

Non-Residential Process Evaluation Study: Attachment 2 – Program-Specific Evaluations

Final Report

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Southern California Gas Company

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1. INTRODUCTION TO ATTACHMENT 2 – PROGRAM SPECIFIC EVALUATION RESULTS

We present here Attachment 2 – Program-Specific evaluation results, as part of the Southern California Gas Company (SoCalGas) Nonresidential Process Evaluation Final Report. While we encourage all stakeholders to read this attachment and all parts of the report, this attachment is primarily intended for SoCalGas program managers and senior-level staff.

1.1 STRUCTURE OF THIS ATTACHMENT

One chapter is dedicated to each program evaluated. It includes a program overview; program status (budget, energy savings, number of participants and vendors); review of end-of-cycle PPMs and other potentially useful metrics; results from staff interviews, customer surveys, vendor interviews and other data collection activities; and final conclusions and recommendations. We evaluated:

- ◆ Deemed (EERB)
- ◆ Calculated
- ◆ Local Nonresidential Bid
- ◆ Nonresidential Audits
- ◆ Program for Resource Efficiency in Private Schools (PREPS)
- ◆ SaveGas
- ◆ Appendix – Early feedback memo: Recommended Programs for Critical Review. This describes programs we recommended for immediate internal review in August 2011..

1.2 OTHER VOLUMES IN REPORT

Beside this attachment, the SoCalGas Nonresidential Process Evaluation Final Report includes:

- ◆ Main Report: Intended for all stakeholders, including all SoCalGas staff, the CPUC, 3P implementers, vendors, and others. This includes an Executive Summary of issues and recommendations for the portfolio-level evaluations and for program-specific evaluations; an overview of the methodology, a summary of best practices; and results of the Regulatory and Statewide Initiatives evaluation.
- ◆ Attachment 1 - Portfolio-level Evaluations: Intended for all SoCalGas staff, particularly senior-level staff, and those involved in the utility practices described. It presents results from evaluations on portfolio-level topics (Organizational Issues, Marketing, IT and Database Management, Effectiveness of 3P Implementation).
- ◆ Attachment 3 - Data Collection Resources. This includes interview guides and customer survey results.
- ◆ Attachment 4 - Work Plan and Evaluability Assessment. We developed these at the beginning of the study and used them to guide research activities.

1.3 DEFINITION OF KEY INDICATORS

In the program status section of each program chapter, we include a few key indicators. Here we describe our definition for these indicators and our methodology for determining them.

Budget spent, and Installed and Committed Savings: We present these in absolute and relative terms. The absolute values refer to budget spent and savings through Q3 of 2011 (i.e., cumulative from Q1 2010 – Q3 2011), based on EEGA reports. These are presented relative to the total allocated budget and total projected savings for the 3-year cycle (2010-12).

Number of Unique Projects: We based this on the number of unique Project ID's in the Q3 2011 program database. For programs not included in the program database, we used information provided by program managers or third party (3P) implementers.

Number of Unique Participants: We developed this using the Q3 2011 program database. For programs not included in the program database, we used information provided by program managers or third party (3P) implementers. For programs with small participation, we reviewed participant names and removed duplicates. For programs with larger numbers of participants (e.g., Deemed, Energy Savings BID), there was no perfect method for determining the number of unique participants. We used the number of unique Service Account IDs. However, Service Account IDs are based on meters, and 1 facility may have multiple meters. The other field we considered, unique Service Account Names, is also imperfect: One company may have multiple facilities (e.g., Starbucks), but each facility may operate independently for the purposes of the program. Also, a customer may be listed under different account IDs and account names, but essentially be the same facility – for example, John Doe Inc., Bldg A; and John Doe Inc., Bldg B, both with at least one service account ID.

Number of Vendors: We used information from SoCalGas staff.

2. DEEMED (EERB)

2.1 OVERVIEW

Formerly known as Express Efficiency, the Energy Efficiency Rebates for Business (EERB) is a mature program that offers prescriptive rebates for a variety of energy efficiency measures/products. It has a fair degree of market and customer awareness of its offerings, with Account Executives (AEs) and contractors (e.g., vendors) doing much of the program marketing. The program manager (new this cycle) tends to focus on participation issues (e.g., clarifying customer/equipment eligibility), researching new measures and communicating program changes to other SoCalGas staff. Statewide, deemed rebate programs are a non-residential sector energy savings “workhorse” – accounting for a large percentage of gas savings.

The EERB offers rebates for newly purchased qualifying gas measures. Eligible customers include commercial, non-profit, industrial, federal agencies, and agricultural customers, as well as the common areas of multi-family properties on a qualifying nonresidential rate schedule. In addition, customers must have existing buildings supplied with natural gas from SoCalGas in order to be eligible. Rebates are paid on a first-come, first-served basis.

The EERB is described as a vendor driven program: Projects can be undertaken directly by the customer, or through a vendor (a.k.a. trade ally) or other third party sponsorship.

Key players in program delivery and their roles include:

- ◆ EERB Program Manager – develops and modifies program design and implementation, has some direct contact with vendors on program updates and marketing, attends statewide coordination meetings with other deemed rebate programs staff, provides program education to Industrial Service Technicians
- ◆ Other EERB program staff – fields application questions, pre-screen applications and oversees payments
- ◆ SoCalGas Segment Advisors – market to trade groups and coordinate with AEs and Program Managers
- ◆ SoCalGas Measure Developer and Engineering staff – works with program manager and other SoCalGas staff (e.g., Policy, Emerging Technologies) to develop measure parameters (cost, savings, measure life) and develop work papers for CPUC Energy Division
- ◆ SoCalGas AEs – market program to customers and assist with participation process
- ◆ SoCalGas Commercial and Industrial Service Technicians (CSTs, ISTs) – may recommend deemed measures during course or customer repairs/retrofits; less involved in marketing than AEs and vendors
- ◆ Inspectors – SDG&E inspectors conduct inspections on behalf of SoCalGas; they confirm existing and new equipment is installed as claimed
- ◆ SoCalGas Rebates Processing Staff – process applications and rebates

- ◆ SoCalGas Vendor Alliance Representative – recruits participating vendors, keep vendors informed, can help usher a project through the process
- ◆ Vendors – market the program and can serve as a project sponsor

EERB is a mature and evolving program. EERB was delivered in 2006-08 (as Express Efficiency), and SoCalGas made significant program changes in the current cycle, mostly focused on specific measures and rebate amounts. For instance, steam traps for dry cleaners were moved to a separate program, and the program may add finned-bottom pots (initially delivered through point-of-sale discounts), ozone laundry systems and liquid pool covers as new measures. Notably, ozone laundry is a very popular deemed measure for PG&E, and currently it is a custom calculated measure for SoCalGas. (Other popular deemed PG&E gas measures are: process pipe insulation in the agriculture sector, commercial ovens (retail), boilers (food processing) and commercial fryers (hospitality).

Overall, cost effectiveness analyses by CPUC has made it increasingly difficult to obtain gas savings. In the current cycle rebate amounts for some high-impact measures were reduced due to reduced savings impacts, and some measures (steam traps, pipe insulation, some food service equipment) may be phased out.

2.2 PROGRAM STATUS

2.2.1 Budget, Participants, and Savings

EERB is expected to provide 20% of SoCalGas’ portfolio gas savings. The following tables shows the program budget, participation and achieved savings, and shows that the program has only spent about one-quarter of its program budget and has served about 1,000 customers (and most complete only one project each). The vast majority of program participants and completed projects have been in the commercial sector. Agricultural customers are most inclined to complete projects with HVAC measures, while other customers are completing a wide range of process-related projects.

	Budget Allocated	Budget Spent	Committed Budget	No. of Projects	No. of Unique Participants	No. of Participating Vendors¹
Amount	\$29,882,067	\$7,776,457	\$72,134	1,041	928	27
(% of Allocated)		(26%)	(0%)			

Figure 1 – Status of SoCalGas EERB program thru Q3 2011

¹ This number is likely incorrect, as SoCalGas provided a vendor list that had not been updated to reflect the most current recruitment activity.

Sector	No. of Projects	No. of Unique Participants
Ag	38	29
Com	818	756
Ind	185	143
Total	1,041	928

Figure 2 – SoCalGas EERB Participation by Sector thru Q3 2011

Sector	Projects w/HVAC Measures	Projects w/Process Measures
Ag	30	9
Com	1	817
Ind	0	185
Total	31	1,011

Figure 3 – SoCalGas EERB Projects by Sector and End Use thru Q3 2011

The following table shows projected, installed, committed energy savings based on EEGA Q3 filings. These savings are based on an old version of DEER, and the values will change after the new DEER database is finalized.

	Gas Savings (Therms x 1000)		
	Project ed	Installe d	Committ ed
Amount	23,604	8,547	333
(% of Projected)		(36%)	(4%)

Figure 4 – SoCalGas EERB Energy Savings thru Q3 2011

2.2.2 PPMs

The table below shows the two end-of-cycle PPMs that pertain to the EERB program, and shows that the EERB program manager relies on SoCalGas policy staff to track and report these

metrics to CPUC. The evaluation team does not know if the policy staff are indeed tracking these PPMs.

Cycle PPM	Tracked?	Status
Number and percent of new, improved or ETP measures installed in program	Policy staff track new Emerging Technology measures added to program	Not known

Figure 5 – SoCalGas EERB Cycle PPM Summary and Status

2.3 DATA COLLECTION ACTIVITIES

Throughout the process evaluation of the EERB program, our research focused on the following key research issues:

- ◆ How is the program marketed to customers, and how well is this process working?
- ◆ How easy or difficult is it for customers and vendors to participate in the program and complete the program applications?
- ◆ What barriers prevent customers and vendors from participating?
- ◆ What organizational, regulatory and systems issues are hindering the program delivery?
- ◆ What program changes could improve program delivery, participation, and satisfaction?

The following table summarizes the data collection activities for the EERB program, including the interviews and surveys conducted, and materials reviewed.

Target for Data Collection	Data Collection Mode	Date	Key Research Issues	No. of Data Points	Source of Sample
EERB Program manager	Interview	5/3/11, 8/24/11 and 9/13/11	Goals for evaluation, program theory and implementation, program changes, marketing, challenges, IT issues	1	Sempra process evaluation manager
Energy Efficiency and Sustainability Staff	Interview	5/3/11 and 9/1/11	Goals for evaluation, program implementation, rebates processing	1	Sempra process evaluation manager
Vendor Alliance Representative	Interview	11/30/11	Communicating program changes to vendors, feedback from vendors on recent program changes, vendors' role in process, bringing in more vendors, recommendations	1	EERB Program manager
IST Managers	Interview	12/6/11	Staff training, customer recruitment methods, program experience and challenges	2	EERB Program manager
PG&E and SCE Deemed programs staff	Interview and email correspondence	Multiple in November 2011	Customer recruitment, participation tracking, goals achievement, program strengths and challenges	4	PG&E and SCE
Inspections supervisor	Interview	11/30/11	Inspections process, bottlenecks, Recommendations for improvement	1	Various program managers
Lead Measure Developer	Interview	11/30/11	New measure development process, challenges	1	EERB Program manager
Participating Vendors	Interviews	November and December 2011	Reasons for participation, customer and vendor participation challenges, how customers targeted, feedback on program design, recommendations	6	Other EERB Program staff
Non-Participating Vendors	Interviews	November and December 2011	Programs awareness, reasons for non-participation, potential future participation	3	Other EERB Program staff
Rebates Processing Supervisor	Interview	12/14/11	Rebates processing steps, challenges, potential changes	1	Sempra process evaluation manager

Target for Data Collection	Data Collection Mode	Date	Key Research Issues	No. of Data Points	Source of Sample
Participating Customers	Surveys	10/1-11/4/11	How they learned about program, participation challenges, reasons for participation, satisfaction with program elements, interest in participating again	167	SoCalGas Program database
Non- Participating Customers	Surveys	10/1-11/4/11	Program awareness, reasons for non-participation, likely future participation	82	SoCalGas Program database

Figure 6 – SoCalGas EERB Evaluation Data Collection Activities

2.4 RESULTS AND FINDINGS

2.4.1 Program Processes

The following application flowchart, updated by SoCalGas in November 2011, shows the detailed steps that are followed by SoCalGas and SDG&E staff to screen, process and pay rebate applications. Key steps in this process include:

- ◆ Customers submit applications
- ◆ Applications are pre-screened by SoCalGas staff
- ◆ Pre-inspection of some projects (verifying specifications of existing equipment)
- ◆ Applications entered into CRM system
- ◆ Post installation inspections by SDG&E for some projects (5% random, all greenhouse gas curtains)
- ◆ Final QA by SDG&E rebates staff, and SoCalGas staff
- ◆ Rebate checks mailed, or customers receive disqualification letter

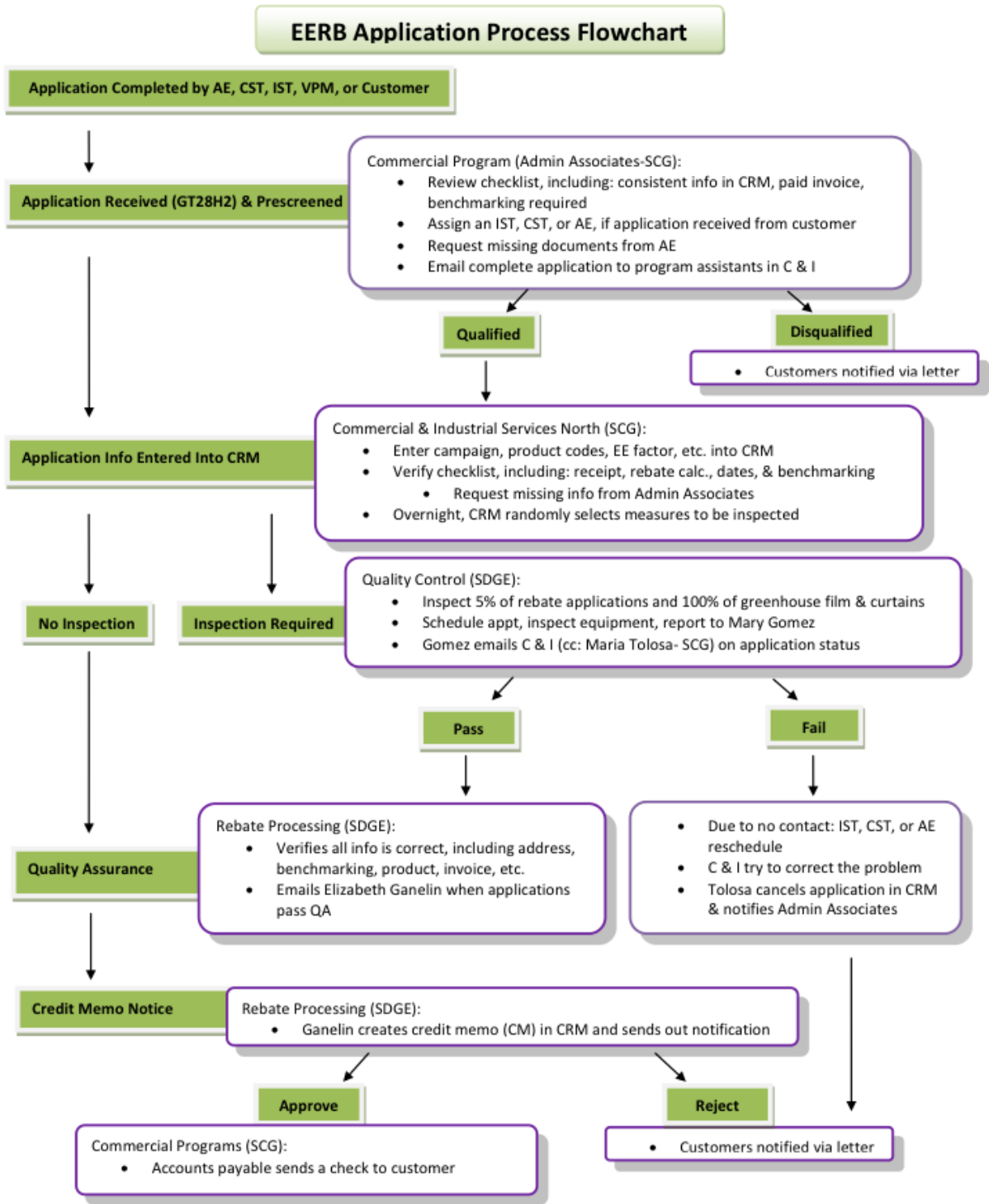


Figure 7 – SoCalGas EERB Application Process Flow Chart

As described below, SoCalGas is implementing several changes to the process, which should improve the quality of applications received and reduce the time required to issue rebates.²

First, the paper application form is being revised (with third-party expert help) to have a new layout and less technical language. However, this process has been delayed by CPUC requirements for additional measures data collection (e.g., for steam traps, pipe insulation). These improvements should reduce the amount of pre-screening needed, since currently many applications coming in are missing NAICs codes, measure codes, or other data. In addition, the on-line application that is planned should help expedite the process by screening for missing information in real-time.

The inspections process has recently been improved. In the past, some customers experienced long wait times, as SDG&E only allocated one staff person to cover SoCalGas' large service territory. Going forward, SoCalGas will conduct its own inspections using contractor staff. Lastly, the rebate checks will be mailed directly to customers, instead of going first to an AE or service technician for delivery.

2.4.2 Marketing

Program marketing is done by a range of staff, including:

- ◆ Market segment advisors
- ◆ Vendor Alliance Representative
- ◆ Account executives
- ◆ Commercial/industrial service technicians (CSTs/ISTs)

The following figure shows how customer phone survey respondents learned of the EERB program, and shows that they learning of the program from a wide variety of sources. Notably, many program participants are smaller customers with no assigned AE, but still report hearing about the program from an AE.

² Initial pre-screening by SoCalGas speeds up the QC and processing by SDG&E and is not necessarily redundant on the processing front end. However, there may be redundancy on back end when rebate checks are being cut; both IOUs review the final paperwork, as SoCalGas wants to ensure that information hasn't changed in CRM at SDG&E.

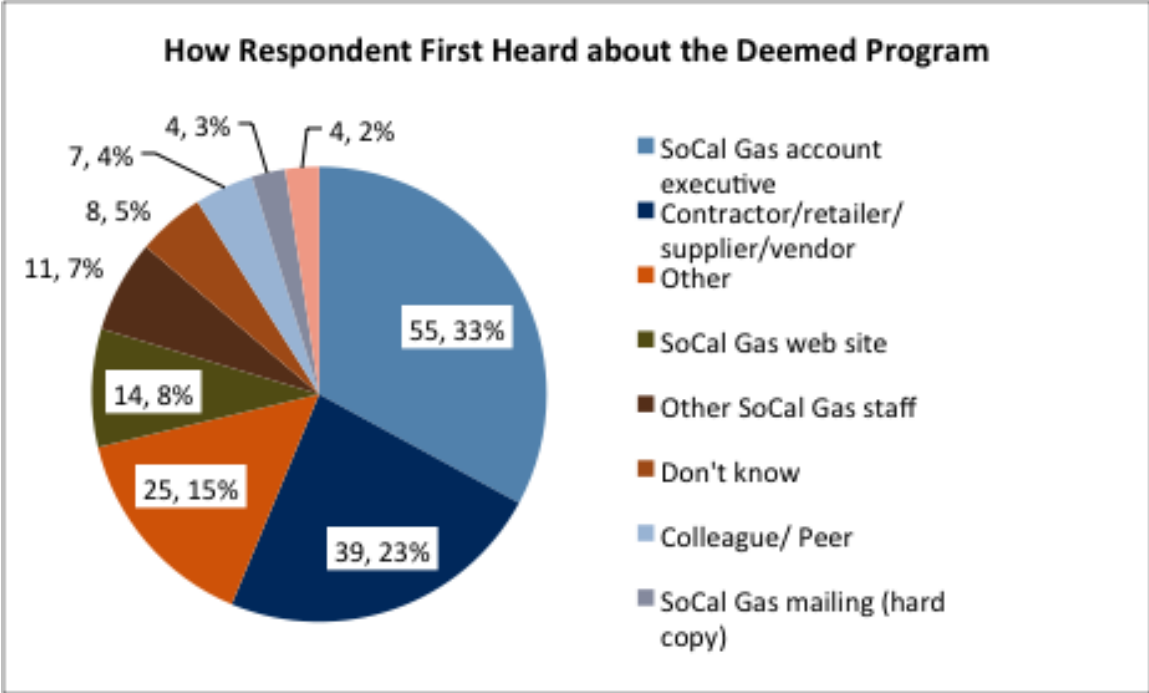


Figure 8 – SoCalGas EERB: How Respondent First Heard about the Program

According to the EERB manager, the Segment Advisors lead the overall marketing efforts, and serve as liaisons between the program managers and AEs. They are responsible for EERB mass-market advertising and the overall EERB marketing budget. However, one staff member in a technical role believes the Segment Advisors lack deep market knowledge. At the time of the initial evaluation interviews, the Program Manager perceived that the marketing function was understaffed, and thus the program had spent relatively little marketing budget. The results of the non-participants survey shows that only 28% of non-participants are aware of SoCalGas programs in general.

In addition, the Vendor Alliance Representative (VAR) role is being revived after a few years of dormancy. The VAR tries to recruit new vendors from multiple sources. But this staff member needs more help with regular administrative/logistics tasks (e.g., collateral re-stocking, event planning), so that she has more time to conduct personal visits and develop strong relationships, which are critical to vendor participation.³ In particular, the VAR will start to offer free sales training for vendors from third party sales experts (e.g., overcoming objections, how to profit) and also a series of social mixers to develop cross-vendor relationships and reach

³ The participating vendors we interviewed most often learned of the program from the VAR, followed by AE's, and sometimes vendor forums, other utility programs and equipment manufacturers.

more vendors, more efficiently. The VAR noted that she values the proactive program change communications she receives from EERB staff.

A key goal of the VAR is to get vendors to fill out the applications and offer buy-downs to customers, to reduce the time strain on customers. That said, the VAR also knows that vendors do not want to deal with SoCalGas' slow rebate payments to vendors.⁴ Thus, the VAR is developing a vendor SPIFF for buy-down projects, a tool that is currently used by SCE to incentivize applications completions by vendors.⁵ According to the VAR, the quality of vendor applications is currently very poor (and is requiring too much of their time to address). However the planned 2012 application changes, which will have less focus on customer sectors, should improve the quality of applications.

There are also 150 unionized CSTs and ISTs that provide gas equipment servicing to small customers, collect missing information on customer applications, and perform some verifications. These staff do bring in some rebates to the program during the course of their regular service work. However, they currently receive no incentives for doing this, and there may be greater potential to enhance this "secondary sales force." EERB staff do present program information to the CSTs and ISTs, however it is difficult to get the techs to these sessions to hear the detailed information firsthand, and some districts lag others in programs knowledge. These technical field staff are very busy, and marketing is not a key job responsibility. Some perceive that the programs change too often to warrant tracking closely.

2.4.3 New Measures Development

Overall, it has been difficult to find cost effective new gas measures when water and greenhouse gas savings are not considered. For each new measure, a team is assembled comprised of: the lead measure developer (who manages the process), one or more program managers, segment advisor(s), policy staff, engineering staff and sometimes EM&V staff. There is a formal process for developing measures (which staff find "reassuring"), and the steps include:⁶

- ◆ Meet as a team to define the measure and available data
- ◆ Assess measure viability (primarily the measure developer)
- ◆ (If viable) Develop work papers (engineers)
- ◆ Publish work paper and obtain approvals from SoCalGas staff

⁴ While one interviewed vendor completes 80 percent of the customers' applications, the others do "less than 10 percent", in part to avoid the long payments process of 3+ months.

⁵ SCE staff stated that they now give vendors "40 percent of their attention instead of 20 percent", acknowledging the critical marketing role vendors can play. As a result, the quality of vendor applications has also increased.

⁶ Separate staff interface with CPUC to get work paper approvals; this person was not interviewed.

- ◆ Get approval from CPUC
- ◆ Measure added to Program Builder system
- ◆ Measure added to EERB program

This process usually takes several months to complete, for multiple reasons. First, staff do not always know if a measure will end up deemed or calculated. Therefore multiple program managers may be involved initially, and it can be difficult to convene meetings. Then, different SoCalGas staff may identify different target markets that should be the same (e.g., number of small industrial food processors) due to IT issues (i.e. inconsistent categorizations within SoCalGas). Often, it is also difficult to find the new technologies in field with actual performance data, so pilot studies must be completed. The process is also very dependent on engineering staff, “who are usually very busy”. Lastly, there is some concern that the Segment Advisors do not have the “deep” sector knowledge required to know if the new measures will be viable, early in the process.

2.4.4 Statewide Coordination

Managers of all the IOUs’ deemed rebates programs participate in regular monthly phone calls to discuss program developments, consistency, challenges and delivery strategies. The CPUC does not participate in these calls, and PG&E is represented by its lighting products manager, as there is no overall manager for all deemed measures. The group has no formal or funded leader, and the SDG&E EEBR program manager has taken the initiative to develop call agendas via email in advance of the calls.

The calls have provided only moderate value to SoCalGas’ program manager, as they are generally focused on electric measures, particularly since PG&E and SDG&E both suspended gas measure rebates for a period. That said, SoCalGas’ manager has derived some benefits in that gas measure work papers (or elements thereof) can be planned and shared, and some (unspecified) delivery strategies may pertain to SoCalGas. In addition, an early group call was useful to clarify how PPMs would be reported to CPUC after some initial confusion.

The EERB program manager believes the calls are needed to stay current with the other IOUs and should continue. According to staff at the other IOUs, however, issues are not always resolved, because no one is responsible for managing the group, and staff are busy managing their own programs. In one case, PG&E delayed dropping a specific measure requirement until more field data were available, and another IOU dropped the requirement unilaterally, causing confusion among statewide vendors and customers. While programs consistency is not always possible or required (SCE was able to offer enhanced summer rebates on its own), it is generally preferred, and the IOUs would still benefit from improved knowledge of others’ activities. At least one statewide program (Custom) has funded a separate group coordinator to focus on issues resolution and implementation follow-through, to make the programs run smoother and allow managers to focus more on strategic long-term planning.

2.4.5 Program Satisfaction

In this section we summarize key findings from the participating customer survey regarding the application process, program rebates, benchmarking and inspections process.

As shown in the figure below, most program applications are completed by customer company staff, and relatively few are completed by AEs or equipment vendors. Participants that completed the applications with help from others (e.g., an AE or vendor) were also asked to rate the likelihood of applying for the rebate on their own, without assistance. On a scale from one (very unlikely) to ten (very likely), the average respondent score was 6.5, suggesting that application assistance is fairly important to some customers.

	Percent
Respondent	73.7%
Internal staff	19.2%
Account Executive	15.6%
Vendor or contractor	6.6%
SoCalGas Staff	1.2%
Do not know	1.8%
Total	N=167

Figure 9 – SoCalGas EERB: Person Responsible for Completing and Submitting the Application

The next figure shows that among respondents that completed the applications themselves, most thought the process was somewhat or very easy. (In contrast, the vendors interviewed for the evaluation did not perceive that the applications are very difficult for customers to complete.)

Fifteen percent of respondents mentioned that they had some problem with the application process, and the most commonly cited problems were confusion regarding the required input data and the length of the entire process (including the payment period).

	Percent
Very easy	35.0%
Somewhat easy	48.0%
Somewhat difficult	13.8%
Very difficult	3.3%
Do not know	0.0%
Total	N=123

Figure 10 – SoCalGas EERB: Ease of Submitting Application if Participant was Responsible for Process

The figure below shows that the most important reason for program participation was the rebate itself (i.e., monetary reasons). Eighty-five percent of participants received the rebate check themselves (as opposed to a vendor), and among this group, 85% were satisfied with the amount of time that it took to receive the rebate. Moreover, 89% stated that the rebate was about they expected, while 4% received lower-than-expected amounts.

	Percent
Rebate availability	50.3%
To save money	39.5%
To save energy	19.8%
The equipment failed/worked poorly and needed to be replaced	15.6%
To help environment	4.2%
Recommended by account executive	3.6%
Other	13.2%
Do not know	1.8%
Total	N=167

Figure 11 – SoCalGas EERB: Reasons for Participation

When asked to rate the likelihood of installing the program equipment *without* a program rebate, the average response was 7.5 on a scale from one (not at all likely) to 10 (extremely likely). This is a fairly high rating, and suggests that other customers may also purchase program equipment without pursuing rebates. However, this analysis should not be viewed as an assessment of free ridership, as we did not test for this robustly (e.g., ask different questions to assess the same answer for greater confidence, speak with different shareholders about this question such as vendors, etc.).

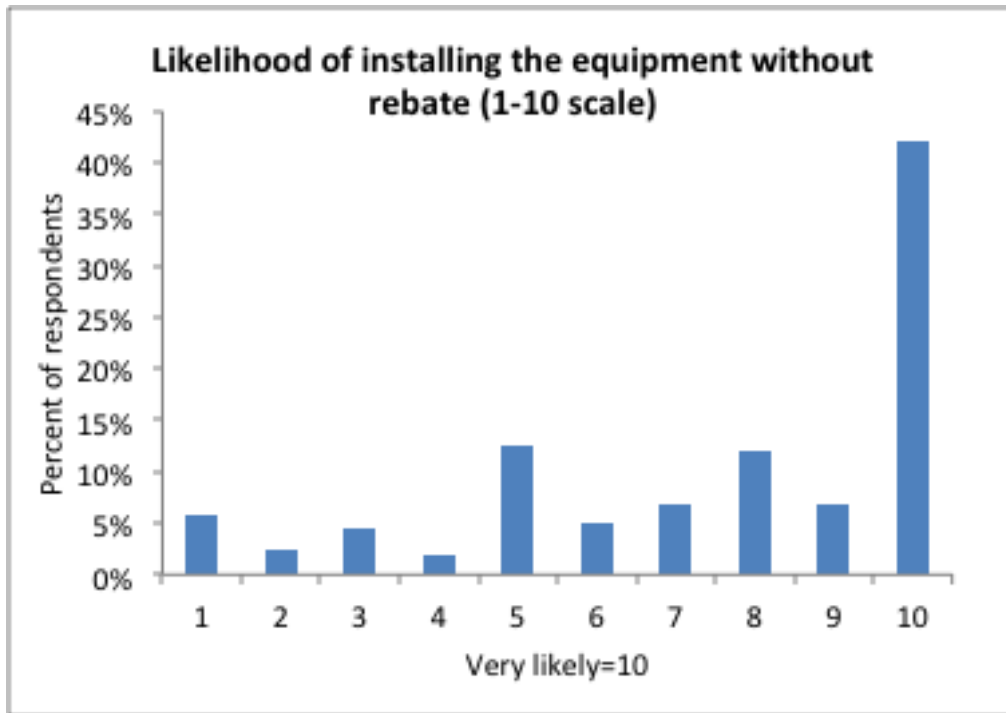


Figure 12 – EERB: Likelihood of Installing Equipment Without Rebate, N=159

Although SoCalGas has suspended its benchmarking requirement for the EERB program, some participants had completed this, and the figure below shows that roughly half of the customers completed the benchmarking themselves. In cases where the benchmarking was completed by others (e.g., an equipment vendor), 64 % of the participants reviewed the benchmarking findings. On a one to ten scale, with ten being extremely satisfied, the respondents gave an average satisfaction rating of 7.8 with the information provided by the benchmarking.

	Percent
No one	43.1%
Respondent	24.6%
Someone else	21.0%
Do not know	11.4%
Total	N=167

Figure 13 – SoCalGas EERB: Person Responsible for Benchmarking Energy Use Before Program Participation

Lastly, the participating customers gave a very high satisfaction rating for the inspections process, with an average rating of 9.4.

2.4.6 Overall Satisfaction with Program

On a scale from one to ten, the surveyed participants gave an average score of 8.8 for their overall program satisfaction, which is a very high rating. EERB participants typically (80%) had no difficulties purchasing and installing equipment through the program, but a few had problems with a lack of funding (4.2%), or with the quality of the equipment (2%). In these cases, participants were either sold out-of-date equipment, the equipment did not meet capacity needs, or the quality was low and the product had to be replaced. Few surveyed customers had specific suggestions for new program equipment to add.

