install measures in the following end-use measure categories; Appliances, Domestic Hot Water, HVAC, and Maintenance. The full measure list is attached as Exhibit ESA-002.

SDG&E's recommendation is based on the aforementioned research, combined with the analysis conducted as part of the annual report for 2018. In August 2019, SDG&E conducted a

[92] SDG&E and MDC Research conducted one-on-one interviews with nine local property owners in August 2019.

series of one-on-one interviews with decision makers for a range of multifamily property types in the SDG&E service territory. Key findings from the interviews lead to the conclusion that an SDG&E delivered program that helps with common area efficiency is both valued and welcome. At a high level, findings include:

- All were familiar with the ESA Program, and most perceptions are positive. Those who favor the program see it as a "win-win." It provides a valuable service to their tenants reducing utility costs and improving satisfaction with the unit—and has a positive impact on tenant retention.
- There is receptivity to the idea of an ESA Whole Building program and would consider engaging if approached by SDG&E; Receptiveness flows both from positive experiences with the ESA in-unit program and the prospect of an added property/owner focused benefit with common area improvements.
- A rent "freeze" for participating tenants is not a deal-breaker. High occupancy and low turnover are easier and more profitable than frequent rent increases. A one-year suspension of increases is not a concern, a duration of two years is less acceptable.
- The prospect of big-ticket items at no cost, or deep discount, is attractive enough to surmount most skepticism and reluctance to inspire action. New refrigerators, common area lighting, and water heaters are top attention-getters.

The internal analysis that supports the potential for savings in the non-deed restricted sector furthers the proposal for a program to serve this need. SDG&E estimates that multifamily properties, on average, can achieve up to 4% kWh and 3% therm energy savings for a one-year period. To develop this analysis, SDG&E used current savings values, derived from approved workpapers or load impact evaluations, and averaged those across the multifamily properties where accurate information was available and reported on for the 2018 annual report.[93] Based on availability of accurate data, the population of multifamily properties analyzed in the 2018 annual report represents 56% of those where the property is potentially eligible for ESA Program treatment. The budget associated with the multifamily non-deed restricted CAM effort can be

[93] SDG&E's Low Income Annual report for 2018, section 1.15.1, page 49, filed May 1, 2019.

found in ESA Table A-1a. SDG&E endeavors to be prudent in spending rate payer funds and therefore requests that it be allowed to modify its assumptions and budget at the proposed midcycle filing.

In order to help maintain affordable rents, SDG&E proposes to create a new statewide multifamily property authorization form that authorizes access to and the installation of in-unit and common area measures for a property. As part of the form, the property owner will certify that if they choose to receive measures from any IOU ESA program, the affordability of rents will be maintained for a 1-year time period. The foundation for this requirement is found in federal and in recently signed state law.

> [F]or a reasonable period of time after weatherization work has been completed . . . the tenants in that unit . . . will not be subjected to rent increases unless those increases are demonstrably related to matters other than the weatherization work performed.
>
> (C) the enforcement of subparagraph (B) is provided through procedures established by the State by which tenants may file complaints and owners, in response to such complaints, shall demonstrate that the rent increase concerned is related to matters other than the weatherization work performed;…[94]

SDG&E also notes the recent passage of AB-1482 the Tenant Protection Act of 2019, signed into law by Governor Newsom in October 2019.

> Subject to subdivision (b), an owner of residential real property shall not, over the course of any 12-month period, increase the gross rental rate for a dwelling or a unit more than 5 percent plus the percentage change in the cost of living, or 10 percent, whichever is lower, of the lowest gross rental rate charged for that dwelling or unit at any time during the 12 months prior to the effective date of the increase.

Although SDG&E plans to add language as part of the Property Owner Authorization, the IOUs do not have the authority to enforce these agreements in the event of a dispute.

[94] 42 U.S.C. § 6863(b)(5)(B) (2007).

9. Multifamily Whole Building Program:

When looking to encourage innovation, the Commission recently directed the energy efficiency program administrators to transition the majority of their overall portfolios to programs designed and implemented by third parties. Similarly, we direct the IOU's 2021-2026 ESA Application to include a Multifamily Whole Building energy efficiency program (MFWB program) designed and implemented by one or more third parties who will, taken together, serve all qualified prioritized populations in multifamily buildings identified in the Application. The Application shall include specific information about the scoring criteria and process for the solicitation. The MFWB program implementer(s) shall provide energy efficiency services for the whole building which includes common areas and tenant units but may provide treatment of only common areas or only tenant units in a particular building if it is not feasible to undertake both. The IOUs are strongly advised to consider a statewide program with a single implementer. It seems particularly important that the MFWB program for buildings with SCE electricity customers and SoCalGas gas customers shall have a single implementer. The MFWB program is not limited to the previously approved measures or other requirements in prior Commission Decisions or to the provisions of the ESA Policy and Procedures Manual. The proposal shall include the following:

a. Provide an overview or brief description of the general program goals and budget and solicitation process and timeline. Additionally, use the budget template to provide annual budget levels.

SDG&E proposes in this application to include "a Multifamily Whole Building energy efficiency program (MFWB Program) designed and implemented by one or more third parties" that is exclusive to the deed-restricted multifamily property market in the SDG&E service territory. In essence, SDG&E recommends formalization and continuation of the existing ESA CAM initiative to be combined with in-unit treatments for deed-restricted properties as a new program to be wholly redesigned and delivered as a statewide program with a single implementer.

As demonstrated through lessons learned and in conversations within the multifamily working group, it is generally recognized that this set of properties comes with challenges related

to re-syndication and other tax issues that may best be served by a single implementer. However, SDG&E maintains that the non-deed restricted market in its service territory is primarily locally owned, as discussed in Section E.2.a.i below, and at risk of being underserved by any program that is administered statewide.[95] Section D.8.a.i discusses SDG&E's success in delivering treatment to tenants of multifamily properties in the service territory, and the addition of common area measures as described in Section D.8.c should only serve to further increase penetration and service to customers in this market. In addition, with the prevalence of customers who move housing within the low-income community, maintaining delivery of a local ESA program across single family and non-deed restricted multifamily markets allows for ease of customer interaction, follow up and potential for the program to "follow" a customer, no matter which type of housing they choose to move into.

i. Describe the energy savings and treatment targets for multifamily properties in the MFWB program. What are the annual savings targets in kWh, therms, and equivalent BTUs? What are the annual goals for number of properties and number of units served? Is there a minimum efficiency target for each property? Will the goals adjust based on the solicitation process?

SDG&E estimates that deed restricted multifamily properties, on average, can achieve up to 7% kWh and 3% therm energy savings for a one-year period across the whole building. Similar to the non-deed restricted analysis described in Section D.8.c above, SDG&E used current savings values, derived from approved workpapers or load impact evaluations, and averaged those across the deed-restricted multifamily properties where accurate usage

[95] The LIWP program has completed three projects for large multifamily energy efficiency and renewables in SDG&E's service territory out of 68 across the state in 2017 and 2018. As reported in the California Climate Investments Annual Reports: http://www.caclimateinvestments.ca.gov/annual-report

information on these properties was available. Based on SDG&E's ability to match usage data with external data on property information, the population of multifamily properties analyzed represents 10% of the local deed restricted market. The budget associated with the statewide MFWB program can be found in ESA Application Table A-1 and A-1a.

Within the current program cycle, SDG&E intends to serve 100 of the 390 eligible deed restricted properties in the service territory. The remaining pool of potential eligible properties will be reduced to approximately 290 properties for program years 2021-2026. Based on the current success rate of qualifying properties via tenant income eligibility, SDG&E estimates that 40% of the deed restricted properties may not be eligible if current guidelines remain, which leaves approximately 174 properties that could meet eligibility requirements. Based on this, SDG&E recommends following treatment targets for a deed restricted MFWB program.

Table 31: MFWB Targets

Program Year	PY1	PY2	PY3	PY4	PY5	PY6	Total
Properties	0	18	38	52	43	23	174
In-Unit	0	432	912	1248	1032	552	4,176

ii. What are your proposed income guidelines for participation and processes to certify eligibility? How will affordability (for rents) be maintained?

Results of the current ESA CAM initiative are unknown and in progress. Therefore, SDG&E recommends that current income criteria remain the same. In order for a property to qualify for common area treatment, the property where ESA in-unit services are being provided must obtain a 65% tenant income eligibility rate. Additionally, if a property obtains an 80% in-unit participation rate, SDG&E proposes to continue the 80/20 rule and have the program install all feasible measures in the remaining 20% of units. When addressing affordability for rents, if the MFWB program is focused on the deed-restricted housing market, this is a non-issue.

iii. At a minimum, include in the timeline: 1) issuing necessary solicitations; 2) executing contracts; and 3) launching the MFWB program.

