

# Process Evaluation of the Southern California Gas 2006- 2008 Residential Customer Programs

Final Report

February 15, 2008

**ECONorthwest**

ECONOMICS • FINANCE • PLANNING

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## **Acknowledgements**

This report was prepared by ECONorthwest's Portland office for the Southern California Gas company under the supervision of Rob Rubin. Dr. Stephen Grover was the ECONorthwest project manager for this evaluation and questions regarding the report should be directed to him at [grover@portland.econw.com](mailto:grover@portland.econw.com) or by phoning the Portland office at (503) 222-6060.

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## EXECUTIVE SUMMARY

This report presents the process evaluation results for the 2006-2008 phase of nine Southern California Gas (SCG) residential energy efficiency programs. The evaluation began in April 2007 and concluded in Jan 2008 for the following programs:

- Home Efficiency Rebate Program (Single Family)
- Multi-family Rebate Program
- 3rd Party Mobile Home Program
- Home Energy Efficiency Survey (HEES)
- 3rd Party Chinese Language (CLEO) Program
- 3rd Party PACE Program
- 3rd Party Designed for Comfort Program
- 3rd Party LivingWise Program
- 3rd Party Kiosk Pilot

This evaluation is the work of multiple firms listed below. The individual programs that each firm researched are listed in parenthesis. Evaluation team members include:

- ECONorthwest (HEES, PACE, CLEO, Kiosk)
- Wirtshafter Associates (Home Efficiency)
- Research Into Action (Mobile Home, LivingWise)
- EMI (Multi-family)
- Phil Willems / PWP, Inc (Designed for Comfort)
- Freeman Sullivan (Phone surveys)
- John Stevenson (Survey design)
- Marnie McPhee (Technical editor)

The evaluation tasks were generally the same for each program and are discussed in each of the individual program chapters. Major evaluation tasks included:

- *Logic model and program theory.* A logic model and program theory for each program established a starting point for all evaluation activities. The structure of the logic model that links program activities and expected outcomes is a useful instrument for identifying specific program assumptions that can be tested using a survey or other primary data collection activities.
- *In-depth interviews.* In-depth interviews were conducted with program managers, program implementers, and other key staff members from May to June of 2007. Program staff members helped to gauge program progress, provided valuable insight into daily operations, and proposed research topics to be addressed by the evaluation.

- *Participant surveys.* The primary data collection instrument for all residential programs was participant surveys, fielded over the phone or on-line. The surveys explore the participant experience with program services and address the research issues identified by the logic model and in-depth interviews. Identical question batteries were used across programs so that comparisons could be made on key evaluation metrics. However, each survey also included questions to address the differences across programs in terms of target markets, measures, and implementation approach.
- *Program-specific data collection.* Other key evaluation activities included a review of all available program documents and marketing materials, ride-alongs, interviews with trade allies, and on-site visits with retailers.

## PROGRAM SPENDING AND PROGRESS TOWARD GOALS

Figure ES-1 shows the current progress toward goals for the SCG resource acquisition programs. All data for these charts are taken from the SCG quarterly reports and reflect spending and accomplishments from Q1 2006 through Q3 2007. As shown in Figure ES-1, the vast majority of the therm savings are expected from the Home Energy Efficiency Retrofit program and the Multi-family program. (Over 90 percent of therm savings are expected from these two programs). For all the resource acquisition programs, therm savings are falling well short of goals so far in the 2006-08 program cycle.

**Figure ES-1: Progress Toward 3-Year Therm Savings Goals (Q1 2006 – Q3 2007)**

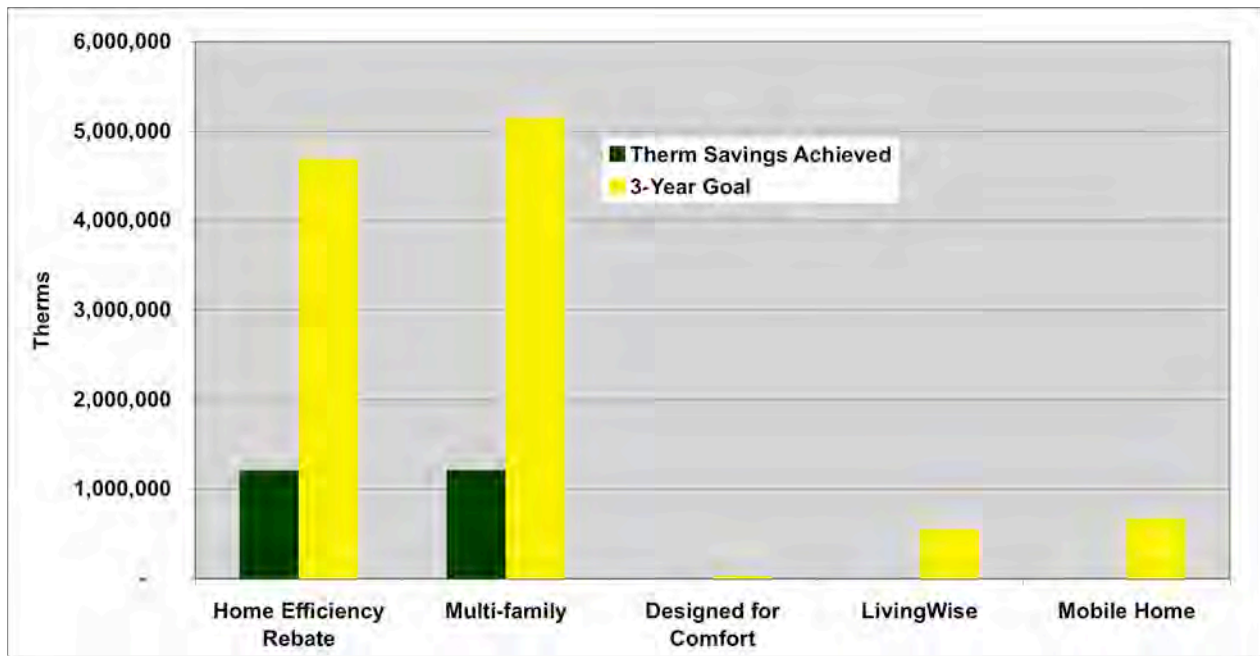
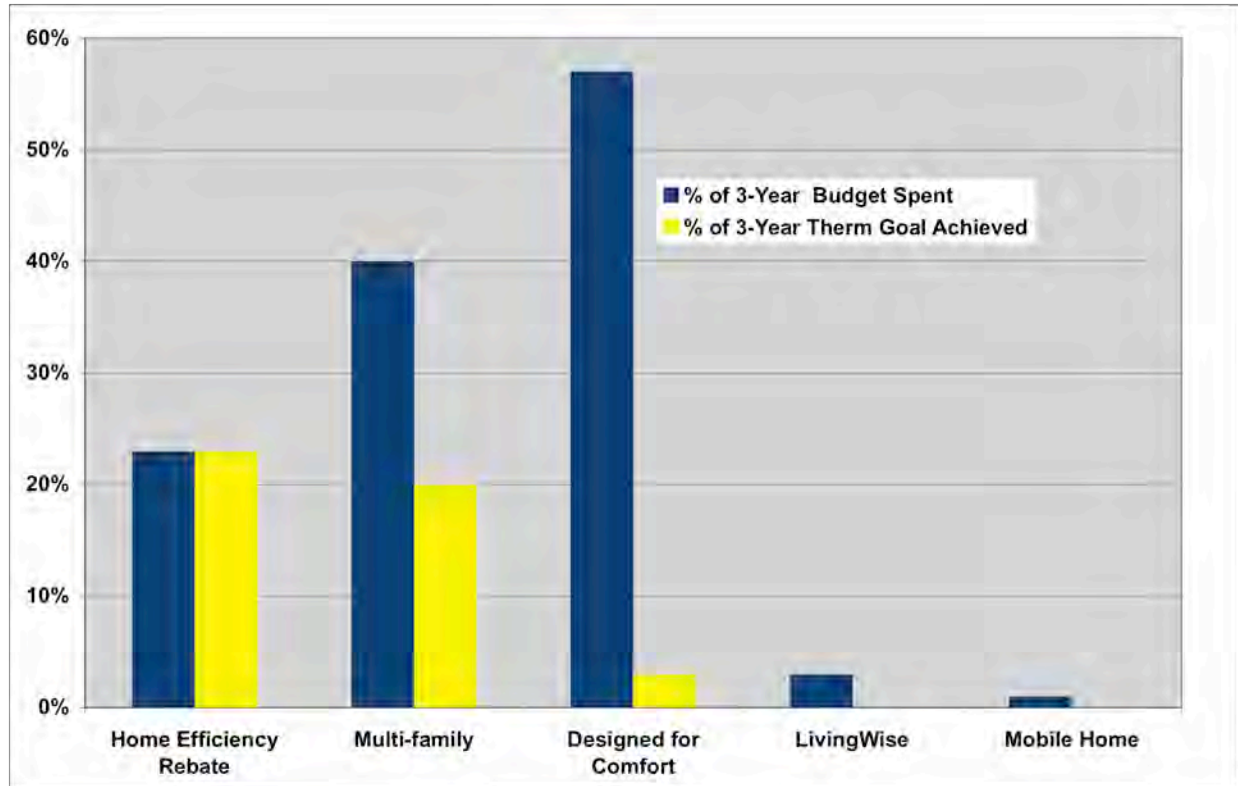