Participating vendors were also asked to rate their program satisfaction on a one to five (highest) scale. While one vendor gave a rating of “low” (because they do not carry much equipment covered by the program), the other vendors gave scores of four and five. Some of the program strengths they cited were:

- ◆ Valuable assistance from SoCalGas vendor relations staff
- ◆ Communications from SoCalGas engineering staff regarding customers needing upgrades
- ◆ Somewhat increased business sales due to the rebates

Regarding future needs from the program, one vendor would like regular budget status communications, as the program has been oversubscribed in the past, making them reluctant to promote the rebates heavily. Another vendor would like SoCalGas to provide more regular training for AEs, since in the past newer AEs have given incorrect eligibility information to customers.

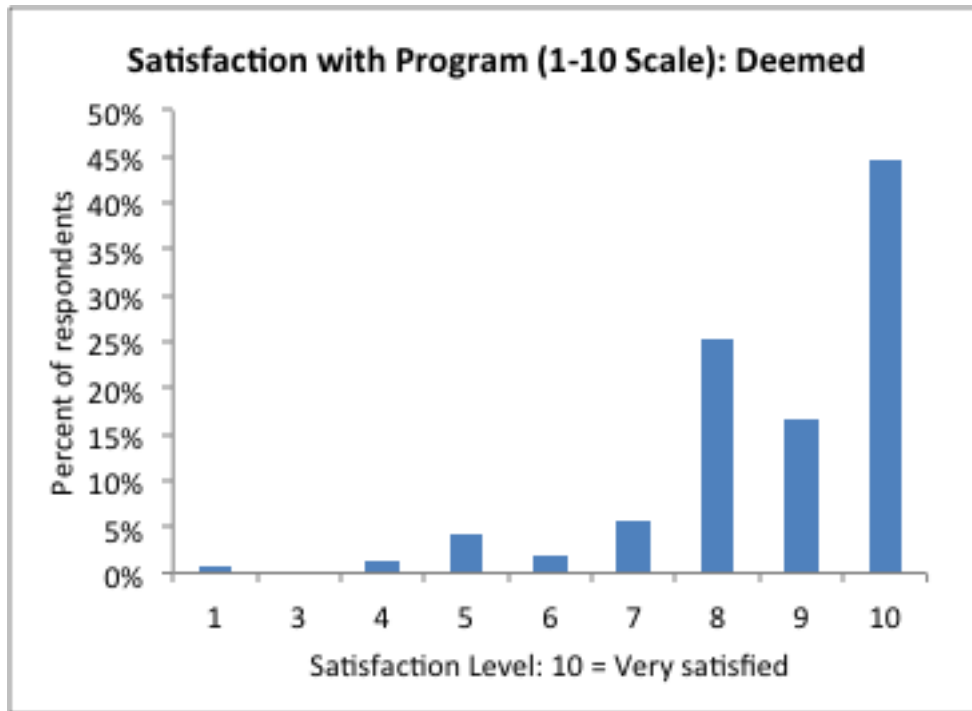


Figure 14 – SoCalGas EERB Customer Satisfaction with Program, N=163

2.4.7 Program potential

On a scale of one to ten, where ten is very interested, the surveyed participants rated their level of interest in participating again at 9.4. The figure below shows that program participants are likely to install a wide range of program equipment going forward, with the most common being related to food service, HVAC and water heating.

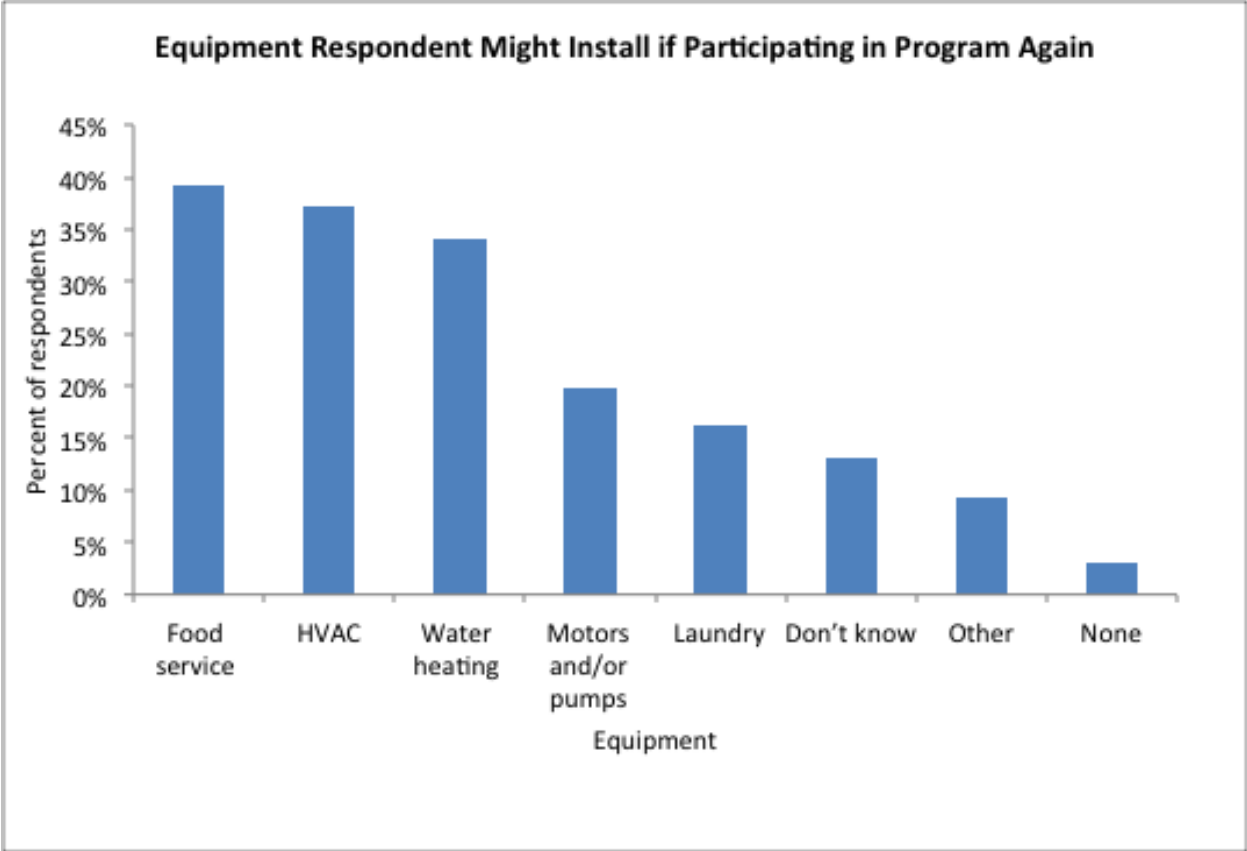


Figure 15 – EERB: Future Equipment Respondent Might Install Through Program, N=161

Program non-participants were also asked about their future participation interest, and the average score given was seven out of ten. Among customers with the highest participation interest (i.e. a score of seven or more), reducing energy costs was the most common participation motivation. Very few respondents reported their companies have policies that require purchasing efficient equipment.

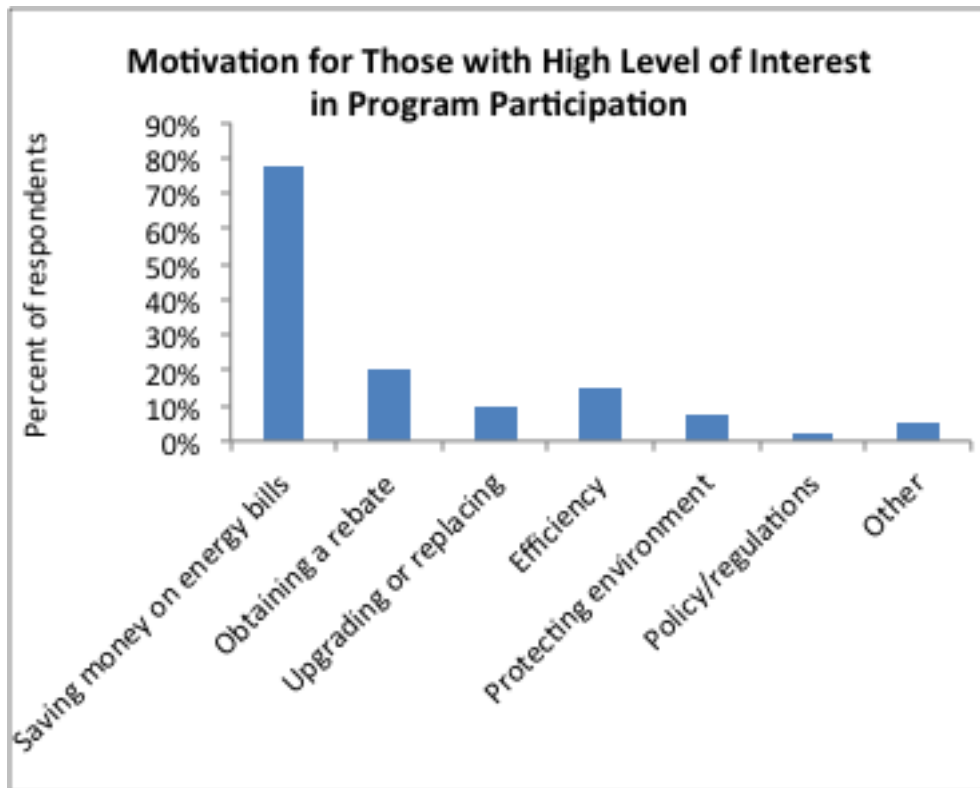


Figure 16 –SoCalGas EERB: Motivation for Participating, for Non-Participants with High Level of Interest, N=40

Lastly, the following figure shows that numerous factors have prevented customers from participating in EERB, including perceived application hassles, lack of capital funding/money issues, skepticism about efficiency claims and inability to disrupt business operations. Taken together, however, there does not appear to be single critical factor that is hindering program participation. The interviewed vendors also noted that out-of-pocket costs were a common participation barrier, while (unspecified) restrictive equipment requirements are sometimes an issue.⁷

⁷ One vendor specifically noted that more customers are buying high quality used food service equipment.

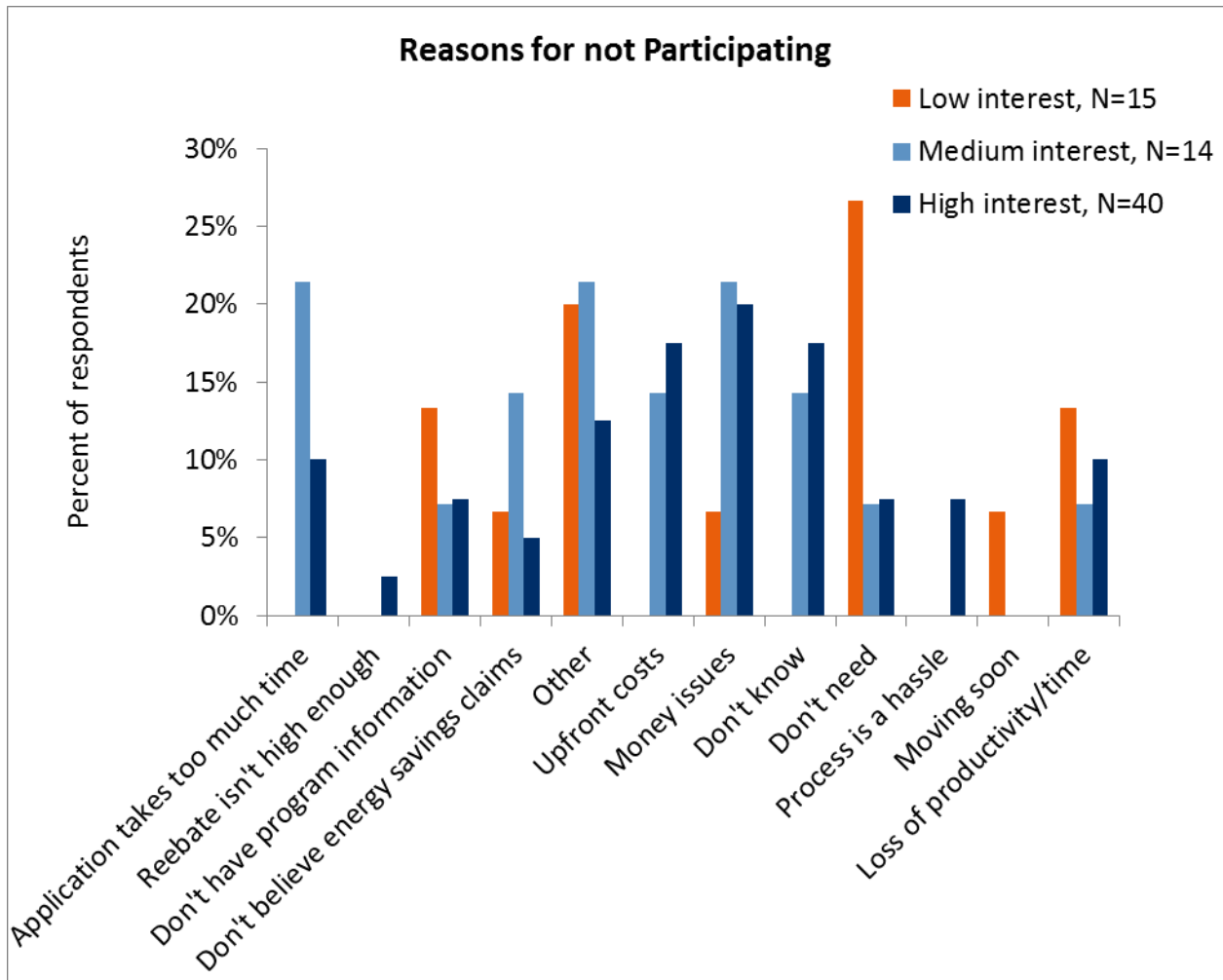


Figure 17 – SoCalGas EERB: Reasons for not Participating, by EERB Interest Level

2.4.8 Comparison to Best Practices

Overall, the SoCalGas Deemed Program is operating according to best practices. Our evaluation of the program indicates that it meets nine of the 17 applicable standards included in our research. The table below summarizes the program’s comparison to best practices followed by the reasoning for the assessment.

Best Practice	Current	Historical
Is the program design effective and based on sound rationale?	Yes	Yes
Is the local market well understood?	Maybe	Maybe
Are responsibilities defined and understood?	Yes	Yes
Is there adequate staffing?	No	Yes

Best Practice	Current	Historical
Are data easy to track and report?	No	Yes
Are all routine functions automated as practical?	Maybe	Not researched
Does the program manager have a strong relationship with vendors involved in the program?	Yes	Not researched
Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?	Yes	Yes
Are customers satisfied with the product?	Yes	Yes
Is participation simple?	No	Yes
Are participation strategies multi-pronged and inclusive?	Maybe	Maybe
Does program provide quick, timely feedback to participants?	No	Yes
Is participation part of routine transactions?	Yes	Yes
Does the program facilitate participation through the use of Internet/electronic means?	Yes	Maybe
Does the program offer a single point of contact for their customers?	Not Researched	Yes
Are incentive levels well understood and appropriate?	Yes	Not researched
Does the program use targeted marketing strategies?	Maybe	Yes
Are products stocked and advertised?	Not researched	Not researched
Are vendors and utility staff trained to enhance marketing?	Yes	Maybe

Figure 18 – SoCalGas EERB: Comparison to Best Practices

1. Program Theory and Design

- a. *Is the program design effective and based on sound rationale?* Yes. Deemed programs are common and well understood. In addition, the program has a developed logic model documenting program theory.
- b. *Is the local market well understood?* Maybe. The program is now effectively engaging vendors through SoCalGas' vendor relations staff. However, interviews indicate that segment managers may not be providing enough assistance to the measure developer to identify and assess new measures that are likely to be viable for different segments.

2. Program Management

- a. *Are responsibilities defined and understood?* Yes. Interviews indicated clarity among personnel.

- b. *Is there adequate staffing?* No. SoCalGas has not employed project inspectors so this responsibilities falls to other program staff whom have limited additional capacity. It is also not clear if the segment advisors are providing adequate marketing support.

3. Reporting and Tracking

- a. *Are data easy to track and report?* No. The new CRM database does not allow program staff to see where applications are in the pipeline (e.g., approved, under review). Furthermore, staff reported that the database training provided was too limited and that the database is not flexible enough to provide the needed reports.
- b. *Are all routine functions automated as practical?* Maybe. Rebates processing is generally automated, however SoCalGas staff continue to review 100% of all applications.

4. Quality Control and Verification

- a. *Does the program manager have a strong relationship with vendors involved in the program?* Program staff do not have much vendor contact. However, the vendor relations staff is building effective relationships with the vendors.
- b. *Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?* Yes. QC procedures are in place.
- c. *Are customers satisfied with the product?* Yes. Surveyed participants gave high satisfaction scores for the overall program.

5. Participation Process

- a. *Is participation simple?* No. Based on interviews with program staff, the program is working to improve the application process, as many applications are submitted with errors. Currently, the application is not "user-friendly" and can be streamlined. Likewise, benchmarking was removed to simplify participation.
- b. *Are participation strategies multi-pronged and inclusive?* Maybe. The program is now effectively engaging vendors through the vendor relations staff. However, SoCalGas is still determining how to best leverage the segment managers. Program interaction with the segment managers seems to be limited.
- c. *Does program provide quick, timely feedback to participants?* No. Based on interviews with program staff, the program is working to improve the application turn-around.
- d. *Is participation part of routine transactions?* Yes. Vendors include the program as part of their sales practices.

- e. *Does the program facilitate participation through the use of Internet/electronic means?* Yes. Program information and applications are available online. Sempra is working to develop online applications.
- f. *Does the program offer a single point of contact for their customers?* Not researched.
- g. *Are incentive levels well understood and appropriate?* Yes. Vendors and program staff understand incentive levels for all equipment types.

6. Marketing and Outreach

- a. *Does the program use targeted marketing strategies?* Maybe. AEs are promoting the program to their customers, but general customer awareness of all SoCalGas programs is low. It does not appear that targeted segment marketing by the segment advisors is sufficient.
- b. *Are products stocked and advertised?* Not researched.
- c. *Are vendors and utility staff trained to enhance marketing?* Yes. Program is now developing relationships with vendors through vendor relations staff. In 2012, this staff member began working to improve sales training. Likewise, utility staff are trained but are looking to improve working knowledge of the vendor and retailer market.

2.5 CONCLUSIONS AND RECOMMENDATIONS

The EERB program is leading to high customer satisfaction but may not hit its therm savings goals. Several key factors appear to be contributing to this, including:

- ◆ Low program awareness
- ◆ Reduced rebate levels this cycle (set by the CPUC)
- ◆ Customer cash flow constraints
- ◆ Delays in introducing new measures
- ◆ Inadequate vendor recruitment and partnering in the past
- ◆ Inadequate marketing expenditures overall

The next figure lists detailed recommendations for the EERB program.

Issue.....	Issue raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in Addressing (H/M/L)	Value in Addressing (H/M/L)
Insufficient vendors outreach	N	<ul style="list-style-type: none"> Not enough vendors promoting program 	<ul style="list-style-type: none"> Increasing recruitment, offering new sales training and social mixers 	<ul style="list-style-type: none"> Hire additional staff (part-time?) to assist Vendor Relations, could potentially market other programs too 	M	M
Missed customer marketing opportunities	N	<ul style="list-style-type: none"> Not enough customers aware of program opportunity 		<ul style="list-style-type: none"> Amend union contract if possible; add incentives for CSTs and ISTs linked to rebates if cost effective 	H/M	M
				<ul style="list-style-type: none"> Utilize budget to bring more CSTs and ISTs to marketing training in field 	M	M
				<ul style="list-style-type: none"> Integrate high-quality 3P contractors to increase marketing to large retailers 	M	M
Too many customer and vendor application mistakes	Y	<ul style="list-style-type: none"> Significant staff time for screening, correcting Delayed participation for customers 	<ul style="list-style-type: none"> Redesigning paper application Developing on-line application 	<ul style="list-style-type: none"> None 		

Issue	Issue raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in Addressing (H/M/L)	Value in Addressing (H/M/L)
Insufficient vendor marketing incentive	N	<ul style="list-style-type: none"> Vendors do not take time from regular business to promote program, complete applications 	<ul style="list-style-type: none"> Developing SPIFF for vendor application submittals 	<ul style="list-style-type: none"> None 		
Application process too cumbersome	Y	<ul style="list-style-type: none"> Customers sometimes drop out of program or do not pursue it 		<ul style="list-style-type: none"> Look for point of sale delivery options, which have worked for finned- bottom pots; focus on makers and/or large retailers 	M	M
Low customer awareness of program	N	<ul style="list-style-type: none"> Reduced customer participation 	<ul style="list-style-type: none"> SoCalGas staff is recruiting additional vendors, which should boost customer awareness 	<ul style="list-style-type: none"> Increase mass-marketing and targeted segment marketing 	M	H
Lack of statewide Deemed team management and issues resolution	N	<ul style="list-style-type: none"> Varying SoCalGas measures offerings and marketing messages – vendor and customer confusion Reduced program manager time for future program planning 		<ul style="list-style-type: none"> Co-fund a statewide coordinator position for Deemed programs 	L	L

Figure 19 – Deemed (ERB): Summary of Issues and Recommendations

3. CALCULATED PROGRAM

3.1 PROGRAM OVERVIEW

The Statewide Calculated Energy Efficiency Program, also known as the “Energy Efficiency Business Incentives” Program, is a statewide non-residential energy efficiency (EE) incentive program targeting large customers within the commercial, industrial and agricultural sectors. It provides incentives for customized energy efficiency projects and, in some cases, design/audit assistance. Incentive levels are paid per annual therms saved and include a measurement and verification (M&V) procedure. Customers can receive \$1 per therm or up to 50% of project costs (whichever is less), not to exceed a predetermined incentive size cap of \$1 million. Savings calculations are generated by program software or alternatively from other engineering sources. Program numbers for the Calculated Program, include: SoCalGas3602 (Agricultural Sector), SoCalGas3607 (Commercial Sector), and SoCalGas3611 (Industrial Sector).

Although this evaluation looked at all three sectors, our focus was on the industrial sector, which has the largest savings per project and total savings.

Key researched issues include:

- ◆ Program goals
- ◆ Market actors
- ◆ Previous evaluation issues and recommendations
- ◆ Potential program process improvements

Key players in program delivery and their roles include:

- ◆ Calculated Program manager – develops and modifies program design and implementation, some direct contact with vendors on program updates and marketing
- ◆ Other Calculated Program staff – processes applications and payments, responsible for assisting in marketing the program
- ◆ SoCalGas Engineering – reviews calculations for custom projects (measures not listed in DEER⁸ or work papers), conducts M&V for custom projects
- ◆ SoCalGas AEs – market program to customers and assist with process
- ◆ SoCalGas inspectors – confirm existing and new equipment is installed as claimed
- ◆ Vendors –market the program and can serve as a project sponsor
- ◆ Customers –work directly with SoCalGas (for a self-sponsored project) or with a vendor

The Calculated Program targets large energy efficiency projects – either single large projects, or an aggregate of many projects. The program is open to any non-residential SoCalGas customer. The program is meeting its savings goals with the majority of projects and savings coming from industrial customers. According to the Q3 2011 EEGA database, the Calculated Program is

⁸ Database of Energy Efficient Resources

expected to deliver the largest gas savings of SoCalGas’s energy efficiency portfolio of programs- 38% of therms saved; industrial customers are expected to account for the largest therm savings contributor to the Calculated Program representing 79% of total program gas savings.

3.2 PROGRAM STATUS

This report uses data from the Q3 2011 EEGA database as well as from the Q3 2011 SoCalGas database. There is a slight difference between the two databases in terms of savings for the industrial sector. For each analysis below, it is clearly listed whether EEGA or SoCalGas database was used.

According to the Q3 2011 EEGA database, installed projects in the Calculated Program make up 66% of nonresidential gas savings of the SoCalGas Portfolio. The program is close to reaching projected savings goals for the 2010-12 cycle at 95% (41% installed and 54% committed), while only 44% of its allocated budget is spent. Therefore, the program has potential to exceed its goal in 2012. The Program Manager asserted that the current economic situation is impacting program participation indicating there is even more potential savings.

3.2.1 Budget and Savings

Figure 20 shows budget and participation for the Calculated Program based on EEGA Q3 filings. The program is well below the allocated budget for the 2010-12 cycle, with 25% of budget spent and 19% of budget committed.

	Budget Allocated	Budget Spent	Committed Budget	No. of Projects	No. of Unique Participants	No. of Participating Vendors
Amount	\$66,207,926	\$16,505,954	\$12,547,060	258	188	Unknown
		(25%)	(19%)			

Figure 20 – Status of Energy Savings for Calculated Program thru Q3 2011 (EEGA)

Figure 21 shows natural gas savings projected (for 2010-12 cycle), and installed and committed savings (thru Q3 2011), based on EEGA Q3 filings.

	Gas Savings (Therms x 1000)		
	Projected	Installed	Committed
Amount	43,408	17,751	23,522
(% of Projected)		(41%)	(54%)

Figure 21 - Calculated Program Energy Savings thru Q3 2011 (EEGA)

Figure 22 presents projected natural gas savings (for 2010-12) and installed and committed natural gas savings (thru Q3 2011) by sector as a percent of projected total based on EEGA Q3 filings. Projects in the commercial sector have exceeded their goal, while projects in the agricultural and industrial sector are slightly behind.

Sector	Projected Therm Savings as % of Total for 2010-12 Cycle	Installed & Committed Therm Savings as % of Projected Total
Agricultural	8%	7%
Commercial	13%	16%
Industrial	79%	72%
Total	100%	95%

Figure 22 – Projected and Installed or Committed Calculated Program Energy Savings by Sector thru Q3 2011 (EEGA)

3.2.2 PPMs

Program Performance Metrics (PPMs) are defined as the number and percent (relative to all eligible customers) of commercial, industrial and agricultural customers participating in the program broken down by NAICS code, by size (+/- 200 kW per yr or +/- 50K therms per yr), and by Hard to Reach (HTR). Based on conversations with SoCalGas staff, program managers are tracking annual PPMs, and these were submitted to the CPUC in 2011. Cycle PPMs are defined as number, percent, and ex-ante savings from commercial, industrial and agricultural sector of projects with new measures introduced into the portfolio since 1/1/06 included. Figure 23 only shows cycle PPMs.

Cycle PPM	Tracked?	Status	Comment
Number of projects and ex-ante savings including Emerging Technologies Program measures	Yes	Summary statistics are shown in the tables above	Compliance with this reporting requirement are not an issue

Figure 23 – Cycle PPM summary and status for Calculated Program

Based on our evaluation, there are other metrics that could be useful for the program managers to track for assessing market transformation and program progress. These are shown in Figure 24. All of these are already being tracked as annual PPMs, but program staff do not appear to be using them to for marketing activities.

Useful Metric	Tracked?	Status	Comment
Track savings by business segment	Yes – as annual PPM		
Track savings by equipment type more specifically	Yes – as annual PPM		While these items may be gathered through the application process they do not seem to be used to target marketing activities
Track savings by geographic area	Yes – as annual PPM		

Figure 24 – Additional useful metrics assessing progress or market transformation for Calculated Program

3.3 DATA COLLECTION ACTIVITIES

Through the process evaluation, the team’s research included:

- ◆ Understanding the role of vendors on marketing and program participation
- ◆ Understanding how the program interacts with potential and current participants
- ◆ Determining effectiveness and possible improvements to the program implementation/process
- ◆ Reviewing recent program implementation changes and how they affect processes, participation, and savings

Program staff were initially contacted to discuss program practices and processes and identify areas for improvement.

Telephone surveys of customers were conducted by trained interviewing staff using structured computer-assisted telephone interview (CATI) software. In-depth interviews with vendors and customers were semi-structured telephone interviews performed by experienced consulting staff. In the evaluation of the Calculated Program, the terms vendors/contractors are used interchangeably. Program participant in-depth interviews probed on the findings of the telephone surveys. Near-participant interviews investigated barriers to participation and potentially improvements to program processes.

General and program specific interview questions were developed for program participating vendors to assess their perspective on program support and overall program satisfaction as well as to identify any barriers to participation.

Figure 25 summarizes data collection activities, including interviews and surveys conducted, and materials reviewed.

Target for Data Collection	Data Collection Mode	Date	Key Research Issues	No. of Data Points	Source of Sample
Calculated Program manager	Interview	5/3/2011; 9/6/2011; 11/17/2011	Goals for evaluation, program theory and implementation, program changes, marketing, overall challenges, IT issues	3	Sempra process evaluation manager
Account Executives	Interviews	12/8/2011	Application process,	2	Sempra process evaluation manager
Vendors	Interviews	12/5-12/15/11	Reasons for participation, reasons for customer participation, how customers targeted, feedback on program changes, feedback on each program element, recommendations	3	SoCalGas staff
Nonparticipating vendors	Interview	12/5/11- 12/23/2011	Reasons for non-participation, tools for support, program awareness, interest in participating	2	SoCalGas Equipment Vendor Directory
Participating customers	Surveys	10/1-11/4/11	How they learned about program, participation challenges, reasons for participation, satisfaction with program elements, interest in participating again	28	SoCalGas program database
Nonparticipating customers	Surveys	10/1-11/4/11	Program awareness, interest in participating in program	82	SoCalGas Customer Database
Participating customers in-depth interviews	Interview	12/1/2011- 12/21/2011	Follow-up on survey findings: benchmarking, communication, audit, project timeline, application, satisfaction with application	2	SoCalGas Customer Database
EEGA Q3 2011 Database	Analysis	1/18/2012	Review allocated and committed/spent budget; projected and installed/committed savings	1	EEGA website
SoCalGas Q3 2011 program database	Analysis	1/18/2012	Review number of projects, participating customers, measure types, and savings	1	Sempra process evaluation manager
Other nonresidential Programs around the country	Literature Review and Best Practices interviews	2011	Program processes and marketing approaches	6-8	Web sources, Interviews, other evaluation activities

Figure 25 – Calculated Program Data Collection Activities

The team also attempted to collect information using the following, but this information was unavailable or difficult to attain.

- ◆ The team was unable to reach the number of vendors and participants for in-depth interviews as stated in the work plan. The team reached two participating customers for in-depth interviews. The team made concerted effort to reach as many respondents as possible. The low response rate is largely due to missing data in the database, small sample size, numbers and contacts which changed since the project ended, respondent was unavailable (repeated calls, voice mails, emails) or not interested in participating in the interview.
- ◆ Due to the difficulty in obtaining a list of participating vendors for the SoCalGas Calculated Program, the team was able to survey three instead of five vendors. Therefore, because of the low sample size, vendor responses should only serve as guidance and findings are not representative of all program participating vendors.

3.4 RESULTS AND FINDINGS

3.4.1 Program Evolution

SoCalGas offered the Calculated Program - previously called Business Energy Efficiency Program (BEEP), in the 2006-08 program cycle. The CPUC's 2006-08 evaluation found that the program saved 97,940 lifecycle therms⁹ (123% of expected therms) during this period.

The previous evaluation reported that most operations related to the BEEP program were going smoothly; participants had complaints about the application process taking too long, paperwork getting lost, and having to wait too long to get the incentive. Another area for potential improvement was marketing of the program and identifying additional potential participants.

Since the last evaluation, SoCalGas made the following changes:

- ◆ SoCalGas underwent a program application process review to identify bottlenecks in the process, clarify language in the application form, shorten the application form, and reduce the amount of information and signatures required. These changes were scheduled to go into effect in January 2012.
- ◆ Improved website user friendliness, making program information and application forms easier to find and reducing redundancy of the information available in the website.
- ◆ AE became the single point of contact for customers and vendors to avoid confusion and multiple points of contact.

⁹ Appendix A of the 2006-08 Energy Efficiency Evaluation Report. Available at: <ftp://ftp.cpuc.ca.gov/gopher-data/energy%20efficiency/Appendix%20A-J%202006-2008%20EE%20Evaluation%20Report.pdf>

3.4.2 Program Processes

During the course of the evaluation, SoCalGas implemented an update to the Calculated Program application process. In March of 2011, SoCalGas initiated an internal review of the application process. A team of AEs, program staff, and policy staff worked to develop a process focusing on a positive experience of the customers. The SoCalGas team met monthly through the year and coordinated with various program groups, including engineering, inspection, and QA/QC.