SDG&E intends to utilize procurement and supply management best practices and strategies to procure quality services that will balance scope, methodologies, contractor expertise, and sufficient program timeframes while ensuring fair pricing for the delivery of quality services for the benefit of SDG&E's customers. SDG&E proposes the following single-stage solicitation with a two-step selection process to allow flexibility and to meet the requirements of both the proposed statewide and locally designed programs. Please note that these timeframes are representative of how the solicitation process has been progressing in energy efficiency programs and that any proposed schedule may increase or decrease as the process is developed:

A. Single Stage Solicitation with Two Step Selection

- **Step 1:** Solicitation submitted to the market for response, with a down selection to a smaller number of qualified bidders following scoring and evaluation of bids.
- **Step 2**: Qualified bidders are asked to answer specific questions, and provide presentations during in-person interviews at SDG&E. The bidders are allowed time to answer and clarify those questions. The interview results are evaluated, and those scores lead to the final selection of the preferred implementer.

B. Solicitation Timeframe

SDG&E anticipates that the solicitations will follow standard steps, which are outlined here. It is important to note that these are approximate and general timeframes.

- **Step 1: Solicitation Preparation (1 Month)** During this timeframe, SDG&E will work to develop the solicitation and the requisite request for proposal (RFP)

documentation. Activities will include identifying the type of solicitation requirements (including requirements for proposed savings, budget and program requirements) and writing the scope of work. During this time, all RFP documentation (general terms and conditions) will be prepared and collated for release with the scope / solicitation. The evaluation criteria and vendor scorecards will also be developed during this preparation timeframe.

- **Step Two: Solicitation Release (1 Month)** This step begins with final assembly of all documents for RFP submittal. SDG&E's internal Supply Management team will provide review and ensure completion of legal review, if required. Built into this step is also any notification to the bidding community. Two weeks prior to the release of the solicitation, SDG&E will notify contractors and implementers of the upcoming solicitation and release date with a notice on the statewide IOU solicitation system, Proposal Evaluation & Proposal Management Application (PEPMA). This notice will include the solicitation type. The contractors and implementers will be given explanation how to register for the solicitation and will be directed to SDG&E's solicitation platform, Power Advocate, for further detail. Solicitation release takes place in Power Advocate on the specified date.
- **Step Three: Solicitation Response and Evaluation (2–3 Months)** During this time, SDG&E will host a bidders' conference and respond to questions from contractors and implementers to ensure that they have the information they need to provide a comprehensive response to the solicitation. To ensure fairness, all questions submitted by solicitation participants and SDG&E's corresponding responses will be posted within Power Advocate, but equally available to all

respondents to ensure they have equal access to all solicitation information. Bids will be submitted to SDG&E and the evaluation will take place. SDG&E's evaluation team will work to compile scores and scorecards and develop a recommendation for top bidders. The top bidders will be invited to SDG&E for interviews, proposal presentations and final evaluation. Evaluation criteria will also be utilized for this crucial interview process to aid in final recommendations.

- **Step Four: Contractor Selection and Contract Recommendation (1 Month)** The SDG&E evaluation team will finalize recommendations for successful implementer(s) and will present that recommendation to SDG&E management and leadership to gain approval of the selection. At this point, the selected contractor/implementer(s) will be notified of the opportunity to begin scope of work development and contract negotiation. Note that unsuccessful bidders will not be notified until the successful bidder and SDG&E reach agreement and contracts are executed.
- **Step Five: Contract Negotiation Process (2–4 Months)** Contract negotiation to finalize pricing, general terms and conditions and specific terms based on program requirements will take place. The activities around contract negotiation include coordination with program staff, utility personnel and the third parties to bring the expertise of all areas to bear for finalization of the statement of work (SOW). Additionally, SDG&E will work together with its supply management and legal teams on the internal contracting requirements. Upon agreement of all terms and conditions and the SOW between the parties, SDG&E will move forward with supply management toward agreement execution.

- **Step Six: Program Launch (6-12 Months)** It is important to note that this process provides for the solicitation, contract negotiation and contract execution activities only. The final step, which is the implementation of set-up and launch activities may take between 4 and 6 months depending on the complexity of the processes required.

iv. Consider all feasible and appropriate opportunities for job training; job creation; or pathways to employment for members of low income or disadvantaged who participate in local job training programs.

Please see response to Section D.2.d.i above. With regard to the MFWB program and coordination opportunities with existing EE WE&T programs, SDG&E points out that the model of implementation for WE&T has both a statewide single administrator for Career & Workforce Readiness, or (CWR), and a locally administrated component that serves the needs of the local population with Integrated Energy Education and Training. Noting that SDG&E foresees the ability to continue to serve the non-deed restricted multifamily market, the workforce here should not see an impact like what could happen if that segment of the market is under a statewide administrator.

As the design and implementation for the statewide MFWB program to serve the deed restricted community evolves, that program administrator should look to the existing CWR program to leverage the focus of that program; which is to focus on those not prepared for a traditional energy job/career higher education path, such as those in disadvantaged communities and disadvantaged workers. Through partnerships, this program will aim to provide career preparation and job readiness services to a workforce that may be developed to serve the new MFWB program at a statewide level. The parallel between a statewide MFWB program for deed

restricted properties and the existing statewide administration model for CWR once it goes through solicitation should be leveraged to the fullest extent.

b. The Massachusetts LEAN Multifamily Program has a single application portal for a multifamily retrofit program funded by different programs and agencies. Address how the MF solicitation will address the goal to, where feasible, create a seamless customer interface for delivering energy efficiency services for owners and tenants of multifamily buildings.

With this application, SDG&E is proposing a robust SPOC model, backed up by technology that should allow a similar seamless level of integration that allows for multifamily participation in any program, whether administered by an IOU or by a third party. If a statewide platform is established as part of this proceeding, SDG&E would request additional funding for IT expenses associated with integration necessary to tie all platforms together. Any solicitation for the MFWB program should also include criteria for how bidders will integrate with either a statewide platform and with the existing IOU SPOC processes, similar to the recent SDG&E Multifamily EE solicitation.[96]

c. Describe how the solicitation process will address the following:

i. Offer existing demand response tools, technology, or education to help multifamily households shift load to off-peak times.

SDG&E acknowledges that demand response tools, technology and education will play an important role in any proposed program or solution. Given the rapid changes in technology, tools and technology offerings, SDG&E expects the market to drive the requirements and the implementers to propose and design new and innovative technologies and solutions into their program design. SDG&E's solicitations will drive the implementer responses to detail not only

[96] SDG&E's Residential Multi-Family Request For Proposal, Issued on 6/18/2019.

these technologies, but to also address innovation and include detail to ensure that multifamily households utilize those technologies to shift loads to off-peak times.

ii. Provide multifamily building owners flexibility in choosing a contractor to implement ESA-funded energy efficiency measures, including processes with open or continuous enrollment and trainings, cost control measures (such as competitive bids), and coordinated statewide requirements.

SDG&E acknowledges the necessary changes to the MFWB program around flexibility for multifamily building owners to select contractors for building improvements. SDG&E's solicitations will be developed in such a way that they will encourage implementers to have a range of building efficiency contractors so that multifamily building owners can maintain flexibility. Implementers will be required to design and propose solutions to the unique challenges that property owners face in this area.

iii. Address the need to work with multifamily building owners/managers to plan ESA energy efficiency projects that coincide with other building upgrades or building refinancing.

In Section D.8.a.iii SDG&E is proposing a newly designed SPOC to be delivered from the utility. Proposed changes outlined include dedicated project management to assist multifamily building owners and managers with their energy efficiency project needs (including building upgrades and possible financing), while ensuring effective and seamless coordination across all programs. It will be important for third-party implementers to understand this new model for the SPOC and how, as proposed, it will help serve the market overall. As such, SDG&E intends to include detailed information to the implementers on the proposed SPOC within the solicitation process. Each third party will then be asked to provide a detailed plan for how they will or will not utilize and integrate the SPOC and its offerings into their proposed program and implementation design.

iv. Address whether bidders may submit bids that propose serving the entire state, or specific geographic areas, or specific prioritized populations.

For SDG&E's proposed statewide MFWB program, the solicitation process will detail the requirements for a program that serves the entire state and is delivered in a like-manner in all service territories. The MFWB program design described herein is specific to deed restricted properties, which then does translate into a very defined building type. The bidders must keep in mind that the IOUs across the state must guarantee equity with the low-income population, and that there is an obligation to ensure that the special needs of these populations within each service territory are actually served by the selected and implemented statewide program.