Figure ES-2 shows how program expenditures compare with progress toward savings goals. At this point in the program cycle, we would expect to have at least 50 percent of the program budget spent given that we are over half way through the 2006-08 program cycle. As shown in this graph, all of the programs are currently below the 50 percent mark for spending. This is not surprising given the lagging of therm goals shown in Figure ES-1. However, for the Multi-family

and the Designed for Comfort programs, spending is outpacing progress toward therm goals by a wide margin. Conversely, there has been little spending to date on the LivingWise and Mobile Home programs and neither of these programs has reported any therm savings to date.

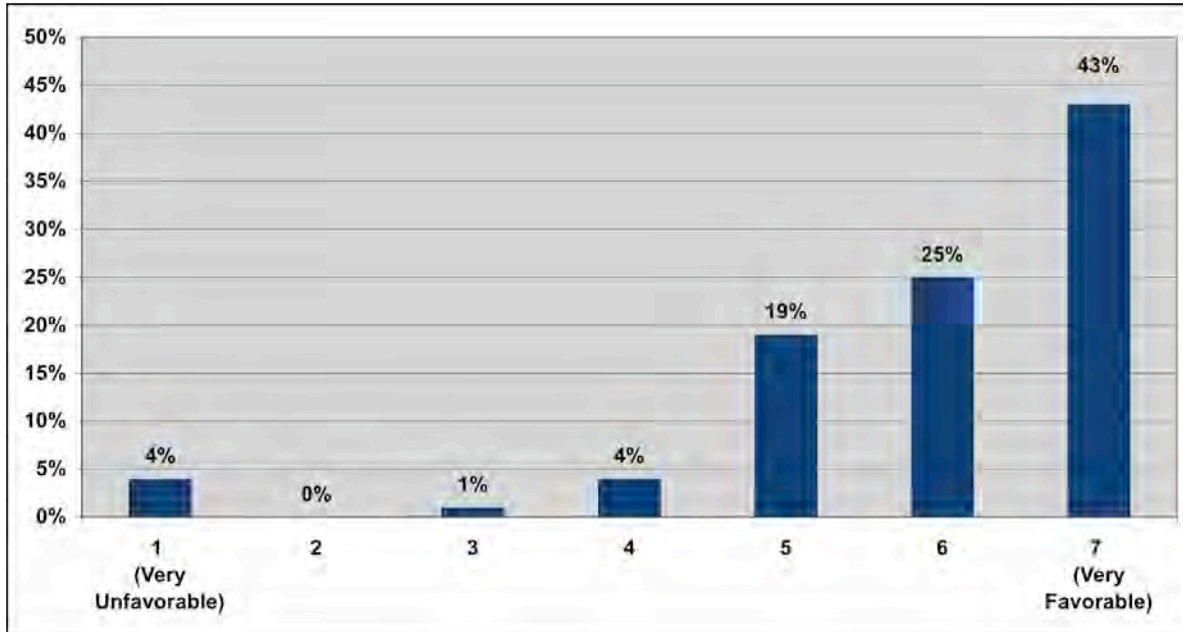
**Figure ES-2: Program Spending and Progress Toward 3-Year Goals (Q1 2006 – Q3 2007)**



### CUSTOMER SATISFACTION WITH SCG

The following graphs show customer satisfaction with SCG. Figure ES-3 shows customer satisfaction with SCG in general based on a 7-point scale where 1 indicates “very dissatisfied” and 7 indicates “very satisfied”. Based on this question, customers are generally satisfied with SCG—43 percent of respondents gave SCG the highest rating (average rating was 5.7).