The 2012 application process will have fewer documents and customer signatures. Electronic signatures will be accepted on all documentation. Specifically, the Letter of Interest document has been combined with the Customer Application, the Final Incentive Worksheet has been eliminated, and wet signatures are no longer required. Additionally, the terms and conditions have changed to allow for 12-month project durations. The figure below shows the timeline of the calculated application process and major updates and events.



Figure 26 – Calculated Program Application Process Timeline

Application flowchart

The application process differs based on project size thresholds, but at a high level the 2011 application process includes the following:

- AE or Energy Van conducts initial site visit
- Customer submits Letter of Interest and Application
- Energy Analysis provided to Engineering review staff
- AE generates Customer Agreement for customer signature
- Customer proceeds with installation of the project
- M&V (only for projects > 200,000 therms)
- AE generates Customer Final Incentive Worksheet
- Inspection randomly triggered within CRM

Although not listed on the 2011 application process flow diagram, SDG&E also does a QA/QC on the final incentive package. SoCalGas is in the process of taking over these functions, thus removing redundancies.

Post-install inspections are sometimes a bottleneck. SDG&E had been conducting inspections for SoCalGas; SoCalGas is in the process of assuming this responsibility. The inspection team consists of one person who travels from the San Diego area. For most projects, the inspector completes the inspections within two weeks. However, the inspector only travels for projects in the northern service area once a month. As a result, the inspections for those projects may take up to six weeks to complete. The inspections generally do not hold up the incentive payments.

Custom Measure and Project Archive (CMPA) Discretionary Review Process

In August 2011, the CPUC began discretionary reviews of any calculated-incentive type project at any phase of the application process. The review process was created in part to address a criticism of the 2006-08 impact evaluation, which was that this evaluation was mostly done retrospectively. In the review process, a Custom Measure and Project Archive (CMPA) must be created by the utility, and the CPUC is able to select any project from this archive for review. However, according to SoCalGas staff (and echoed by SDG&E staff), the CPUC has not yet established a clear protocol for reviewing the projects it selects, or a timeline for doing so. In response, SoCalGas has implemented a 30-day hold on all new customer agreements, in case the CPUC selects a given project for review. SoCalGas has also changed the terms and conditions in the application paperwork such that the customer can move forward with the project at any time, but the incentive is not guaranteed if the customer moves forward prior to Customer Incentive Reservation (CIR). In general, SoCalGas staff report that the CMPA process has caused a significant delay for projects the CPUC chooses for review, and general confusion for SoCalGas as to the CMPA process procedures. During the application process, the CPUC and SoCalGas engineering staff can work in parallel or collaboratively. No representative projects were available for review at the time of this evaluation.

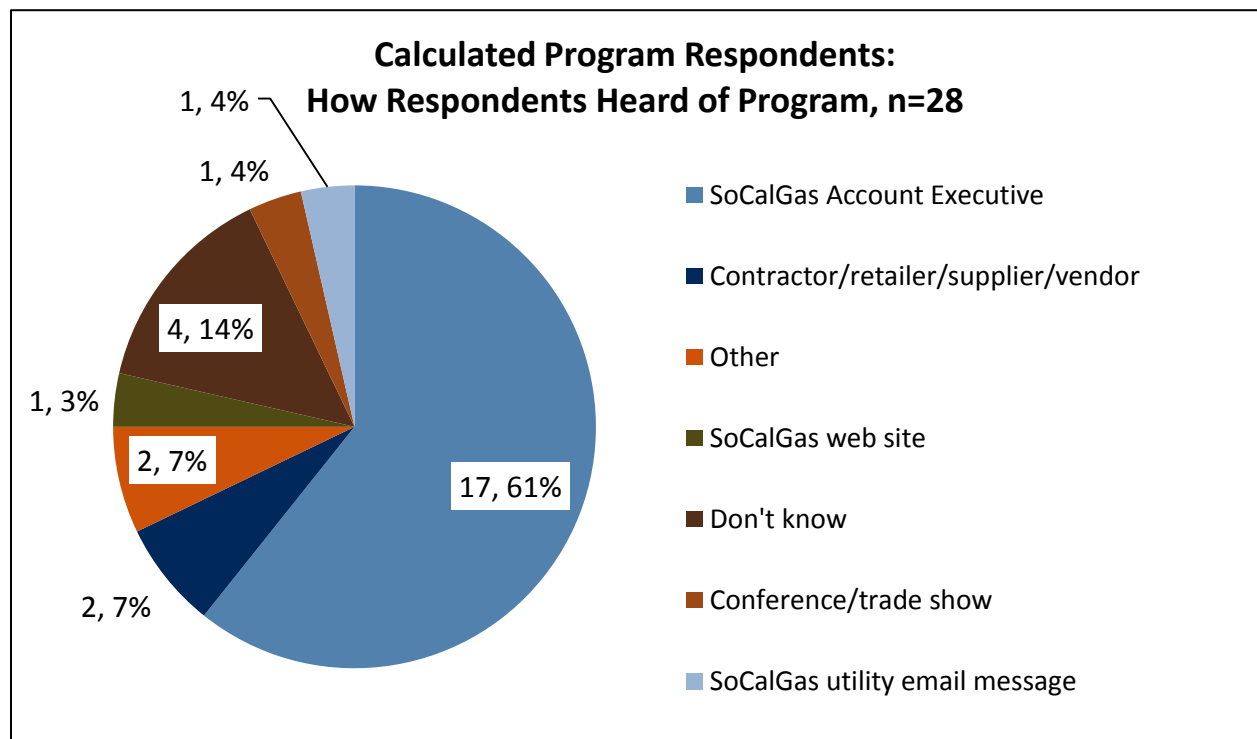
3.4.3 Marketing

Currently, there is no formal marketing plan for the Calculated Program. AEs and segment advisors (specialized in market sectors and segments) are generating leads. As discussed later in this section, this program does not have a formal vendor participation mechanism, and they are not a source of lead generation for the program. As the program design intends, Account Executives are primarily responsible for bringing projects to the program.

Program Awareness

This section describes results of our customer survey relating to program awareness, preference for receiving information, SoCalGas website use, and cross-participation in other SoCalGas programs.

Based on our customer survey, Calculated Program respondents hear about the program primarily from AEs, as demonstrated in the figure below. While the program manager expressed that participants usually come in to the program through an audit, none of the customer survey respondents had an audit completed.



*Figure 27 – How Respondents First Heard about the Calculated Program**

**Note: the first number in the data label represents the number of respondents; the second represents the percent of respondents.*

The majority of program respondents heard about the program from AEs (61%), followed by vendors (7%) and other (7%). Other avenues include conference/trade shows, website, and

SoCalGas email message. In answer to a separate survey question - how they prefer to receive information and updates regarding the Calculated Program - 43% each said by utility email message and by account executive, 7% hard copy mailings, and 4 % web site. The majority of respondents have not visited the program's website: 63% said no and 32% said yes.

The majority of respondents (57%) are unaware of other energy efficiency programs offered by SoCalGas, such as training programs, audit program and real-time pricing. Seventy percent of respondents who are aware of other energy efficiency programs participated in other programs. This indicates that SoCalGas should focus on increasing awareness, since many customers aware of programs participated in them.

SoCalGas customers who do not participate in energy efficiency programs were asked about their level of interest in participating in program in the future. For response options, program types were used and not exact program names. For "Custom" Program (which would be closest to the Calculated Program), respondents' level of interest for participating in the program is 6.9 out of 10, which is slightly higher than for other programs (except for "Rebate" Program).

Potential Use of Vendors

The program does not have a formal vendor participation mechanism. There are vendors that have installed equipment through the program, and we spoke with a few of them. We also spoke with a few nonparticipating vendors (i.e., those that have not installed equipment).

A vendor who has not participated in the program for a few years said that he has not heard from the program (no emails, program changes), and that he would be very interested in participating in and marketing the program. He would also appreciate marketing materials from the utility. Another nonparticipating vendor reported he was interested in serving the program, but wanted to learn more about it and how it could serve his customers.

Participating vendors generally learn about the Calculated Program by interacting with SoCalGas staff, specifically Account Executives. Most vendors noted they have been working in the field for several years, and specialize in energy efficient technologies specifically. Vendors reported they are kept informed of program updates through word of mouth or emails from the utility. This highlights the importance of maintaining good relationship with vendors. One vendor explained that he does not receive leads from AEs and identifies projects based on which utility program it fits best under. Customers do not typically come to vendors with previous knowledge of the program.

Greater reliance on participant recruitment through vendors is recommended. Vendors can increase participation with only a small burden on SoCalGas staff. The program manager expressed concern that there is a general lack of resources at the utility, and that AEs are spread thin. Smaller customers, and many commercial customers, do not always receive support from an AE and can "fall through the cracks". Vendors could be a good means of bringing in these smaller, unassigned accounts.

The program would benefit by creating a list of vendors who would be periodically informed about program happenings, updates and new measures. The Equipment Vendor Directory

(2009) could serve as a starting point. However, that directory has various errors in phone numbers, so the first step would be to update it. The team also recommends tracking the actual contractor's name (and not the customer's name) in the database. If there is no contractor, or the company used internal resources, then the application form could have a check box to indicate the external contractor was not engaged.

Marketing Strategies and Promotional Materials

In terms of marketing strategies: SoCalGas could reach out to current and past program participants via vendors, email, or AE, and inform them of other energy efficiency programs and other/new measures. This can also build upon trusted relationships to increase program participation. Reaching out to customers through trade shows, associations, and seminars is another good way to market the program.

AEs and vendors both discussed that they would like to have a one page collateral for the program which could be handed out to customers. The team recommends creating utility marketing material discussing a few case studies so vendors could provide these to customers as examples of how the process works and what to expect from the program.

3.4.4 Program Participation

Figure 28 presents the number of projects, total and average savings by sector based on the SoCalGas database. While the number of industrial projects make up 54% of all projects, savings arising from these projects are 83%. Average savings per projects is four times as large in the industrial sector than in the agricultural or commercial sectors.

Sectors	Projects	Projects as % of Total	Total Gross Therm savings	Savings as % of Total	Average Gross Therm Savings / Project
Agricultural	23	9%	630,594	4%	27,417
Commercial	96	37%	2,413,409	14%	25,140
Industrial	139	54%	14,669,761	83%	105,538
Grand Total	258	100%	17,713,764	100%	68,658

Figure 28 - Number of Projects and Savings by Sector for Calculated Program (SoCalGas database)

For this evaluation, IOU project ID was used to establish the number of unique projects in the Calculated Program. With 188 unique customers (based on IOU Service Account ID), 258 projects were completed through the end of Q3, 2011. The following figure shows the breakdown of projects and savings by sector for the Calculated Program. Installed projects in the industrial sector make up the majority (54%), followed by 37% in the commercial sector and 9% in the agricultural sector. Total savings are shaped by the industrial sector (83%), followed by 14% from commercial sector and 4% from agricultural sector.

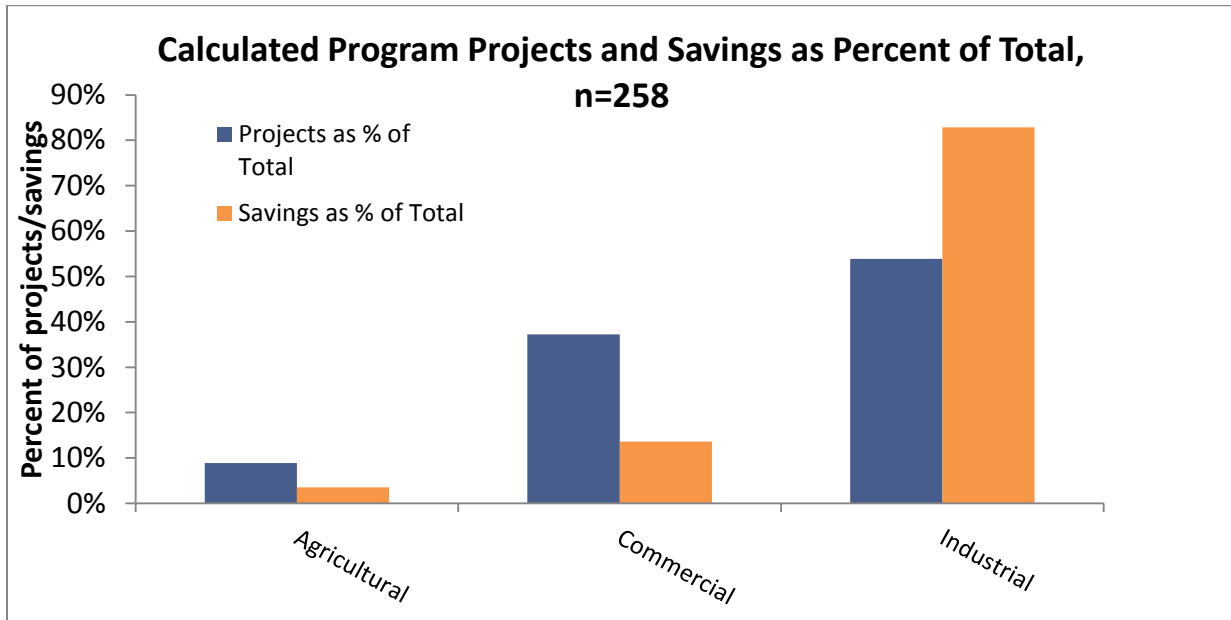


Figure 29 - Number of Projects and Savings as Percentage of Total by Sector for the Calculated Program (SoCalGas database)

The next figure presents the breakdown across all program participants from the SoCalGas database (thru Q3 of 2011). Out of 258 projects, the majority (57%) were in light industry manufacturing, followed by 11% in office, and 9% in health/medical businesses.

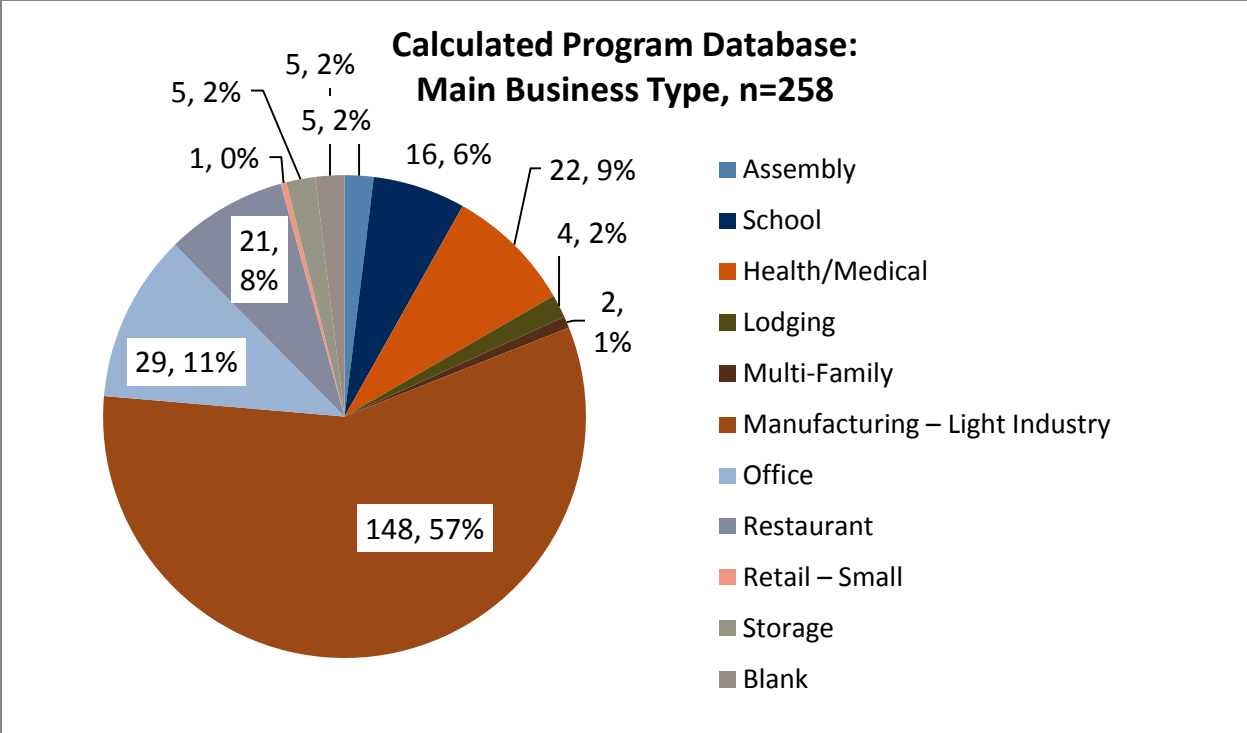


Figure 30 – Calculated Program Respondents by Business Type* (SoCalGas Database)

*Note: the first number in the data label represents the number of program participants; the second represents the percent of program participants in each business type.

In terms of coordination with other programs: out of the 258 projects, only 16 projects received financing through the On Bill Financing program.

Equipment

Figure 31 presents the number of projects by each equipment type that was installed based on the SoCalGas database. A large number of projects included equipment modernization (38%), as well as boiler upgrades/replacement (21%). These measures were predominant in both the commercial and industrial sectors, along with process equipment and furnace replacement/upgrades. For the agricultural sector, engine rebuild/replacement was the largest equipment type installed. The team recommends further breaking out the category titled “Equipment Modernization”, to learn more about what equipment is contained in this category.

Number of projects by Equipment Type	Sector			Grand Total	% of Total
	Agricultural	Commercial	Industrial		
Equipment Modernization	2	46	49	97	38%
Boiler Upgrades/Replacement	3	27	23	53	21%
Process Equipment		5	19	24	9%
Furnace Replacement/Upgrades	3		17	20	8%
Engine Rebuild/Replacement	10	6		16	6%
Heat Recovery		1	14	15	6%
Systems New Construction	1	6	8	15	6%
System Replacement Tenant Improvement	1	1	6	8	3%
Cooking Equipment		2	3	5	2%
Pump Rebuild/Replacement	3			3	1%
Steam Trap		1		1	0%
Grand Total	23	96	139	258	100%

Figure 31 - Projects by Equipment Installed for Calculated Program (SoCalGas database)

Customers were asked to list the equipment that uses the most gas, and second most gas, at their facility. According to the Figure below, boilers are using the most gas at facilities (32%), followed by HVAC equipment (15%) and laundry equipment (15%). Other equipment with high gas usage include kilns, and absorption chillers.

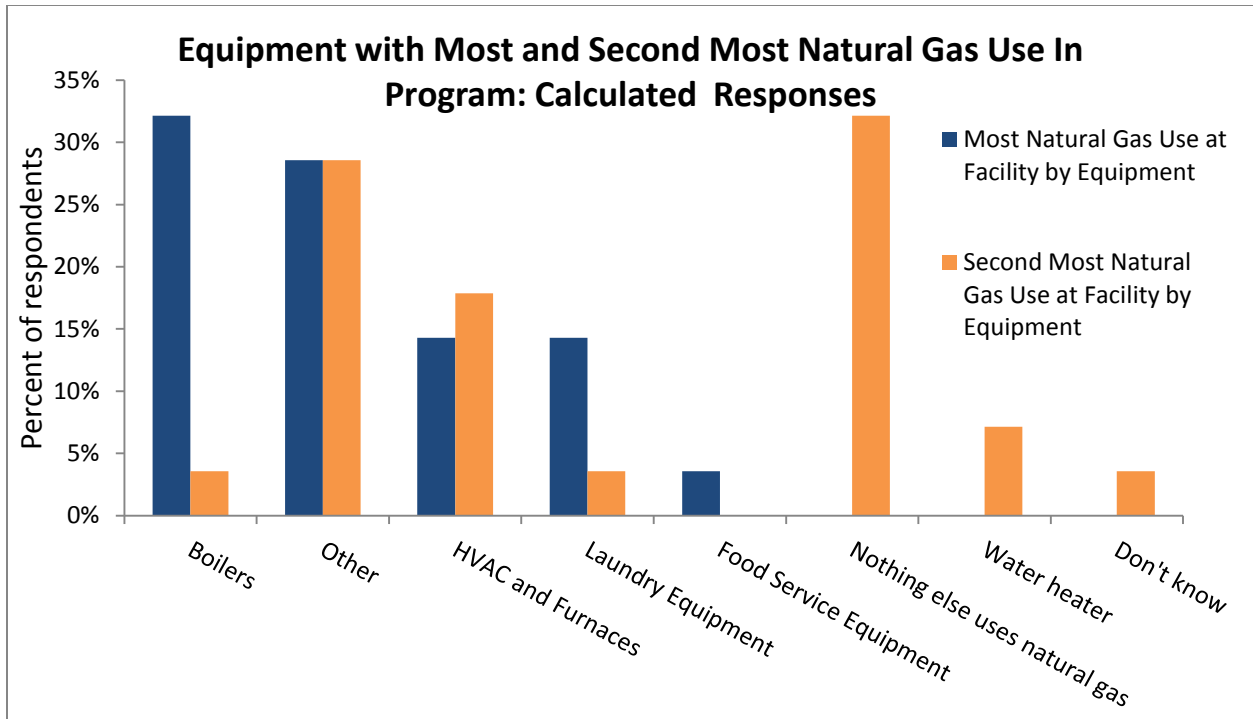


Figure 32 - Equipment Using Most and Second Most Natural Gas at Facility: Calculated Program (Customer Survey)

The program already targets high usage equipment (boilers), as well as HVAC equipment and furnaces. Targeting laundry equipment appears to represent a potential opportunity for SoCalGas to explore.

Decision Makers and Motivation for Program Participation

The figure below presents who makes the decisions regarding utility purchases and upgrades. (Multiple responses were accepted.) President, owners, and general managers are responsible for making the decision 25%, 18% and 14% of the time, respectively. Other decision makers listed include construction planning, engineering department/manager and procurement. Because owners and presidents are involved in the majority of the decisions to make an energy efficient equipment purchases, targeting these groups with marketing and or education should be enhanced. Consider developing an executive education program where decision makers can be educated about the program and potential benefits from energy efficient equipment.

While 46% of respondents have developed a specific policies for the selection of energy-efficient equipment, 55% of respondents have not.

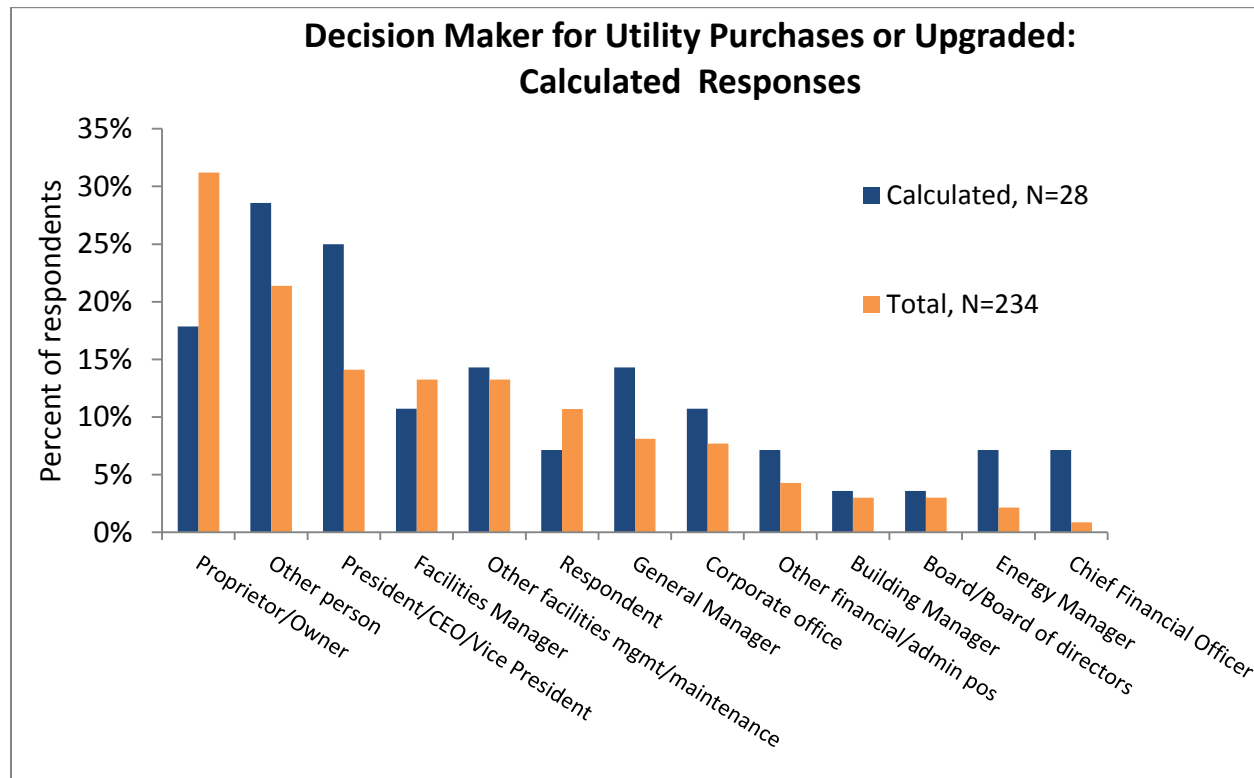


Figure 33 - Decision Maker for Utility Purchases or Upgrades for Calculated Program

Customers agree strongly (9.4 out of 10) that energy efficiency is an important factor when considering equipment purchases. Fifty-seven percent of respondents are planning repairs or replacements to their equipment in the next two years, while 32% are not. Out of the respondents planning to make a purchase, 88% are planning to use a utility program for these purchases. The utility should provide information to all utility program participants on other programs available.

Customers' reasons for participating in the Calculated Program included: 64% to save money, 36% to save energy, 21% because of the incentive and 18% due to the failure of their old equipment/needing replacement. Helping the environment was only an important consideration for 11% of respondents.

Participation Challenges

Vendors discussed what difficulties customers face in their decision to upgrade to energy efficient equipment. All three vendors mentioned lack of capital as the main obstacle. It is difficult for customers to understand how energy efficient measures will provide savings for them in the long run. AEs and some vendors noted that some customers are hesitant to commit to installing energy efficient equipment and/or participate in a program without assurance that the equipment will be reliable and that their incentive will come through. Vendors report that incentives and financing help, but clients still need a worthwhile return on investment and often have difficulty in obtaining capital.

Some customers get frustrated because the incentive process takes a long time, and at times customers do not understand the program well enough. Program participation for customers would be made easier if customers knew whether the project qualifies for an incentive and the exact amount that they will be receiving earlier in the project. It would also be a useful benefit if customers could track the progress of their application via the web. Vendors would like the utility to offer customers more clarification on how the program works and levels of incentives, and to provide a shorter timeframe for receiving incentives.

Program participation for vendors is easy after a vendor is through the process a few times. However, the approval process can be cumbersome and sometimes it takes a long time to get answers from SoCalGas. Vendors also mentioned that training would be beneficial for them.

Finally, one vendor said that code requirements from other agencies can conflict with energy savings and other goals, and gave the following example: Air Quality Management District code now requires low NOx high efficiency boilers, which must operate at higher temperatures. While this does reduce NOx, the higher temperature requires more energy overall. Also, the low NOx boilers are more expensive, more sophisticated (thus requiring higher O&M), and conflict with safety concerns in multifamily buildings.

3.4.5 Program Satisfaction

This section presents results on overall program satisfaction, and satisfaction with specific program processes.

Customers are very satisfied with the Calculated Program, while vendors are slightly less satisfied. Seventy-five percent of respondents reported no difficulties with purchasing/installing the energy efficiency equipment through the Calculated Program.

Program Application Processes

For completing the application, the program participating customer respondent was primarily responsible (61%); following that was the AE (29%), internal staff at the organization (21%), or the vendor / contractor (11%). 71% of respondents thought the application was easy to submit. During the application process, the great majority, 82%, did not have any problems. Those that reported problems described them as the length of time to receive application, and that the vendor had to resubmit multiple times.

Vendors interviewed said that generally they complete the application along with input from customers. The application is difficult for customers to understand, and it takes a long time for vendors to walk customers through it. However, the utility has already taken steps to work on this problem by making the application form shorter and less complicated.

Customers are very satisfied with the custom incentive calculation process: the mean satisfaction is 8.6 out of 10, with 42% of customers giving a 10 score. The mean level of satisfaction for the inspection process is also quite high: 9.1 out of 10.

The evaluation team reviewed two Calculated Program projects in detail and interviewed the customers. Both customers were generally satisfied with the process. They were pleased with

the AEs availability and willingness to facilitate the application process. The only outstanding delays during the process were caused by the customers, who both requested timeline extensions. Because large gas projects often take a long time to implement, SoCalGas has increased the application contract duration from six months to 12 months. One of the customers did mention he had expected a more rigorous measurement and verification of the project. The customer was surprised that SoCalGas only took a snapshot of the equipment and operations to calculate savings. They feel that a snapshot might not be representative enough of actual operations and equipment energy usage. Additional monitoring of operations and equipment could lead to more accurate and higher savings. However, it could also lead to lower savings, and costs SoCalGas resources.

Vendors discussed the following problems with the program:

- ◆ Application: it is difficult to track an application's progress; application and approval process should be streamlined (at times vendors have to resubmit application a few times over). The application form is currently under revision by the utility.
- ◆ Custom savings calculations: Wait time can be weeks, which vendor feels is too long and customers are unsure as to how much incentive they will receive.
- ◆ Contact with utility: reaching utility staff or getting a clear answer is hard for some vendors;
- ◆ Technical problems: some AEs might not understand completely special technologies and should work with engineers to understand what they are looking at.
- ◆ AEs: one vendor pointed out that for a retail chain with a large geographic spread in terms of locations, he had to deal with multiple AEs (hence it was almost like starting the project from the beginning over and over).
- ◆ Data tracking at utility: documents were "lost" by utility and vendor had to resubmit. Findings from the Program Manager also support that the data tracking system is cumbersome.
- ◆ Payment timing and amount: timing is too long or amount is too low.

Overall Satisfaction with Program

Customers generally have high satisfaction with the Calculated Program overall; the mean level of satisfaction is 8.9 out of 10. For the entire nonresidential portfolio, satisfaction is 8.1 out of 10. Thus, Calculated Program participants are slightly more satisfied than those participating in other programs.

Level of interest in participating in the program again is very high; the mean score is 9.4 out of 10, with 73% of respondents showing very high interest (10). Therefore, previous years' program participants should be contacted periodically, letting them know about incentive changes and new measures that were added to the program.

Vendors are generally satisfied with the Calculated Program. The mean level of satisfaction is 3 out of 5. *(Due to the small sample size (3 vendors), results are not representative of all vendors.)* Vendors said that the program is a good tool to help sell energy efficient equipment and it also helped increase sales. For the most part, they are satisfied with the interaction they had with

utility staff. They expressed frustration with the length of time it takes to take a project through the program process. Also, vendors would like more help in making customers understand how much incentive they will receive and which program is a better fit for various customers.

3.4.6 Description and Comparison to Best Practices

This section presents findings from our best practices assessment. We begin with our comparison against the 18 practices in the National Best Practices Study¹⁰ (the tool used for all program chapters). We then present a different set of best practices, which are specific to calculated or "custom" programs. Both tools could be useful for future program design.

Comparison to National Best Practices

Overall, the SoCalGas Calculated Program has several areas in which it could improve according to our assessment of program best practices. Our evaluation of the program indicates that it meets eight of the 18 applicable standards included in our research and is likely meeting four additional criteria. The table below summarizes the program’s comparison to best practices followed by the reasoning for the assessment. Historical data refers to analysis from the 2006-2008 process evaluation.

Best Practice	Current	Historical
Is the program design effective and based on sound rationale?	Yes	Yes
Is the local market well understood?	Yes	Yes
Are responsibilities defined and understood?	Yes	Yes
Is there adequate staffing?	No	Yes
Are data easy to track and report?	No	Yes
Are all routine functions automated as practical?	No	Not Researched
Does the program manager have a strong relationship with vendors involved in the project?	No	Not Researched
Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?	Yes	Yes
Are customers satisfied with the product?	Yes	Yes
Is participation simple?	Maybe	Maybe

¹⁰ Volume 5 – Crosscutting Best Practices and Project Summary. Quantum Consulting. December 2004. This study was managed by Pacific Gas and Electric Company under the auspices of the California Public Utility Commission in association with the California Energy Commission, San Diego Gas and Electric, Southern California Edison, and Southern California Gas Company.