As is similarly noted with respect to technology, tools and innovation, SDG&E expects the market to respond to the specialized requirements of each distinct service territory and the implementers to propose and design solutions that meet the low-income population's specialized needs.

v. Address whether feasible and appropriate opportunities for job training, job creation, or pathways to employment for members of low income or disadvantaged communities who participate in local job training programs are incorporated.

The energy efficiency WE&T CWR program mentioned above will offer a formalized and easily accessible WE&T sub-program that is focused on disadvantaged workers. The program will leverage and complement existing social services (soft skills, case management, job placement) and allow direct access to employment and/or energy education pathways via Workforce Development Organizations (community colleges, apprenticeship programs, workforce development boards, non-profits). The program will also provide new and skilled members of the EE workforce a path to future employment supporting IOU resource programs.

10. Proposed Performance Assessments to Inform Future Cycle Decision Making:

If designed with meaningful purpose, conducted rigorously, and the results used effectively, assessing performance and benefit to the ESA Program participants allows for course correcting within the 2021-2026 timeframe.

Overview of Proposed Studies

Prior experience with ESA studies has shown study needs sometimes change after the initial study proposals presented in program applications are finally approved. With the 2021 to 2026 longer program cycle and newly designed program strategies, this is a particular concern for anticipated research needs. To mitigate this risk, SDG&E along with the other IOUs are recommending a different approach to proposing studies than has occurred in past cycles in which study proposals included defined work scopes, timelines and budgets as part of the applications. When these studies were subsequently implemented years later, often the details provided in the applications were outdated as research needs had changed.

For the new program cycle, the IOUs propose an overall study budget by category. During the cycle as research needs are identified, the IOUs will submit work scopes and budgets for individual studies. To further facilitate this process, the IOUs recommend forming an ESA/CARE Study Working Group to manage the process. The Working Group would be composed of members from Energy Division staff, IOUs, and other potential stakeholders, and follow a consensus approach with a quarterly meeting format. Working Group members could alternate leading and facilitating the Working Group. IOUs would continue to manage project administration using a statewide co-funding structure with clearly assigned utility leads for each project.

The following study categories describe the anticipated research areas along with a proposed overall budget by category, shown in Table 32. Individual study work scopes and

budgets will be submitted for review and approval during the course of the program cycle as developed by the ESA/CARE Study Working Group.

Table 32: Proposed Study Categories

Category	Statewide Studies	SDG&E Portion
Impact	$1,500,000	$225,000
Process	$500,000	$75,000
Low Income Needs Assessment	$1,000,000	$150,000
Non-Energy Benefits	$500,000	$75,000
Local Customer Research		$300,000
Categorical Eligibility	$150,000	$22,500
Total	$3,650,000	$847,500

a. Impact Evaluation

Propose a budget, scope, objectives, schedule, and methodology for the next impact evaluation. Present a detailed discussion of how 2015-2017 impact evaluation results influenced current (PY 2018-2020) program goals and planning. How would the proposed next impact evaluation(s) have improved value and aid prompt improvements to program performance and benefit to participants?

Two statewide impact evaluation studies are anticipated during the six-year cycle with a not-to-exceed budget of $500,000 each. These studies estimate the energy savings realized from the program treatments. These studies have been completed in previous program cycles using monthly billing analysis. The Working Group may consider other methodologies and/or additions to the study work scope. Additional budget in this category may cover additional analysis related to the ESA savings values including development of ex ante savings estimates, baselines and other related research.

b. Low-Income Needs Assessments (LINA)

Propose a budget and topics for the 2022 LINA and budget only for the 2025 LINA. Present a detailed discussion of why these areas warrant study for the 2022 LINA report and how you would incorporate future LINA information to establish program goals and/or facilitate accomplishing those goals.

The CPUC is mandated to complete a LINA Study every three years with the assistance of the Low-Income Oversight Board.[97] Given the current study will be completed in December 2019, the next two are scheduled to be completed in 2022 and 2025.

If the IOUs are directed to complete these studies on behalf of the Commission, a budget of up to $500,000 for each LINA is requested. The IOUs will work with Energy Division and the LIOB to outline details of the work scopes. It is anticipated that these studies will explore the needs of low-income customers in the context of the new program designs and examine the effectiveness of the services and measures in addressing low-income customers' energy expenditures, hardship, language needs, and economic burdens.

c. Studies or Pilots

Discuss all other proposed studies/pilots or any alternative or additional proposed assessment of performance. All proposals must include budgets, a timeline, and detailed justification, and implementation plans for the proposed study/pilot.

Four other research areas are anticipated: process, non-energy benefits (NEBs), categorical eligibility and local research. Each of these is discussed below.

A process evaluation is proposed to assess whether and how the program is achieving desired outcomes according to original planning and design. The proposed budget for this statewide study is $500,000. This study would take place in 2023 to 2024 in order to inform the mid-cycle process. Lessons learned and recommendations will inform the program's effectiveness and identify elements that program administrators should adjust to achieve optimal program impacts.

[97] P.U. Code § 382(d).

The 2019 NEBs study strongly recommended additional primary research to collect ESA specific data used to estimate the NEBs for cost-effectiveness testing. The results from this primary research will be used to update the NEBs calculations. The preliminary budget for this statewide study is $500,000. The IOUs will work with the ESA/CARE Study Working Group to finalize the project scope and timing.

A categorical eligibility study is proposed to review and update both CARE and ESA requirements. This statewide study will be funded by both CARE and ESA programs.

The IOUs propose an additional $300,000 for each IOU to conduct local customer research or analysis as needed during the program cycle. Similar to the statewide studies, the ESA/CARE Study Working Group would provide oversight and review for these projects.

11. Cost-Effectiveness:

a. Provide a summary of quantitative valuation of the benefit to cost ratio of ESA Program (using cost-effectiveness tests), demonstrating any notable trends in cost-effectiveness of the ESA Program (e.g. over time, over different populations) or other analytical results that informed proposed Program goals and approach. Include tables or graphs to illustrate cost-effectiveness trends discussed.

i. In presenting cost-effectiveness results and trends apply consistent and compliant methodology for calculating cost-effectiveness (see Decision 14-08-030 for adopted Cost-Effectiveness Working Group recommendations) and use the updated savings values from the 2015-2017 ESA Impact Evaluation.

Table 33 summarizes the results of the cost-effectiveness tests. The two adopted tests for ESA include the ESACET and the Resource Test. The ESACET includes all the benefits and costs for all the measures while the Resource Test includes only the electric and gas benefits and measure installation costs for resource measures.

Table 33: Cost-Effectiveness Results for Main Program

Test	2021	2022	2023	2024	2025	2026
TRC	0.19	0.17	0.15	0.16	0.16	0.17
PAC	0.19	0.17	0.15	0.16	0.16	0.17
RIM	0.14	0.13	0.12	0.12	0.12	0.12
ESACET	0.74	0.70	0.81	0.90	0.95	1.04
Resource Test	0.41	0.40	0.33	0.33	0.32	0.32
ESACET Net Benefits ($)	(6,064,118)	(6,256,990)	(3,513,186)	(1,824,382)	(837,765)	(705,421)
R. Test Net Benefits ($)	(6,581,360)	(5,222,341)	(5,926,827)	(6,161,219)	(6,236,099)	(6,580,134)

Figures 8 and 9 illustrate the change over time of the ESA cost-effectiveness test results. When comparing the forecasted results, the effect of discounting future years to the analysis year should be taken into account.