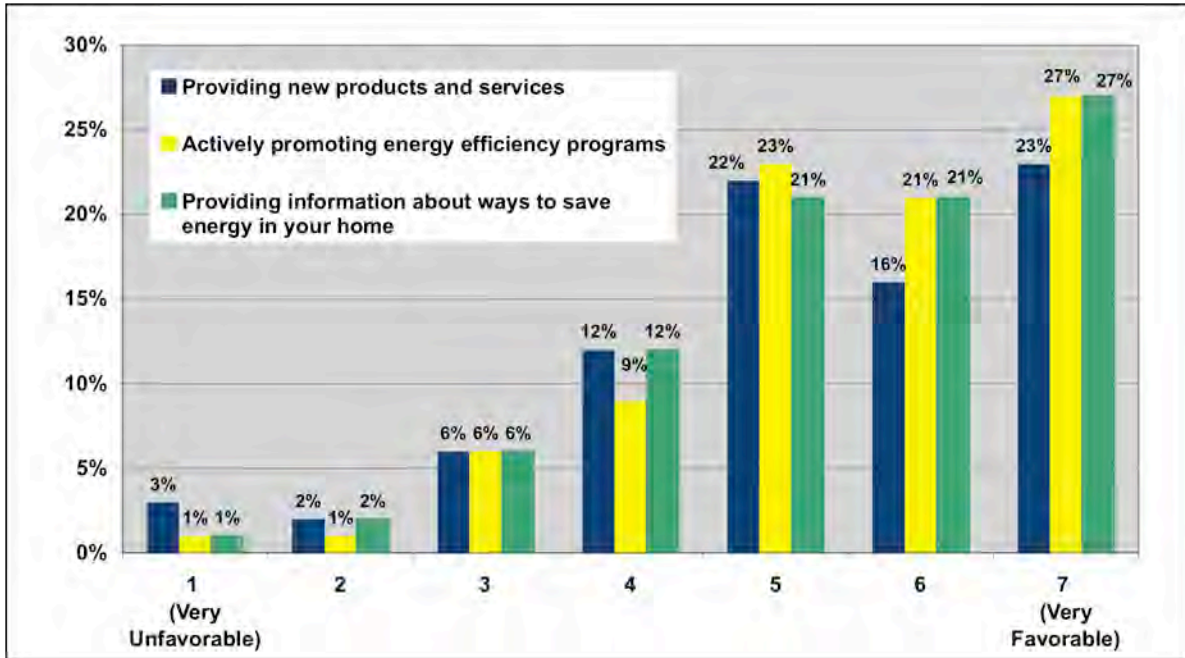
**Figure ES-3: Customer Rating of SCG**



Additional questions were asked regarding satisfaction with specific elements relating to energy efficiency using the same 7-point scale and these results are shown in Figure ES-4. As before, customers were generally satisfied with information and services provided. In terms of providing new products and services, 39 percent provided a rating of 6 or higher with an average rating of 4.4. Similarly, satisfaction with SCG’s promotion of energy efficiency programs received a 6 or 7 rating from 48 percent of respondents and had an average rating of 4.9. Satisfaction with information provided by SCG on ways to save energy received a rating of 6 or higher from 48 percent of respondents with an average rating of 5.0.

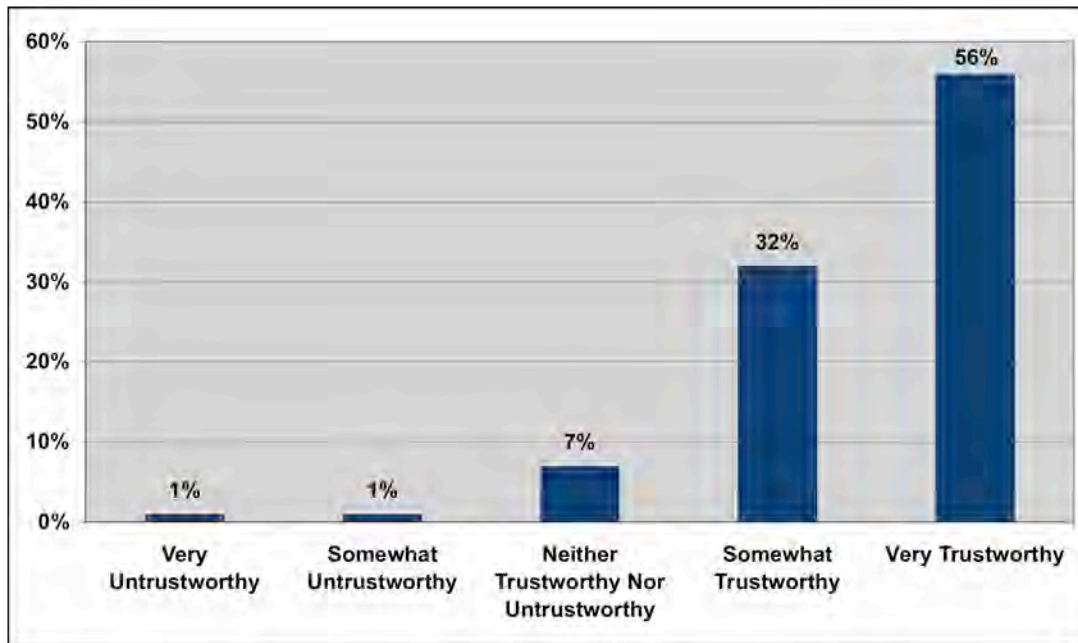


**Figure ES-4: Customer Satisfaction with SCG Services**



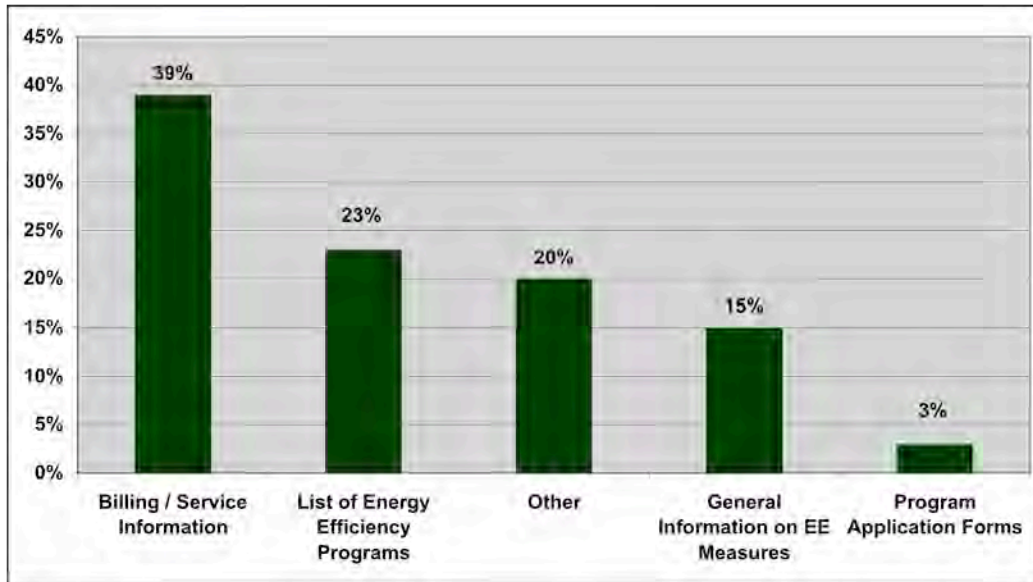
In a related question, customers were also asked about their perception of SCG’s trustworthiness for providing information on energy savings. Customers generally trust information received from SCG, as shown in Figure ES-5, with over half of the customers considering the utility “very trustworthy”.