Best Practice	Current	Historical
Are participation strategies multi-pronged and inclusive?	Maybe	Maybe
Does program provide quick, timely feedback to participants?	No	Yes
Is participation part of routine transactions?	Yes	Yes
Does the program facilitate participation through the use of Internet/electronic means?	Yes	Maybe
Does the program offer a single point of contact for their customers?	Yes	Maybe
Are incentive levels well understood and appropriate?	No	Yes
Does the program use targeted marketing strategies?	Maybe	Yes
Are products stocked and advertised?	N/A	Not Researched
Are vendors and utility staff trained to enhance marketing?	Maybe	Maybe

Figure 34 – SoCalGas Calculated: Comparison to Best Practices

1. Program Theory and Design

- a. *Is the program design effective and based on sound rationale?* Yes. Calculated programs are common and well understood. In addition, the program has a developed logic model documenting program theory.
- b. *Is the local market well understood?* Yes.

2. Program Management

- a. *Are responsibilities defined and understood?* Yes.
- b. *Is there adequate staffing?* No. Interviews with program staff indicate that the AEs do not have adequate time to walk customers through the program. As they are often the point of contact in the Calculated program, this can result in delays in project implementation. Also, program staff report that there is generally more work to do than staff to do it.

3. Reporting and Tracking

- a. *Are data easy to track and report?* No. Per interviews with program staff, the customer-tracking database is 2 to 3 years old and problems with the system are affecting long-term program performance.
- b. *Are all routine functions automated as practical?* No. Though changes are expected, program staff use multiple databases to track project status and program performance. This can result in inefficiencies and delays due to redundant data entry and increased user error.

4. Quality Control and Verification

- a. *Does the program manager have a strong relationship with vendors involved in the project?* No. As AEs already maintain strong relationships with vendors, it is not necessary for the program-specific staff to maintain those relationships. However, vendor research indicates that some of vendors are not aware of the program.
- b. *Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?* Yes. QC procedures are in place and practiced.
- c. *Are customers satisfied with the product?* Yes. Customer surveys indicate high levels of satisfaction with the program.

5. Participation Process

- a. *Is participation simple?* Maybe. Interviews with program staff indicate that the program has attempted to streamline the application process and remove unnecessary steps for participants.
- b. *Are participation strategies multi-pronged and inclusive?* Maybe. The program heavily relies on AEs to market the program to their accounts. However, small businesses that may qualify for and benefit from the Calculated program are not assigned AEs and likely “fall through the cracks”.
- c. *Does program provide quick, timely feedback to participants?* No. Per interviews with program staff, AEs normally initiate the feedback process. However, they often lack the resource (i.e., time) to start this process as other priorities take precedence.
- d. *Is participation part of routine transactions?* Yes. Vendors include the program as part of their sales practices.
- e. *Does the program facilitate participation through the use of Internet/electronic means?* Yes. The program application is online and available at the program website.
- f. *Does the program offer a single point of contact for their customers?* Yes. AEs usually drive the participation process.
- g. *Are incentive levels well understood and appropriate?* No. Interviews with program staff, vendors, and customers indicate that customers are unsure of incentive amounts. Often, project implementation is delayed as customers wait for the confirmed dollar amount.

6. Marketing and Outreach

- a. *Does the program use targeted marketing strategies?* Maybe. The program coordinates with segment advisors and vendors. However, small businesses that may be eligible are not targeted.
- b. *Are products stocked and advertised?* Not applicable.

- c. *Are vendors and utility staff trained to enhance marketing?* Maybe. Interviews with vendors and program staff indicate that additional vendors would like to participate in the program. However, lack of knowledge about how the program operates inhibits their participation.

Best Practices for Custom Programs

The evaluation team reviewed best practices of custom C&I energy efficiency programs. The team reviewed best practice literature¹¹ and resources and conducted interviews with program management and implementation contractors of several utilities around the country. The research focused on commercial, industrial and agricultural programs of utilities with similar program offerings as SDG&E and SoCalGas. The team also interviewed marketing and industry experts to gain insight into program marketing trends. The following represents best practices and current trends in C&I energy efficiency programs.

Program Management

- ◆ Develop and maintain clear lines of communication.
- ◆ Use motivated field staff and efficiency providers.
- ◆ Use qualified engineering staff for project reviews.
- ◆ Maintain consistency of personnel through the program.
- ◆ Give account executives energy savings goals and tie to performance reviews.

Reporting and Tracking

- ◆ Integrate program data into a single database.
- ◆ Link database with CRM (customer relationship management) and CIS (customer information systems) databases.
- ◆ Use automated or otherwise regularly scheduled notification to achieve close monitoring and management of project progress.
- ◆ Use electronic workflow management and web-based communications.
- ◆ For programs with proactive marketing efforts, track program prospects early and drive program intervention around major equipment-related events
- ◆ Balance the level of tracking against resource availability

QA/QC

- ◆ Require pre-inspections for large projects with uncertain baseline conditions.
- ◆ Require post-inspections for commissioning for large project with uncertain savings.

¹¹ Quantum Consulting. "National Energy Efficiency Best Practices Study: Volume NR5-Non-Residential Large Comprehensive Incentive Programs Best Practices Report." Submitted to California Best Practices Project Advisory Committee, San Francisco, California, December 2004. Supplemented with original research conducted by Navigant Consulting in 2011.

- ◆ Conduct either in-program measurement or measurement through an impact evaluation on the very largest projects and those that contribute most to uncertainty in overall program savings
- ◆ Tailor measurement rigor, including the use of sampling, to each project's contribution to the cumulative uncertainty in estimated savings for the program overall
- ◆ Carefully consider tradeoffs associated with in-program M&V versus ex post impact evaluation
- ◆ Consider using third-party M&V contractors to oversee/conduct M&V

Program Participation Process

- ◆ Use simple, user-friendly application forms.
- ◆ Develop an online application process and tracking system.
- ◆ Provide technical assistance to help applicants through the process.
- ◆ Keep program staff informed regarding updates to documentation and procedures.

Incentive Approaches

- ◆ Set incentive levels to maximize net program impacts.
- ◆ Adjust incentive levels based on market demand.
- ◆ Limit or exclude incentive payments to known free riders.
- ◆ Do not allow incentives to cover entire cost of project.
- ◆ Use early projects as demonstration projects to generate interest in difficult industry segments.
- ◆ Offer alternative funding mechanisms, such as on-bill financing.

Marketing and Outreach

- ◆ Tailor marketing strategy to each industry segment.
- ◆ Maintain a robust customer contact database for emails and direct mailings.
- ◆ Direct customers to the program website whenever possible to incite interest.
- ◆ Leverage vendors and maintain communication regarding the program changes and offerings. Organize seminars, training sessions, and trade shows.
- ◆ Use personalized marketing, where cost-effective, to identify and address customer- and industry-specific barriers and issues
- ◆ Develop case studies of key technologies and segment applications
- ◆ Train account executives and other marketing staff

3.5 CONCLUSIONS AND RECOMMENDATIONS

Overall, the program appears to be functioning well, and the program is on track to exceed therm savings. Customers generally have high satisfaction with the Calculated Program overall; the mean level of satisfaction of those customers surveyed is 8.9 out of 10. Primary complaints from all stakeholders pertain to the application process. An internal Sempra review process was initiated at both subject utilities in early 2011. It identified several key bottlenecks and proposed solutions being rolled out this year (2012). It would be helpful to develop a way (online application process) for customers to track the progress of their applications via the web or perhaps through some form of automated updates. While in depth interviews cited

long processing times, it should be noted that 91% of those customers surveyed who received an incentive were satisfied with the time it took to receive it. Data management continues to be an issue and regulatory reporting takes more time than most respondents believed was worthwhile. There is a call for improved marketing materials including case studies. We also recommend proactively reach out to prior program participants as they have expressed a high willingness to participate again.

The following figure shows a summary of issues and detailed recommendations for the Calculated Program.

Issue	Raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Recommendations	Difficulty in Addressing (L/M/H)	Value in Addressing (L/M/H)
The application process takes too long (custom savings might take weeks to complete) and is difficult for customers to understand.	N	<ul style="list-style-type: none"> Customers get discouraged to take on EE projects Long application strains staff time 	<ul style="list-style-type: none"> SoCalGas underwent a whole customer experience review and decided on the following: streamlining the application process, changing its language and shortening the application form and requiring less signatures 	<ul style="list-style-type: none"> Automate aspects of the application process that make it easier for customers to track their progress through the system Provide more staff support or increase use of interns to provide administrative / engineering support to AEs Ensure that participating franchises are treated as one project to cut down on repetition and processing time 	H	H
Inspection time is long, particularly in far north territories.	N	<ul style="list-style-type: none"> Inspections might take upwards of 6 weeks to complete 	<ul style="list-style-type: none"> SoCalGas is assuming inspection responsibilities from SDG&E 	<ul style="list-style-type: none"> Ensure that all areas of SoCalGas territory are well served. Consider hiring outside (at will) contractors for low activity areas. 	M	M

Issue	Raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Recommendations	Difficulty in Addressing (L/M/H)	Value in Addressing (L/M/H)
Contractors and customers cannot track the progress of an application, and AEs do not have time to track down application status	N	<ul style="list-style-type: none"> Customers get discouraged to take on EE projects 		<ul style="list-style-type: none"> Automate the application process and/or create an on-line tool that allows tracking the process or an automated update system Test the new online tool with customers and vendors for user friendliness and if needed, provide introductory training 	H	H
Time to receive incentive is too long	N	<ul style="list-style-type: none"> Smaller contractors cannot carry these costs for the six months or more it takes to receive incentives Contractor's costs increase significantly and cannot take on several projects at the same time 	<ul style="list-style-type: none"> SoCalGas is streamlining the application (see above) 	<ul style="list-style-type: none"> Improve incentive processing time and guarantee payment within a reasonable time period 	M	H
Data tracking system is cumbersome	Y	<ul style="list-style-type: none"> Documentation gets lost Reporting requirements must be fulfilled by custom spreadsheets EEGA and utility databases are not in 	<ul style="list-style-type: none"> SoCalGas is hiring a vendor to automate their tracking reports 	<ul style="list-style-type: none"> Automate the application process to enhance data tracking as well as help the utility fulfill regulatory requirements 	H	H

Issue	Raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Recommendations	Difficulty in Addressing (L/M/H)	Value in Addressing (L/M/H)
		sync				
Customers do not understand the program, how the incentives are calculated, and who to contact; and website might contain old information regarding program.	Y	<ul style="list-style-type: none"> Customers get confused regarding the different program offerings and the points of contact 	<ul style="list-style-type: none"> Account Executives are now the only point of contact 	<ul style="list-style-type: none"> Make more case studies and informational marketing material available on the website, such as one page success stories Rely on contractors to educate the customer. Provide training to contractors about program's changes and new measures Improve utility response time on inquiries and questions Consider developing an executive education program where decision makers can learn about the program & potential savings from energy efficient equipment Ensure that website is user friendly and up to date with program changes & new measures 	M	H
Vendors have a hard time reaching someone at the utility.	N	<ul style="list-style-type: none"> Vendors become frustrated and lose motivation to bring 		<ul style="list-style-type: none"> Improve on utility response time on inquiries and questions 	L	M

Issue	Raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Recommendations	Difficulty in Addressing (L/M/H)	Value in Addressing (L/M/H)
AEs lack the bandwidth to support unassigned accounts.	N	<p>in customers</p> <ul style="list-style-type: none"> Smaller customers do not always receive support from AEs and fall through the cracks 		<ul style="list-style-type: none"> Send case studies and informational marketing materials to unassigned customers Provide training to vendors about program's changes and new measures and rely on them to educate & recruit customers. Use interns to provide administrative / engineering support to AEs 	L	M
Vendors would like to be more involved in the program and could be used to help AEs recruit customers and reach unassigned customers. Vendors and customers might not know about the program	Y	<ul style="list-style-type: none"> Program participation not fully realized 	<ul style="list-style-type: none"> SoCalGas recently ramped up efforts to bring in participating vendors, primarily for Deemed program 	<ul style="list-style-type: none"> Create a list of vendors (vendors) inform them periodically about the program and new measures. Start with the Equipment Vendor Directory. Track actual contractor's name and contact information in the database. Increase outreach to customers and vendors at trade shows, associations Reach out to past 	M	M

Issue	Raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Recommendations	Difficulty in Addressing (L/M/H)	Value in Addressing (L/M/H)
				participants to inform them of new measures & other available programs		
“Equipment Modernization” category not broken out in the database	N	<ul style="list-style-type: none"> Updated equipment and upgrade opportunities are not well categorized 		<ul style="list-style-type: none"> Allow more appropriate tracking of measures by listing the equipment type that was modernized 	L	L
Program may not be reaching high energy usage measures	Y	<ul style="list-style-type: none"> Projects may not include equipment that uses the most (or second most) energy at a facility 	<ul style="list-style-type: none"> Program is targeting boilers, HVAC equipment and furnaces. 	<ul style="list-style-type: none"> Consider targeting laundry equipment as well 	L	L
AEs do not fully understand niche technologies, and there is a lack of coordination between AEs and engineering.	N	<ul style="list-style-type: none"> Discourage customers and contractors from participating in the program Introduce time delays by lack of coordination 	<ul style="list-style-type: none"> AEs sometimes contact engineering via email request 	<ul style="list-style-type: none"> AEs should work more closely with engineering staff to understand the operation and engineering calculations of the equipment Continue working on IT solutions (e.g., automatic emails sent for status changes, or ticklers if application timelines exceeded) 	M	M
Capital is obstacle for customers (ROI is shorter than in previous years).		<ul style="list-style-type: none"> Lower participation 	<ul style="list-style-type: none"> SoCalGas provides On Bill Financing program. 	<ul style="list-style-type: none"> Cross market financing programs, particularly OBF 	L	L

Figure 35 – Calculated Program Issues and Recommendations

4. LOCAL NONRESIDENTIAL BID PROGRAM

4.1 PROGRAM OVERVIEW

The Non-Residential BID program (BID) is an incentive-based program that serves very large projects that may have several million therms saved. The concept of BID is twofold: 1. This program should serve projects with savings exceeding what is incented in the Calculated program (i.e., Calculated provides up to \$1 million for 1 million therms savings; savings beyond 1 million therms are not incented). 2. This program could assist projects in leveraging the rebates and incentives offered by other agencies, such as the electricity provider, water utility, CARB, and others. Through the program, SoCalGas could serve as the point of contact with these other agencies, and educate projects on additional incentives. While the concept of the program is to coordinate across various agencies, SoCalGas recognizes that few projects would achieve savings incented by all of these agencies. Consequently, collaborating agencies would change, depending on the project.

This program operates similarly to Calculated, including the same program processes and program staff, and projects pursuing incentives beyond those provided in Calculated can apply to BID. However, BID works on a case-by-case basis to develop incentives for a project, instead of imposing the \$1/therm, up to \$1 million, in Calculated. For SoCalGas to consider providing >\$1 million through BID, the utility asks the customer to provide a business case and a proposal, or “bid,” on how much incentive is required for the customer to undertake the project. The incentive is “negotiated” between SoCalGas and the customer depending on how much SoCalGas is willing to offer (based on budget, cost effectiveness of the project, and more). Incentives will exceed the Calculated cap of \$1 million, but may not need comply with the \$1/therm.

Other differences with Calculated include that Calculated is a statewide program, which means that SoCalGas has less flexibility in its implementation. For example, SoCalGas must use the \$1/therm incentive rate for Calculated, whereas SoCalGas can choose the incentive rate (e.g., pay less than \$1/therm) for BID, making the program potentially more cost-effective. Finally, Calculated does not encourage the same level of agency coordination.

Whether the concept of program implementation agrees with the actual roll-out is yet to be fully determined, because there is so far only one participant.

4.2 PROGRAM STATUS

BID currently has one project enrolled – a new construction greenhouse project that has installed equipment predicted to save 3 million therms, and will use the vast majority of the program budget.

There are no participating vendors serving the program, and the program manager does not have plans for developing a vendor alliance / relations program for incentive type programs (i.e., Calculated or BID).

	Budget Allocated	Budget Spent	Committed Budget	No. of Projects	No. of Unique Participants	No. of Participating Vendors
Amount	\$3,114,801	\$208,182	\$2,700,000	1	1	0
(% of Allocated)		(7%)	(87%)			

Figure 36 – Status of BID program thru Q3 2011

Because the enrolled project has such high predicted savings, the program should exceed its projected savings target of 1 million therms. While the project has passed post-inspection, it has not yet completed M&V (as of December 14, 2011). Because of the very large savings that will be claimed by this project, the CPUC or its impact evaluators will probably review the project and could reduce the savings. However, the savings are estimated to exceed the projected by a factor of >2, so the impact evaluators would need to have a very different approach to savings estimates for the program to fall short of its goals.

	Gas Savings (Therms x 1000)		
	Projected	Installed	Committed
Amount	1,310	0	3,180
(% of Projected)		(0%)	(243%)

Figure 37 - BID program energy savings thru Q3 2011

4.3 DATA COLLECTION ACTIVITIES

Because this program has only one project so far, we scaled back our data collection activities compared with our original work plan. Activities conducted are shown below.

Target for Data Collection	Data Collection Mode	Date	Key Research Issues	No. of Data Points	Source of Sample
Program manager and assistant	Interview	5/3/11 and 8/29/11	Goals for evaluation, program theory and implementation, program changes, marketing, challenge, IT issues	1	Sempra process eval manager
Engineer	Interview	9/14/11	Process for estimating energy savings for one project in program		Program manager
Programs Advisor	Interview	11/21	How BID program fits into larger portfolio, differences between BID and Calculated, submission to CPUC on tool used for one BID project	1	Sempra process eval manager
PG&E tool developer	Interviews	12/6/11	Outcome of submission of greenhouse tool to CPUC	1	Programs Advisor
Quality Assurance supervisor	Email	12/4/11	Outcome of post-inspection	1	Sempra process eval manager

Figure 38 – BID Evaluation Data Collection Activities

4.4 RESULTS AND FINDINGS

4.4.1 Program Evolution

The SoCalGas BID program began this cycle (2010-12), and some aspects of the program were still under development in 2010. While this is a new program, SoCalGas staff report that the utility has been wanting to deliver a program of this type for some time.

The program implementation plan (PIP) is complete, and describes the program rationale, expected outcomes, and more. The program manager did not describe any planned changes to program implementation. However, because of its small enrollment, SoCalGas has the flexibility of changing various facets of BID, such as minimum savings requirements or incentive rates, marketing, or vendor participation, with little disruption to current customers. We present possible ideas for program changes in the Conclusions and Recommendations section.

To continue for the remainder of this program cycle and serve other projects beyond the one enrolled, the program would need to find other resources. The combined budget spent and committed to the one participating project is 94% of the allocated program budget.

The evaluation team spoke with a SoCalGas staff member on February 2, 2012 (at the process evaluation presentation) about future filings for bridge years and the next program cycle. The

evaluation team pointed out that, since BID targets extremely large energy savings projects, if there is no interest expressed by a customer (i.e., no customers in the pipeline), SoCalGas could consider not including BID in its portfolio. The SoCalGas staff member noted that SoCalGas staff (e.g., engineers, AEs) are “putting feelers out” for large projects. Depending on what they find, SoCalGas may include BID in the future portfolio. The staff member also noted that BID could be included in the portfolio even without a project lined up, and SoCalGas could later fund shift if needed.

4.4.2 Program Processes

The BID program processes are the same as for the Calculated program. Because all BID projects must exceed 1 million therm savings, all projects follow the Calculated pathway for savings > 200,000 therms. In brief, a customer (often with assistance from an AE) submits an application for a proposed project including the proposed equipment, the engineering department develop or review savings estimates, quality assurance staff conduct pre-installation and post-installation inspections, and SoCalGas conducts M&V to finalize savings achieved and calculate payments.

As described in the Calculated Program chapter, SoCalGas is currently streamlining the Calculated program delivery. We assume that these changes will carry over to the BID program.

4.4.3 Marketing and Program Participation

Marketing strategies

There are currently no unique marketing materials for BID. SoCalGas staff look for large savings projects, and marketing for the Calculated program serves both the Calculated and BID programs. AEs should theoretically do the bulk of marketing for this program, because large accounts (> 50K therms in use) are assigned to specific AEs. A project could also be referred by another agency (e.g., electricity provider, water utility).

Program staff are not sure whether this program should be marketed independently, or if SoCalGas should continue to treat BID more as a program for projects exceeding the Calculated limit (i.e., just move customers exceeding the \$1 million incentive limit in Calculated to BID). According to one SoCalGas staff, trying to market the program would probably not yield results. This staff member believes that, because the projects targeted are so large, SoCalGas would generally hear about them another way. However, if the program hopes to work proactively (i.e., encourage projects that would not happen anyway), marketing could be useful. In particular, the program could focus on encouraging emerging technologies projects, as discussed in Section 4.5.

As part of the nonparticipating customer survey, the evaluation team asked customers if they would be interested in an incentive type program (such as BID or Calculated). While these responses include customers with small energy savings projects (not just those eligible for BID), results could be useful in guiding how SoCalGas can contact customers. As shown below,

customers that expressed interest in an incentive type program (with an interest of at least 5 on a 10-point scale) responded that they would prefer to hear about SoCalGas programs primarily through an SoCalGas mailing (hard copy).

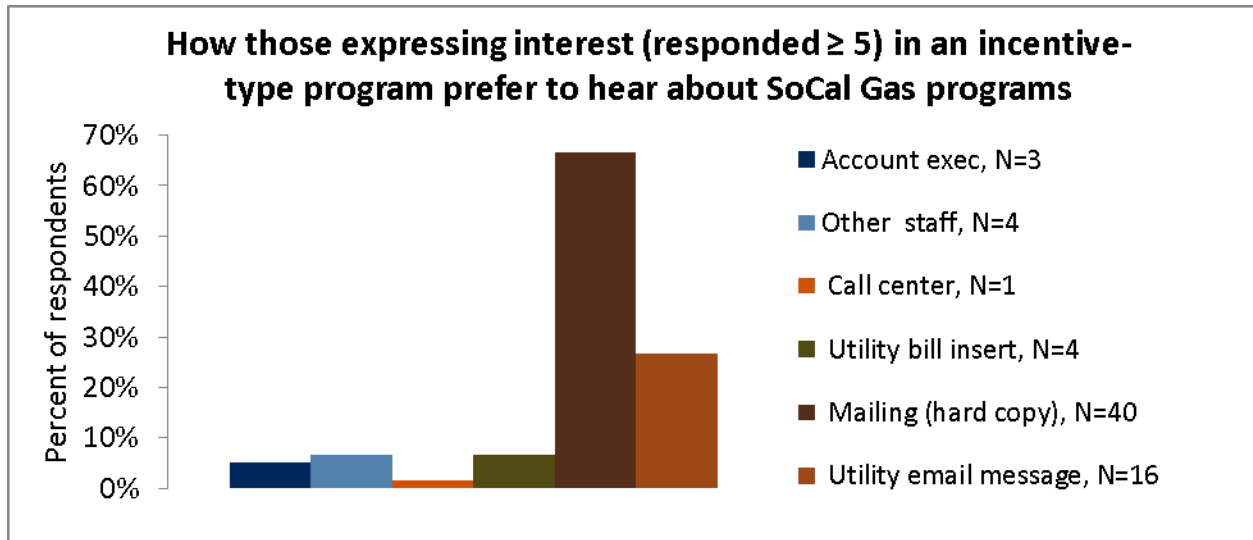


Figure 39. Preference for Learning about SoCalGas Programs, for Customers Expressing Interest in Custom Incentive Program

Barriers to participation

The program manager believes that the lag in large energy savings projects, such as those that would participate in the Calculated or BID program, is due to the economic downturn. In general, it is often difficult for facilities to implement a very large savings project.

4.4.4 Status of Currently Enrolled Project

Due to the very large predicted savings of the one enrolled project (~3% of SoCalGas's projected portfolio savings), we collected as much information as available on the status of the project and the likelihood of it achieving the savings predicted.

SoCalGas staff describe this as essentially an emerging technology project. The large greenhouse project uses a unique air distribution system from Holland. SoCalGas collaborated on the project with PG&E staff, the customer's electricity provider, in developing savings calculations. Because a DOE tool was not available for this application, SoCalGas engineering used a greenhouse tool provided by PG&E to develop energy savings calculations. The tool includes baseline assumptions (because greenhouses are not in Title 24), the installed equipment, and it interfaces with weather data. SoCalGas engineering also reviewed case studies of the technology (installed in Holland) and spoke with the manufacturer. While SoCalGas has completed savings calculations, they have not submitted them to the CPUC for review, as this is only required if the project is selected for an impact evaluation.

As of December 2011, according to Quality Assurance staff, the project had passed the post-inspection stage of the process, and the equipment listed on the application was verified as installed.

4.4.5 Description and Comparison to Best Practices

Overall, the SoCalGas BID Program is conforming to 5 of the 12 applicable standards. (The unique nature of BID limits the appropriateness of many of the standards.) The table below summarizes the program’s comparison to best practices followed by the reasoning for the assessment.

Best Practice	Current	2006-08 Assessment¹²
Is the program design effective and based on sound rationale?	Yes	-
Is the local market well understood?	No	-
Are responsibilities defined and understood?	Yes	-
Is there adequate staffing?	N/A	-
Are data easy to track and report?	Maybe	-
Are all routine functions automated as practical?	N/A	-
Does the program manager have a strong relationship with vendors involved in the project?	No	-
Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?	Yes	-
Are customers satisfied with the product?	Not researched	-
Is participation simple?	N/A	-
Are participation strategies multi-pronged and inclusive?	No	-
Does program provide quick, timely feedback to participants?	Yes	-
Is participation part of routine transactions?	N/A	-
Does the program facilitate participation through the use of Internet/electronic means?	Yes	-
Does the program offer a single point of contact for their customers?	Not researched	-

¹² In the 2006-2008 evaluation, the BID program was a subprogram under BEEP 3513 and was not evaluated for Best Practices.

Best Practice	Current	2006-08 Assessment¹²
Are incentive levels well understood and appropriate?	Maybe	-
Does the program use targeted marketing strategies?	No	-
Are products stocked and advertised?	N/A	-
Are vendors and utility staff trained to enhance marketing?	No	-

Figure 40- BID Comparison to Best Practices

1. Program Theory and Design

- a. *Is the program design effective and based on sound rationale? Yes.*
- b. *Is the local market well understood? No.* Program staff are trying to determine how to best attract big projects and are working to improve their understanding of the market. Due to the economic downturn, it is unclear if organizations are not undertaking large projects or if there are concerns with components of the BID program (e.g., wait time, onerous paperwork).

2. Program Management

- a. *Are responsibilities defined and understood? Yes.*
- b. *Is there adequate staffing? Not applicable.* The program operates as an extension of the Calculated program.

3. Reporting and Tracking

- a. *Are data easy to track and report? Maybe.* This has not yet been tested, because there is only 1 project, and it is not yet completed (i.e. entered in database). The Calculated program did report problems with the tracking database.
- b. *Are all routine functions automated as practical? Not applicable.* Given the unique nature of BID projects, there are few “routine” functions.

4. Quality Control and Verification

- a. *Does the program manager have a strong relationship with vendors involved in the project? No.* The program does not utilize vendors. AEs are the primary program advocates and often are helping customers complete the application.
- b. *Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market? Yes.* However, the CPUC review process adds additional time, which can be challenging for customers and vendors.

- c. *Are customers satisfied with the product?* Not researched. Only one participant was participating at the time of this evaluation.

5. Participation Process

- a. *Is participation simple?* Not applicable. Not enough projects to assess.
- b. *Are participation strategies multi-pronged and inclusive?* No. The purpose of the program is to serve very large energy savings projects. There is currently only one enrolled project. The program does not include a vendor participation mechanism for promoting the program or assisting participants through the process. It also does not allow vendors to aggregate savings across projects (e.g., install the same measure at various facilities owned by different entities) to meet the minimum energy savings threshold. Finally, because of the large energy savings required, one project can use the entire program budget, as is the case in the current cycle.
- c. *Does program provide quick, timely feedback to participants?* Yes. However, if the program expands, AE resources may not be able to initiate the feedback process.
- d. *Is participation part of routine transactions?* Not applicable.
- e. *Does the program facilitate participation through the use of Internet/electronic means?* Yes. The program application is available online.
- f. *Does the program offer a single point of contact for their customers?* Not researched.
- g. *Are incentive levels well understood and appropriate?* Maybe. Incentive levels are developed on a case by case basis. The one participant received less than \$1 per therm, so a lower incentive rate than other programs. There are not enough projects to determine if this is an appropriate approach to incentives, or if project teams will need a more predictable incentive rate, and/or a rate that is at least as high the \$1/therm provided in many SoCalGas programs. The current approach of developing incentives on a case by case basis is used to maximize the cost effectiveness of this program.

6. Marketing and Outreach

- a. *Does the program use targeted marketing strategies?* No. There is no targeted marketing for the program. Currently, AEs drive the participation process. Additional input from vendors would create more comprehensive marketing strategies.
- b. *Are products stocked and advertised?* Not applicable.
- c. *Are vendors and utility staff trained to enhance marketing?* No. The program does not currently conduct any outreach with vendors.

4.5 CONCLUSIONS AND RECOMMENDATIONS

BID is a new program at SoCalGas, that is estimated to exceed its projected savings goals through one large project. While the program should be successful this cycle, we identified several aspects in which the program does not meet best practices.

The BID program is implemented at both SoCalGas and SDG&E (where some call it “ESB”, for Energy Savings Bid), but the program is very different at the two utilities. We noted positive aspects at each utility that is not implemented at the other utility, and aspects that both utilities could improve upon. Because we believe each utility has something to learn from the other, and because this program is still taking shape at SoCalGas and could be modified at SDG&E, we present a comparison of these programs below. In addition, the SDG&E ESB program is currently behind in its therm savings goals (but exceeding electricity savings goals), so a comparison of strategies between the two programs could help identify therm savings potential.

Final Conclusions and Recommendations are then provided.

Program Element	SoCalGas	SDG&E	Comment
Incentive rate compared with other programs	BID incentives same or less than Calculated. BID determines incentives on case by case basis, but capped at \$/therm (same as Calculated)	Higher for BID than Calculated (for kWh), same for therms	Raising incentive rate per therm or providing kicker for reaching a savings threshold could promote larger projects
Use of vendors	No participating vendors for incentive programs.	Uses vendors for marketing, and for assisting customers with applications	Developing some type of relationship with vendors (e.g., participation contracts, alliance) can increase participation at fairly low cost to utility.
Coordination with other agencies	Emphasizes coordination (e.g., water agencies, CARB, other utilities) in PIP. However, fully developed mechanisms for collaboration not fully in place	Coordination was not mentioned by program staff. However, PIP states participants can receive 1 year free membership to Climate Registry and cost assistance to measure and verify Greenhouse Gas emissions	Establishing and maintaining periodic contact with other agencies, and learning about other agencies' programs, could help projects leverage assistance and funding and move them forward
Aggregation across facilities	Does not allow	Allows (both across same owners but multiple facilities, and entirely different owners)	Aggregation enables vendors to reach larger energy savings. In conjunction with higher incentive rate than other programs, this encourages more savings. However, this would be a very different type of program than is currently implemented at SoCalGas.
Types of projects enrolled	The one project enrolled is emerging technology	Majority of projects enrolled appear to be simple measures (e.g. linear fluorescent lights) and single end-use type projects (i.e., only lighting, instead of bundled or comprehensive projects)	SDG&E could consider moving some simple project types (incented through rebate program) out of ESB. At both utilities, ensure good communication with emerging technologies group, to discuss if there are projects to bring into ESB.
Technical assistance	In PIP, SoCalGas staff technical assistance is offered to projects, including in-depth energy assessments	PIP has technical assistance offerings, including energy audits and project design, although unclear the degree to which these are executed. Vendors, vendor alliance staff, and AEs often provide assistance with application.	Both utilities could consider promoting technical assistance more formally, and establishing clear mechanisms for marketing and implementing this assistance.