Figure 8: SDG&E Proposed ESACET and Resource Test Results Over Time

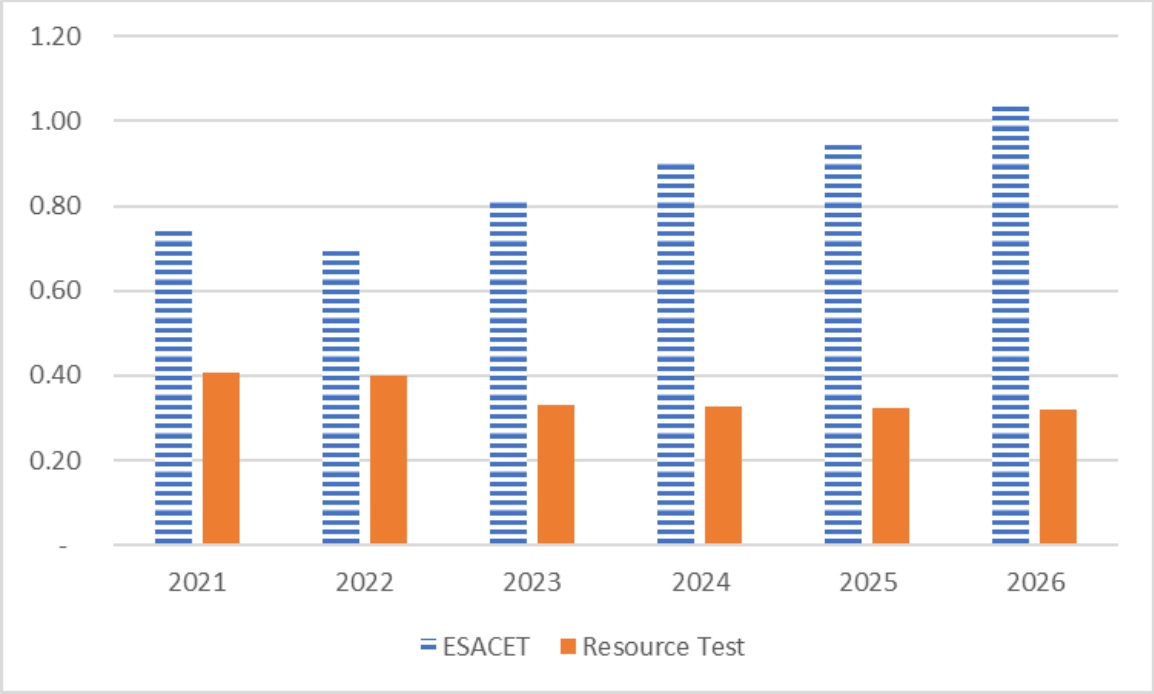


Figure 9: ESA Proposed Net Benefits Over Time (in $millions)

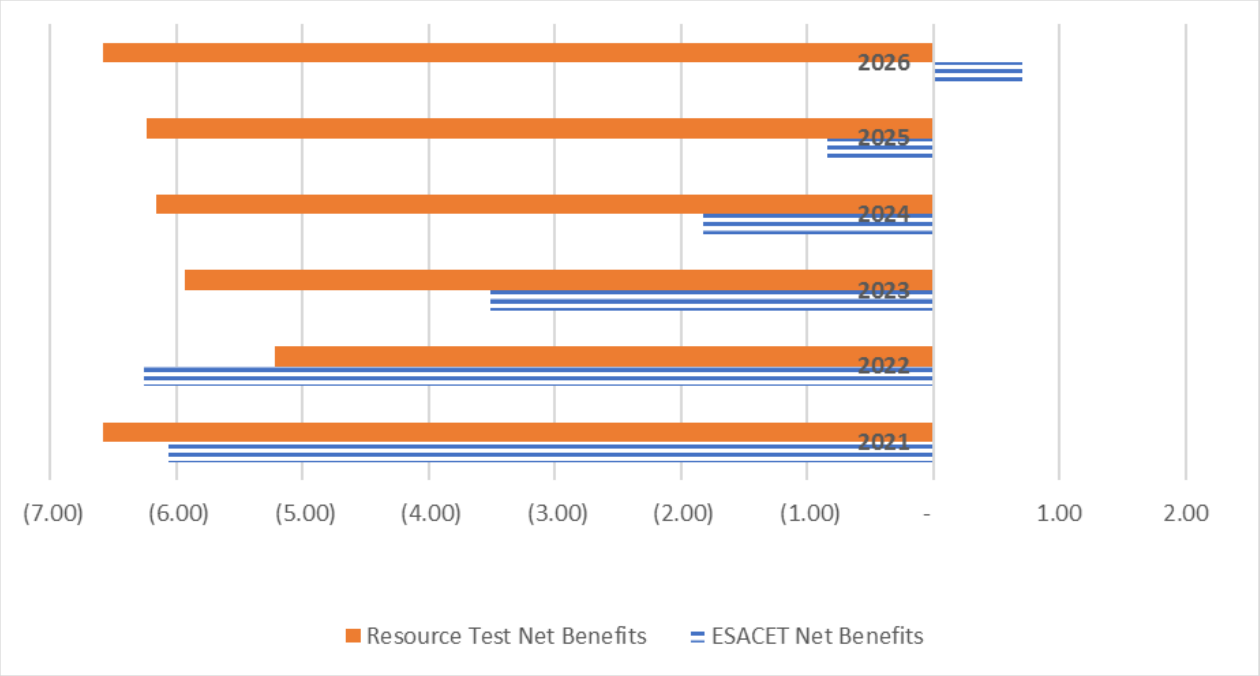


Table 34 presents the results for the newly proposed, locally implemented multifamily non-deed restricted CAM program.

Table 34: Cost-Effectiveness Results for ESA CAM

Test	2021	2022	2023	2024	2025	2026
TRC	0.00	0.25	0.66	0.67	0.66	0.66
PAC	0.00	0.26	0.77	0.79	0.78	0.78
TRC No Admin	0.00	1.00	0.98	0.95	0.92	0.90
PAC No Admin	0.00	1.26	1.23	1.20	1.16	1.13
RIM	0.00	0.18	0.32	0.32	0.32	0.32
Net Benefits	(1,238,719)	(1,831,180)	(1,060,155)	(1,170,904)	(1,315,820)	(1,404,088)

b. The Commission is to "take into consideration both the cost-effectiveness of the services and the policy of reducing the hardships facing low-income households" when setting policy governing energy efficiency services for low-income households.

i. What changes, if any, do you propose for the method of cost-effectiveness calculation adopted in D.14-08-030 per Cost-Effectiveness Working Group recommendations?

SDG&E does not propose any changes to the ESA cost-effectiveness calculations at this time.

Explain how cost-effectiveness results have informed design and/or delivery and identify any proposed changes.

Cost-effectiveness was a significant factor in determining how to move forward with the long-term program design for the ESA Program. As part of the review for the proposed measure mix, SDG&E reviewed a list of current ESA Program measures and a list of potential new measures to identify how to proceed with measure offerings. Once the cost-effectiveness results were presented, SDG&E identified measure which should be excluded from consideration due to their negative impact to the overall portfolio cost-effectiveness and relatively low impact to the customers savings potential. SDG&E did not consider removing non-resource measures which

provide health, comfort and safety to customers but significantly impact the program cost-effectiveness.

E. Program Administration

1. Components of Program Administration

Per the proposed design and delivery, list and define the necessary components of program administration (e.g. Contract solicitation, negotiation, and management; sharing data and information; reporting for compliance; audits; change management). Suggest any proposed changes to policies that would significantly reduce utilities' administrative costs in offering ESA services.

As outlined in the ESA Reporting Requirements Manual (RRM)[98] SDG&E categorizes components of program administration into "Energy Efficiency" and "Below the Line" categories. The Energy Efficiency category consists solely of costs associated with measures, and everything else is contained in the Below the Line category. D.19-06-022 refers to the Below the Line costs as "administrative". However, SDG&E contends that it is incorrect to categorize all non-energy efficiency costs as administrative. In order to reduce administrative costs to levels seen in different proceedings, a recategorization of costs should be undertaken first to appropriately determine what is an administrative expense.

ESA closely mirrors other Energy Efficiency programs in terms of delivery, and precedent has been set in the Energy Efficiency proceeding that potentially puts forth a more appropriate categorization of program expenses. D.09-09-047 defines administration costs as "Overhead (G&A Labor/Materials), Labor (Managerial & Clerical) and Travel and Conference fees." Notably, administrative costs in the EE proceeding do not include Evaluation, Measure, and Verification (EM&V), Marketing and Outreach or Direct Implementation (DI) costs for delivering programs. DI is defined as "costs associated with activities that are a direct interface

[98] The ESA Program RRM adopted by the Commission in 2002.

with the customer or program participant or recipient (*i.e.*, contractor receiving training)". Also excluded from administrative expenses are direct implementation non-incentive (DINI) costs associated with incentive-based programs. These costs include engineering project management and customer support. SDG&E would be agreeable to an assessment of how to accurately categorize and report on administrative expenses in order to demonstrate true utility costs to administer low income programs.

However, until such an undertaking is complete, SDG&E's presents components to Program Administration that mirror how the program has been run in the past. These consist of: 1) Training, 2) Inspections, 3) Marketing and Outreach, 4) Studies, 5) Regulatory Compliance, 6) General Administration, and 7) CPUC Energy Division. For the upcoming cycle, SDG&E has included Single Point of Contact expenses as a separate line item under Program Administration.

As part of SDG&E's proposed new program design, SDG&E anticipates larger General Administration budgets in the first two program years of the cycle, reducing to traditional levels after the first two years. In General Administration, major components tracked include:

- Employee labor and expenses
- IT development, implementation and maintenance
- Program solicitations, including expenses for a Procurement Review Group
- Customer research, including disaggregated load profiling

Within general administrative costs, the major components driving cost up the first two years are as follows:

- Information Technology: Design and development of customer focus system, including audit, online education, enrollment tracking, reporting, data security enhancements, and ongoing system maintenance. It also includes necessary multifamily design components, including improvements to support linking buildings to properties for improved delivery of multifamily services.