**Figure ES-5: Customer Perception of SCG Trustworthiness in Providing Energy Savings Information**



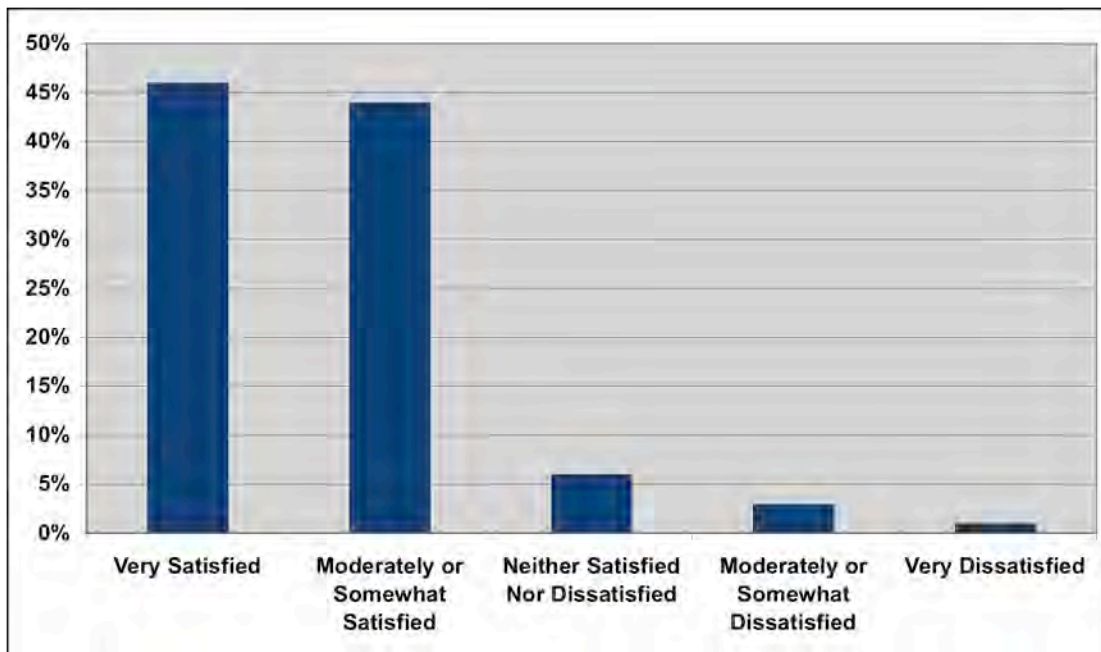
Customers were also asked if they had visited the SCG website for information. Most (82 percent) had not used the website, but those that did were often looking for information on energy efficiency and program opportunities (38 percent). Figure ES-6 shows the various reasons given for using the website.

**Figure ES-6: Reasons for Visiting SCG Website (N=69)**



Of the website users, most were quite satisfied with their experience, as shown in Figure ES-7. The few customers that were dissatisfied indicated that they did not think that the website was very user friendly and did not like having to enter in their account numbers.

**Figure ES-7: Satisfaction with SCG Website**



Finally, all customers surveyed were asked to provide suggestions for new programs or services they would like to see offered by SCG. The vast majority of customers surveyed did not provide any suggestions for additional program offerings and seemed to be satisfied with the services SCG currently provides. The few suggestions received include the following (some of which are already available through existing programs):

- Provide in-home energy audits
- Rebates for solar energy
- More information on energy efficiency and utility programs
- More TV ads educating on energy efficiency
- More rebates

## **ASSESSMENT OF BEST PRACTICES**

This section of the report briefly compares the implementation and performance of the programs with selected best practices that have been established for other similar programs. The California Best Practices Study, which was designed specifically for this purpose, was used as a reference in selecting key indicators or benchmarks for comparison with current SCG program practices. We were able to do the comparison with Best Practices for most of the major SCG program types (e.g. rebate and audit programs). Some of the smaller, more innovative programs such as Kiosk and Designed for Comfort did not align well with the Best Practices study and therefore were not included in the best practices assessment. Additional details on these programs are provided in the program-specific chapters.

### **Single-Family Comprehensive Programs**

The Home Energy Efficiency Rebate Program is consistent with Best Practices in several areas. Importantly, the program provides rebates for a range of energy efficient appliances and home improvements that are attractive to customers. In addition, the target marketing tactics are consistent with program strategies. Customer-driven program tactics (bill inserts, direct mailings, community outreach) successfully drive customers to the program. The program also coordinates with other program campaigns (e.g., Flex Your Power) to further drive participation. Lastly, while manufacturers, retailers, and circuit-rider contractors are largely responsible for driving participation in the program, in-house oversight of program has been retained, and program staff members are actively involved in developing and distributing marketing and rebate materials and educating contractors and retail sales staff on equipment features and energy efficiency benefits.

In theory it should be easy for customers to participate, as only a few participation options are available – point of sale (POS) rebates at some participating stores and rebate applications that are available at non-POS stores and on the utility website. However, the program does not have a good system in place to expedite rebate processing. It is taking four to eight weeks to process applications, which is negatively affecting program participation. Program participation may also be reduced because the on-line applications are lengthy and cannot actually be filled out on-line; they must be printed out, filled in, and then returned as a hard copy.

The Comprehensive Mobile Homes Program is generally adhering to Best Practices. The expectations of the contractor, Synergy, are clearly established and there is no evidence of implementation ambiguity or conflicts. This is likely because the experienced implementer is skilled at writing contracts that work well for them. Target marketing tactics are consistent with the overall program strategies. For example, areas with warmer climates are targeted to drive AC improvements, and local referrals (within the mobile home parks) are emphasized to enhance customer trust and build participation.

The one-stop-shop design makes it easy for customers to participate, and customer satisfaction is tracked. The package of measures and services is attractive to customers, and is adjusted as needed to improve customer satisfaction and meet SCG savings goals. Popular measures are packaged with equipment and services that otherwise would not be requested or self-installed. The program also provides ongoing training of contracted technicians, recognizing that there have been staffing deficits in past.

Program improvements may be needed in other areas, however. Although the mobile homes market is very unique, SCG has done very little to leverage other local programs and campaigns (e.g., energy fairs), which is recommended as a Best Practice. This is due in part to the fact that Southern California Edison (SCE) is the lead for this program. The marketing materials/messages do not explicitly equate greater energy efficiency with home improvement, although they do promote the results as making the home less costly to operate. While Synergy obtains comprehensive and real-time data that could be used for systematic analysis, we did not confirm what data SCG receives or how it is used. Lastly, the PM function has largely been outsourced to the contractor. Although this is often not advisable, in this case it seems to be a good thing as Synergy is very experienced and has a strong track record of delivering savings and running their programs well. That said, it would be good for SCG staff to increase its involvement by visiting with Synergy staff more and doing some field visits with them (or have evaluators conduct regular field visits).