Figure 41- Comparison of BID program at SoCalGas and SDG&E

Issue	Issue raised in 06-08 Process Eval?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in Addressing (H/M/L)	Value in Addressing (H/M/L)
Program design not flexible (staff report this would conflicts with program goals): 1 participant meets/exceeds entire program budget and savings goals, and large savings projects rare	N/A: BID not offered 06-08	<ul style="list-style-type: none"> Only 1 participant thus far Program processes are somewhat untested, and project successes cannot be replicated 	<ul style="list-style-type: none"> SoCalGas staff are keeping ears open for large projects 	<ul style="list-style-type: none"> Consider reducing minimum threshold savings for BID for some project types (e.g., emerging technology), to stimulate innovation. 	L	M
		<ul style="list-style-type: none"> If projects come in after budget is expended, SoCalGas may not be able to incent projects (beyond the \$1 million provided in Calculated) 		<ul style="list-style-type: none"> Consider incorporating program aspects shown in Figure 41, such as aggregation across facilities, so BID more flexible. 	L	M
		<ul style="list-style-type: none"> While program should hit its savings target this cycle, there may be no participants next cycle, challenging program filing for bridge or next cycle. 		<ul style="list-style-type: none"> Provide vendor participation process 	H	H
BID not implemented as unique program		<ul style="list-style-type: none"> Program is operating very similarly to Calculated. Staff are not sure if this should continue, or if they should develop BID more as a unique program 	<ul style="list-style-type: none"> Staff is considering future of program 	<ul style="list-style-type: none"> Firm up role of program in portfolio. BID could continue operating similarly as Calculated, especially if SoCalGas cannot raise incentive cap for Calculated (statewide program). OR, SoCalGas could increase flexibility and unique features of BID (see Figure 41). 	L	M
PIP includes several useful, innovative features, but no full mechanisms for implementing		<ul style="list-style-type: none"> While PIP promotes features specific to BID (collaboration with other agencies, SoCalGas technical assistance), these may not be happening to the extent envisioned 	<ul style="list-style-type: none"> SoCalGas collaborated with PG&E for the one participating project 	<ul style="list-style-type: none"> Identify mechanisms for improving collaboration with other agencies: make contacts, check in regularly 	L	M
				<ul style="list-style-type: none"> Identify technical assistance SoCalGas could provide beyond norm 	M	M

Figure 42 BID Conclusions and Recommendations

5. NONRESIDENTIAL AUDIT

5.1 PROGRAM OVERVIEW

The Non-Residential Audits (NRA) program is designed to deliver a coordinated statewide integrated demand side management that promotes energy efficiency, demand response, distributed generation and emerging technologies. The programs are non-resource, and therefore, do not directly claim savings credits. Instead, these programs are intended to act as “funnels” or “feeders”, encouraging participants to take part in other resource programs (e.g., the Calculated or Deemed [EERB] programs).

Audits are provided internally by SoCalGas staff. They are generally described as providing more detail than walk-through audits, but can be less sophisticated than investment-grade audits. The information provided to customers through the audit varies, but includes organizational information, recommendations, payback or return-on-investment details, and information on other SoCalGas nonresidential programs.

Key players in program delivery and their roles include:

- ◆ Nonresidential audit program manager – develops and modifies program design and implementation, reviews audit recommendations and reports, modifies processes and procedures as necessary
- ◆ SoCalGas Account Executives – deliver preliminary audits to customers, review and/or write-up audit report, present audit report to the customer
- ◆ SoCalGas interns – work with the Account Executives to perform the audits and write up the results
- ◆ SoCalGas engineers – work with Account Executives in the cases of more complex potential projects to determine the potential opportunities and resulting energy savings

Because AEs are the primary mechanism for marketing and completing the audit, the target population is the assigned accounts. Based on our understanding of the program design and preliminary interviews with program staff, the evaluation team designed the evaluation of the nonresidential audit around the following:

- ◆ Are the program’s marketing efforts effective? Are there any sub-sectors that are not being reached?
- ◆ Are the audits offered through the program comprehensive and accurate? If not, how can they be improved?
- ◆ Are the findings from the audits easily understood by participants? Do they offer clear guidance on next steps?
- ◆ Do the audit findings offer clear direction on additional programs from which customers may benefit?
- ◆ Can the program efficiently track which audit participants move on to participate in other resource programs?

- ◆ What is the current estimated conversion rate (i.e., number of facilities participating in audits that later complete a project generating savings)? How could the program improve this rate?
- ◆ How satisfied are customers with the Non-Residential Audit offerings?

5.2 ROLE OF PROGRAM IN PORTFOLIO

The overarching objective the Audit program is directing customers into resource programs. It is embedded as a sub-program within the Statewide Commercial, Agriculture, and Industrial Energy Efficiency Program Implementation Plans, which also include Calculated, Deemed, and Continuous Energy Improvement as sub-programs.

There is considerable potential for this program to provide information and services to nonresidential customers. Previous studies on California's Non-residential Audit programs (2002, 2003, and 2004-2005) recognized the importance of audits in promoting customer awareness and eventually driving greater energy savings by funneling customers into resource programs. The 2004-2005 evaluation stated:

*"The most salient finding of this study is that the Audit program net impacts resulting from non-rebated measures do not begin to approach the true value of the Audit program. This effect is particularly dramatic for larger customers..."*¹³

Further, the California Strategic Plan puts particular emphasis on integration of information and technology in DSM programs, and providing services through a systemic approach. The Strategic Plan outlines a vision that *"Energy efficiency, energy conservation, demand response, advanced metering, and distributed generation technologies are offered as elements of an integrated solution that supports energy and carbon reduction goals immediately..."*

Specific to audits, the California Strategic Plan documents its integration in program delivery coordination, combining demand side management audits and recommendations to provide customers DSM opportunities¹⁴. As such, the Nonresidential Audit Program is designed to not only enhance the opportunities for other nonresidential programs, but also develop a long-term sustaining market for energy efficiency through education to customers.

As an example of how the Nonresidential Audit contributes, Figure 43 illustrates how, per the program design, the Nonresidential Audit program integrates within the Statewide Commercial Energy Efficiency Programs. Note that this figure does not necessarily indicate the flow of activities as designed for SoCalGas. While a stand-alone program offering, in theory the

¹³ Itron, Inc., *Evaluation of the 2004-2005 Nonresidential Audit and PG&E Local Program, Final*. September 4, 2008 (p-1-2).

¹⁴ Section 8 – Page 68 of the Strategic Plan

nonresidential audits should be driving customers into the other programs, particularly Deemed and Calculated Incentives.

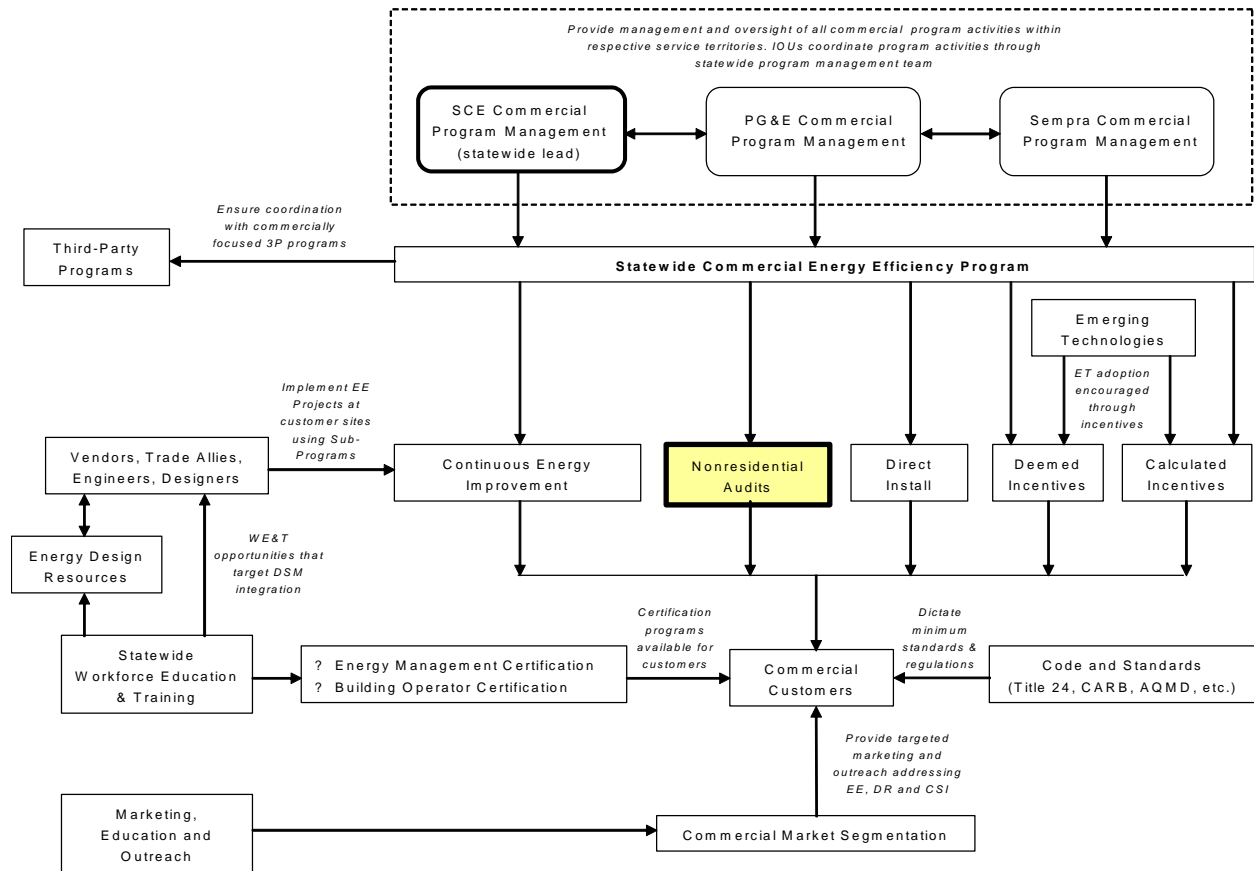


Figure 43 –Diagram of Nonresidential Audit Program Role, per Statewide Commercial Energy Efficiency Program Implementation Plan

5.3 PROGRAM STATUS

5.3.1 Budget and Participants

A total budget of about \$3.9M is allocated to this program, of which only about a quarter is spent as of the third quarter of 2011. In the figure below, we show the allocated and spent budget for each sector (agriculture, commercial, and industrial).

Because this is a non-resource program, it has no projected (or claimed) energy savings.

Sector/Program Code	Budget Allocated (% of Total Portfolio)	Budget Spent (% of Allocated)	Committed Budget (% of Allocated)	No. of Projects	No. of Unique Participants
Agriculture SoCalGas3604	\$176,521	\$15,701 (9%)	\$0	Not analyzed	Not analyzed
Commercial SoCalGas3609	\$1,833,302	\$282,802 (15%)	\$0	Not analyzed	Not analyzed
Industrial SoCalGas3613	\$1,909,380	\$718,131 (38%)	\$0	Not analyzed	Not analyzed
Total	\$3,919,203 (1.4% of portfolio budget)	\$1,016,634 (26%)	\$0	Not analyzed	Not analyzed

Figure 44 – Budget Status of Nonresidential Audit program thru Q3 2011

5.3.2 Program Performance Metrics (PPMs)

The Nonresidential Audit program only includes program cycle PPMs. However, the program manager confirmed that she has established a system to report on these PPMs and has responded to requests related to these PPMs already within this program cycle.

A complication of assessing these PPMs for the Nonresidential Audit programs, which the CPUC recognizes in the Resolution E-4385¹⁵, is that audits tend to drive longer-term results than the resource acquisition programs, such as Deemed and Calculated. The decision-making timeframe or process for nonresidential customers can be complicated and take time.

Without any firm data regarding historic adoption rates (audit to projects), it is reasonable that the audit PPMs lack specificity regarding appropriate percentages or adoption rates. However, the lack of specificity also limits the program’s ability to also be “ambitious”, a component of the SMART PPMs. If possible, the program staff and the CPUC should revisit these PPMs for the next program cycle, taking into account historic program data, if the Nonresidential Audit Program continues to be a stand-alone state-wide offering.

¹⁵ Public Utilities Commission of the State of California, *Resolution E-4385*, SCE AL 2476E, PG&E AL 3120G, SoCalGas AL 4114, SDG&E AL 2172E. Date of issuance: 12/06/10.

Cycle PPM	Tracked?	Status	Comment
Number and percent of commercial, industrial, and agricultural customers receiving non-residential audits by NAICS and SIC code.	Yes, SoCalGas tracks the NAICS codes associated with each customer that received an audit.	Almost two-thirds of program participants are coded as manufacturing per the NAICS codes (61%). The next most prevalent business type was accommodations and food services (fifteen percent).	For this metric to be most useful, SoCalGas should determine the prime target market segments, and if there are specific types of businesses that should be targeted beyond the manufacturers.
For customers who received audits, the number and percent of adopted audit-recommended technologies, processes and practices.	Yes, SoCalGas has developed systems to track customers that received audits that also participated in a program. However, the process is manual.	The program manager has the means to manually compare audit recipients with projects completed. There is the potential for a higher adoption rate in time; however, the rate to date is low.	Data sources for reporting will come from (a) program tracking databases and (b) process evaluation to refine estimates.

Figure 45 – Nonresidential Audit Cycle PPM summary and status

The theory behind this program is to drive customers to participate in energy efficiency programs and/or make changes not captured in any program as a result of the information received in the audit. The PPMs adopted by this program are appropriate, with the caveat that the PPMs should be more specific in terms of 1) target markets and 2) expected adoption rates.

The evaluation team provides several additional PPMs for program consideration. First, audit programs are in part designed to drive change that is not captured in resource programs, or spillover. The Market Transformation Indicators (MTI) outline a number of other useful spillover opportunities that could be captured through this program, which would also be useful to measure. We provide a variation to the MTI that the program may be interested in assessing.

Additionally, the audit alone may not be enough to encourage customers to make changes in their facility. It is also important to reinforce the concepts outlined in the audit through repeat information and follow-ups. This process will also allow SoCalGas to hear from customers about activities completed outside of the programs, or other services customers need to help adopt the recommendation. While it may correlate highly with the audit recommendation adoption rates, we also recommended tracking customer follow up.

Useful Metric	Tracked? [note if annual PPM]	Status	Comment
Percent of participants who made at least one recommended change not captured in the program	No	The audit form qualitatively captures recommendations. These recommendations are not documented in the tracking system and linked specifically to customer actions.	The tracking system needs to be set up to allow for this type of tracking.
Percent of participants receiving follow-up within one year of the audit.	No	N/A	It is important to follow up with customers to reinforce concepts in the audit and identify other opportunities to assist the customer.

Figure 46 – Nonresidential Audits: Additional useful metrics assessing progress or market transformation

5.4 DATA COLLECTION ACTIVITIES

The data collection activities for this process evaluation consisted of interviews with program staff and surveys with participating and nonparticipating customers. The evaluation team also conducted a literature review of other audit programs and lessons learned using Internet searches and publication sources such as other evaluation reports and proceedings from sources such as the Association of Energy Services Professionals (AESP), International Energy Program Evaluation Conference (IEPEC), and American Council for an Energy Efficient Economy (ACEEE). Last, the evaluation team spoke with an implementation contractor that developed audit reporting and tracking products for a large Wisconsin-based Investor Owned Utility.

Target for Data Collection	Data Collection Mode	Date	Key Research Issues	No. of Data Points	Source of Sample
Nonresidential Audit Program Manager	Interview	05/12/2011 09/01/2011 01/04/2011 01/10/2011	Goals for evaluation, program theory and implementation, program changes, marketing, challenges	1	Sempra process evaluation manager
Policy support staff	Interview	12/22/2011	Background information regarding the program; logic behind isolating the audit as a separate program, tracking issues	1	Sempra process evaluation manager
Account executives	Interview	12/16/2011 12/21/2011	As part of interview regarding the Calculated program, discussed experience providing audits	1	Sempra process evaluation manager
SoCalGas Account Executives	Focus Group	9/27/2011	Explore role in marketing the program, interactions with customers, and interactions with internal departments	8 AEs	Sempra process evaluation manager
Program participants	Surveys	10/11/2011- 11/4/2011	Experience with the program, information received, satisfaction in program components	39	Sempra program manager
Program nonparticipants	Surveys	10/18/2011- 11/4/2011	Awareness of SoCalGas' programs; interest in audit services; purchases without program benefits	82	SoCalGas customer database
Non-California audit provider	Interview	1/10/2011	Experience developing audit tools for IOUs; usefulness of tools; best practices/lessons learned	1	Awareness of program through publications
Prior evaluation reports	Literature Review	Not applicable	Previous process evaluation findings, best practice assessment	1	Internet research
Utility Programs and Conference Proceedings	Literature Review	Not applicable	Previous process evaluation findings, best practice assessment, other offerings across country	40+	Utility websites and other Internet research

Figure 47 – Nonresidential Audit Evaluation Data Collection Activities

5.5 RESULTS AND FINDINGS

This section presents the results and key findings from the data collection activities. Please note that these findings are based on a small number of qualitative interviews with program staff.

Additionally, the number of completed participating customer surveys was relatively small (n=39), and often the responses to specific questions are a subset of this group and thereby even smaller in sample size. Therefore, the participant survey results should be viewed as informational only, and may not be representative of the entire program population.

5.5.1 Program Evolution

Although this program is called out as its own as a unique program offering for this program cycle, the Statewide Nonresidential Energy Audit has been in existence for over a decade. In prior program cycles, the Nonresidential Audit program was a component of the nonresidential portfolio, although embedded within the Account Executives' domain of responsibilities and not identified as a separate program offering. For this program cycle, SoCalGas is operating it as a stand-alone program offering with a program manager to oversee and direct the program.

5.5.2 Program processes

The process includes the following steps:

- ◆ Outreach to customers by Account Executives
- ◆ Conduct audit
- ◆ Prepare and present report to customers
- ◆ Enter customer information into SoCalGas audit tracking system

Customers receive an audit report once the audit is complete. The AE shares the audit results with the customer once it is completed. The report is submitted to SoCalGas program staff and customer contact information is entered into a tracking database.

We outline these components in the Nonresidential Audit Program logic model from the Program Implementation Plan, modified slightly for SoCalGas, in an effort to illustrate the program processes and intended outcomes. Although not a process flow map, this logic model provides a fairly succinct visualization of the program's processes and intended outcomes.

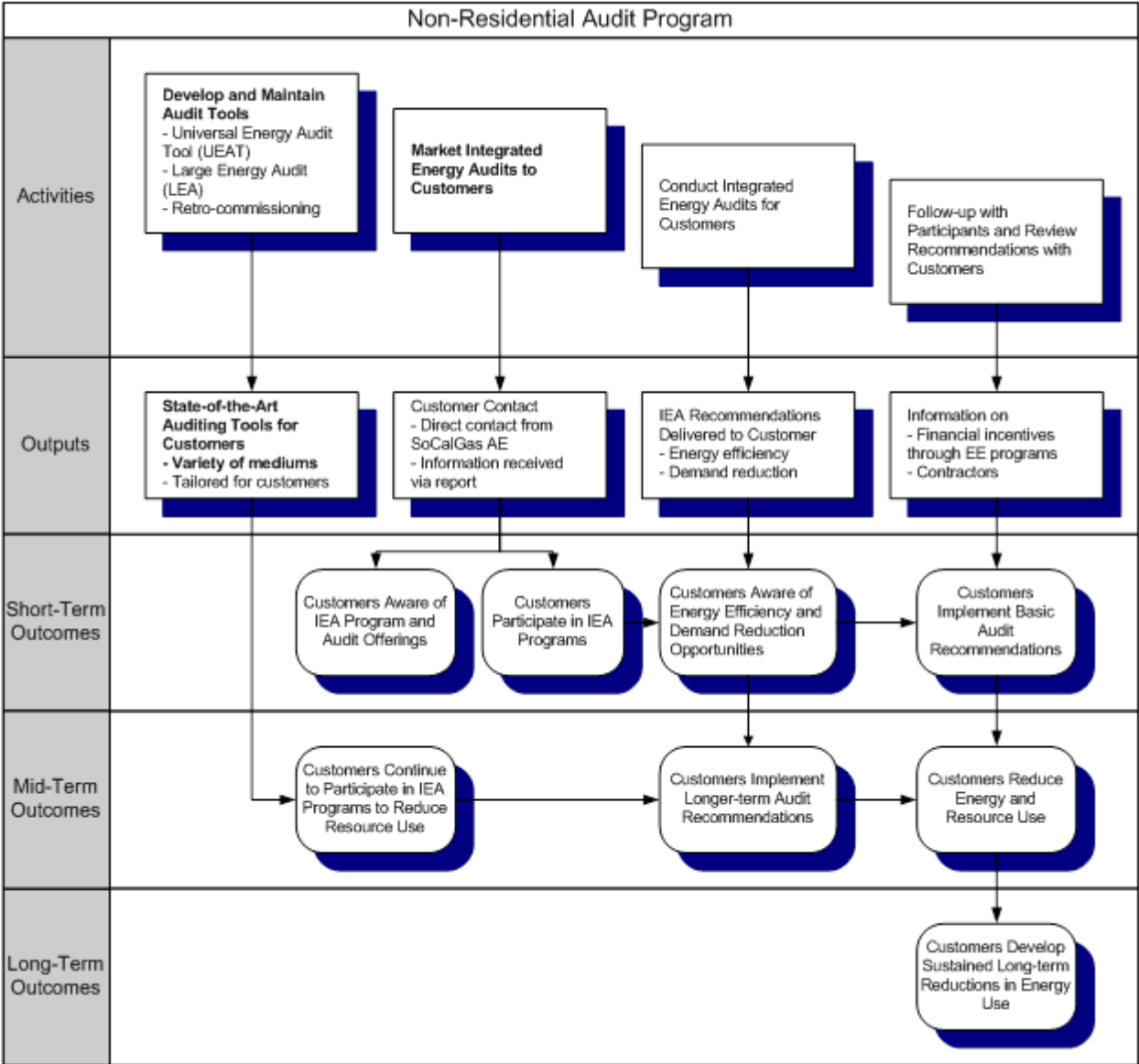


Figure 48 – Nonresidential Audit Logic Model, Modified by Evaluators

Below, we describe a few discrepancies between the intended processes, and how the program is currently operating.

First, one of the initial activities under this program was to develop and maintain an audit tool. As a statewide program, this tool would ideally be consistent amongst the IOUs in the information collected, tracked, and presented. However, to-date there is no uniform collection tool. In fact, as of recently the information collected has been inconsistent and not complete.

Second, the program design is to leverage the AEs to market audits to customers and provide the audits for the majority of customers. There is no evidence from this process that there is any strategic marketing effort beyond AEs meeting with their customers, as we discuss further in this report. Thus, this aspect of the program is generally not happening.

Last, the follow-up represented in this logic model represents the communication of the results to the customer. There is the potential for additional follow-up to reinforce the messages a period of time after the audit is complete, which is not happening.

Despite the fact that the activities are not necessarily taking place as outlined in this model, the customer surveys indicate that the majority of the planned outputs and outcomes are happening. Customers that receive the audit are receiving information about potential efficiency improvements, and a subset of those customers are participating in energy efficiency programs when they otherwise would not. All these points are further discussed in the subsequent findings below. This indicates that, when audits are conducted, they can be a fruitful service in funneling facilities to resource-based programs.

5.5.3 Tracking Customer Data and Audit Results

There are a number of customer tracking systems available to SoCalGas staff to track program participants and information regarding their participation. The CRM system is the primary tracking system for SoCalGas, which houses all the data for Calculated, Deemed, as well as other energy efficiency program progress.

However, the Nonresidential Audit Program tracks its data separate from the CRM system. This is because the CRM system is not easily modified, and does not include fields important to tracking this program. The program manager created a tracking system, which is updated based on AE reports. The project manager, along with management staff at SoCalGas, are attempting to work with the IT department to modify CRM to allow for an integrated system. The project manager is not optimistic that this will be possible until the next program cycle.

The tracking of data in the current system is limited to customer information and date of audit. Recommendations made through the audit process are not captured in the tracking system; therefore, it is not possible for AEs to easily pull useful data relating to customers' audits should they want to follow up with them.

Additionally, it is not possible for the program manager to link recommendations to installations. This means the program manager will not be able to easily track funneled savings resulting from the program, an element that is typically necessary to support the value of this type of program.

From a marketing standpoint, it would be useful for SoCalGas to be able to document and analyze the recommendations. Benefits would include the potential to identify additional program offerings, as well as the tools to conduct more detailed segmentation analysis of their customer base.

5.5.4 Audit Quality and Reporting Documentation, and Comparison to Other Audit Programs

Audit Quality and Tool

Early in the evaluation, it was apparent that there was dissatisfaction among SoCalGas staff regarding the quality of the audits. Per staff reports, the information provided by the audits were inconsistent in terms of level of information and overall quality. At times the audits were completed by the AEs, but they may also have been completed by company interns, who may not have the same training, skills, or organizational knowledge as the AEs.

Until this program cycle, the utility has not had a formal, detailed audit tool for AEs to use to collect consistent information. The documents provided to the program manager primarily consisted of the recommendations with little detail.

Over this program cycle, the program manager has been refining the audit form and enforcing information requirements to improve the quality of the report to customers. For example, the program manager required a more robust section on business operating requirements to illustrate that SoCalGas has educated customers and provided the information they need to influence their purchasing decisions. In addition, the program manager now requires that the audit form captures more detail on the customer's businesses, processes, and services they provide. Last, the auditor is expected to document whether they discussed SoCalGas program offerings. A review of a sample of these reports show that the information being reported by AEs is indeed improving as the requirements became more formal.

The literature review of other programs around the nation showed that while the information captured in audit reports varied, there were four main pieces of information that should be included within the reports:

- ◆ Recommended energy efficiency improvements and identification of incentives
- ◆ Projected annual savings, if possible
- ◆ Incentives and financing options
- ◆ Potential project payback period

Some utilities have branched out to provide some unique sources of information to their customers. Energy Smart's On-Site Energy Consultation presents each business with a summary which indicates top energy-saving opportunities, next steps, a list of the financial incentives that may be available to help pay for an upgrade, and any additional information that may be useful in making the decision to upgrade. Energy conservation improvement options are broken down by level of opportunity (excellent, potential, not applicable or already doing) and by area of opportunity (lighting, machines & equipment, HVAC, hot water, building envelope). Oregon Trail Electric Consumers Cooperative's (OTECC) Energy Audit Program report details the recommended retrofits with their estimated cost, savings, rebates, and simple payback. The

recommendations are phased to provide businesses a blueprint for action, starting with low-cost quick payback measures and culminating in long-term system improvements.

SoCalGas, for the most part, does provide the details documented above along with savings estimates and in some cases return on investment analysis. However, it is not purely the report itself that is important. The knowledge of the auditor, and level of audit itself, is just as (or more) important. Customers need to feel they can trust the person completing the audit, and that the auditor knows their business.

Program Satisfaction

The customer survey probed on their perception of the audit experience, asking the participants to rate their satisfaction on a 1 to 10 scale, where 1 was not at all satisfied and 10 was highly satisfied. Figure 49 presents the results of these questions, categorized into five rating buckets. (Note, these categories were established for analysis purposes only and not read to customers).

Satisfaction Levels and Mean	Type of Information Provided	Applicability of Information Provided	Knowledge of Auditor	Program Overall
Not satisfied (1-2 rating)	1	0	0	0
Moderately dissatisfied (3-4 rating)	1	0	1	1
Moderately satisfied (5-6 rating)	3	6	3	1
Satisfied (7-8 rating)	9	9	7	9
Highly satisfied (9-10 rating)	11	10	14	14
Mean (standard deviation)	7.7 (2.2)	8.0 (1.5)	8.4 (1.8)	8.5 (1.7)

Figure 49 – Nonresidential Audit Program Satisfaction Levels of Those that Recalled Receiving bring to bear Audit (n=25)

The majority of participants were satisfied with the aspects of the program addressed: type of information provided, applicability of information provided, and knowledge of auditor. Although not statistically significant, it appears that customers were least satisfied with the type of information provided, and most satisfied with the knowledge of the auditors. Overall, the program received an average satisfaction rating of an 8.5 on the 10-point scale.

While overall satisfaction was high, several open-ended responses to the question regarding potential program improvements did indicate that customers would have liked someone more knowledgeable about their actual operations providing the audit to them. The survey did not probe into who provided the audit.

“They had no idea what we did or basic manufacturing processes.”

“Perhaps the auditor could be more familiar with the canning operations than he appeared to be.”

Auditor Training and Staff

All these factors confirm the importance of training AE's, interns, and/or others providing the audits. SoCalGas has a staff member that is devoted to training AEs, which is a great step and should continue. Specific to this Nonresidential Audit Program, the training should continue to focus on level of interactions with customers and consistency for capturing and documenting recommendations.

These issues also bring to mind whether there is value in having third party implementers, or devoted staff, provide audits to participants. Using AEs or their interns is a cost-effective approach, and AEs have a sense of responsibility for their customers and experiences. But there may be value in having either devoted staff, or third party implementers with expertise in particular types of businesses, provide audit services.

Many of programs reviewed through the literature review relied on expert third party auditors. The rationale for using third party auditors is that they bring a level of professionalism to the audit process and have the expertise to develop effective audit reports and track the data accordingly.

However, there is value to moving from a "transaction-based" outsourced audit to a personal relationship based audit process. These personal relationships can be powerful tools to getting buy-in from the customer; the AE-based approach in SoCalGas' delivery model may be its strength. However, the program needs to recognize that the AEs or the interns that provide services for them may not have as much of a background, or be as thoroughly trained, as some experts in the field, particularly when working with specialized segments of the population.

There are a number of possibilities to retain AE touch-points while bringing in expertise if programs staff see this as being an issue. The first is to design the program as a multi-staged audit process: AEs provide the marketing and first-level walk-through audit, and SoCalGas engineers follow up with a more technical-based audit for the second stage if necessary. Another option is to bring in staff whose role is specifically to conduct the audits, whether it be a third party implementer or an internal staff member, and including the AEs in the entire process.

As shown in Figure 50, the program tracking system (captures audits through May 2011) indicates that a multi-stepped audit process is happening, albeit rarely. Of the 300 customers documented in the data, 20 (or 6.7%) received a walk-through audit *as well as* a comprehensive audit. The majority of audits provided (76%) are characterized as walk-through audits.

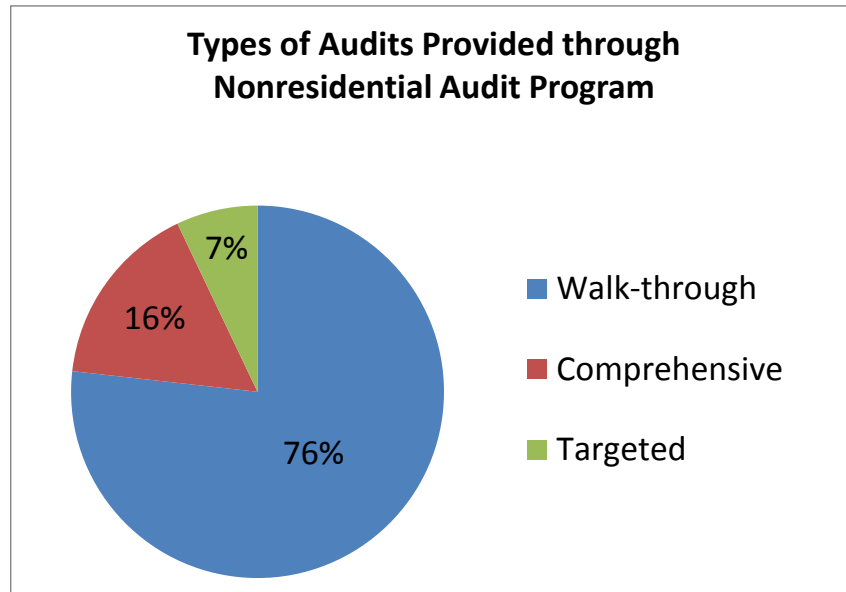


Figure 50 – Characterization of Nonresidential Audits Provided through May 2011 (N=300)

5.5.5 Marketing

The program exclusively markets to and serves assigned accounts. Although the program manager recognizes the opportunity and need for targeted smaller or unassigned accounts, program resources do not allow for that more targeted marketing to take place.