- Program Solicitations: A minimum of three solicitations with potentially two more, one for training, and one for the design and delivery of the new online enrollment, audit and energy education tools.

Another area requiring increased administrative cost is Marketing and Outreach. With the anticipated changes to the program design, changes in website content, program materials, marketing materials, and outreach contractor support to support the delivery of the new online audits. Marketing to disadvantage communities, outreach to special needs customers, tribal communities, and rural and hard to reach areas are part of the ESA Program campaigns. SDG&E has included a Marketing and Outreach chapter with more details on targeted outreach activities.

In Regulatory Compliance, SDG&E has included cost for audits, and technical support for updates to Installation Standards, Policy and Procedures Manuals, and new measure development. Support for day-to-day program policy, compliance and regulatory reporting are included, as well as cost for CPUC audits.

For Training Centers, SDG&E has included cost to support developing new training materials for the new program design, onboarding training and ongoing program training activities.

For studies, SDG&E has included cost for Statewide initiative, such as the LINA, NEBs Study, Process Evaluations, Impact Evaluations, and discretionary funds to support ad-hoc program research.

SDG&E has also included a new SPOC Category in Program Administration for both the Multifamily and Single-Family components of the budget. With the new program design including a non-deed restricted component of Multifamily CAM, SDG&E will require additional resources to help deliver the portfolio of measures to multifamily property owners.

SDG&E does anticipate some cost savings associated with the new ESA Program delivery. Once the new online customers enrollment, audit and education modules have been implemented, savings will be realized due to the reduction of in-home enrollments for customers only needing simple measures which can be self-installed. While Customer Enrollment cost are expected to decline, cost for providing customized energy education and more in-depth home assessments will drive in-home education cost up. The net, however, will be a cost savings to the program.

2. Program Implementers

a. **List all solicitations the IOU would run to contract implementers to carry out programs described in the Design and Delivery sections above. Which Design and Delivery elements, if any, will not be solicited for implementation by third party entities, and why? Energy efficiency programs per Commission Decision 18-01-004 are third-party designed and delivered in part to keep administration costs low and optimize effectiveness of installed measures through innovation in a competitive marketplace. For Design and Delivery elements that are solicited, how will you ensure that there is a sufficient number of third-party program implementers competing?**

SDG&E intends to run four solicitations to meet the requirements of the Design and Delivery elements outlined above:

1. A statewide Multifamily Whole Building (Deed Restricted) program
2. A locally delivered Non-Deed Restricted multifamily program
3. A locally delivered Single Family / Mobile Home program
4. The IT/Online audit and program delivery platform for local programs

It is understood that design and delivery by third parties helps bring new and innovative techniques and delivery options and solicitations above will be open to allow for incorporation of these ideas within the budgets and savings goals proposed here. In Section E.2.c below SDG&E

has proposed a strategy for outreach and communications during the solicitation process to reach a sufficient amount of potential third-party program implementers.

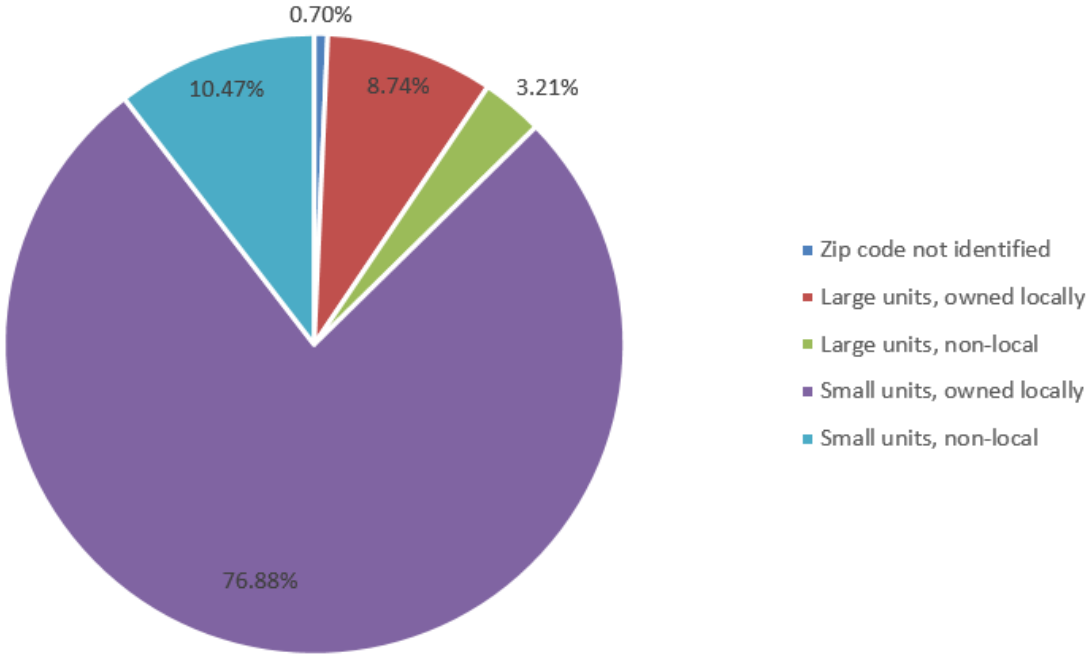
b. **Which Design and Delivery elements, if any, do the IOUs propose to administer as a statewide program, with a single third-party program implementer for all IOU regions?**

SDG&E proposes delivering the MFWB program for deed restricted properties as a statewide program with a single third-party program implementer for all IOU regions. As described in Section D.9 above, there are challenges to overcome in the deed-restricted property market, which may be better served by a statewide entity. This would also allow for greater coordination across other programs that target the deed-restricted market, like the SOMAH program. In proposing this, SDG&E relies on the deed-restricted vs. market-rate properties as a clear line of demarcation between programs that can serve property owners, which allows for no overlap between the two.

SDG&E's success in reaching the 2020 homes treated goal, serving all facets of the market including multi-family in unit treatment, and the unique needs of SDG&E's service territory leads the recommendation that non-deed restricted multifamily market continue to be administered and implemented by local IOU program staff. An analysis of ownership of the multifamily market in SDG&E's service territory illustrates the importance of a locally administered program. In Figure 10 below. SDG&E ran a basic analysis on the zip code of the registered property owner, breaking the market into "large" properties (those above 50 units) and "small" properties (those with fewer than 50 units). The large majority of multifamily properties in the service territory (77%) are small properties where the owner's address lists an SDG&E service territory zip code. As noted above, SDG&E's primary concern is that the local market would be underrepresented and underserved by a statewide program, as demonstrated by the very low number of LIWP large multifamily energy efficiency projects in the service territory.

SDG&E is best positioned to truly understand and serve the needs of the local market, particularly those "small" units that are most likely to be overlooked by a statewide effort.

Figure 10: Ownership Analysis for Multifamily Properties in SDG&E Service Territory



c. **Detail a proposed process for soliciting program implementers for your territory and statewide programs (if proposed above). Include discussion of solicitation and contracting processes from the current cycle, noting best practices, and lessons learned on each of the following elements:**

i. Propose an outreach and communications strategy for the solicitation process that will garner a strong (in quantity and quality) response from third parties to the Request for Offer (RFO).

SDG&E has outlined its proposed single-phase solicitation process above in D.9.a.iii. during which SDG&E plans the utilization of several channels to ensure widespread notification of the solicitations, including announcements and descriptions of each solicitation on various platforms. These include the IOU's energy statewide solicitation website, PEPMA, posting to all applicable service lists and posting to SDG&E's own solicitation web pages at SDGE.com.

Additionally, SDG&E will partner with its supply management supplier diversity unit to identify any fairs, meetings or opportunities to discuss these solicitations.

In addition to outreach opportunities, SDG&E may offer web-based bidders' conferences for each of the specific solicitations for increased quality in bid responses. These web-conferences may provide a detailed review of the specifics of that RFP including milestones and dates and specific instructions for proposal submittals, questions/responses and a more detailed description of each solicitation's requirements. Additionally, the bidders' conference may detail best practices and preferred methods for responses to aid the bidders in preparing their proposals. The web-conference is typically held early in the process to allow bidders to understand the requirements of submittal and to allow them to develop any additional questions during the process for clarification.

ii. What controls ensure a fair, unbiased, transparent, and rigorous solicitation process, from RFO design, through bidder evaluation, to contract negotiation? Address whether there should be an independent evaluator, a procurement review group, and/or Commission review of contracts exceeding a certain amount, similar to requirements in Decision 18-01-004.