## **Multi-Family Comprehensive Programs**

In accordance with Best Practice recommendations, the Multi-Family Energy Efficiency Rebate program does collect information on many aspects of multi-family buildings (complex and unit level data, units treated/untreated, measures information) via the rebate application forms, although this collection process—a 10-page application—has also stifled participation (discussed subsequently). The program has also successfully built relationships with firms responsible for equipment installations, operations, and maintenance. Program contractors communicate relatively regularly with utility staff and other contractors to stay informed about the rebate program.

The Multi-Family program offers a range of eligible measures that collectively support a whole-building approach to (potentially) achieve maximum energy savings. Presumably, the program uses a database of multi-family property information to track the customer population and identify project candidates, as the program is primarily marketed through periodic mailings to multi-family property owners and managers, with some outreach to apartment associations. (Despite this, however, most property owners and managers continue to learn about the program through installation contractors.)

In other areas, the program is not adhering to Best Practices. From a design standpoint, rebates for the most popular measures (e.g., boiler controllers) are not tied to measures that are less likely to be considered and installed. Customers are free to pick and choose measures, leading to high customer satisfaction, but lower realized savings. The program also has no strategic marketing plan, which is particularly important for reaching a market characterized by many different decision-makers. While the program does offer a single point of contact to ease customer participation via the on-line rebate forms, many participating customers still require utility staff assistance to complete the long and detailed forms, and the forms deter some would-be participants.

Property owners and managers also reported that they desire better ongoing communications with program staff, and that the utility could provide more support throughout the project lifecycle. Lastly, the current tracking and reporting system design does not fully address the program's information and data needs. Despite the long and detailed rebate application, program staff said it is still difficult to find specific information about participating properties and customers, which is information that would aid program planning.

## **Residential Audit Programs**

In most areas, the Home Energy Efficiency Survey (HEES) program is consistent with best practices. For example, the program operates through a single prime contractor, KEMA, to deliver all survey modes (on-line, mail-in, in-home) and the marketing materials and surveys are multi-lingual to reach a wide customer base. For the mail-in mode, the paper survey is provided along with the advertisement.

Furthermore, the survey results flow seamlessly into the adoption of energy efficiency measures. From the survey results, participants can learn about their energy and water usage, receive recommendations on how to be more energy efficient, and access appropriate energy efficiency programs that enable them to execute the recommended measures. In addition, the survey tool packages popular behavioral tips (such as installing CFLs) along with less-common measures, such as replacing larger appliances with energy efficient models. The survey recommendations span a wide variety of appliances and the free incentive kit (low-flow showerhead and three aerators) provided to all participants ensures that most surveys lead to at least some energy savings.

There are some areas, however, where the HEES is not conforming to Best Practices. The HEES program does not track customer satisfaction, what measures the participant has implemented as a result of the survey, or what other energy efficiency programs the participant has joined as a result of the survey (metrics addressed by this process evaluation). A follow-up call system is not in place to verify what measures have been installed. Without a comprehensive tracking database, it is difficult to assess if the program is effective and what can be done to improve the survey design.

## **RESIDENTIAL PORTFOLIO-LEVEL OBSERVATIONS AND RECOMMENDATIONS**

Based on the combined evaluation of the SCG residential programs, we offer the following recommendations for the overall portfolio. Additional program-specific recommendations are provided in the individual program evaluation chapters.

- **There does not appear to be a large savings potential remaining in the residential sector.** Due in part to the aggressive promotion of conservation by SCG and other utilities, customers have already accomplished a significant amount of savings. While examining savings potential was not a primary focus for this evaluation, the customer surveys indicate that most of the gas appliances are relatively new (less than 10 years old) and therefore have less potential than older appliance vintages.
- **Simplify rebate application process.** As discussed for the single family and multi-family programs, the current rebate form is too long and complicated, which will discourage customers from participating. The length of time and processing costs for the rebate applications are also issues that are hampering the success of these programs. SCG should continue to recruit stores to participate in the point-of-sale rebate process. Furthermore, SCG should develop a method for completing the rebate form on-line using a simpler form that is less demanding on the applicant.
- **Increase the use of the SCG website to promote programs and simplify the application process.** Customers that visit the SCG website are often looking for information on the efficiency programs and/or accessing rebate application forms. Customers also view SCG as a trustworthy source of information regarding energy conservation and are generally satisfied with the utility and its efforts to promote energy conservation information and programs. Increasing reliance on the website could ultimately reduce the costs of implementing these programs, particularly if the rebate application process is automated and available on-line through the SCG website.
- **Improve tracking of audit programs.** SCG can potentially claim savings for its audit programs (such as HEES) if activities are tracked more thoroughly and the utility follows up with HEES participants on actions taken as a result of the audit. For programs such as CLEO and PACE that focus on non-English speaking customers, applications should be provided in-language and then tracked to determine if these outreach events are resulting in increased participation among the non-English speaking customers. Increased tracking and documentation of conservation actions that are a direct result of the audit could ultimately be included in SCG's savings claim for the residential portfolio. (The lack of tracking and documentation for these programs currently prohibits claiming savings for the HEES program and for outreach activities done through CLEO and PACE.

# 1. INTRODUCTION

## 1.1 EVALUATION OVERVIEW

This report presents the process evaluation results for the 2006-2008 phase of nine Southern California Gas (SCG) residential energy efficiency programs. The evaluation began in April 2007 and concluded in Jan 2008 for the following programs:

- Home Efficiency Rebate Program (Single Family)
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- EMI (Multi-family)
- Phil Willems / PWP, Inc (Designed for Comfort)
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The evaluation tasks were generally the same for each program and are discussed in each of the individual program chapters. Major evaluation tasks included:

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- *In-depth interviews.* In-depth interviews were conducted with program managers, program implementers, and other key staff members from May to June of 2007. Program staff members helped to gauge program progress, provided valuable insight into daily operations, and proposed research topics to be addressed by the evaluation.
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programs so that comparisons could be made on key evaluation metrics. However, each survey also included questions to address the differences across programs in terms of target markets, measures, and implementation approach.

- *Program-specific data collection.* Other key evaluation activities included a review of all available program documents and marketing materials, ride-alongs, interviews with trade allies, and on-site visits with retailers.

The remainder of this report is organized as follows. The following section presents a discussion of evaluation issues and findings that relate to the entire SCG residential program portfolio. Following this are separate chapters that present detailed evaluation results for each of the residential programs covered in this evaluation. An appendix contains the data collection instruments employed for each program. Note that two programs (LivingWise and Kiosk) did not have significant program activity that could be studied during the evaluation period. As a result, these chapters are limited to presenting the program logic and theory and suggesting research issues that might be addressed in future evaluations.

## **2. PORTFOLIO ANALYSIS**

This section of the report discusses over-arching evaluation issues that cut across all of the residential programs. As part of this portfolio analysis, we first examined program expenditures and progress toward savings goals for the resource acquisition programs.

