

SOUTHERN CALIFORNIA GAS COMPANY
ENERGY SAVINGS ASSISTANCE AND CALIFORNIA ALTERNATE RATES FOR
ENERGY PROGRAMS & BUDGETS FOR PROGRAM YEARS 2021-2026

(A.19-11-006)

CalAdvocates-ESA-CARE-SoCalGas-2020-01

RECEIVED: JANUARY 22, 2020

SUBMITTED: FEBRUARY 5, 2020

QUESTION 1:

Please provide any workpapers used in the development of Application 19-11-006 and the associated testimony.

RESPONSE 1:

Attached please find SoCalGas' workpapers for the development of the SoCalGas Application 19-11-006 and the associated testimonies.



ESA Program
Workpapers.pdf



CARE
Workpaper.pdf

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QUESTION 2:

Please explain why the Worker Education & Training (WE&T) budget increases from \$61,208 in 2021 to \$1.3 million in 2022.¹ Include a detailed WE&T budget broken down by activities and labor categories.

RESPONSE 2:

In 2021, the WE&T activities will be operating on a status quo basis. During 2021, SoCalGas will conduct a Request for Proposal (RFP) to support the increased activity as described in the ESA Program Testimony at p. 76. SoCalGas expects to launch these new initiatives in 2022. A detailed WE&T budget by category is provided under the heading, "2021-2026 Training Center Budget" in the ESA Master workpapers as attached in response to Question 1.

¹ A-19-11-006. Application of Southern California Gas Company (U904G) for Approval of Low-Income Assistance Programs and Budgets for Program Years 2021-2026. Prepared Direct Testimony of Mark Aguirre and Erin Brooks, p. 52.

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QUESTION 3:

SoCalGas proposes to treat 110,000 dwellings per year in PYs 2021-2026.²

- a. State the basis and provide evidence for the treatment goal of 110,000 dwellings.
- b. State the basis for the statement that treating 110,000 dwelling per year is achievable.

RESPONSE 3:

- a. SoCalGas' proposal to treat 110,000 dwellings per year is the same treatment goal proposed by SoCalGas and adopted by the Commission for program year 2017. SoCalGas has treated on average of 115,000 customers per year over the five-year period 2010 through 2014. SoCalGas references this timeframe, as there was a larger population of untreated customers at that time than in recent years. In the new program cycle, SoCalGas has proposed that all customers be considered untreated, so this timeframe is more representative of the 2021-2026 period.
- b. See response to part a. In addition, SoCalGas expects to report treating over 120,000 dwellings in PY 2019³.

² A-19-11-006, p. 15.

³ The number of homes treated for 2019 will be reported in the May 1, 2020 Low Income Programs Annual report.

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QUESTION 4:

SoCalGas proposes a system to provide customers with the opportunity to directly schedule visits with service providers.⁴

- a. Provide the estimated costs for the proposed system, including costs for equipment, software and labor to develop, operate and maintain such a system.
- b. Provide the estimated costs identified in subpart (a) for maintaining the current scheduling system.

RESPONSE 4:

- a. Estimated non-labor costs for the proposed system are provided as part of ESA Program General Administration workpapers. These costs are divided into third party development costs (“Build A Customer Experience Focused Platform”); software licensing, hosting, and support; and legacy system hosting and support. These activities are an estimated \$7,468,825 for this PY 2021-2026. Please see the cost breakdown provided in the workpapers attached in response to Question 1.
- b. Legacy system hosting and support costs total \$800,000 which are provided in the General Administration workpapers attached in response to Question 1.

⁴ A-19-11-006, p. 17.

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QUESTION 5:

SoCalGas plans to further develop and enhance its energy education offerings.⁵ Does SoCalGas have evidence that its past energy education offering were effective in achieving energy savings? If yes, please provide evidence of the effectiveness of past energy education.

RESPONSE 5:

The energy education offerings within SoCalGas' ESA Program are not designed to achieve energy savings. SoCalGas is not aware of any past impact evaluations which measured energy savings from ESA energy education. However, SoCalGas' ESA Program does conduct participant surveys on a quarterly basis to measure participant satisfaction with program offerings. The most recent customer survey for the third quarter of 2019 indicated that more than three-quarters (78%) of participants recall receiving a Customer Energy Education Packet the day they signed up for the program. Of these participants, the overall majority (80%) find the energy tips discussed with the sign-up person as *very useful*. As stated in the ESA Program testimony, SoCalGas proposes to continue to provide energy education to remove barriers to program participation.⁶

⁵ A-19-11-006, p. 67.