SDG&E conducts its competitive solicitations following processes and procedures developed by its supply management department. The standards for these practices are consistent with industry best practices and are designed to procure quality goods and services that balance scope, methodologies, contractor expertise, and delivery timeframe requirements with fair prices and quality for the benefit of SDG&E's customers.

SDG&E currently operates its EE third-party program solicitations in partnership with its EE Procurement Review Group (PRG) and Independent Evaluators (IEs), in accordance with the requirements of D.18-01-004. The EE third-party solicitation process, as defined by D.18-01-004, is relatively new with Request for Abstracts (RFAs) being released to the market in

November 2018, and the first RFPs being released in August 2019. As this process has not yet resulted in a single program selection or contract execution, it is undetermined at this point if the use of an oversight body has contributed to an overall streamlined, efficient or cost-effective process. In fact, it could be that this process has led to some market concern and loss of interest due to the length of time required to include such oversight.

Currently, the EE third-party solicitation process is being reviewed to determine how to streamline the process based upon lessons learned to date, but at this time SDG&E has concern regarding the additional expense, time and resources that this level of oversight involves. In the event that a PRG is a requirement, SDG&E strongly recommends that a new membership be solicited (different members from the current EE PRG and process), and that a requirement for the membership would be strong familiarity with this proceeding and the unique ways that the ESA program differs from energy efficiency programs. Primary differences revolve around the health, comfort, and safety drivers of the program as well as the ways that all IOU and non-IOU programs leverage each other to serve the same population.

In addition, SDG&E would like to further understand if the added layer of review by an IE is necessary for this proceeding. While there is certainly some value, utilizing consultants has become very costly and has added a layer of complexity that may not be necessary. SDG&E has budgeted for a robust solicitation process as part of its general administration line item; however, the requested budget does not include additional expense for an IE. Additionally, submitting contracts for Commission review may make sense, particularly if a threshold of a certain contract value or term (*e.g.* per D.18-01-004, setting it at a value of any contract over $5M and/or a term of greater than three years) may be all that is needed in these contract requirements. It should be noted, however, that the utilization of a PRG process, if deemed appropriate for ESA, should

greatly reduce the need for lengthy CPUC review or discussion on submitted contracts as the PRG would be involved in each step of the process, and would have reviewed each program and contract proposal prior to advice letter submittal.

iii. What contract terms and conditions must the IOUs include in contracts to:

SDG&E intends to utilize our third-party standard services agreement for the terms and conditions by which we will do business with the implementers. We do, however, intend to address each area outlined below as follows:

- **Allow the IOUs to ensure that third party program implementers comply with program rules and regulations.**

The scope of work will include a section to detail and address program rules and regulations, and will ensure that all parties understand eligibility requirements, as well as compliance to legal and regulatory requirements.

- **Allow the IOUs to track implementer progress and ensure meeting performance milestones and goals.**

SDG&E will work closely during scope of work development and contract negotiations to develop tracking mechanisms for tracking the implementers progress to performance milestones and goals, which should include assurances that funding from each IOU is returned to respective service areas via measure delivery to local customers. Ideally, when contracting for the program design requirements, it would be the intention to negotiate pay-for-performance elements into the performance goals.

- **Allow the IOUs to hold third party program implementers accountable if progress and performance milestones are not met.**

As goals are established and required for program success, SDG&E will work with the third-party program implementers to understand program metrics that will be needed to meet established goals and will include the metrics in the SOW. SDG&E will then develop Key Performance Indicators (KPIs) to measure the progress of those metrics in reaching the established goals. The KPIs will also be used in operational discussions with the third-party program implementer to drive improvements, changes or renewed focus if needed.

- **Attract third party entities to submit bids in response to solicitations.**

SDG&E has described our outreach strategy above in Section E.2.c.i.

- **Allow third party entities the certainty and ability to propose bids to implement programs without high price risk premiums.**

SDG&E will utilize its standard services agreement for third party implementers and supply management best practices in contract negotiations. The parties will work together to develop and negotiate a detailed scope of work that is clear in the roles and responsibilities of each party; this is the best way to reduce risk on all sides.

iv. Please identify all contract terms and conditions that can feasibly be standard across all contracts and/or all the IOUs.

The standardization of terms and conditions across all contracts and and/or IOUs is difficult as each IOU has different business, liability and risk requirements. The IOUs and third - party program implementers will be held to all CPUC decisions, regulatory requirements, and federal, state or local jurisdictional requirements which are part of all contracts and support standardization across the IOUs.

v. Include a schedule for issuing the necessary solicitations and executing contracts.

Please see recommended timelines and schedule in Section D.9.a.iii.

3. Audits

a. Changes and improvements should leverage learnings from both internal and external audits. Provide background via response to 'I' and 'ii' below and how audit results have influenced this application in response to 'iii'.

i. Internal Audits

Describe internal audits of the utility's ESA program during the current program cycle and all utility-initiated audits of the ESA Program by a 3rd party consultant. Include your utility's response and corrective measures.

The ESA Program conducted quarterly audits of contractors using their internal database, which randomly selected a percentage of contractor's invoices for review to ensure the proper documentation was obtained and enrollments were properly charge dot the program. The process was labor intensive for both SDG&E program personnel and contractors. Issues identified required contractors to provide the missing documentation or chargeback were issued for items not having appropriate documentation. Additionally, SDG&E reviewed measure eligibility report to ensure measures were installed in compliance with the Statewide Policies and Procedures Manual.

During mid-2018, SDG&E transitioned to a new enrollment database. As part of the new system, contractors began transitioning to a new invoice process which required supporting documentation to be uploaded and reviewed at 100% by program invoice processors prior to payment. The process includes multiple reviewers prior to the final invoice being approved for payment. This new process eliminated the need for the quarterly audits, as upfront audits were being conducted.

SDG&E also conducted internal SOX[99] audit review of the newly implemented process and identified improvements needed to the current process. Contractors were utilizing the system to generate invoices and including the appropriate supporting documentation, however they were not including a contractor invoice with the contract purchase order number, enrollment counts, and other required fields. SDG&E worked with the auditors and contractors to develop an appropriate corrective action and implemented the change with all contractors.

ii. External Audit Findings

Include your utility's response to the audits conducted by the State Controller's Office for PYs 2013-2015 along with a summary of all corrective measures implemented to ensure compliance. Specify where each corrective measure is also properly reflected and/or documented (*e.g.* monthly and/or annual report, formal filings, etc.).

In 2018, SDG&E received the State Controller's Office audit findings. For the ESA Program, the following issues were identified:

Table 35: State Controller's Office Audit Findings

Finding	Recommendation	Response
Of the 137 ESA Home Energy Assistance Tracking system expenditure files and records tested, 18 did not have sufficient Heating, Ventilation, and Air Conditioning (HVAC) installation forms to support HVAC expenditures.	We recommend that SDG&E ensure that all recorded ESA program expenditures are fully supported by sufficient, appropriate documentation, and all documentation is preserved in such a manner that it may be readily examined.	SDG&E agreed with the State Controllers finding and recommendation and has implemented corrective actions to address these issues. In 2018, SDG&E implemented a new system which requires HVAC, Appliance Installation, Weatherization, and Natural Gas Appliance Testing (NGAT) contractors to upload all supporting documentation for each enrollment workflow step prior to payment. SDG&E is

[99] Sarbanex-Oxley Act of 2002 is a federal law that established sweeping auditing and financial regulations for public companies.

		currently in the process of implementing this process for Outreach and Assessment contractors and will have it completed by the end of 2019.
Due to a misclassification error, SDG&E shifted funds in the amount of $50,156 into the In-Home Education Subcategory in its 2014 Annual Report without prior approval from the Administrative Law Judge.	To ensure compliance with the fund shifting rules set forth by the CPUC, we recommend that SDG&E obtain prior approval from the Administrative Law Judge, if required, for shifting of funds. We also recommend that SDG&E modify its procedures for reviewing and processing fund shifts to avoid future misclassifications.	SDG&E agrees with the finding and recommendation and stated that it has implemented corrective actions to avoid future misclassifications. In addition, SDG&E stated that it had filed an advice letter on February 28, 2018, explaining the fund shift activity in 2014 and the change in procedures to avoid future misclassifications.

Additionally, SDG&E is conducting an internal audit of the ESA Program process and procedures to ensure compliance with CPUC rules, the Statewide P&P and internal program processes and procedures. SDG&E expect to complete this audit in early 2020.

iii. Describe how Internal and External Audits' findings influenced this proposal for administration of the program.