### **2.1 PROGRAM SPENDING AND PROGRESS TOWARD GOALS**

Figure 1 shows the current progress toward goals for the SCG resource acquisition programs. All data for these charts are taken from the SCG quarterly reports and reflect spending and accomplishments from Q1 2006 through Q3 2007. As shown in Figure 1, the vast majority of the therm savings are expected from the Home Energy Efficiency Retrofit program and the Multi-family program. (Over 90 percent of therm savings are expected from these two programs). For all the resource acquisition programs, therm savings are falling well short of goals so far in the 2006-08 program cycle.



**Figure 1: Progress Toward 3-Year Therm Savings Goals (Q1 2006 – Q3 2007)**

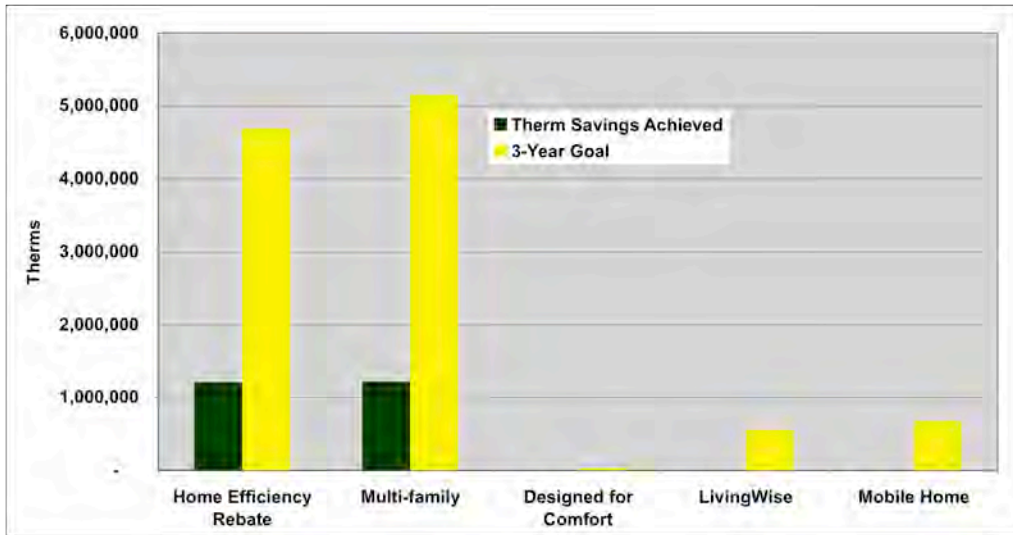
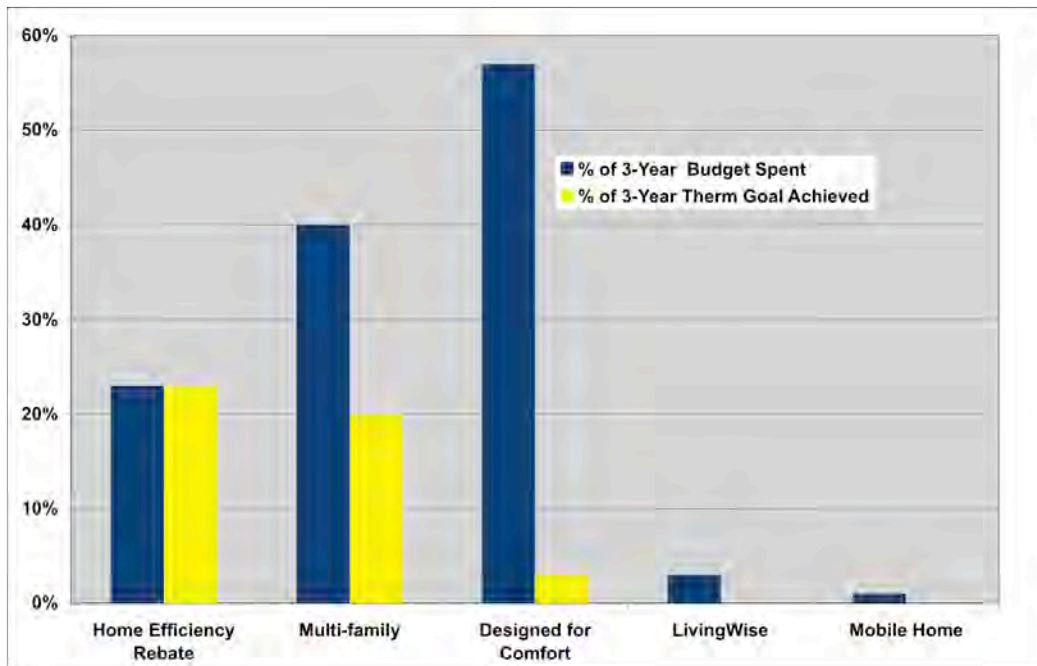


Figure 2 shows how program expenditures compare with progress toward savings goals. At this point in the program cycle, we would expect to have at least 50 percent of the program budget spent given that we are over half way through the 2006-08 program cycle. As shown in this graph, all of the programs are currently below the 50 percent mark for spending. This is not surprising given the lagging of therm goals shown in Figure 1. However, for the Multi-family and the Designed for Comfort programs, spending is outpacing progress toward therm goals by a wide margin. Conversely, there has been little spending to date on the LivingWise and Mobile Home programs and neither of these programs has reported any therm savings to date.

**Figure 2: Program Expenditures and Progress Toward 3-Year Goals (Q1 2006 – Q3 2007)**



The remainder of this evaluation report is devoted to exploring the various factors that are contributing to the individual programs' low levels of savings. Additionally, we have also examined data from a variety of sources to determine industry best practices and customer preferences for energy efficiency and what they desire in an energy efficiency program. Based on this information, we have developed several recommendations that we believe will improve the SCG residential program portfolio.