As expected for this program’s design, participants overwhelmingly said they initially heard of the program through their AE (nearly 70%). Interestingly, although this was the primary mode of to hear about the program, more participants said they would prefer to hear about programs through emails from SoCalGas (56%), followed by their AEs (39%). However, since many AEs contact their customers through email, these strategies are not mutually exclusive.

Initial knowledge of program	How Heard about the Program (n=39)	How Prefer to Hear About the Program (n=39)
SoCalGas Account Executive	69.2%	38.5%
Other SoCalGas staff	5.1%	
SoCalGas mailing	2.6%	2.6%
SoCalGas email message	5.1%	56.4%
Trade ally (contractor, vendor)	7.7%	
Conference/trade show	2.6%	
Other	2.6%	
SoCalGas call center	0%	2.6%
Do not know	5.1%	

Figure 51 – How Nonresidential Audit Participants Heard and Prefer to Hear about Programs

No customers mentioned a website as a means for hearing about the program. We did not see any mention of the Nonresidential Audit from our review of the SoCalGas website, or that these services were offered to nonresidential customers. Although not intended to be a primary mechanism for recruiting customers, having this information on the website could provide another source of reaching customers that may not be aware of the program. Providing the information on the website may also be a cost-effective means for reaching unassigned accounts, a segment of the population that SoCalGas staff say is not targeted due to resource constraints. However, this outreach should be balanced with the constraints of the Nonresidential Audit program, so the program does not become overextended.

It is not apparent from the discussions with AEs or program staff that AEs strategically consider who to engage for participation in the program. Examples of groups of customers that could be targeted include: larger energy using customers, customers that have not previously been served by other nonresidential energy efficiency programs in this program cycle, or customers that may have completed projects but have opportunities to complete additional work.

Other groups of customers worthy of targeting are those that received an audit previously but did not move forward with the recommended projects. Nonresidential customers' decision-making and budgeting process can take months, if not years, out from the point of the audit. Revisiting those customers to follow up on the information provided through the audit provides another opportunity to provide more personalized services, address questions, and offer additional services that could encourage a greater uptake of energy efficiency projects. In fact, the literature review completed for this study identified follow-ups to audits as a best practice and one that helps to stave off missed opportunities¹⁶.

Interviews with SoCalGas AEs indicate this is not happening; they did not believe follow-up interviews were necessary, as they believed customers were equipped with the information they needed from the audit experience. This is not to say there is no follow-up whatsoever. AEs can be highly active in reaching out to and meeting with some of their customers. However, this is a process improvement that may optimize the potential for adopting energy efficient projects and taking advantage of incentives that they may not recall being available to them¹⁷.

It is surprising that there was little interest shown in receiving an audit from the nonparticipating survey respondents. The response of the 73 nonparticipants when asked about their interest in the audit program was lukewarm, rating an average of 5.3¹⁸ on a 1 to 10

¹⁶ Skumatz, Lisa (SERA), Brian Coates, Dennis Pearson (Seattle City Light), John Green (SERA), *Evaluating Multi-Resource Audit Programs to Demonstrate Sustainability, Payback, and Customer Benefits: Incorporating Non-Energy Benefits (NEBs)*.

¹⁷ Ibid.

¹⁸ Standard deviation 3.1

scale (where 10 was very interested). Only 18% said they were very interested by rating their interest a 9 or 10 on the 10 point scale.

The evaluation team attempted to review the interest level by main business activity. Unfortunately, there was not sufficient sample to segment the analysis this way. Qualitatively, though, industrial processing or manufacturing organizations showed the least interest. This is not surprising as they are more likely to have staff dedicated to facility energy management. Smaller organizations (grocery stores, restaurants, hotels) showed somewhat more interest.

The lack of interest may be due to their lack of understanding of the benefits the program could provide. It is possible that a fuller description of the benefits they could receive may have increased their interest.

5.5.6 Effectiveness of the Program for Encouraging Action

As discussed in the PPM section, the conversion rate – or rate that the audit recommendation is acted upon – is reportedly low, per program staff. To address this issue further, the participant survey asked customers whether they received recommendations as part of their audit and subsequently acted upon those recommendations.

Just over two-thirds of audit participant respondents reported that the auditor recommended equipment installation or replacement (68%, or 17 of 25 respondents). Of those seventeen respondents who recalled a recommendation being made, 11 (or 65% of the 17) said the organization installed the recommended equipment.

Based on discussions with program staff, the rate of customers that said they moved forward with a program seemed high. Their analysis for the annual PPMs indicated a lower rate of project completion for audit recipients. It is possible that the analysis is biased, if respondents were those that were more likely to implement a project than just receive the audit.

As one objective is to encourage installations that customers may not have previously considered, the survey asked customers whether they were planning to install some, all, or none of the equipment prior to the audit. Only one of the 11 respondents that said they installed equipment said they were planning to install all the equipment prior to the audit. Six of the respondents (just over half) said they were planning to install some of the equipment, and four of the 11 respondents (about a third) said they were not planning to install any of the equipment. Although this data should be viewed qualitatively due to the small sample sizes, it does provide some indication that the audits are somewhat influential for a sample of customers, and that the program has been able to engage true participants (non free riders).

The survey results also support that the audit is providing some of the customers with information regarding other nonresidential programs (14 of 23 said they received this information). We expected that this number would be higher, because the intent of the audit is to direct customers into other programs. It is not apparent whether the auditor did not inform customers of the program, or if the customer forgot about that information. This finding does highlight the importance of following up on audit results, and reinforcing the information regarding other program participation.

Studies completed for other utilities indicated that often it is the technical audit that is most influential in their decision-making process¹⁹. Additionally, there is evidence that in-depth information can be more influential in converting recommendations to projects, because nonresidential customers are often looking for greater support to move energy efficiency projects through their purchasing chains.

For example, the indirect impacts evaluation commissioned by the CPUC of the Local Government Partnership programs investigated the relative effectiveness of different audit offerings provided through the Association for Bay Area Governments (ABAG). ABAG offered audits in three stages: a benchmarking assessment of facilities, a walk-through audit, and an investment grade audit. Qualitative evidence gathered through interviews with municipal ABAG participants suggests that a more in-depth audit experience (i.e., providing leave behind materials, cost-benefit analyses, and investment-grade audit experiences, depending on customer type) more effectively encourages customers to change behaviors or install high-efficiency equipment. ABAG participants said that they attributed their motivation to move forward with energy efficiency projects to the in-depth audit and its subsequent report²⁰.

5.5.7 Description and Comparison to Best Practices

Overall, the SoCalGas Non-Residential Audits programs are partially operating according to best practices. Our evaluation of the program indicates that it meets 6 of the 11 applicable standards included in our research. The table below summarizes the program’s comparison to best practices followed by a detailed description of each best practice. program’s comparison to best practices followed by the reasoning for the assessment.

Best Practice	Current
Is the program design effective and based on sound rationale?	Yes
Is the local market well understood?	Yes
Are responsibilities defined and understood?	Yes
Is there adequate staffing?	No
Are data easy to track and report?	No

¹⁹ Tetra Tech, *Union Gas Limited Process Evaluation Findings for the Commercial and Distribution Contract Custom Project Programs*. (June 30, 2011).

²⁰ Summit Blue Consulting and PA Consulting Group, Inc., *Government Partnership Programs Effectiveness and Impacts of Non-resource Elements of the 2006-2008 Government Partnership Programs*. Prepared for the California Public Utilities Commission Energy Division. CALMAC Study ID CPU0022.01. (January 26, 2010).

Best Practice	Current
Are all routine functions automated as practical?	No
Does the program manager have a strong relationship with vendors involved in the project?	Not applicable
Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?	Not applicable
Are customers satisfied with the product?	Not researched
Is participation simple?	Yes
Are participation strategies multi-pronged and inclusive?	Yes
Does program provide quick, timely feedback to participants?	Not researched
Is participation part of routine transactions?	Not applicable
Does the program facilitate participation through the use of Internet/electronic means?	No
Does the program offer a single point of contact for their customers?	Yes
Are incentive levels well understood and appropriate?	Not applicable
Does the program use targeted marketing strategies?	No
Are products stocked and advertised?	Not applicable
Are vendors and utility staff trained to enhance marketing?	No

Figure 52 – Nonresidential Audits: Comparison to Best Practices

1. Program Theory and Design

- a. *Is the program design effective and based on sound rationale?* Yes. The audit program has a logical and tested theory.
- b. *Is the local market well understood?* Yes. The program staff, segment managers, and account executives know the target market (assigned accounts) and are able to use that knowledge for the success of the audit program.

2. Program Management

- a. *Are responsibilities defined and understood?* Yes. Account Executives are responsible for providing the audits and reporting results to the program manager. In specialized cases, engineers may also be called upon to provide more complex audits.
- b. *Is there adequate staffing?* No. Resources are not devoted to providing audit services to customers, and are providing multiple services to these customers

which takes away from the focus or importance of the audit. There are interns that work within the Account Executive pool of staff that may provide value if they could be trained to focus their time on conducting and following up on audits; however, it may not be possible to use those interns to that extent as the Account Executives use their services as well.

3. Reporting and Tracking

- a. *Are data easy to track and report?* No. Audit results and reports do not integrate with other program databases, and conversion rate is not tracked.
- b. *Are all routine functions automated as practical?* No. There is no method for automatically entering audit results from the report into a database, and no system established for following up on past recommendations.

4. Quality Control and Verification

- a. *Does the program manager have a strong relationship with vendors involved in the project?* Not applicable.
- b. *Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?* Not applicable. However, the program manager verifies that the information captured in the audit reports are comprehensive and sufficient.
- c. *Are customers satisfied with the product?* Yes. Customers reported satisfaction, especially with the knowledge of the auditor/account executive that provided the audit.

5. Participation Process

- a. *Is participation simple?* Yes. The audit process is simple for participants.
- b. *Are participation strategies multi-pronged and inclusive?* Yes. The program is offered across market segments.
- c. *Does program provide quick, timely feedback to participants?* Not researched.
- d. *Is participation part of routine transactions?* Not applicable.
- e. *Does the program facilitate participation through the use of Internet/electronic means?* No. The program does not use any online database for tracking audit status or conversion.
- f. *Does the program offer a single point of contact for their customers?* Yes. Customers' point of contact is generally the account executive.
- g. *Are incentive levels well understood and appropriate?* Not applicable.

6. Marketing and Outreach

- a. *Does the program use targeted marketing strategies?* No. The marketing does not appear to be targeted according to a specified strategy.
- b. *Are products stocked and advertised?* Not applicable.
- c. *Are vendors and utility staff trained to enhance marketing?* No. Account executive incentives are not aligned with audit program goals and do not focus on conversion of audits.

5.6 CONCLUSIONS AND RECOMMENDATIONS

The Nonresidential Audit program is provided by SoCalGas as a separate program offering, primarily to assigned accounts. The intent of the program is to serve as a funneling mechanism into SoCalGas' nonresidential programs, particularly Deemed and Calculated.

AEs and their interns primarily provide the audits, although engineers are also engaged for more complex opportunities. The tracking system indicates that most customers receive walk-through audits, and few customers receive more comprehensive audits.

The Nonresidential Audit Program is making strides to improve the program operations. Based on the findings discussed within this report, the evaluation team provides several recommendations for consideration. However, program staff raised a few issues that they believe limit the effectiveness of the audits provided to customers:

- ◆ AEs wear multiple hats, and do not prioritize the audit process
- ◆ AEs are not held to specific conversion rate goals, thereby reducing the emphasis of this program in their daily activities
- ◆ It is difficult to implement program design and implementation changes due to internal decision-making processes (to revise the information required from the audit forms took over three months to get approved)
- ◆ There is inconsistent follow-up from AEs with customers after audits are completed

The following figure outlines these issues, along with related recommendations for SoCalGas' consideration.

Issue	Issue raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in Addressing (H/M/L)	Value in Addressing (H/M/L)
AEs are not held to specific conversion rate goals; yet, they are included as PPMs	N/A – not evaluated	<ul style="list-style-type: none"> There is less incentive for AEs to improve targeting techniques, audit experiences, or follow up with customers 	<ul style="list-style-type: none"> SoCalGas is assessing the metrics required to be tracked through the PPMs, to establish a lower-bound baseline 	<ul style="list-style-type: none"> Establish more specific metrics or goals for AEs Tie AEs incentives (payment) to specific PPMs, such as conversion rate 	L	H
There is no evidence of targeted outreach or marketing to customers	N/A	<ul style="list-style-type: none"> Customers that have not previously participated in programs may not be benefiting from this program. Targeting nonparticipating customers may reach true participants (non free-riders), based on survey results. Targeted marketing may enhance customer perception of SoCalGas. 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Consider establishing strategic targeting to reach customers not previously engaged in the nonresidential programs, lower usage customers, and/or segments not reached. Target customers through email blasts, potentially including short case studies or newsletter formats. 	M	M
Audit offerings are not detailed on the website	N/A	<ul style="list-style-type: none"> Customers do not learn about opportunity, and AEs may not discuss the program with customers. 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Add information on technical audit and assessment services to the nonresidential portion of SoCalGas' website on the For Your Business page, such as "Services for Business Customers". 	L	L
AEs wear multiple hats, and the Audits program is not a priority.	N/A	<ul style="list-style-type: none"> AEs are not prioritizing audits AEs (or interns) may not be providing high quality audits 	<ul style="list-style-type: none"> None, although the issue has been raised 	<ul style="list-style-type: none"> Devote several SoCalGas staff or a 3P implementer to deliver the program, continuing to engage AEs as the face to the customer 	M	H

Issue	Issue raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in Addressing (H/M/L)	Value in Addressing (H/M/L)
Customers do not receive follow-up to audits	N/A	<ul style="list-style-type: none"> • AEs lose the opportunity to reinforce audit recommendations and convert project • Participants may not remember effect of audit program at time of EE upgrade 	<ul style="list-style-type: none"> • None. 	<ul style="list-style-type: none"> • Train the staff sufficiently so that the audits are high quality • Require that follow-up take place by those providing the audit in an established period of time. 	M	H
Nonresidential Audit Program tracking system is not tied to the CRM	N/A	<ul style="list-style-type: none"> • Manual process for running reports for PPMs (strain on program manager time) • Difficult to pull out customers for follow up 	<ul style="list-style-type: none"> • Program staff have been investigating how to get the audit program data into CRM 	<ul style="list-style-type: none"> • Find a means to build into CRM the variables necessary for maintaining key audit data (recognizing some information may still need to be tracked outside CRM) 	H	H
Recommendations are not electronically tracked ²¹	N/A	<ul style="list-style-type: none"> • Inability to attribute participation in resource program to audit program • Difficulty in validating impact of program • Auditors (AEs) must manually review paper documentation to follow up with customers on audit recommendations 	<ul style="list-style-type: none"> • None, although program staff are aware of the issue. 	<ul style="list-style-type: none"> • Track specific recommendations, ideally within a CRM database but at minimum within the program's Excel database, to track program progress. • Build off of this cycle's audit reports to identify most common recommendations in 	H	M

²¹ A similar finding and recommendation was made in the 2004-2005 statewide Nonresidential Audit Impact and Process Evaluation.

Issue	Issue raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in Addressing (H/M/L)	Value in Addressing (H/M/L)
				building the system. <ul style="list-style-type: none"> • Potentially review electronic tracking systems specific to audit programs on the market today²² • Add a check box to Calculated and Deemed program to indicate if implemented measure is a result of audit 		

Figure 53 – Nonresidential Audits: Summary of Issues and Recommendations

²² As an example, one is currently being developed for We Energies.

6. PROGRAM FOR RESOURCE EFFICIENCY IN PRIVATE SCHOOLS (PREPS)

6.1 PROGRAM OVERVIEW

The Program for Resource Efficiency in Private Schools (PREPS) is a new 2010-2012 SoCalGas program that provides rebates, incentives as well as technical services to evaluate energy saving measures in private schools, colleges, universities, and trade schools and educates end-users about energy efficient practices. Through a third-party (3P) implementer, Resource Solutions Group (RSG), the program offers technical services, rebates, and incentives for qualifying energy efficient measures to overcome the market barriers of low consumer information and finances and lack of onsite staff to deal with efficiency measures. The program seeks to provide increased reach (relative to the utility core programs) into this market segment through an understanding of the barriers schools face in implementing energy efficiency measures, and to tailor services to each school's needs.

The program approach is to target and pursue hard-to-reach customers and design and provide program services accordingly. The program attempts to address several characteristics of this market: 1) schools are under pressure to manage rising energy costs with increasingly tight budgets; 2) they tend to be risk-averse; 3) lack of internal resources presents the greatest barrier to implementing energy efficiency projects with longer payback periods; and 4) the academic year/school calendars place constraints on budgeting, planning, and installation. Because of the above, most schools are seen to need support beyond rebate or standard performance incentive programs to convince decision-makers of the value of the energy efficiency project and to install high efficiency equipment.

RSG initially is targeting large private colleges and universities with greater than 50,000 therms of gas usage and mid-to-large trade/technical schools and secondary schools. PREPS interacts with this market segment through SoCalGas account executives (AEs). For smaller preschool, primary, and secondary school customers, RSG is implementing a mass marketing and vendor outreach approach, with plans to involve students, parents, and other stakeholders in educational activities.

Program activities and services include a customer project evaluation process, comprehensive energy audit reports and processing, and various installation support services. The program provides base incentives identical to those provided through SoCalGas's core rebate programs, plus bonuses to encourage early commitment and project installation. Customers that are interested in participating in the program first sign a non-binding Program Participation Agreement (PPA) and then receive an energy audit. If they choose to proceed with a project, they then sign a non-binding Project Implementation Agreement (PIA), which identifies the specific upgrades to be installed.

PREPS can offer a 20% bonus for eligible measures on top of the institutional catalog. A participating school receives the first 10% for timely signing of a PIA and the second 10% if it completes installation within six months after signing the PIA. Should a customer be unable to meet the six-month commitment to complete the project, PREPS can provide a 5% bonus for installation and project completion within 12 months after signing the PIA. The school can still go through the regular rebate process instead, which allows it to apply up to 12 months after installation with no opportunity for additional bonuses.

The key players in program delivery and their roles are:

- ◆ PREPS Program Manager – manages implementer contract and monitors implementer’s progress. (The current program manager had been serving as the segment advisor to schools, but transitioned to managing PREPS during the evaluation.)
- ◆ SoCalGas AEs – refer customers to the program
- ◆ RSG program staff – enroll customers in the program and deliver the program services
- ◆ Vendors – selected by customers to install measures approved in the program catalog
- ◆ Customers – enroll in program to have energy saving measures installed at their facilities.

Figure 54 shows the PREPS logic model from the Program Implementation Plan. The primary goal of the program is to capture therm savings in the private school market. A secondary goal is to educate end users on cost-effective energy efficiency measures and practices to improve overall building operations and comfort.

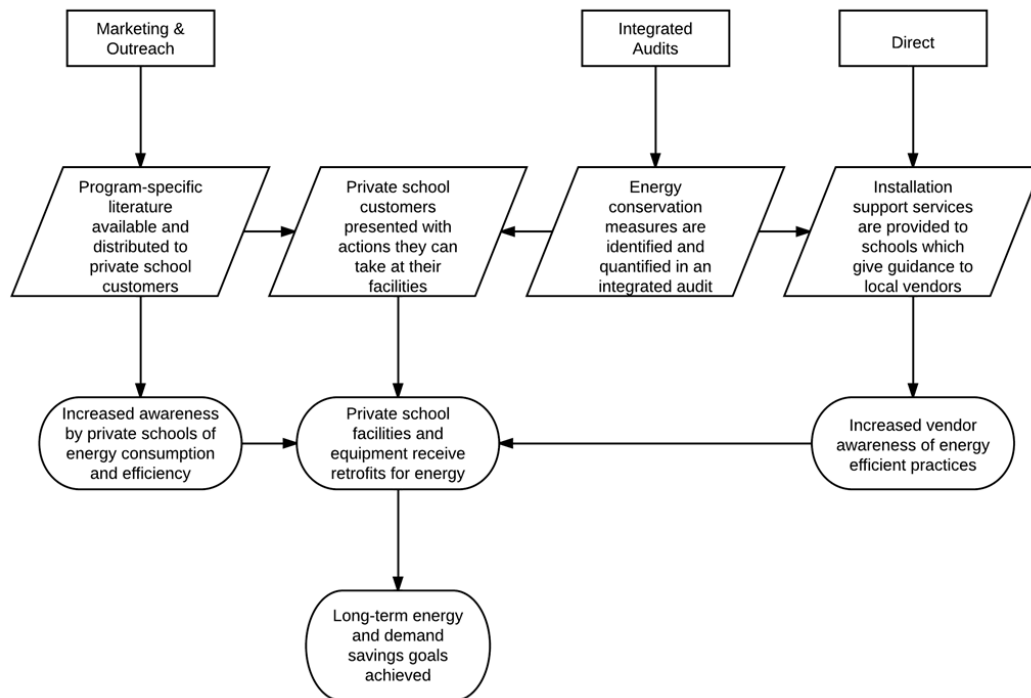


Figure 54 . PREPS Logic Model from Program Implementation Plan

6.2 PROGRAM STATUS

The program is generating savings, following its launch in the late summer of 2011. Three large schools have completed projects with a combined savings of 65,527 gross therms. The program should have several more projects over the next year, as indicated by the 12 PPAs the program has signed with large schools. As of early January 2012, of the 213 schools contacted by RSG, three schools had signed PIAs and also completed installation; 12 additional schools had signed PPAs; and another 15 schools were in the process of signing PPAs. The three schools with installed projects are eligible for the full amount of the bonuses.

6.2.1 Budget, Participants, and Savings

Budget spent reflects program costs for the initial program launch. As the program begins to generate savings, six-month reviews of program spending will more accurately reflect the program's spending on a per savings basis. This program is not tracked in the main SoCalGas program database. We present details on project tracking in Section 6.4.3.

Budget Allocated (% of Total Portfolio)	Budget Spent (% of Allocated)
\$ 1,939,519 (0.7%)	\$ 159,964 (8%)

Figure 55 – PREPS Budget Status through Q3 2011

Gas Savings (Therms x 1000)	
Projected	Installed (% of Projected)
905	66 (7%)

Figure 56 - PREPS Energy Savings through Q3 2011

PPMs and Useful Program Metrics

PREPS does not have PPMs. RSG staff reported tracking the following metrics:

Customers Contacted	Customer Outreach (% of Customers Contacted)				Completed Projects	Vendor Outreach Vendors / Associations Contacted
	Customers Undecided	Customers Declined Participation	Signed PPAs	Signed PIAs		
204	168 (82%)	15 (7%)	15 (7%)	3 (1%)	3 (1%)	80

Figure 57 - PREPS Implementer Tracked Performance Indicators, as of December 2011

6.3 DATA COLLECTION ACTIVITIES

The major research issues were as follows:

- ◆ Communication and coordination between SoCalGas and the RSG
- ◆ Quality of the program's marketing and outreach tactics
- ◆ Market interest in the program
- ◆ Program alignment with SoCalGas's strategic plan
- ◆ Program progress in enrolling schools and educating end-users
- ◆ Participants' experience with the program, including the program's educational activities.

The major data collection activities for the PREPS evaluation consisted of:

- ◆ Review of program documentation and the website
- ◆ In-depth interviews with implementation staff
- ◆ Survey of participants and nonparticipants
- ◆ Review of program data provided by RSG staff.

Figure 58 summarizes data collection activities, including interviews and surveys conducted and materials reviewed. The in-depth interviews focused on program processes, issues of concern to program management, and the status of the program. This information informed the design of the survey instruments. In addition, RSG staff provided email updates on program participation to the evaluation team in December 2011 and early January 2012.

The sampling plan for the customer survey is in Attachment 3B. RSG provided a list of 13 "participants" (schools that had completed a PPA) to the evaluation team. We contacted all 13 schools on the participant list. Five schools completed the participant survey: three universities and two high schools.

The evaluation team used three sources of potential contacts for the nonparticipant survey: 1) a list (provided by RSG) of private schools that the program invited to enroll in the program, 2) a list of all schools with NAICS Code 611 (from the SoCalGas customer database), 3) and a list of all private schools in California counties within SoCalGas territory (obtained from the state government website). We compiled and cleaned these lists, removing duplicates and bad phone numbers. The result was a list of 261 nonparticipants. We completed 42 surveys (a completion rate of 16%).

Target for Data Collection	Data Collection Mode	Date	Key Research Issues	No. of Data Points	Source of Sample
SoCalGas Program Advisors	Kick-off Interview	5/4/11	Program status, key issues for evaluation, implementer information	1	Sempra process evaluation manager
SoCalGas Interim Program Manager	Interview	9/13/11	Communication with implementer, marketing activities, data collection and reporting, adequacy of resources, duplication with other utility programs	1	Sempra process evaluation manager
Resource Solutions Group (PREPS Implementer) Staff	Interview	9/19/11	Communication with utility, marketing activities, data collection and reporting, quality control, adequacy of resources	1	Sempra process evaluation manager
PREPS Participants	Participant Telephone Survey	11/3/11	Experience and satisfaction with PREPS, type of energy use, plans for upgrades/replacements, energy efficiency practices, interest in SoCalGas programs	5	Implementer
PREPS Non-Participants	Non-Participant Telephone Survey	11/3/11	Type of energy use, plans for upgrades/replacements, energy efficiency practices, interest in SoCalGas programs	42	Implementer, NAICS Code, CA State website

Figure 58 – PREPS Evaluation Data Collection Activities

6.4 RESULTS AND FINDINGS

6.4.1 Program Evolution

PREPS is transitioning from its launch phase to full cycle implementation. Since the program portfolio of measures was not approved until July 2011, the primary program activities during 2010 and half of 2011 consisted of administrative tasks and some limited marketing and outreach. The program's first project was completed at the end of 2011.

The initial program launch was slowed by delays in obtaining SoCalGas approval for application and marketing materials and eligible measures, according to SoCalGas and RSG staff. Outreach to schools began in late summer of 2011.

To allow participation by swimming schools and similar entities, program targets were broadened to include all schools with NAICS code 611 (Educational Services). Program staff did not report any other planned changes in the program design.

6.4.2 Program Processes

To address schools' lower technical capacities and complex capital decision processes, the program's process employs a mix of free audits and customer agreements. Program activities and services include a customer project evaluation process, energy efficiency audits, comprehensive energy audit reports and processing, and installation support services (e.g., assistance with financing, bidding, contracting, and rebate application). The program processes are:

1. School completes a PPA (nonbinding)
2. Implementer verifies that school is a gas customer and requests billing data
3. Implementer offers free audit and discuss measures
4. Implementer fills out PIA (non-binding estimate), identifying upgrades
5. School reviews and gets approval
6. Project is bid and implemented
7. Paperwork for rebates is processed
8. Implementer performs inspection of 30% of projects, randomly selected

6.4.3 Program Management

RSG staff reported having adequate staffing resources and program knowledge to develop and implement the program. RSG has a dedicated Project Manager and in September 2011 hired a marketing person for the SoCalGas territory. As a matrix organization, RSG can mobilize staff resources for tasks such as the telephone campaign or database. RSG has a successful track record with the program design and schools market in PG&E territory, where it is called the School Energy Efficiency Program.²³

SoCalGas program managers and implementer staff said they had a good working relationship and communicated regularly. Together, they have been able to get important program documents approved and update the eligible measures to reflect gas equipment. The program has not yet established ongoing data collection or reporting procedures. RSG forwards copies of

²³ Cadmus Group. *Final Process Evaluation Report: Target Market Schools & Colleges Program, School Energy Efficiency Program, Campus Housing Energy Efficiency Program*. CALMAC Study ID PGE0271.01. December 4, 2008.

application materials to the Program Manager. This document trail is the utility's primary source of data. Eventually program data will be entered into the SMART database.

6.4.4 Marketing

The PREPS marketing strategy is differentiated to address differences between large and small schools. For large schools: the program leverages SoCalGas AEs' existing customer relationships to identify and promote the program. For small schools, RSG does the bulk of the marketing. RSG reports its primary challenge is identifying the appropriate decision-maker at these small schools (without AEs). RSG contacts smaller schools (with < 50,000 therms of annual demand) through phone campaigns. Additionally, RSG and SoCalGas jointly promote the program at school-focused seminars and conferences.

Promotional materials

RSG maintains a program website that provides general program information and access to the PREPS application form. RSG also developed a program marketing brochure and PowerPoint presentation. RSG staff noted that the utility's policies regarding use of the SoCalGas logo delayed approval of PREPS promotional materials. SoCalGas staff reported that SoCalGas's new branding guidelines help address this issue. But at the time of the interviews, neither the PREPS materials nor the program website include the SoCalGas logo. In contrast, the website for the School Energy Efficiency Program (a similar, school-focused RSG program at PG&E) *does* include the RSG and PG&E logos: <http://schoolenergyefficiency.com/>.

As another marketing strategy, RSG reported they were working with the PREPS Program Manager to co-market PREPS at trade fairs and conferences for K-12, colleges, universities, and trade school business managers.

Program awareness

Findings from our very limited participant survey (5 participants, all are large schools) indicate that the logic model of AEs promoting the program to large schools has worked in 3 instances. Two large schools learned about the program through other methods (see Figure 59).

How participants learned of the program	Participating Customers (n = 5)
Account Executive	3
Pool Equipment Company	1
Other	1

Figure 59. PREPS Participants: Sources of Program Awareness

Based on our survey of nonparticipants, none were aware of the program. However, at the time of this evaluation's customer survey (October 2011), the program had just begun direct

marketing to schools (summer 2011). Our nonparticipant survey included primarily smaller (unassigned) schools. Our findings show that the program has an opportunity to expand marketplace awareness of the program. As discussed in Section 6.4.6, most of the nonparticipants we contacted expressed interest in the program.

Aware of program?	Nonparticipating customers (n=38)
Yes	0
No	38

Figure 60 – PREPS Nonparticipant Awareness of Program

With regards to other SoCalGas programs: None of the participants were aware of other SoCalGas programs that promote energy efficiency. Awareness of other programs was higher among nonparticipants: 16 of the 42 nonparticipants (38%) indicated they were aware of other SoCalGas programs, with six of them having participated in one.

6.4.5 PREPS Participants’ Experience with the Program

All five participants that we spoke with were in the pre-implementation stage:

- ◆ Two of five participants had completed the on-site energy audit, one had received general information, another mentioned being interested in the rebate for pool covers, and one had just signed the PPA.
- ◆ Three of the five participants had plans to upgrade equipment (two mentioned boiler upgrades and one mentioned HVAC equipment).
- ◆ Two participants of the five participants indicated they have the financial resources to make their planned upgrades; two others were not sure if they could afford them, and one was researching what he could afford.

Three of five participants at this early stage in program implementation are satisfied with the program (4 or 5 on a 5-point scale, see Figure 61). Participants were not far enough along in the program to evaluate PREPS’ incentives and services.

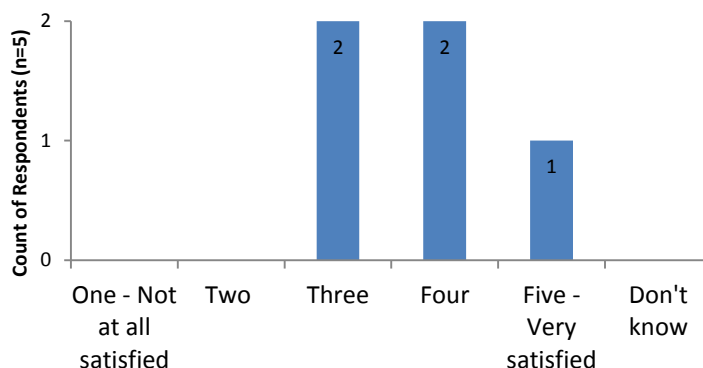


Figure 61 – Level of satisfaction by PREPS participants

Three of the five participants are likely to go through with EE upgrades without PREPS' assistance (4 or 5 on a 5-point scale – see Figure 62).