⁶ SoCalGas ESA Testimony, p. 68.

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QUESTION 6:

SoCalGas states that “based on furnace manufacturer data, SoCalGas believes there are well over two million wall furnaces in its service territory, most operating well below 70% efficiency, a substantial number of which are in low-income homes. These units represent an opportunity to save 20-80 therms per year each time one is replaced with a new, 82% efficient unit.”

- a. State the basis and provide evidence for the two million wall furnaces figure;
- b. State the basis and provide evidence for the 70% efficiency figure;
- c. State the basis and provide evidence for a “substantial number”;
- d. State the basis and provide evidence for the 20-80 therms per year savings;
- e. State the basis and provide evidence for selecting an 82% efficient unit.
- f. Provide a comparison of the savings and costs of units with three higher efficiency levels to the 82% efficient unit.

RESPONSE 6:

- a. Based on communications with Williams Furnace Company, Williams estimates an installed base of 2.1 million Williams wall furnaces within SoCalGas’ service territory. This estimate does not include furnaces manufactured by other companies, which may also be candidates for replacement under SoCalGas’ proposal.
- b. California Title 20 appliance code (post-2013) requires new gravity wall furnaces to be at least 65% Annual Fuel Utilization Efficiency (AFUE). Prior to 2013, gravity wall furnaces were required to have a minimum efficiency rating of 59-64 AFUE.⁷ Based on code, SoCalGas conservatively estimates that most wall furnaces operate below 70% AFUE.
- c. Nearly one third of households in SoCalGas’ service territory meet income requirements for the ESA Program, making it likely that one third or more of the over two million wall furnaces in SoCalGas’ territory are in low-income homes. This perspective is supported by SoCalGas’ contractors’ and field teams’ experience that this configuration is common. 3,006 of 5,188 furnaces replaced in SoCalGas’ ESA Program in 2018 were wall furnaces, further supporting the assertion that a substantial number of the over two million wall furnaces in SoCalGas’ territory are in low-income homes.

⁷ California Code of Regulations, Title 20, at p. 263. Available at <https://ww2.energy.ca.gov/2017publications/CEC-140-2017-002/CEC-140-2017-002.pdf>

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- d. Workpaper SWHC001B attached in this response calculates Gravity Wall Furnace at 82% efficient with 62% AFUE baseline shows a savings value from 17.65 therms to 155.94 therms per year, for climate zones 1 to 16. Within SoCalGas' service territories, climate zones 4, 5, 6, 8, 9, 10, 13, 14, 15,16, the savings values are from 21.03 to 104.09 therms per year. However, the majority of SoCalGas' serviced homes are in climate zones 8, 9, 10, 13, 14, 15 which have savings values from 21.03 to 83.54 therms per year.
 - e. Based on communications with Williams Furnace Company, upon information and belief, Williams plans to introduce a wall furnace at 82% AFUE.
 - f. Please see the file below.



Wall Furnace -
Savings

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QUESTION 7:

SoCalGas forecasts annual savings of \$700,000 per year by 2026 in the “In-Home Education” budget subcategory by transitioning to online customer engagement. SoCalGas states that up to 65% of customers would receive energy education online by the end of the cycle.⁸

- a. Explain how the projected savings of \$700,000 per year was estimated;
- b. State the basis for the 65% figure.

RESPONSE 7:

- a. Based on 2018 historical data, SoCalGas assumes that 59.6% of the 110,000 enrolled homes SoCalGas will enroll in 2021-2026 or 65,560 homes per year will receive energy education. SoCalGas assumes that up to 65% of homes receiving energy education by 2026 will do so online. This is supported by Pew Research data indicating that currently over 70% of lower income Americans own smart phones and over 50% have broadband services, figures SoCalGas expects will improve by 2026.⁹ SoCalGas assumes that energy education costs, \$20/home as of 2018, can be reduced by as much as \$15 per unit or \$17.22/unit in 2026 dollars by using online methods as opposed to in-person visits. Thus, under SoCalGas’ assumptions, by 2026, 65% of the 65,560 homes receiving energy education or 42,614 homes will receive energy education online rather than in person, resulting in savings of \$733,721 in 2026, compared with the scenario in which all energy education is provided in person at a cost of \$20 (2018 dollars) per unit.
- b. See response to a, above.