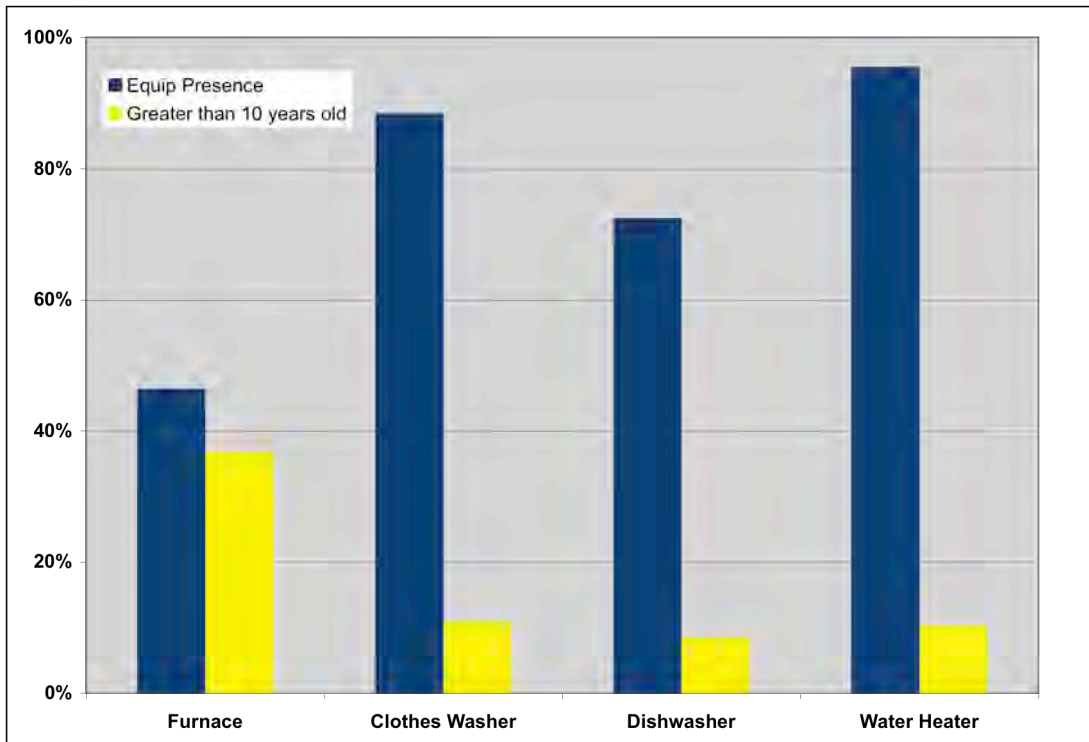
## **2.2 ENERGY SAVINGS POTENTIAL AND CUSTOMER SATISFACTION WITH SCG**

### **Energy Savings Potential**

In all the phone surveys conducted for this evaluation (involving both program participants and nonparticipants), a battery of questions was asked to help identify possible areas where additional saving might be obtained. While customer perception of energy savings potential may not be accurate, they do provide a general indication of potential savings areas that SCG may wish to investigate further. Note that these questions were only asked to provide very general information on appliance holdings to identify any remaining potential areas for therm savings that are being missed by the current programs. As this is a process evaluation (and not an impact evaluation), we did not conduct an in-depth analysis of savings potential.

Figure 3 shows the percentage of respondents that have various equipment holdings that are potential areas for gas savings. While the majority of SCG customers have clothes washers, dishwashers, and water heaters (as shown by the blue bar), few of these customers own models that are greater than 10 years old (shown in the yellow bar). For example, while over 90 percent of customers indicated that they had a water heater, less than 10 percent of these same customers said that their water heater was more than 10 years old. Since most of these appliances are relatively new, they are less likely to present large, untapped opportunities for therm savings.

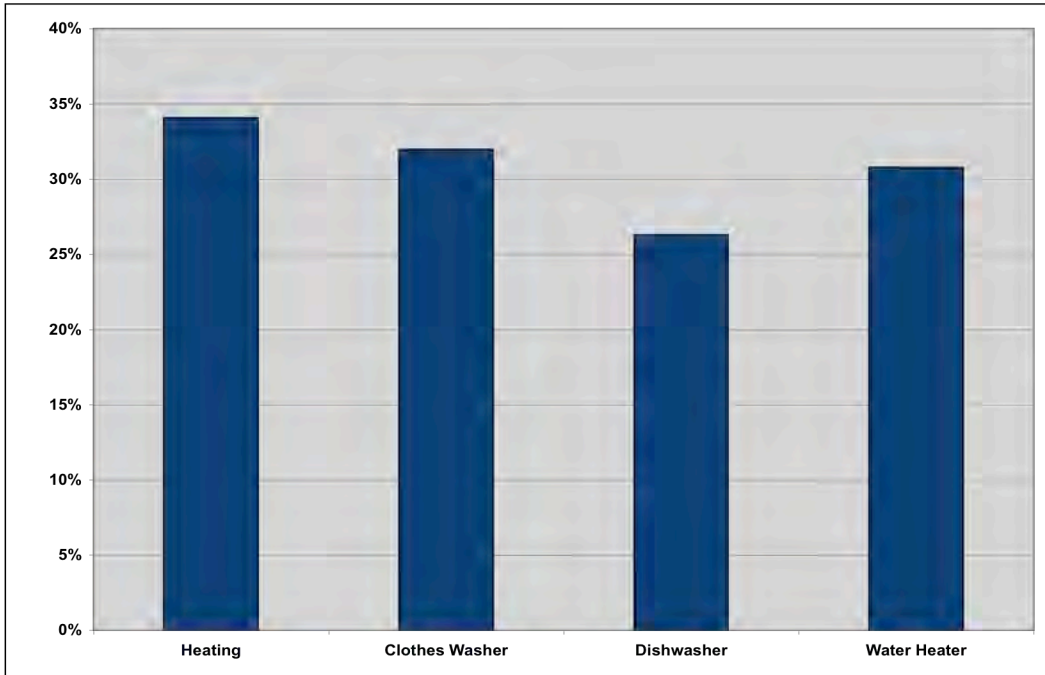
**Figure 3: Equipment Holdings and Age**



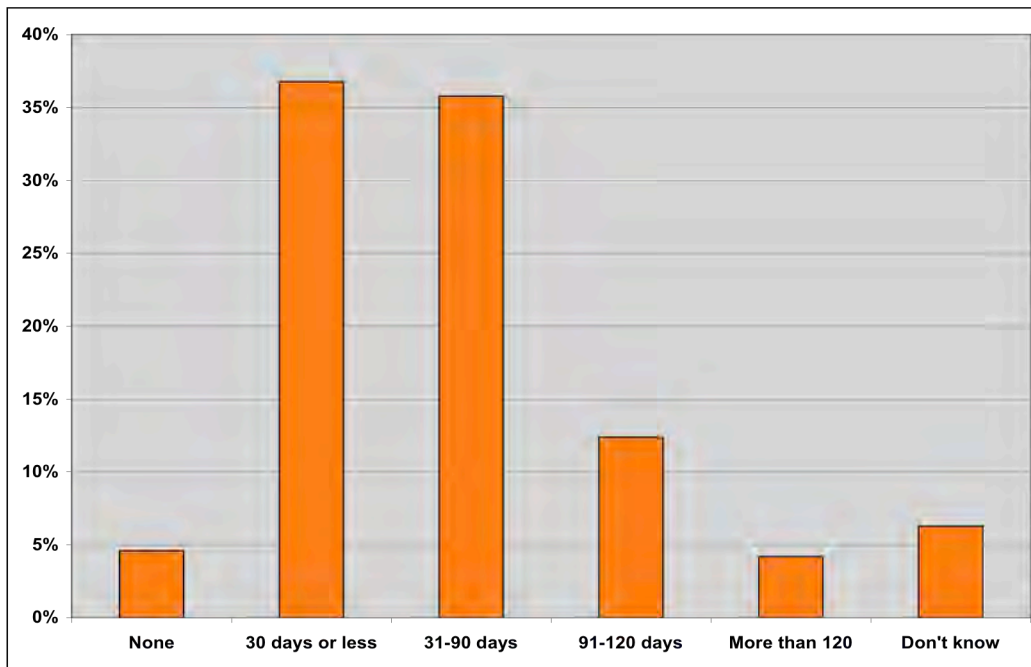
Customers were also asked to provide their own opinion on whether their appliances presented an opportunity for energy savings. As shown in Figure 4, about a third of respondents in each case felt that there was a “high” level of opportunity for savings for these appliances. As discussed in Home Energy Efficiency Rebate chapter, there is also potential for savings with clothes washers, as there are additional rebates available to customers through their water and electricity utilities. The presence of multiple rebates does make the attribution of savings more challenging, however.