Based on internal and external audit findings, SDG&E has made adjustments in their systems to address issues identified. The findings did not directly influence program design; however, SDG&E will be mindful to consider audit findings in the development of system enhancements which can continue to support improved data and enrollment integrity.

4. Process for Program Revisions in PY 2021-2026

a. Regardless the frequency and set of impact evaluations and other studies in the performance-assessments program elements above, propose a process/methodology for an IOU to correct its course to achieve established goals and targets within the program period. State specifically what course corrections would require Commission approval or not and why, and the proposed process for obtaining Commission approval.

i. Discuss the effectiveness of the mid-cycle working groups and advice letter process and indicate whether to consider similar or different approaches for PYs 2021-2026.

As described in the requested policy change in Section D.7 SDG&E proposes using the advice letter process to make program revisions during the 2021-2026 ESA program cycle for revisions such as budget adjustments, adding and/or removing measures, changes to marketing, education & outreach efforts in a changing environment and to make a course adjustments to achieve goals and targets. SDG&E proposes to engage the Energy Division on goals and targets that may need a course correction to obtain guidance prior to filing the advice letter.

SDG&E also proposes to use a mid-cycle working group structure to bring forth efforts that may need course corrections to obtain their feedback. SDG&E proposes the Commission authorize the mid-cycle working group to convene a meeting no later than 6 months after the issuance of decision to propose and define working group rules and processes, establish working group calendar, and prioritize efforts/tasks. The mid-cycle working group would include members from each of the IOUs, Energy Division, Public Advocates Office and other interested stakeholders to work on a number of efforts such as:

- Update the P&P Manual to conform with the Decision;
- Discuss and recommend changes to goals;
- Discuss mid-cycle measure retirements and additions;

- Discuss mid-cycle course corrections necessary to achieve goals; and
- Discuss and recommend program revisions required by new laws that become effective during 2021 through 2026.

ii. New laws that became effective during PYs 2021-2026 could require revisions in PYs 2021-2026. What process do you suggest for incorporating changes?

SDG&E proposes continuation of the advice letter process, as described in Section E.4.a.i. directly above to incorporate any new applicable laws that may impact program delivery.

F. Revenue Requirement and Rate Impacts

In the ESA Program Revenue Requirement and Impact section of the application:

1. Discuss the revenue requirements necessary to achieve the program plans and objectives proposed for the application period, as well as, the projected rate impacts (with quantitative information provided through B-2 and B-3 rate impacts tables).

SDG&E – Electric

SDG&E is not proposing any changes to the revenue allocation or rate design for the ESA electric surcharge rate. Consistent with prior decisions (i.e., D.08-11-031 and D.06-12-038), SDG&E proposes recovery of ESA Program costs on an equal-cent-per-kWh approach to all non-exempt authorized sales[100] as defined in D.97-08-056.[101]

SDG&E recovers its ESA Program costs through the PPP surcharge. The ESA Program costs is calculated from the revenue requirement, which is based on the combination of both the ESA administration costs and the ESA energy efficiency costs. SDG&E filed AL 3440-E, dated October 1, 2019, to request an update for the electric PPP rates effective January 1, 2020. AL 3440-E is pending Commission approval.

Illustrative rate impacts are presented in Table 36 below.

[100] Per D.18-11-035.

[101] Per D.97-08-056, Streetlighting sales are exempt from ESA surcharge.

Table 36: Present and Proposed Energy Savings Assistance Program Rates ($/kWh)

	Current	2021	2022	2023	2024	2025	2026
Energy Savings Assistance (ESA) Program							
Incremental Funding Request ($M)		($1.192)	$1.009	$1.165	$1.936	$1.244	$0.921
Energy Savings Assistance (ESA) Program Rate							
Residential	$0.00082	$0.00078	$0.00083	$0.00089	$0.00099	$0.00106	$0.00111
Small Commercial	$0.00079	$0.00072	$0.00077	$0.00083	$0.00093	$0.00099	$0.00103
Med. & Large C&I	$0.00079	$0.00078	$0.00084	$0.00090	$0.00100	$0.00107	$0.00112
Agriculture	$0.00081	$0.00068	$0.00073	$0.00078	$0.00087	$0.00093	$0.00097
Lighting	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000
System Total	$0.00080	$0.00077	$0.00082	$0.00089	$0.00099	$0.00105	$0.00110

SDG&E – Natural Gas

SDG&E is not proposing any changes to the revenue allocation or rate design for the ESA gas surcharge rate. Pursuant to D.09-11-006, SDG&E's ESA Program costs are currently recovered using an Equal Percent of Authorized Margin (EPMC) to allocate costs between the customer classes. The ESA Program rates are calculated by multiplying the program cost by the allocation factor and dividing by the applicable billing determinants minus any exempt throughput.

SDG&E recovers its ESA Program costs through the PPP surcharge. The ESA Program cost is calculated from the revenue requirement, which is based on the combination of both the ESA administration costs and the ESA Program budget. SDG&E filed AL 2815-G, dated October 31, 2019, to request an update for the gas PPP rates effective January 1, 2020. AL 2815-G is pending Commission approval.

Illustrative rate impacts are presented in Table 37 below.

Table 37: Present and Proposed ESA Program Rates (Natural Gas)

	Current	2021	2022	2023	2024	2025	2026
				ESA			
Incremental Funding Request ($M)		$9.5	$0.2	$0.1	$0.1	$0.2	$0.1
				ESA Rate [1]			
Residential	$0.01760	$0.03585	$0.03766	$0.03844	$0.04225	$0.04499	$0.04760
Core C&I	$0.00408	$0.00831	$0.00873	$0.00891	$0.00979	$0.01042	$0.01103
Non-Core C&I	$0.00136	$0.00277	$0.00291	$0.00297	$0.00326	$0.00347	$0.00367

[1] Increase in 2021 compared to 2019 due to a $13M under-collection in balancing accounts.

2. Include detailed accounting of unused funds from prior budget cycles and show how these funds reduce the revenue requirement.

SDG&E's collections in its ESA Program balancing accounts at 2018 year-end totaled $37,077,411 in unspent electric and gas funds (which represents prior years 2009 through 2016 unspent funds, plus 2017 and 2018 unspent funds) which represents a $16,299,641 over-collection of unspent gas funds and a $20,777,770 over-collection of unspent electric funds.

The equation below illustrates how the unspent funds are either allocated or being used to offset future revenue requirements.

Beginning total	$37,077,411
Committed to new initiatives[102]	($12,959,793)
Offsetting future revenues (through 2019)[103]	($20,000,000)
Remaining unspent/uncommitted balance	$4,117,618

3. Include a brief discussion of the costs and the benefits of these programs and how they impact the rates.

ESA Program costs recovered through the PPP surcharge are recovered from all SDG&E residential customers, including CARE customers. All direct costs of customer outreach,

[102] Resolution E-4884 authorized $12,959,793 to be utilized for specific new initiatives above and beyond the base ESA Programs for the 2017 through 2020 program cycle.

[103] D.17-12-009 directs SDG&E to offset its future revenue collections utilizing unspent, uncommitted ESA Program funds.

assessment, energy education, measure installation, inspection, and program administration are recovered through the PPP. Costs of NGAT, a required safety check any time a home receives air infiltration measures, are not recovered through the PPP, nor are they requested in this filing, but rather through SDG&E's General Rate Case (GRC) proceeding.

4. Include a brief description of the balancing accounts for the ESA Program and explain any changes.

SDG&E – Electric

SDG&E maintains the electric Low-Income Energy Efficiency Balancing Account (LIEEBA) to record the ESA Program expenses incurred against revenue.

Pursuant to Commission D.03-04-027, SDG&E files an advice letter by October 1st of each year requesting to establish the electric PPP rate effective January 1st of the following year. The rate revenue consists of Commission approved ESA Program expenses for the following year and the amortization of the applicable portion of the forecasted current year-end LIEEBA balance. SDG&E does not propose any changes to the LIEEBA at this time.

SDG&E – Natural Gas

SDG&E maintains the Post-2005 Gas Low Income Energy Efficiency Balancing Account (PGLIEEBA) to record the ESA Program expenses incurred against gas surcharge funds reimbursed from the State Board of Equalization. The gas surcharge was established pursuant to AB 1002[104] and implemented by the utilities pursuant to Commission Resolution G-3303 (dated 12/21/2000) and the Natural Gas Surcharge D.04-08-010. SDG&E maintains the PGLIEEBA by recording at the end of each month ESA Program expenses and gas billed surcharges. SDG&E also records as applicable remittances/reimbursements to/from the State Board of Equalization.

[104] AB 1002, Stats. 1999-2000, Ch. 932 (Cal. 2000).