⁸ A-19-11-006, p. 49.

⁹ A-19-11-006, p. 87, fn. 76, 77.

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QUESTION 8:

SoCalGas forecasts that multi-family common area central systems will cost on average approximately \$17,000 per project, with an average of 281 projects per year.¹⁰

- a. State the basis for the forecasted average cost and provide a budget broken down by the different equipment costs and labor categories.
- b. State the basis for the 281 average number of projects per year.

RESPONSE 8:

- a. The word “project” in SoCalGas’ application was inadvertently used in place of the word “measures.” The \$17,000 is a “general” overall statement and was a conservative assumption based on SoCalGas’ estimate provided in the budget estimate attached below.¹¹ The complexity of common area measure (CAM) gas projects is not a “one-size” fits all methodology. When developing the forecast for CAM projects several factors were considered within the multifamily (MF) segment. Historical project data taken from the current program cycle highlighted three prototypical scenarios for CAM opportunities. These opportunities were then categorized into small, medium and large projects.

The cost structure of each project varies greatly based on the size of the project and the type of equipment being replaced. CAM projects are all unique and the number of measures installed, e.g., boilers, varies based on the size of the property and the number of units/tenants. SoCalGas conducts audits and performs engineering design to best determine equipment size, efficiency, and installation requirements. In order to provide some background to the cost structure, equipment and project costs are determined on a project by project basis. The attachment below (MF CAM Properties) illustrates the estimated budget broken down by total project costs, which includes installation, contractor labor costs, and all ancillary costs. This estimate does not include SoCalGas administrative costs.

¹⁰ A-19-11-006, p. 49.

¹¹ The attached budget worksheet includes calculations totaling \$19,573 per measure. This estimate is derived by calculating $(\$5,500,000/281 = \$19,573)$. The \$17,000 was a conservative assumption for this forecast.

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MF CAM
Properties.xlsx

- b. After examining the number of measures that were installed in the current cycle, projects types vary greatly between smaller and larger projects; The 281 number is an estimate. For clarification, the 281 estimate represents measures and, not projects and was thus mis-labeled. The attachment below (MF CAM Properties) illustrates the estimated number of measures per year in the column labeled “Central Systems.”



MF CAM
Properties.xlsx

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QUESTION 9:

SoCalGas proposes to target 220 installations of solar water heating per year at a cost of \$6,000 per year.¹²

- a. Provide the cost per installation, broken down by equipment costs and labor categories.
- b. Provide the basis for the target of 220 installations.

RESPONSE 9:

- a. In relation to the \$6,000, the cost is per project, not per year. Based on CSI Thermal database results for single family applications, the average cost of an installed system has been approx. \$6,000, which includes labor installation costs. This response does not include SoCalGas' administrative costs.

Average costs

Installation cost	\$1,500
Tank cost	\$1,400
Collector cost	\$3,000
Permit cost	<u>\$ 100</u>

Total system install cost \$6,000

- b. Based on data from the CSI Thermal database, since 2014 when the low income program was initiated, approximately 440 single family low income installations on average have been installed per year. With a low in the first year of 19 installations in 2014, to a peak of 1,430 installations in 2018. The target is to achieve a goal of 50% of the 440 installations per year or 220 installations.

¹² A-19-11-006, p. 49.

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QUESTION 10:

According to SoCalGas estimates, the average M&O spent/per household will increase from \$7.48 in 2020 to \$14.59 in 2021 (increase of 192%) and then up to \$15.46 in 2026 (increase of 204%).¹³ Please explain the reasons for the increase in average spent per household each year.

RESPONSE 10:

For Program years 2021-2026, SoCalGas estimated an increase in average spend per household to fully support reaching ESA's Program goals. Targeting and reaching prioritized customers, including but not limited to, high energy users, medical baseline customers and those in disadvantaged communities, will take additional marketing resources. Furthermore, SoCalGas will adopt new technologies such as Short Message Service (SMS) and tablet enrollment as part of its marketing efforts which will increase costs. A breakdown of Marketing and Outreach costs for the ESA Program are detailed in the workpapers provided in response to Question 1.

¹³ A-19-11-006, p. 89.

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QUESTION 11:

SoCalGas and the other IOUs are proposing an additional \$1.2 million of study budget to be defined during 2021-2026 to support various program data needs.¹⁴

- a. Please state the basis for the \$1.2 million budget amount.
- b. Please explain how potential studies will be:
 1. selected;
 2. approved;
 3. developed;
 4. implemented.