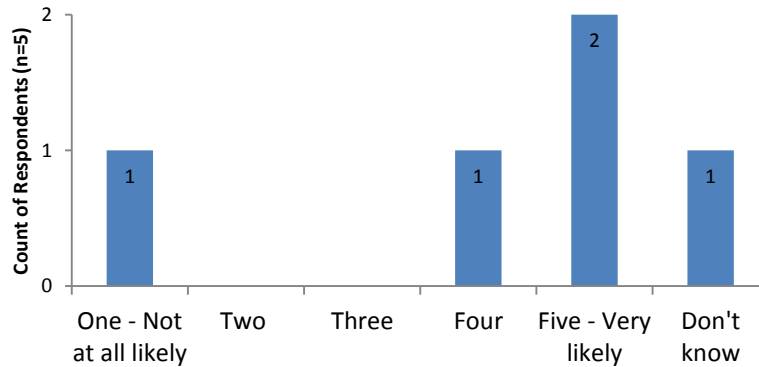


Figure 62 – Likeliness to make EE upgrades without PREPS

6.4.6 PREPS Market Characteristics

This section presents non-participant results with a view toward explaining market characteristics useful for PREPS' implementation. Information such as gas usage and attitudes toward energy efficiency is relevant to predicting a potential customer's interest in participating in the program.

Gas Usage, Planned Upgrades, and EE Policies

Of the 42 nonparticipants, 37 could tell us what their greatest gas-using equipment type was, 27 of whom could also say what the second-greatest gas-user was. Together, boilers and water heaters were mentioned as the greatest or second greatest gas using equipment by 22 of the 37 respondents (60%) and food service equipment was mentioned by 20 of the 37 (54%). Figure 63 shows all responses.

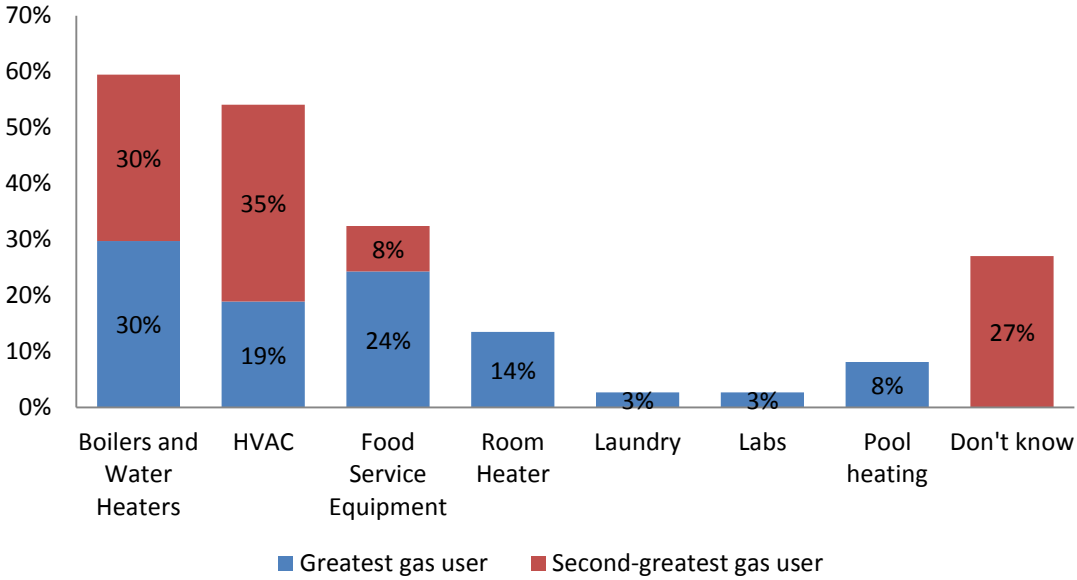


Figure 63. PREPS Nonparticipants: Current Equipment That Uses Most Gas (n=37)

Over half of nonparticipants (25 of 42) have no plans to upgrade gas using equipment by 2014 (see Figure 64). A third of nonparticipants have specific plans to upgrade or plan on upgrading equipment upon failure.

Plans to upgrade (n=42)	Count	%
No Plans to upgrade	25	60%
Plan to upgrade	7	17%
Phasing out old/broken	7	17%
Have upgraded	3	7%

Figure 64 – PREPS Nonparticipant’s plans to upgrade gas using equipment (n = 42)

Of the 17 respondents who have upgraded or plan to upgrade equipment, almost two-thirds (11 of 17) mentioned boilers or water heaters and between one-quarter and one-third (5 of 17) mentioned food service equipment (see Figure 65).

Equipment upgrades recent or planned (n=17)	Count	%
Boilers or Water Heaters	11	65%
Food	5	29%
HVAC	2	12%
Furnaces	1	6%

Figure 65 – PREPS: Equipment nonparticipants have or plan to upgrade (n=17)

Few non-participants had *explicit* energy policies (see Figure 66).

Policy Type	Count	%
No policy	25	60%
Buy energy efficient if possible	11	26%
Buy Energy Star or better	4	10%
Buy products with a high user rating	1	2%
Do not know	1	2%

Figure 66 – Energy Efficiency Policies by PREPS Nonparticipants (n=42)

Decision-makers

Decision makers for nonparticipants can be broken down into two main categories, facilities managers and president/principals. Smaller schools decision-makers tend to be principals or presidents, while larger schools and universities use facilities managers/directors to make equipment upgrade decisions²⁴ (see Figure 67).

Decision Maker	School Size		Total
	Large	Small	
Facilities Manager/Director	14	8	22
Principal/President	2	11	13
Other	2	4	6
Do not know	0	1	1
Total	18	24	42

Figure 67 – Decision-maker by school size (n=42)

However, some schools (6 of 42) also named secondary decision-makers. Five of these 6 indicated that they used both the principal/president and the facilities manager to make these decisions. One of six mentioned decisions were made between the principal and the board.

Potential Interest and Motivation to Participate

Fifty-nine percent of nonparticipant schools indicated interest in the PREPS program (4 or 5 on 5-point scale, see Figure 68).

²⁴ For difference between school types: $\chi^2(3)=8.86$, $p=0.03$

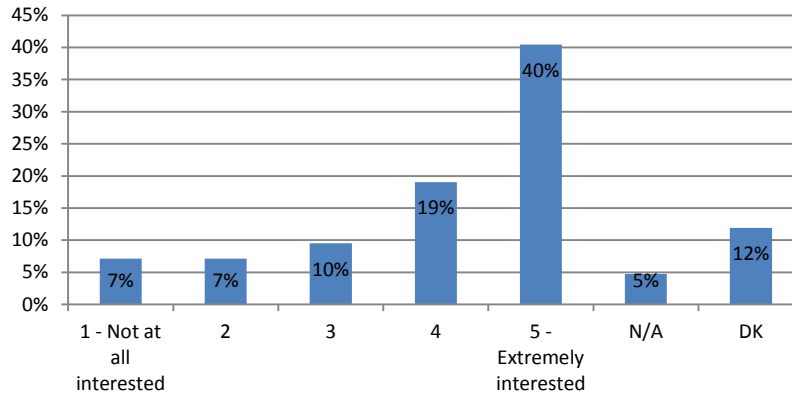


Figure 68. Nonparticipants: Interest in PREPS (n=42)

More than two-thirds (67%) of participant respondents said that “saving money” was their school’s primary motivator to participate in energy efficiency programs (see Figure 69).

Motivation	Count	%
Saving money	28	67%
Energy efficiency	7	17%
Cost effective	6	14%
Environment	3	7%
Return on investment	3	7%
Do not know	3	7%
Other	9	21%

Figure 69 – PREPS: NonParticipants’ motivating factors for program participation (n=42)

The three most commonly given reasons for not participating in a utility program were high cost (8 of 42), lack of funding (7 of 42) and non-cost-effectiveness (7 of 42; see Figure 70)

Reason	Count	%
High cost	8	19%
Lack of funding	7	17%
Not cost effective	7	17%
Application time	3	7%
Not enough information	3	7%
Other	10	24%
Do not know	8	19%

Figure 70 –PREPS: Nonparticipant Reasons **Not to** Participate in SoCalGas Programs (n=42)

6.4.7 Program Value

Initial program outcomes suggest the program will deliver energy savings to SoCalGas by providing technical support, project management, and financial support to financially constrained schools lacking staff and technical expertise for energy efficiency projects.

As of January 2012 (since program launch in summer 2011), of the 213 schools contacted, three schools had signed PIAs and also completed installation; 12 additional schools had signed PPAs; and another 15 schools were in the pipeline. If these latter schools are processed in a timely manner, RSG will have doubled the participation rate in three months. Program managers may want to monitor participation rates to see if they are able to maintain or increase this rate in the following quarters.

Based on our nonparticipant survey, none of the nonparticipating customers we contacted were aware of the program, but most expressed a high interest in the program.

However, one consideration is whether small schools have the resources to implement upgrades. Some do, but the majority of nonparticipants indicated that they had no plans to upgrade in the next two years. Some mentioned that they did not have the resources or only upgrade when things break. Over half (22 of 42) cited money-related issues as reasons not to participate in energy efficiency programs, including high cost, lack of funding, and not cost effective. Whether they have sufficient gas usage to justify the investment is unknown.

Although the survey did not specifically ask about building ownership, in several cases the evaluation team was referred to church administration or staff at other organizations, indicating outside ownership and decision-making. One respondent was uncertain whether they were eligible for PREPS, because a synagogue owned their building. Therefore, many schools likely do not own their own buildings, and a program like PREPS that focuses on a specific market niche may be in a better position to address such a division between ownership/decision-making and operations. RSG has made some effort to contact staff at the Roman Catholic Diocese level to reach decision-makers for Catholic schools.

6.4.8 Description and Comparison to Best Practices

It is too early to judge whether PREPS is operating according to best practices, since it is still in the launch phase. Our evaluation of the program indicates that it meets or partially meets 3 of the 13 applicable standards that were evaluated, and it may meet best practices for 7 other standards. The table below summarizes the program's comparison to best practices followed by the reasoning for the assessment.

Best Practice	Current
Is the program design effective and based on sound rationale?	Maybe
Is the local market well understood?	No
Are responsibilities defined and understood?	Partially
Is there adequate staffing?	Yes
Are data easy to track and report?	Not Researched
Are all routine functions automated as practical?	Not Researched
Does the program manager have a strong relationship with vendors involved in the project?	No
Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?	Not Researched
Are customers satisfied with the product?	Maybe
Is participation simple?	No
Are participation strategies multi-pronged and inclusive?	Maybe
Does program provide quick, timely feedback to participants?	Not Researched
Is participation part of routine transactions?	Not Researched
Does the program facilitate participation through the use of Internet/electronic means?	Maybe
Does the program offer a single point of contact for their customers?	Maybe
Are incentive levels well understood and appropriate?	Maybe
Does the program use targeted marketing strategies?	Maybe
Are products stocked and advertised?	N/A
Are vendors and utility staff trained to enhance marketing?	Partially

Figure 71: PREPS Comparison to Best Practices

1. Program Theory and Design

- a. *Is the program design effective and based on sound rationale?* Maybe. The model that the program logic is based on, with audits and incentives, has been proven in Pacific Gas and Electric (PG&E) territory. However, this program theory has not been tested or modified for the SoCalGas territory. There is a risk that

this program is duplicative of core programs if smaller schools are not targeted for inclusion.

- b. *Is the local market well understood?* No. The third-party implementer of this program lacks local contacts for the target market (private schools). As such, the implementer is relying on SoCalGas account executives for local market contacts and does not have a clear picture of the full target market. In addition, there is no collection of baseline data on the needs of private schools, energy consumption practices, gas usage, and energy efficiency practices in place.

2. Program Management

- a. *Are responsibilities defined and understood?* Partially. The responsibilities are well defined and understood for the program and third party implementation staff; however, the account executives do not have a defined role. Participants do not understand their role.
- b. *Is there adequate staffing?* Yes. The third party implementer is able to meet staffing needs.

3. Reporting and Tracking

- a. *Are data easy to track and report?* Not evaluated. Practices for data tracking, automation, reporting systems, and customer satisfaction are not evaluated at this time because systems are still being put in place.
- b. *Are all routine functions automated as practical?* Not evaluated. Practices for data tracking, automation, reporting systems, and customer satisfaction are not evaluated at this time because systems are still being put in place.

4. Quality Control and Verification

- a. *Does the program manager have a strong relationship with vendors involved in the project?* No. Vendors could be useful marketing or implementation allies. While the third party implementer has had contact with at least one vendor, there is no formal role for vendors in this program.
- b. *Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?* Not evaluated. Practices for data tracking, automation, reporting systems, and customer satisfaction are not evaluated at this time because systems are still being put in place.
- c. *Are customers satisfied with the product?* Maybe. Practices for data tracking, automation, reporting systems, and customer satisfaction are not evaluated at this time because systems are still being put in place.

5. Participation Process

- a. *Is participation simple?* No. Participation is not simple. There has been some confusion with how to deliver the program and meet deadlines to qualify for bonuses with the program.
- b. *Are participation strategies multi-pronged and inclusive?* Maybe. The full target market is not being addressed due to lack of market understanding. The primary point of contact is through account executives. Additional work could be done to improve inclusivity, by finding innovative ways to reach schools and their needs.
- c. *Does program provide quick, timely feedback to participants?* Not Applicable.
- d. *Is participation part of routine transactions?* Not researched. Participation is not related to any routine functions.
- e. *Does the program facilitate participation through the use of Internet/electronic means?* Maybe. There is a website for the program; however, it is not being used. The website may turn out to be an effective way to facilitate participation. If this method is desired, the website should be marketed.
- f. *Does the program offer a single point of contact for their customers?* Maybe. Assigned accounts can go through their account executive or the third-party implementer.
- g. *Are incentive levels well understood and appropriate?* No. Customers do not understand the incentive levels. SoCalGas has revised the catalog of eligible measures for this program.

6. Marketing and Outreach

- a. *Does the program use targeted marketing strategies?* Maybe. At the time of this evaluation's customer survey, the program had just begun direct marketing to schools. Initial indications from updated program data supplied by the 3P implementer to the evaluation team suggest the program is leveraging multiple marketing channels to promote PREPS to large schools. It is possible that the current marketing strategies may be too targeted, potentially leading to missed opportunities if small schools are not included.
- b. *Are products stocked and advertised?* Not Applicable.
- c. *Are vendors and utility staff trained to enhance marketing?* Partially. The third party implementer provided training to account executives; based on process evaluation interviews, this training is not complete.

6.5 CONCLUSIONS AND RECOMMENDATIONS

PREPS had recently launched phase during the evaluation period. At the time of this report, the program had doubled its participation from month six to month nine after program launch. Three projects have been completed producing 65,528 therms in energy savings. Figure 72

identifies the major issues identified and recommendations to address them. Below, we describe two conclusions that warrant further discussion.

RSG has demonstrated initiative in leveraging SoCalGas resources and name recognition to address the challenges associated with launching a new program as a third party implementer. RSG staff have been proactive in educating AEs and co-marketing with the SoCalGas education segment advisor (now the program manager). They are also educating vendors about the program, so they can serve as a recruitment channel. Program staff's efforts would be enhanced if SoCalGas clarifies its co-branding policies to allow PREPS to use the utility's logo and collateral materials.

Lack of understanding of the value of energy efficiency reduces the willingness of schools to make upgrades. Since one of the program goals is to support schools in making the case for energy efficiency measures, PREPS could refer participating schools to training opportunities such as the Building Operators Certification (BOC) program. SoCalGas could consider providing stipends to school facilities managers for targeted BOC training.

Issue	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in Addressing (H/M/L)	Value in Addressing (H/M/L)
<ul style="list-style-type: none"> • AEs provided mixed support in recruiting large customers 	<ul style="list-style-type: none"> • Low awareness of program; low participation 	<ul style="list-style-type: none"> • SoCalGas has changed its policy to incent AEs on therm savings achieved, creating greater interest in promoting program; implementer was proactive in requesting list of AEs • 3 of 5 participants learned of program through AEs 	<ul style="list-style-type: none"> • Focus PM, 3P, and AE on customer outreach activities. Contact decision makers identified here. Consider focusing AEs' time on handful of large schools initially. • Support implementer with updated list of AEs 	M	H
<ul style="list-style-type: none"> • Implementer is uncertain about SoCalGas co-branding policies 	<ul style="list-style-type: none"> • Implementer cannot take full advantage of SoCalGas's name recognition and credibility 	<ul style="list-style-type: none"> • SoCalGas recently produced a communication tools and style guide 	<ul style="list-style-type: none"> • Revisit co-branding policies, and clarify policies within first 6 months of program cycle 	M	M
<ul style="list-style-type: none"> • Some facilities managers and other school staff do not understand the value of energy efficiency 	<ul style="list-style-type: none"> • Reduces willingness to make upgrades and the ability to make the financial case for upgrades 	<ul style="list-style-type: none"> • PREPS educates schools about energy efficiency through audit 	<ul style="list-style-type: none"> • Consider offering stipends to facilities managers for targeted Building Operator Certification training • For small schools, work with both facility manager and principal, and use language they understand (e.g., Rate of Return, Savings: Investment ratio) 	M	M
<ul style="list-style-type: none"> • Very small schools and some faith-based schools do not own their buildings 	<ul style="list-style-type: none"> • Implementer and schools cannot easily identify appropriate decision makers; schools cannot authorize upgrades 	<ul style="list-style-type: none"> • RSG has reached out to Roman Catholic Diocese 	<ul style="list-style-type: none"> • Promote program to other faith-based organization leaders with multiple schools • Leverage account data to target facilities owners 	M	H

Figure 72: PREPS Summary of Issues and Recommendations

7. SAVEGAS

7.1 PROGRAM OVERVIEW

SaveGas is a resource-based program managed by a third-party (3P) contractor, EDC Technologies, Inc. (EDC). SaveGas provides hotels in the SoCalGas territory with hot water sensors and controls to help monitor usage and reduce hot water temperatures during off-peak hours. The program provides customers with continuous monitoring data via the internet, which allows them to view both system problems in real time and historical data for comparison and calculation of longer-term energy savings. Incentives cover the cost of the hot water sensors and monitors, and hotels pay EDC \$1 per hotel room per month for ongoing monitoring.

Program staff explain the program to potential participants and conduct an online demonstration of the monitoring system, followed by an onsite survey of interested customers' facilities to provide more tailored savings estimates. Once a customer submits a proposal and the contract is signed, EDC installs the monitoring system, records baseline energy use data, and commissions the system.

The key players in program delivery and their roles are:

- ◆ EDC Technologies – Markets program to customers, creates product, and monitors the system
- ◆ SoCalGas Program Manager – Modifies program goals and assists with communication between AEs and EDC
- ◆ Customers – Use system and pay for ongoing monitoring by EDC
- ◆ SoCalGas AEs – May provide information about program to assigned customers.

The SaveGas program was launched in 2007 and has continued in its original form. The program has not met any of its annual savings goals.

The program uses unique technology and monitoring to reduce boiler heating during off-peak hours. The program is designed to provide gas savings to hotels that often are underserved by other SoCalGas program offerings.

The previous evaluation of SDG&E's SaveGas program created an accurate logic model for the SoCalGas version of the program (see Figure 73).

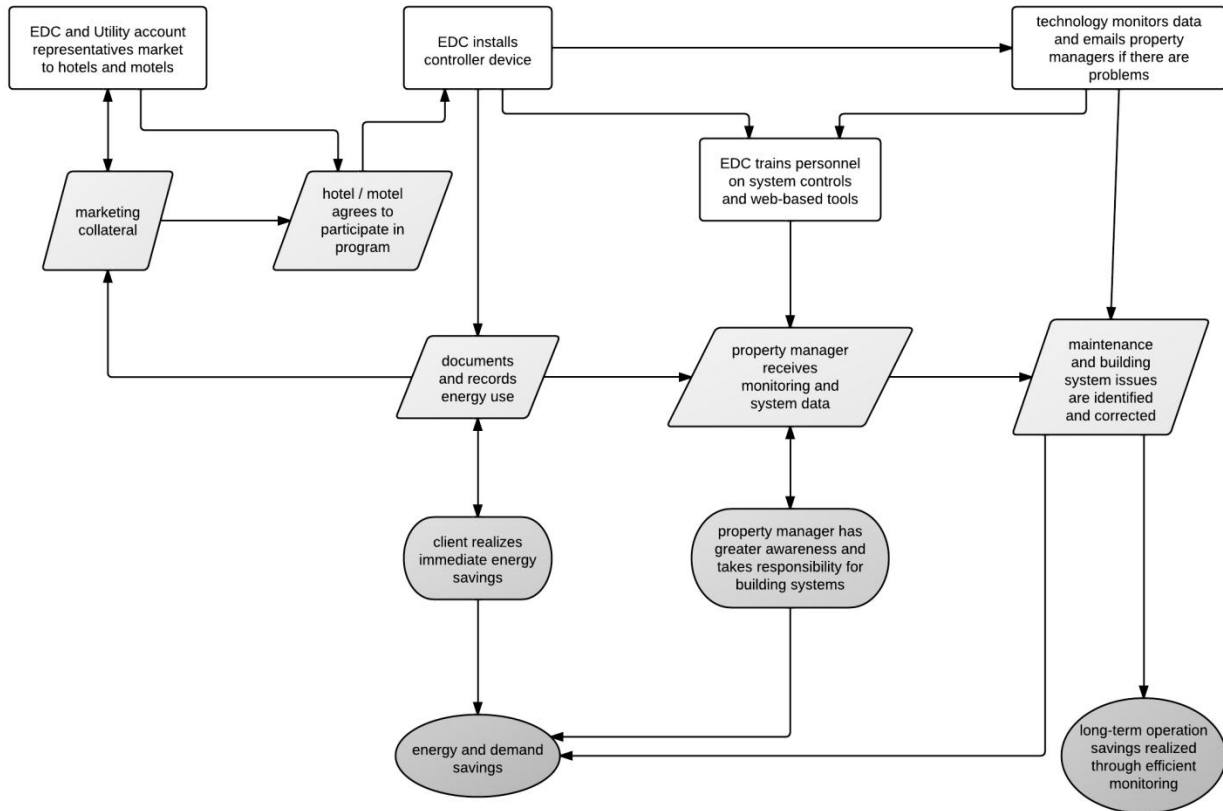


Figure 73 - SaveGas Logic Model

7.2 PROGRAM STATUS

The SaveGas program is expected to deliver about 1% of the projected therm savings for SoCalGas’s portfolio. By the end of the third quarter of 2011, the program had achieved 25% of this savings target. Figure 6.2 displays the program’s budget, targeted levels of participation and gas savings, and actual participation and gas savings as of September 30, 2011.

Budget Allocated (% of Total Portfolio)	Budget Spent (% of Allocated)	Committed Budget (% of Allocated)	No. of Projects	No. of Unique Participants	No. of Participating Vendors
\$ 4,583,363 (1.7%)	\$1,027,966 (22%)		64	42	N/A

Gas Savings (Therms x 1000)		
Projected	Installed (% of Projected)	Committed (% of Projected)
933	235 (25%)	Unknown

Figure 74 – Status of Energy Savings for SaveGas program thru Q3 2011

7.3 DATA COLLECTION ACTIVITIES

Research objectives included:

- ◆ Investigate SoCalGas’s oversight of EDC
- ◆ Assess the quality of EDC’s marketing and online demonstration processes
- ◆ Investigate participants’ and non-participants’ experience with, and perceptions of, the program. In particular, investigate reasons for the low participation rates.

The evaluation team conducted in-depth interviews with SoCalGas’s SaveGas program manager, and EDC staff. Additionally, the evaluation team interviewed 12 participants and 48 non-participants.

While this report is specific to SoCalGas, the experiences with the technology and implementer (EDC) are the same for customers of both SoCalGas and SDG&E. Examination of the customer data did not reveal any differences between utility datasets. Therefore, we took advantage of the greater reliability provided by combining the customer data from the two utilities. Of the 12 participants, 6 were from the SoCalGas territory and 6 were from the SDG&E territory. Of the 48 non-participants, 36 were from the SoCalGas territory and 12 were from the SDG&E territory.

The evaluation team identified non-participants from two sources. The program implementer, EDC, provided a list of hotels it had contacted but that had declined program services. The team identified additional non-participants from NAICS-coded hotels in the SoCalGas territory that were not participating in the SaveGas program.²⁵ Evaluators attempted to target larger hotels (more than 50 rooms), but also contacted some smaller hotels.

The following table summarizes data collection activities, including interviews and surveys conducted, and materials reviewed.

²⁵ List provided by Sempra

Target for Data Collection	Data Collection Mode	Date	Key Research Issues	No. of Data Points	Source of Sample
SoCalGas Program Manager	Kick-off Interview	5/3/11, 9/13/11	Program status, key issues for evaluation, implementer information, Communication with implementer, marketing, data reporting, duplication with other utility programs	1	Sempra process evaluation Manager
EDC Technologies (SaveGas Implementer) Staff	Interview	9/30/11	Communication with utility, marketing activities, data collection and reporting, quality control, adequacy of resources	1	Sempra process evaluation Manager
SaveGas Participants	Participant Survey	Oct–Nov. 3, 2011	Experience and satisfaction with SaveGas, type of energy use, plans for upgrades/ replacements, energy efficiency practices, interest in SoCalGas programs	6 SoCalGas, 6 SDG&E	SoCalGas Program Manager
SaveGas Non-Participants	Non-Participant Survey	Oct–Nov. 3, 2011	Experience with SaveGas, and reason for non-participation (if relevant), type of energy use, plans for upgrades/ replacements, energy efficiency practices, interest in SoCalGas programs	34 SoCalGas, 12 SDG&E	EDC and NAICS codes

Figure 75 – SoCalGas SaveGas Evaluation Data Collection Activities

7.4 RESULTS AND FINDINGS

7.4.1 Program Evolution

SoCalGas started offering the SaveGas program in 2007 and has not made any changes to the program since its inception. The program contacts reported no plans to change the program design.

7.4.2 Program processes

The SaveGas implementation process is shown in Figure 76. In brief, it includes the following steps:

- ◆ EDC markets the program to end-users and demonstrates the technology to them.
- ◆ EDC conducts a site survey and submits a proposal to the customer.
- ◆ EDC installs controls and begins monitoring the system to establish baseline data.
- ◆ EDC invoices SoCalGas for completed installations.
- ◆ EDC analyzes baseline data and creates a control strategy.
- ◆ EDC begins alerting end-users to any anomalies and trains customers to monitor data from program website.
- ◆ EDC continues to monitor each project, make necessary adjustments, and alerts customers to any anomalies.

7.4.3 Process flow chart

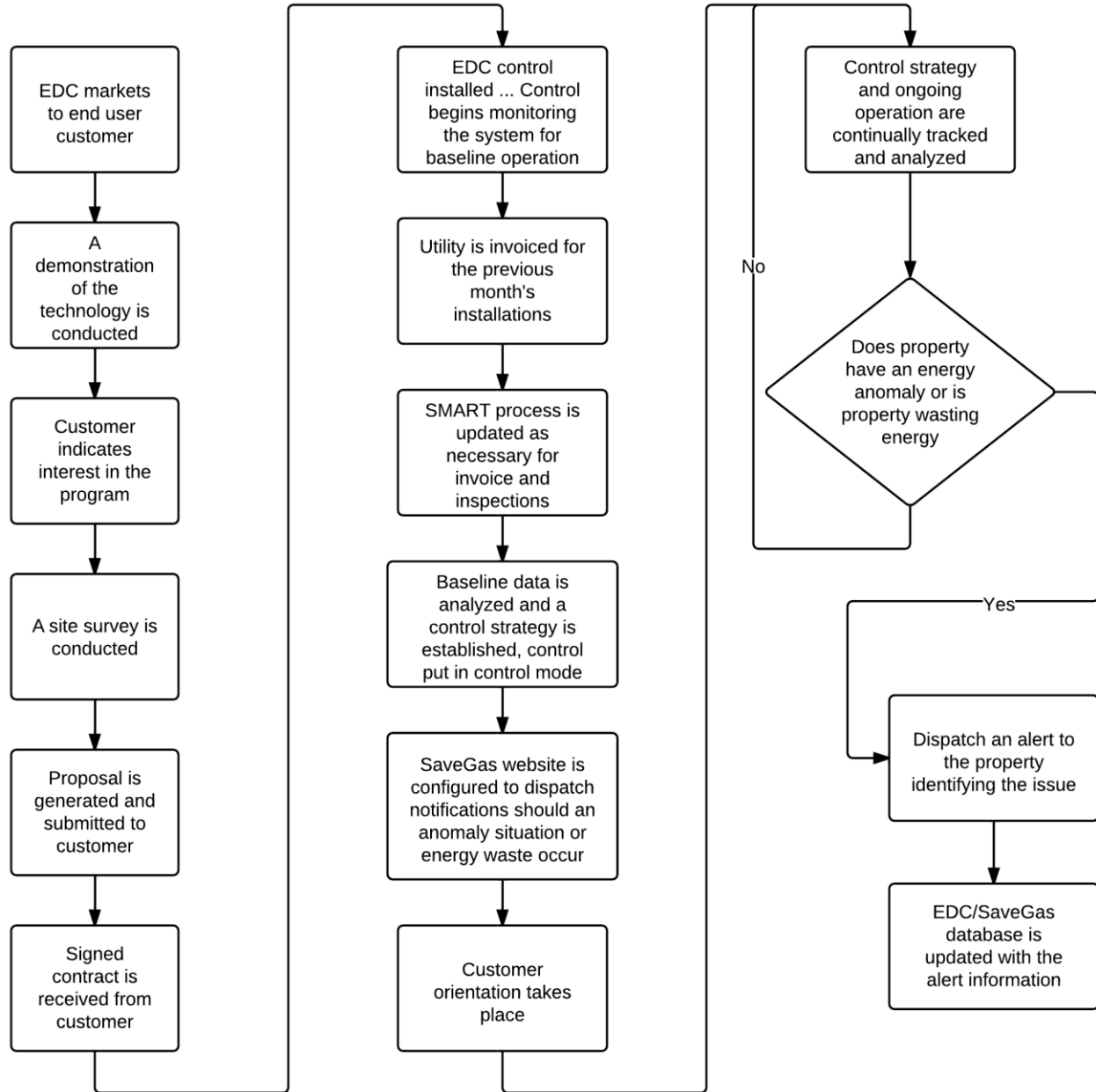


Figure 76 - SaveGas Process Flow Chart

7.4.4 Marketing

Primary strategies used by EDC to identify potential customers includes conducting internet searches for hotels in SoCalGas territory and coordinating with SoCalGas AEs to target high-impact hotels. EDC targets management-level staff and makes about 20 cold calls a day. Of those 20 contacts, typically one or two will watch the webinar. EDC reports a high conversion

rate from the webinar (80%).²⁶ Based on these rates, it would require contacting 1,365 new hotels for the next 3.5 months to obtain the projected savings.²⁷ This may be possible with EDC's addition of sales staff. We roughly estimate that there are about 2,000 to 4,000 hotels in SoCalGas territory in the size range that the program targets.²⁸ SoCalGas may want to monitor progress toward this goal over the next six months. We also recommend that EDC and SDG&E make efforts to improve the success rate (i.e., participants per call), and we include recommendations towards this goal in the Conclusions and Recommendations section of this chapter.

Program awareness

Our surveys of the six SoCalGas participants revealed that they learned of the program from their corporate representatives, their SoCalGas AEs, or EDC (Figure 77). While three of the 12 program participants we contacted mentioned hearing about the program from their corporate office, none of the non-participants who were aware of the program said they had heard about the program through corporate representatives.

As shown in Figure 77, most nonparticipants we contacted (41 of 48) were not aware of the program. The figure also shows the source of program awareness for the 7 non-participants who reported they *were* aware of the program: five of those were "near participants" (those contacted by EDC but decided not to participate) identified by EDC²⁹, and two were true non-participants (had not been contacted about program) from the NAICS code sample.

²⁶ Assuming that EDC divides its time proportionally between SoCalGas and SDG&E territories according to the projected savings goals in their contract, 65% of calls should be in SoCalGas territory.

²⁷ Current program participants are saving an average of 7,700 therms. To meet the projected goal of 933,345 therms, a total of 121 hotels are needed. Currently, the program has 42 participants and needs 79 more to meet the projected savings goals.