Pursuant to Commission D.04-08-010, SDG&E files an advice letter by October 31st of each year requesting to establish the gas PPP rate effective January 1st of the following year. The rate revenue consists of Commission approved ESA Program expenses for the following year and the amortization of the applicable portion of the forecasted current year-end PGLIEEBA balance. SDG&E does not propose any changes to the PGLIEEBA at this time.

II. CONCLUSION

SDG&E respectfully requests the Commission to approve its ESA Program proposal for 2021 through 2026 as described in this testimony and to authorize as follows:

- Approval of its 2021 through 2026 ESA Program plans and budgets herein.
- Approval of the mix of measures discussed herein.
- Approval to implement all requested P&P Manual and Policy changes requested herein.
- Approval to continue integration and leveraging efforts.
- Approval of all statewide studies, including impact evaluations, process evaluation, low income needs assessment, non-energy benefits and categorical eligibility studies.
- Approval to use unspent funds for the 2021 through 2026 ESA Program budget.
- Approval to use unspent electric and gas funds to partially offset future revenue requirements.

III. ESA PROGRAM EXHIBITS

1. **ESA Exhibit 01: - ESA Program 2021 through 2026 Quarterly Spend Plan**
2. **ESA Exhibit - 02: ESA Multifamily Non-Deed Restricted Program Measure List**

STATEMENT OF QUALIFICATIONS
SARA NORDIN

My name is Sara Nordin. I am employed by SDG&E. My business address is 8326 Century Park Court, San Diego, CA 92123.

My current position is Customer Programs Manager. My primary responsibilities are to oversee program design and implementation for SDG&E's low-income, workforce education and training, customer outreach and renewables programs. From 2006 – 2015 I held various positions of increasing responsibility in Customer Communications, Customer Programs, Business Services and Marketing. I left employment at the utility between November 2015 and July 2018 and I returned to SDG&E in 2018 under my current responsibilities as described above. I received a bachelor's degree in English from the University of California, Davis and a master's degree in business administration from Rice University in Houston, Texas.

I have previously testified before the California Public Utilities Commission in A.12-08-009 - Application of San Diego Gas & Electric Company For Approval of Statewide Marketing, Education and Outreach Program and Budgets for Years 2013 Through 2014.

EXHIBIT NO. ESA-001
TO THE PREPARED DIRECT TESTIMONY OF
SARA NORDIN
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

November 4, 2019

Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Energy Efficiency Costs	$ 5,185,595	$ 5,185,595	$ 5,185,595	$ 5,185,595	$ 5,133,606	$ 5,133,606	$ 5,133,606	$ 5,133,606	$ 6,076,146	$ 6,076,146	$ 6,076,146	$ 6,076,146	$ 6,948,671	$ 6,948,671	$ 6,948,671	$ 6,948,671	$ 7,388,743	$ 7,388,743	$ 7,388,743	$ 7,388,743	$ 7,910,037	$ 7,910,037	$ 7,910,037	$ 7,910,037
Non-EE Costs	$ 1,336,556	$ 1,336,556	$ 1,336,556	$ 2,991,389	$ 1,250,896	$ 1,506,253	$ 1,506,253	$ 4,618,192	$ 1,725,035	$ 1,725,035	$ 1,556,191	$ 1,556,190	$ 1,599,769	$ 1,599,769	$ 1,599,769	$ 1,599,769	$ 1,721,232	$ 1,721,232	$ 1,721,232	$ 1,721,232	$ 1,668,366	$ 1,668,366	$ 1,668,366	$ 1,668,366
Technology Milestones						*Customer Audit Platform Development Begins*		**Launch Customer Audit Platform**																
						Contractor Audit Portal Development Begins		**Launch Contractor Portal**																
Local Program Milestones	*RFP Work Begins*		**RFPs in Market**																					
				RFP Selection Begins		**Contracts Awarded**																		
						Contractor onboarding, training & program setup begins		**New Program Launched to Market**																
									SF/MF New Launch			**21931 Customers Reached w/New Program**				**23352 Customers Reached**				**24414 Customers Reached**				**26537 Customers Reached**
																	CARB Electrification Measures Launch							**CARB Electrification Measures complete**
																	Generator for HFTD Low Imcome Launch							**Generator Measures Complete**
MFWB Milestones	*RFP Work Begins*		**RFPs in Market**																					
				Selection Begins		**Contracts Awarded**																		

EXHIBIT NO. ESA-002
TO THE PREPARED DIRECT TESTIMONY OF
SARA NORDIN
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

November 4, 2019

ESA In-Unit CAM Measure List

Measures	In-Unit	CAM	Both
Appliances			
High Efficiency Clothes Washer = 3% first Year, 5 % second year and beyone	x		
Refrigerators			x
High Efficiency Clothes Dryers (Gas)	x		
Domestic Hot Water			
Faucet Aerator Kitchen			x
Low Flow Showerhead			x
Water Heater Blanket (This measure falls in the Maintenance category for CAM)			x
Water Heating Pipe Insulation (This measure falls in the Maintenance category for CAM)			x
Water Heater Repair/Replacement	x		
Thermostatic Shower Valves	x		
Combined Showerhead/TSV	x		
Heat Pump Water Heater (electric)	x		
Tub Diverter W/Shower Valve	x		
Large Gas Instantaneous Water Heater, Et= 0.90, Stdby Loss= 0.23%/hr <200 kbtuh		x	
Central Boiler for DHW TE of 84% for Tier 1 (non- condensing) boiler <200 kbtuh		x	
Central Boiler for DHW TE of 90% for Tier 2 (condensing) boiler <200 kbtuh		x	
Boiler Controls		x	
Enclosure			
Air Sealing	x		
Attic Insulation	x		
HVAC			
FAU Standing Pilot Light Conversion	x		
Furnace Repair/Replacement			x
Room AC Replacement	x		
Duct Testing and Sealing (This measure falls in the Maintenance category for CAM)			x
Energy Efficient Fan Control			x
Smart Thermostat			x
Whole House Fan	x		
HEAT Pump Split System (<=1.5 ton - 4 ton)		x	
AC Brushless Fan Motor replacing Permanent Split Capacitor (PSC) Motor		x	
Maintenance			
AC Diagnostic, Repair and Tune-Up		x	
Furnace clean and tune	x		
Central AC Tune Up	x		
Replace Air Filter		x	
Lighting			
LED Hardwired Fixture - Interior	x		
Led Hardwired Fixture - Exterior	x		
LED Torchiere	x		
LED PAR Lamps			x
LED R/BR			x

LED A Lamps			x
LED Screw-in Candelabras 4 Watt			
Measures	**In-Unit**	**CAM**	**Both**
Lighting (continued)			
LED Non Linear Interior Retrofit		x	
Interior TLED Type A Lamps		x	
Interior TLED Type C Lamps		x	
LED Exit Signs		x	
Interior LED New Luminaire - Size 2x4		x	
Interior LED New Luminaire - Size 2x2		x	
Interior LED New Luminaire - Size 1x4		x	
Interior Integrated LED Retrofit Kits - Size 2x4		x	
Interior Integrated LED Retrofit Kits - Size 2x2		x	
Interior Integrated LED Retrofit Kits - Size 1x4		x	
LED Outdoor Pole/Arm-Mounted Fixture		x	
LED Outdoor Parking Garage Fixture		x	
LED Outdoor Wall-Mounted Fixture		x	
LED Outdoor Fuel Pump Canopy Fixture		x	
LED Pool Light		x	
LED Spa Light		x	
Miscellaneous			
Variable Speed Pool Pump (This measure falls in Pools and Pumping category for CAM)			x
Smart Strip	x		
Smart Strip Tier II (This measure falls in Consumer Elctronics category for CAM)			x
Special HCS Initiatives			
CO Detectors	x		
Smoke Detectors	x		
Air Purifers	x		
In Home Displays	x		
Portable AC	x		
Generators	x		
Customer Enrollment			
In-Home Enrollment (Current)	x		
In Home Assessment (Current)	x		
Online Audit Completion (prioritized)	x		
Online Income Documentation Upload	x		
In Home Documentation	x		
In-home Audit Completion	x		
New In Home Assessment	x		
In-Home Education			
In-home Energy Education (Current Program)	x		
Online Energy Education (Simple100% and Prioritized 60%)	x		
Customized Energy Education 2.0 (Audit Review)	x		
In-home My Account Enrollemnt	x		
Customer Kits (Moved to Marketing)	x		

ESA In-Unit CAM Measure List

Measures	In-Unit	CAM	Both
Audit			
MF Property Audit		x	
Natural Gas Appliance Testing			
NGAT	x		