RESPONSE 11:

- a. As noted in SoCalGas' ESA Testimony, the statewide discretionary budget is \$1,200,000 and SoCalGas' portion of the budget amount of \$300,000.¹⁵ SoCalGas' proposed amount is based on lessons learned from prior cycle in the Low-Income program and the Energy Efficiency program, which has a similar evaluation structure, regarding the costs for study needs and execution. Historically, work on basic analyses in these programs typically costs approximately \$20,000, and conducting a full study, which includes scope, bidding, data collection, analysis and reporting can range from \$150,000 to \$500,000. The unassigned discretionary funds are expected to be used to solicit research or analysis for timelier and/or unknown Statewide or utility specific needs that arise during the program cycle.
- b. As noted in SoCalGas' ESA testimony, potential studies will be selected, approved, developed and implemented using a similar procedure currently used in the mainstream Energy Efficiency proceeding.¹⁶ The process involves several steps that are executed via the Energy Division (ED)-managed portal "Basecamp." For a study that is not identified in a CPUC Decision, a high-level study idea with a budget is posted for ED's input and approval. Following this step, studies are expected to post a more comprehensive and detailed scope of work to basecamp for ED review and input. The development of a formal request for proposal (if going out to bid) and the remainder of the process follows the traditional bidding, contracting and vetting and socialization processes used to implement a study.

¹⁴ A-19-11-006, p. 150.

¹⁵ A-19-11-006, p. 150.

¹⁶ SoCalGas ESA Testimony, pp. 144-145.

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QUESTION 12:

SoCalGas made adjustments to the “expected frequency of measures to reflect the impact of a more customer driven program presentation, the opportunity for customers to self-serve some measures, and SoCalGas’ planned targeting of measures.”¹⁷

- a. Please state the adjustment made to the frequency of each measure.

RESPONSE 12:

Compared with actual frequencies experienced in 2018, SoCalGas has made the following adjustments in its 2021-2026 projections:

- For enrollment, the process of recording customer income and other information and documenting a customer agreement for an eligible customer, is assumed to be replaced with on-line enrollments in up to 65% of cases, with 1.5 on-line enrollments assumed for each traditional enrollment replaced. The 1.5 factor is intended to account for enrollment activity that does not actually result in any further engagement in the ESA Program.
- Tub spout installation frequencies are assumed to double to 7.2% of homes compared with 2018 levels which were impacted by slow adoption in SoCalGas’ program through 2018.
- Air sealing measure frequencies are reduced by 40% to account for SoCalGas’ expectation that air-sealing measures will need to be focused more narrowly by climate zone and for the purpose of targeting indoor air quality improvement.
- SoCalGas assumes that conventional furnace replacement will be completely displaced by High Efficiency (HE) furnace replacement, thus reducing the frequency of the conventional “Furnace Repair/Furnace Replacement” measure forecast to 3.5% from 8.7% of treated homes (removing all replacements and leaving repairs only).
- HE clothes washer frequency is assumed to double to 8.2% of treated homes from the 4.1% level experienced in 2018. This increase reflects efforts underway to boost washer installations in the current cycle. The program delivered over 26,000 washers compared with just under 93,000 treated in 2014, supporting the view that higher frequencies are possible.

¹⁷ A-19-11-006, pp. 45-46.

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QUESTION 13:

SoCalGas proposes allowing limited customer self-serve measure installation.

- a. Please state which measures would be allowed for self-serve installation and why.¹⁸
- b. Please state whether and how a self-serve installation would be verified.

RESPONSE 13:

- a. SoCalGas proposes to allow self-serve installation measures that include kitchen and bath faucet aerators, showerheads, and thermostatic shower valves. These measures are generally simple to install, and the parts are relatively inexpensive.
- b. The verification process for the self-serve measure installation would be a component of the on-line energy education. As stated in the SoCalGas ESA Program testimony, the on-line education process can appeal to an otherwise difficult segment to reach.¹⁹ These customers may also prefer a self-serve approach to adopting energy savings measures. The verification for measures installed may include the following options: use of QR codes or leveraging energy savings prizes to eligible on-line energy education participants.

¹⁸ A-19-11-006, p. 127.

¹⁹ SoCalGas ESA Testimony p. 127