²⁸ Various sources put the number of hotels in California at approximately 11,000 (California Statistical Abstract, Table K-14, "Selected Statistics on Service Industries Subject to Federal Income Tax, 1992", California Department of Finance, http://www.dof.ca.gov/HTML/FS_DATA/STAT-ABS/Toc_xls.htm, accessed March 21, 2012) to 23,000 (*WikiAnswers*, http://wiki.answers.com/Q/How_many_hotels_are_there_in_California, accessed March 21, 2012). If the program targets hotels in the top third of the distribution in terms of size (the program participants averaged 254 rooms, indicating a focus on larger hotels with higher gas usage) and SoCalGas's share of California hotels is the same as its share of the population (55%), then there are between 2,000 and 4,000 hotels in the SaveGas target range in SoCalGas territory.

²⁹ A total of 19 "near participants" were interviewed – these respondents were contacted by EDC about the SaveGas program but decided not to participate. These are a subset of the 48 non-participants we surveyed.

Initial knowledge of program	SoCalGas Participating Customers (n = 6)	All Participating Customers (n=12)	Nonparticipating Customers (n=48)
3P implementer (EDC)	1	2	4
Utility Account Executive	2	3	1
Colleague / Peer (corporate office)	3	4	-
Utility mailing (hard copy)	-	-	1
Utility email	-	1	
Hotel association meeting	-	1	-
Not familiar with the program			41
Do not know	-	1	1

Figure 77 – SaveGas Sources of Program Awareness

We note only 5 of the 19 surveyed “near participants” reported being aware of the SaveGas program, although EDC reported having marketed the program directly to all of these contacts.³⁰

Promotional assistance from SoCalGas

EDC contacts reported that they requested additional marketing assistance from SoCalGas. Specifically, they asked AEs to provide leads for hotels that might participate in the SaveGas program. EDC also suggested that SoCalGas give AEs additional training about the program.

EDC contacts also indicated that SoCalGas’s restrictions on the use of marketing materials and logos had created some challenges. In particular, EDC contacts said some customers had expressed concerns about the poor performance of some pool pump controllers similar to those incited by the SaveGas program. EDC contacts indicated that they could overcome this barrier if they could use SoCalGas marketing collateral when they approach potential customers. The SaveGas program manager noted that SoCalGas is developing marketing collateral for EDC.

EDC contacts also said they could increase program participation and savings if they could coordinate program marketing with SoCalGas AEs. The SaveGas program manager noted some difficulty coordinating communication between EDC and AEs. She suggested that EDC contact her earlier in the sales process so she could facilitate the coordination of program marketing efforts between EDC and the AEs. However, 3P implementers are expected to be able to market their programs; AEs are not required to provide any assistance.

³⁰ Notes from the implementer suggest that most of the contacts provided did not view the web demonstration and possibly only spoke to the implementer once or twice. Given the large volume of information hotel owners, managers and engineers work with, remembering a program they were not interested in may be an unreasonable assumption.

Program participation

As of the third quarter 2011, EDC had spent 22% of its allocated budget and had achieved 25% of its projected savings. There were 42 unique SaveGas projects in SoCalGas's territory with total savings of 235,105 therms – an average savings of 7,700 therms per project. The savings goal for the 2010-2012 cycle was 933,345 therms. To meet this target, based on the size of current participant savings, SaveGas would need a total of 121 individual projects – 79 more than those participating at the time of this report.³¹ There is also some confusion in the PIP regarding whether the room number estimates for 2010-2012 are additive or not. For example, the PIP states EDC will have 228 projects per year. This could also be interpreted as 228 projects across all three years.

The low participation may be due to the poor economy, which has reduced hotel occupancy rates. This may make hotel managers and owners reluctant to pay the monthly \$1 per room monitoring fee, even if the program can guarantee that the energy savings will offset that cost. Initial notes provided by EDC bear this out. Ten (14%) of the 79 potential contacts³² said that they either did not want to incur more expenses, even though EDC gave them positive cash flow estimates, or that they did not anticipate seeing enough savings to participate in the program. EDC contacts agreed that asking prospective customers to pay the fee initially may be a barrier to their participation in the program, but that that becomes less of an issue when they show customers the projected savings.

Nine of the 10 responding participants³³ reported that boilers and water heaters were their largest or second-largest gas users. Four of these 10 participants indicated that laundry equipment used the second greatest amount of gas. One participant mentioned each of the following: boilers, food service equipment, dryers, and patio heaters (see Figure 78).

³¹ Emphasis on large hotels with high gas usage will increase the savings per project and reduce the total number of projects needed to meet goals.

³² EDC provided 79 potential contacts with call history notes from EDC sales staff to the evaluation team. The evaluation team did not speak to all 79 "near" participants.

³³ A total of 12 participants responded to the evaluation team survey, ten of these responded to this question.

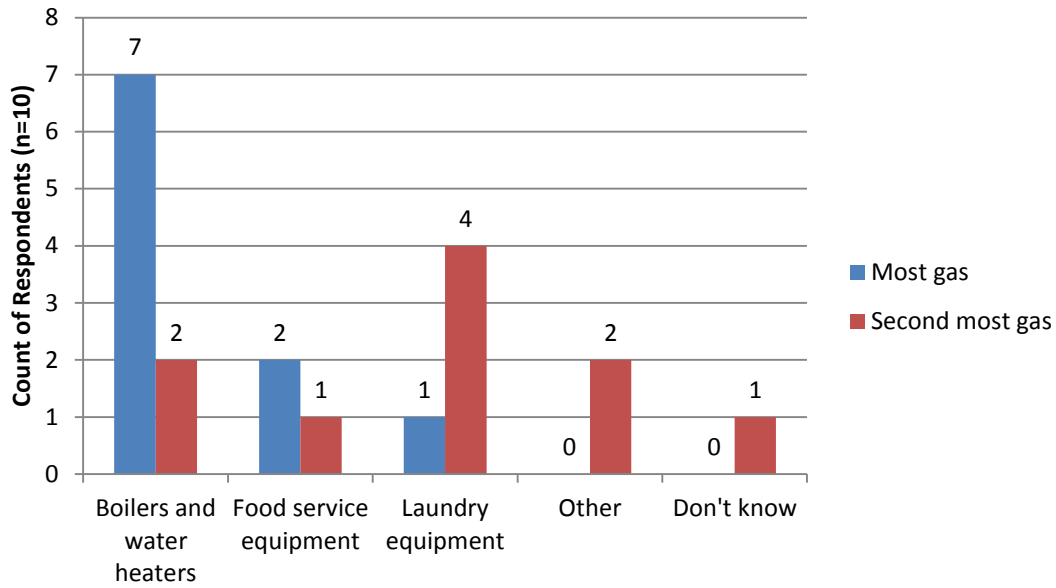


Figure 78 – SaveGas Participants’ Largest and 2nd Largest Gas-Using Equipment

The SoCalGas SaveGas program manager, who took over management of the SaveGas program recently (in the second half of 2011), noted that the program is failing to meet its goals, but that EDC is attempting to increase program participation by hiring new sales staff.

7.4.5 Program interest among non-participants

Non-participants indicated a robust interest in the SaveGas program. Figure 79 shows the range of their responses to a question that asked them to rate their interest in the program on a five-point scale, where 1 indicated “not at all interested” and 5 “extremely interested.” Twelve of the 25 responding non-participants said they were “extremely interested” in the program.

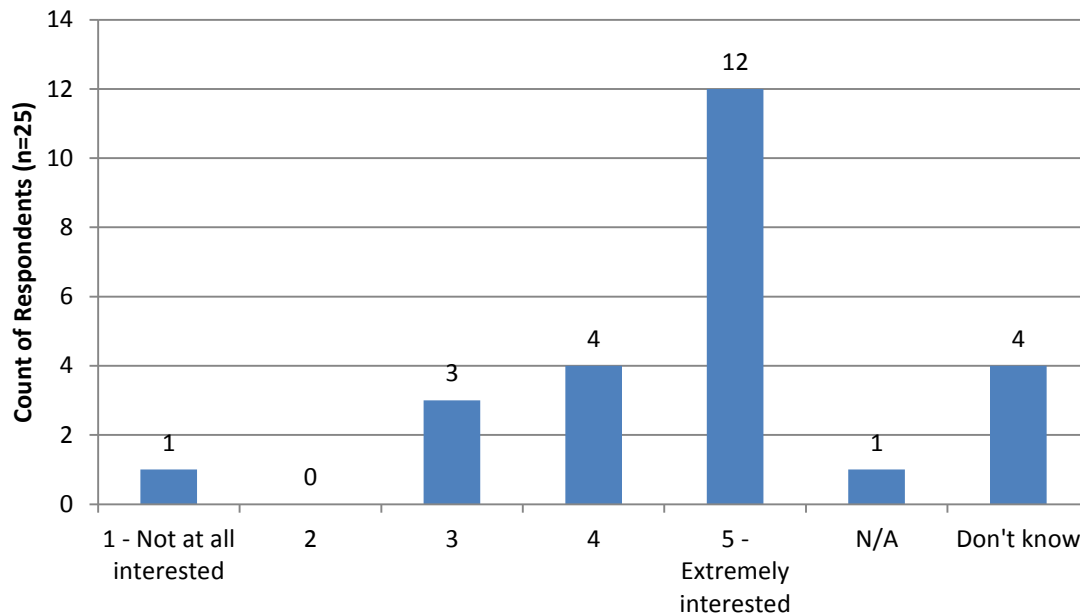


Figure 79 - Interest in the SaveGas program

We were surprised at the high interest reported by nonparticipants in our survey, since EDC reports only about 1 in 20 cold calls translates into a customer taking the next step (i.e., watching the webinar). We do not have sufficient information to give reliable explanations for this discrepancy. One possible reason is that EDC is challenged in its access to decision-makers. Almost two-thirds (30 of 48 non-participant respondents) of non-participants mentioned that corporate managers or owners make decisions about participating in a program, and they were not included in this list of EDC contacts. Another possible reason is that customers may find it difficult to commit to a scheduled webinar that can last anywhere from 10 to 45 minutes.³⁴

7.4.6 Program Satisfaction

When asked a question about their satisfaction with the SaveGas program using a five-point scale, where 1 is “not at all satisfied” and 5 is “extremely satisfied,” eight of the 12 participants (67%) rated their satisfaction with the program as a 4 or 5. One was “somewhat satisfied” and two were not far enough along in the process to feel they could answer accurately. Participants also indicated that they were satisfied with both the installation and the online monitoring system (see Figure 80).

³⁴ The length of the webinar is driven by the amount of interaction of participants, so it is not possible to determine ahead of time how long it will be.

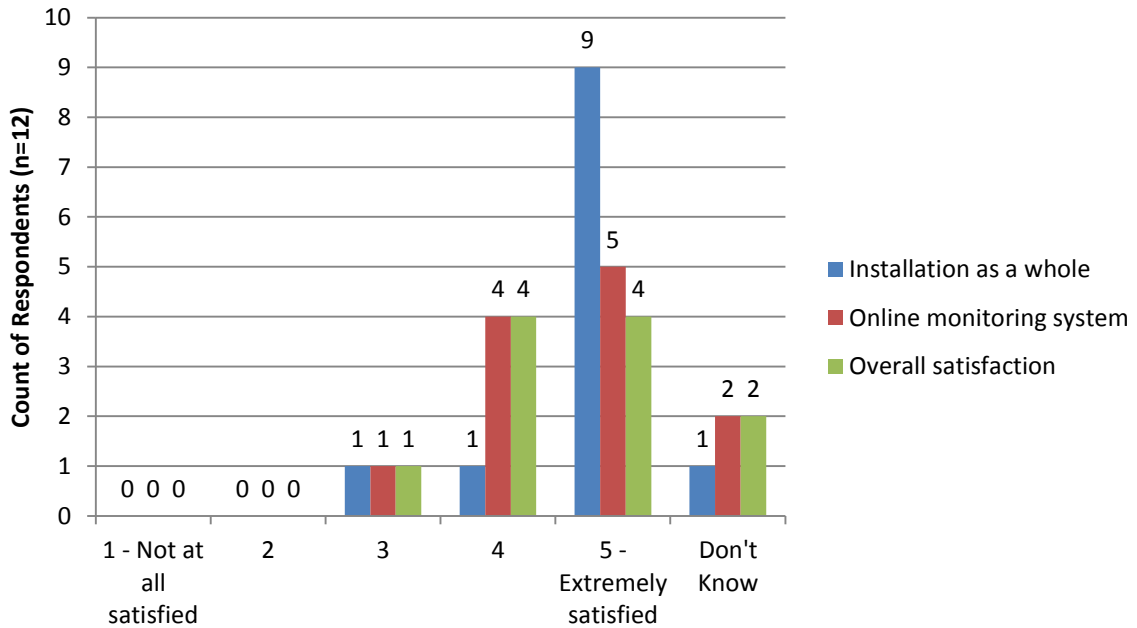


Figure 80 - Participant Satisfaction Ratings

As another positive indicator, all five of the participants who could report on energy savings indicated they saw savings from implementation of the SaveGas monitoring and adjustment system (see Figure 81). Of those, two mentioned saving thousands of dollars monthly and three indicated they saved hundreds of dollars monthly. The rest of the respondents either did not have access to the data (5), or said that it was too early to tell (1).

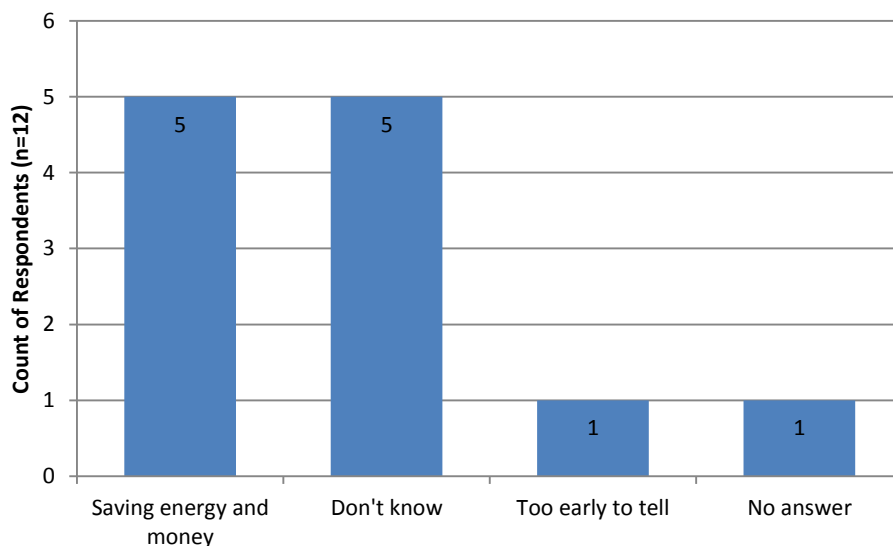


Figure 81 – SaveGas Participants' Reported Gas Saving (in \$) through Program

Additionally, three of 12 participants who had questions about the online monitoring system or problems with boiler sensors said they were “very satisfied” (4 or 5 on the 5-point scale described in the previous paragraph) with EDC’s quick and high-quality technical support. Nine participants reported that program staff generally were either “helpful” or “extremely helpful.” Eight of 12 participants (67%) also indicated that the web presentation was either “helpful” or “extremely helpful.” (See Figure 82).

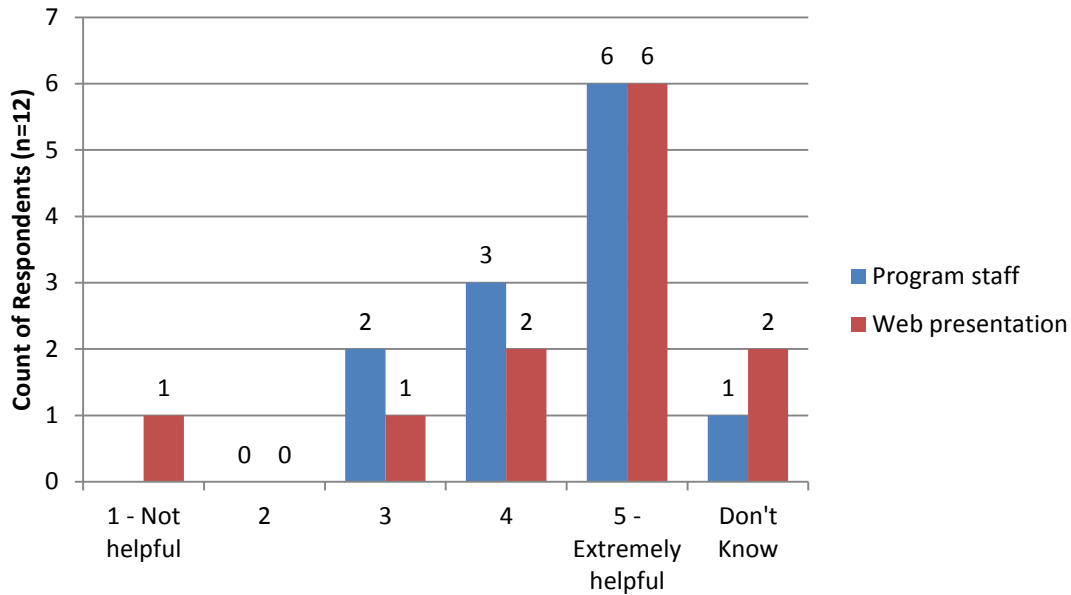


Figure 82 – SaveGas: Helpfulness of EDC program staff and web presentation

7.4.7 Description and Comparison to Best Practices

Overall, the SaveGas Hot Water Control Program is mostly operating according to best practices. Our evaluation of the program indicates that it meets or partially meets 9 of the 14 applicable standards included in our research, and it may meet best practices for 3 other standards. The table below summarizes the program’s comparison to best practices followed by the reasoning for the assessment.

Best Practice	Current
Is the program design effective and based on sound rationale?	Yes
Is the local market well understood?	Maybe
Are responsibilities defined and understood?	Maybe
Is there adequate staffing?	Yes
Are data easy to track and report?	Yes
Are all routine functions automated as practical?	Yes
Does the program manager have a strong relationship with vendors involved in the project?	No
Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?	Yes
Are customers satisfied with the product?	Yes
Is participation simple?	Yes
Are participation strategies multi-pronged and inclusive?	N/A
Does program provide quick, timely feedback to participants?	No
Is participation part of routine transactions?	N/A
Does the program facilitate participation through the use of Internet/electronic means?	Partially
Does the program offer a single point of contact for their customers?	Yes
Are incentive levels well understood and appropriate?	N/A
Does the program use targeted marketing strategies?	Maybe
Are products stocked and advertised?	N/A
Are vendors and utility staff trained to enhance marketing?	No

Figure 83: SaveGas Comparison to Best Practices

1. Program Theory and Design

- a. *Is the program design effective and based on sound rationale? Yes.*
- b. *Is the local market well understood? Maybe.* The third party implementer understands the local market, but they are having difficulty accessing decision-makers for the target market.

2. Program Management

- a. *Are responsibilities defined and understood?* Maybe. Roles and responsibilities are not clear. There are communications breakdowns between SoCalGas and the third party implementer.
- b. *Is there adequate staffing?* Yes. The third party implementer is able to meet staffing needs.

3. Reporting and Tracking

- a. *Are data easy to track and report?* Yes. The savings are collected from billing data.
- b. *Are all routine functions automated as practical?* Yes. Once in place, the hot water control is automated.

4. Quality Control and Verification

- a. *Does the program manager have a strong relationship with vendors involved in the project?* No. The relationship between the program manager and the vendors does not appear strong. This may be partially due to turnover in the program manager position. The current program manager had been in that position a little over one year at the time of this report.
- b. *Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market?* Yes.
- c. *Are customers satisfied with the product?* Yes. Once they get the system in place, customers like the hot water control product.

5. Participation Process

- a. *Is participation simple?* Yes. The third party implementer ensures that participation is simple.
- b. *Are participation strategies multi-pronged and inclusive?* Not Applicable.
- c. *Does program provide quick, timely feedback to participants?* No. Feedback is quick once the system is in place. However, it takes time to get the customers through the initial steps of the program.
- d. *Is participation part of routine transactions?* Not Applicable.
- e. *Does the program facilitate participation through the use of Internet/electronic means?* Partially. There are some web components of the program, such as an online demo of services. The program includes electronic/computer controls of systems. Some parts of the program, especially administration functions, are not online.

- f. *Does the program offer a single point of contact for their customers?* Yes. The third party offers a single point of contact.
- g. *Are incentive levels well understood and appropriate?* Not Applicable.

6. Marketing and Outreach

- a. *Does the program use targeted marketing strategies?* Maybe. Targeting needs to be improved to reach the appropriate decision-makers.
- b. *Are products stocked and advertised?* Not Applicable.
- c. *Are vendors and utility staff trained to enhance marketing?* No. Account executives do not consistently know about the program. Communications between the program manager, account executives, and third party implementer could be improved to enhance marketing.

7.5 CONCLUSIONS AND RECOMMENDATIONS

Overall, the SaveGas program has met 25% of its goals using 22% of its allocated budget. EDC is not overspending for the amount of savings it has achieved, but the program is not meeting its savings goals. Below, we describe four of the most important conclusions and suggest recommendations to address them. In Figure 84, we list all of our conclusions and suggested recommendations.

The “dollar a door” monthly project monitoring fee may be an initial barrier to participation, though EDC staff argue that this becomes less of an issue when they show customers the proposed project’s potential savings. SoCalGas may wish to consider have the marketing department work with the program implementer to develop case studies to illustrate savings to customers, or offer the first month or two of service free or at a reduced cost.

There are continuing challenges to effective coordination between EDC and SoCalGas’s AEs. The evaluation team suggests that SoCalGas work with EDC to develop strategies to improve the coordination between EDC and AEs. Such strategies may include having EDC carry out increased outreach to AEs, notifying AEs about all planned contacts with assigned customers, inviting AEs to attend meetings with customers, and providing AEs with information on the outcome of customer contacts. In particular, EDC might consider notifying AEs of “warm” contacts – assigned customers that have expressed some interest in the program, so that the AEs can be prepared to answer their customers’ questions about the program. In that way, EDC can help support the relationship between AEs and their customers while also promoting the program. Once EDC has gained greater trust and confidence of AEs, it might offer semi-annual SaveGas lunch meetings to inform AEs of ongoing program activities and maintain improved communication.

EDC contacts believed that being able to present SoCalGas-generated program marketing collateral when they approach potential program participants would improve EDC’s credibility in the marketplace. Fast-tracking the development and distribution of program marketing collateral will lend credibility to EDC when they make initial contact with prospective

customers. Some of the success stories presented here (e.g., 10 or of 12 customers believe the program saves them money, high satisfaction levels) could be used for the marketing material.

The low percentage of marketed customers that agree to participate in the webinar is a barrier to success. The percentage possibly could be increased by offering a brief (e.g., three-minute) downloadable or streaming version of the demo, followed by an invitation to participate in the longer webinar.

The following table shows detailed recommendations.

Issue	Issue raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in addressing (H/M/L)	Value in addressing (H/M/L)
Program participation is low, and projected savings not being met	N/A – not evaluated	<ul style="list-style-type: none"> Program may not deliver savings goals 	<ul style="list-style-type: none"> Increasing communication between AEs and EDC Creating a one-page collateral for 3P use 	<ul style="list-style-type: none"> Re-evaluate savings goals to create more accurate estimates for next program cycle Revise contract so that implementer payment depends more on performance (savings achieved), and less on time and materials. Include metrics in contract demonstrating minimum number of sales contacts per quarter, and work to increase success rate per contact (see recommendations below) 	L	M
Hotels do not recall EDC contacting them, despite EDC claiming prior marketing		<ul style="list-style-type: none"> Low participation 		<ul style="list-style-type: none"> Have implementer provide “warm” contacts to SoCalGas AEs, so that AEs can be prepared to answer their customers’ questions about program 	L	M
Poor coordination and communication between 3P and AEs		<ul style="list-style-type: none"> Some potential customers are told not to participate in the program 	<ul style="list-style-type: none"> Increasing communication between AEs and EDC Creating one-page collateral for 3P + AE use 	<ul style="list-style-type: none"> Implementer should notify AEs about all planned contacts with assigned customers, invite AEs to attend, and provide information on outcome of contacts, to build confidence and trust As part of effort to build confidence and trust, implementer should conduct 	M	M

Issue	Issue raised in 06-08 Process Evaluation?	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in addressing (H/M/L)	Value in addressing (H/M/L)
EDC needs more SoCalGas support to be credible to hotels	•	Potential customers do not listen to initial pitch	<ul style="list-style-type: none"> • PM is creating a one-page collateral for 3P + AE use • Increasing communication between AEs and EDC 	<ul style="list-style-type: none"> • bi-annual SaveGas lunch meetings for AEs to advise them of program activities • Continue increasing communication between PM, AEs and 3P implementer • Implementer work with SoCalGas and SDG&E (since same program at both) marketing departments to prepare case studies to show savings. Consider using data gathered here (participant reported bill savings, satisfaction) • Coordinate AE training to reduce miscommunications • Consider having SoCalGas conduct case studies to show savings 	M	M
Low percentage of marketing calls result in webinar viewer	•	Potential customers do not understand how technology works	• None	<ul style="list-style-type: none"> • EDC should consider offering a 3-minute downloadable or streaming video demo (shorter than webinar) 	M	M

Figure 84 – SaveGas Summary of Conclusions and Recommendations

8. APPENDIX: EARLY FEEDBACK MEMO: RECOMMENDED PROGRAMS FOR CRITICAL REVIEW

The evaluation team sent a version of the following early feedback memo to SoCal Gas in August 2011. Names have been removed for this evaluation. **Note this memo was based on preliminary information, so should not be considered with as much weight as the main evaluation findings.**

Although SoCalGas staff did not provide an update on all programs listed here, SoCalGas staff reported that at least some of the issues raised for the Steam Trap and Compressed Air Survey are being addressed. Notably, program staff are considering reducing the goals and budget. Also, program staff report that after completion of the project, there is a wrap up meeting with the customer, contractor and AE to discuss the possibilities of participating in other programs.

MEMORANDUM

To: Rob Rubin, Kevin Shore, Kevin McKinley, Andrew Ytuarte (SoCal Gas)

From: Marian Goebes, Cynthia Austin, Doug Mahone (HMG) and other members of Nonres Process Evaluation Team

Re: **OVERALL STATUS AND RECOMMENDED PROGRAMS FOR CRITICAL REVIEW**

Introduction

The Heschong Mahone Group, Inc. (HMG) team has been contracted to complete a process evaluation of Southern California Gas Company's nonresidential energy efficiency programs. At this stage in the project, the team has conducted preliminary interviews with SoCal Gas staff members, and reviewed program materials, including Program Implementation Plans, program budgets and projected energy savings from the EEGA website. Review findings were used to complete an evaluability assessment for each program.

Based on the preliminary assessment, the team also identified which programs and issues to be included for further project study. Given project budget limitations, some programs will not be included in the project. This memorandum provides information on programs that will not be in the study, but have been flagged as a high priority for SoCal Gas attention. Details on these programs are given below.

Details on programs for critical review

Programs for SoCal Gas Immediate Review (Low level evaluation by HMG Team)

There are several programs that the HMG team is evaluating at a low level. For the low level of evaluation, beyond the preliminary findings presented here, HMG will compare the status of the program with projected savings for the final report. HMG will not follow up on the program review recommendations. We present them here for SoCal gas to pursue.

For these programs, we recommend that SoCal Gas:

- ◆ Review the preliminary findings presented, and confirm that these findings are accurate. HMG emphasizes that our findings are based on limited information.
- ◆ Follow the recommended starting points for program review.

3P-NRes1 – Steam Trap and Compressed Air Survey

2010-2012 Program budget: \$3,176,259

Program implementation stage (Pilot / Design; Early; Mid; Mature): Mid

Projected savings: None (nonresource)

Preliminary findings: Program appears expensive and may not be fulfilling original intent. Also unclear why SoCal Gas is looking at compressed air projects - these are electric. Goals: Evaluate program to decide if it should be discontinued. Evaluate costs and timelines for audits; these are done by an out-of-state implementation contractor, which adds cost and time. New program. They've spent much of their budget, but have not met 2010 or 2011 goals.

Engineering lead may have further information on the program. Also, no integration to funnel audits into core, LGP, and 3rd party programs. Review the potential for the project to ramp up to meet goals set in the PIP. Assess if in-state resources are available to complete both the steam trap and compressed air audits. Follow up on program staff's request (sent May 15, 2011) to implementer for a recovery / ramp up plan. [UPDATED INFO PROVIDED BY PROGRAM STAFF MARCH 2012: The program is currently being reviewed, to consider lowering the goals and budget. The integration to funnel audits to other programs is being done once the audits and final reports are complete: There is a wrap up meeting with the customer, contractor and AE to discuss the possibilities of participating in other programs. Tracking mechanism is a Project Status Report spreadsheet that is reviewed weekly by contractor and program manager.]

Recommendations for review:

- ◆ Follow up on program manager's request to implementer for a recovery / ramp up plan.
- ◆ Review costs and timelines for audits.
- ◆ Assess if in-state resources are available to complete both the steam trap and compressed air audits.

- ◆ Review the potential for the program to ramp up to meet goals set in the PIP. (Performance metrics in the PIP are; 1 - customers contacted 2 - audits completed. Conversion rate should also be captured.) If this does not seem feasible, consider discontinuing program.

3P-Xc01 – Gas Cooling Retrofit

2010-2012 Program budget: \$1,623,716

Program implementation stage (Pilot / Design; Early; Mid; Mature): Mid

Projected savings: 52,613 therms

Preliminary Findings: Despite program implementation for the past five years, the program appears more as early implementation rather than a maturing program. The program has only had one customer in 5 years. The Implementer contractor, Cypress, has a proprietary product that can improve the efficiency of gas cooling equipment. The 1 project is an assigned account that the utility account executive assisted, with since it did not qualify for the Calculated program. Staff reports that contractor keeps sending in invoices monthly that get paid, but no action has been reported. The program is reported on track to achieve savings goals (55,000 therms are reported installed). However, there is no verification, so there is concern that these savings cannot ultimately be claimed. Also, if the program does not recruit more customers, there will be no further savings. The 1 enrolled project was able to achieve the savings goals for this program. So it is possible that, through targeted marketing that brings in another large customer or two, and the addition of a verification procedure, the program could be worth continuing.

Recommendations for review:

- ◆ Interviews with program staff and with implementation contractor contacts. Unlikely value from talking to the 1 participant, but if Cypress has a list of nonparticipants, that would be very useful.
- ◆ Research whether the market is sufficient to support the program. It's estimated that gas cooling is < 1% of statewide gas customers. If it is sufficient, are the program participation barriers something they can change? Program manager reports that management wants to cancel the program and needs some basis for doing this other than inactivity.
- ◆ If program is continued, add verification procedure.

Programs for End-of-Year SoCal Gas Review (Medium/High level evaluation by HMG Team)

The HMG team identified the following programs for major overhaul, which the HMG team will research at a medium to high level. The HMG team will pursue the evaluation goals presented below. SoCal Gas may choose to critically review these programs now, or after the HMG team presents its final report.

Nonresidential Audits – SW-IndC, SW-ComC, SW-AgC

2010-2012 Program budget: Industrial: \$1,909,380; Commercial: \$1,833,302; Agricultural: \$176,521

Program implementation stage (Pilot / Design; Early; Mid; Mature): Mid

Projected savings: None (nonresource)

Preliminary Findings: The nonresidential Audit programs have good potential for feeding customers into core programs, but they are not integrated into the portfolio. The program has been assigned program performance metrics (PPMs). The statuses of these PPMs are uncertain, because the conversion rate is not tracked. The program manager is trying to track this on a separate spreadsheet, but it's unclear how complete this is. There is no clear path for coordinating with or feeding into other programs. The AEs have been focused entirely on the number of audits conducted, not the conversion rate. Program staff are concerned that the audit quality varies, and that it is sometimes low. Engineering staff time may not be well managed – they are often sent into the field for an audit at the request of an AE, with no pre-screening process.

Evaluation goals:

- ◆ Research audit quality
- ◆ Ask for program manager's list of 2010 audits completed, and random sample of audits
- ◆ Research how to integrate audits into resource based programs
- ◆ Estimate conversion rate, identify if there is potential for increasing it.