Among these appliances, heating was considered to have the greatest potential for savings, with 34 percent of respondents rating their heating system with a high level of energy savings potential. Figure 5 shows the amount of time customers are generally using their heating systems during the winter months. As Figure 5 indicates, three-quarters of the respondents use their heating system less than 90 days a year. This low level of use limits the overall saving potential that SCG can realize from heating-based efficiency initiatives.

**Figure 4: “High” Energy Savings Potential by Appliance  
(As Reported by Respondent)**



**Figure 5: Level of Furnace Use**

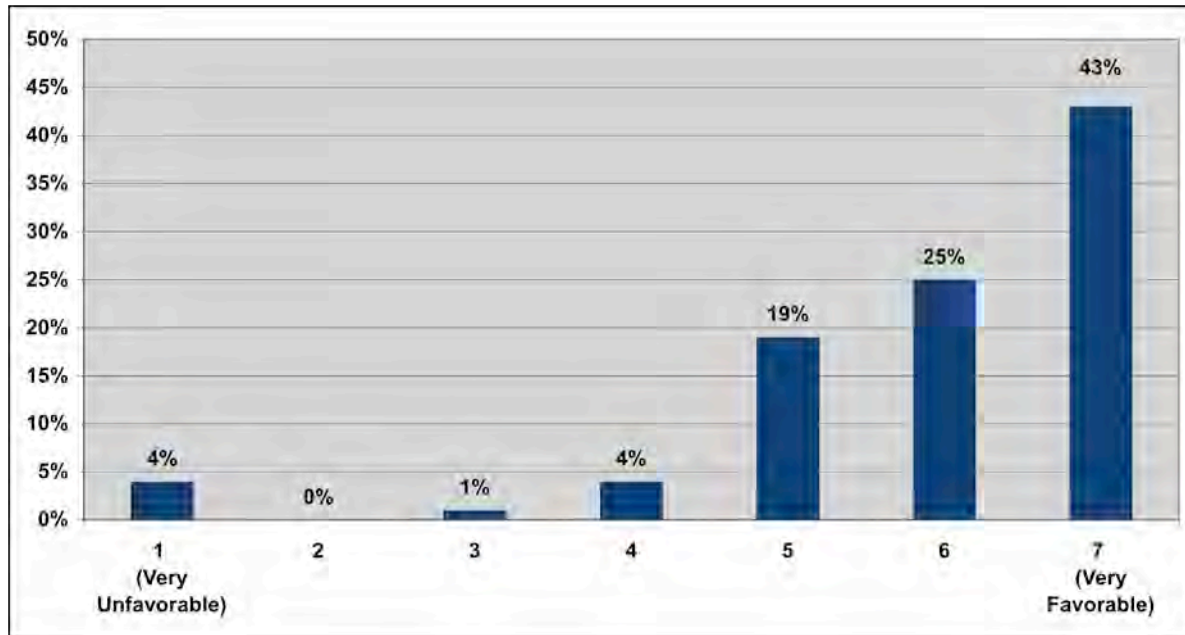


### Customer Satisfaction with SCG

The following graphs show customer satisfaction with SCG. Figure 6 shows customer satisfaction with SCG in general based on a 7-point scale where 1 indicates “very dissatisfied”

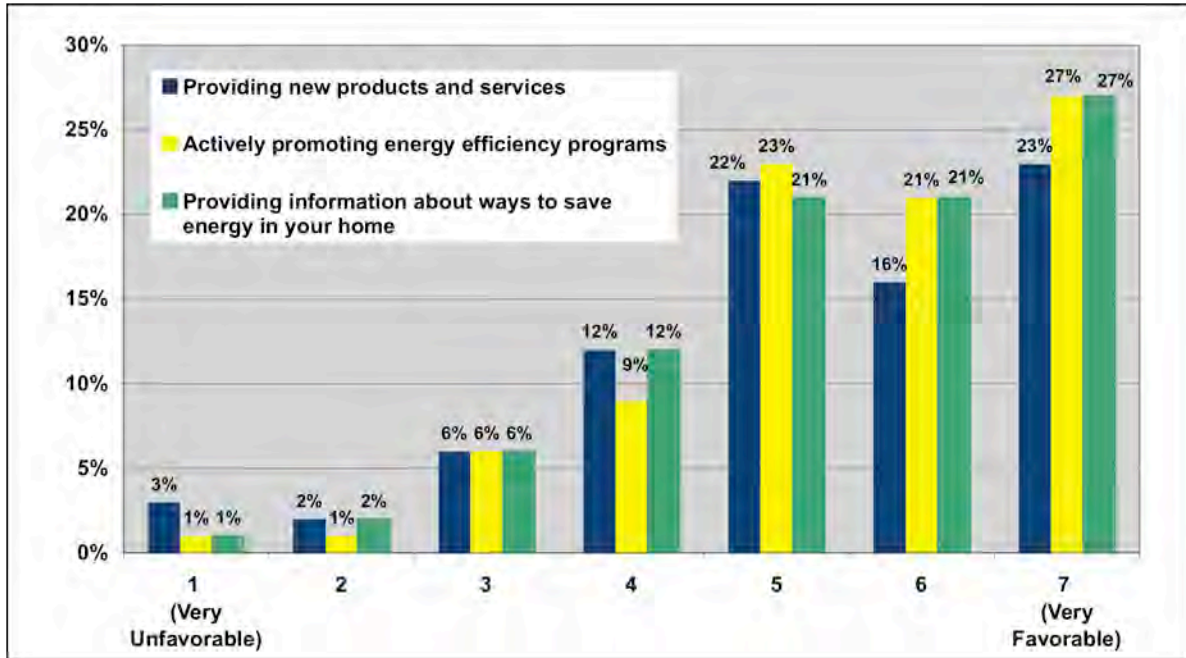
and 7 indicates “very satisfied”. Based on this question, customers are generally satisfied with SCG—43 percent of respondents gave SCG the highest rating (average rating was 5.7).

**Figure 6: Customer Rating of SCG**



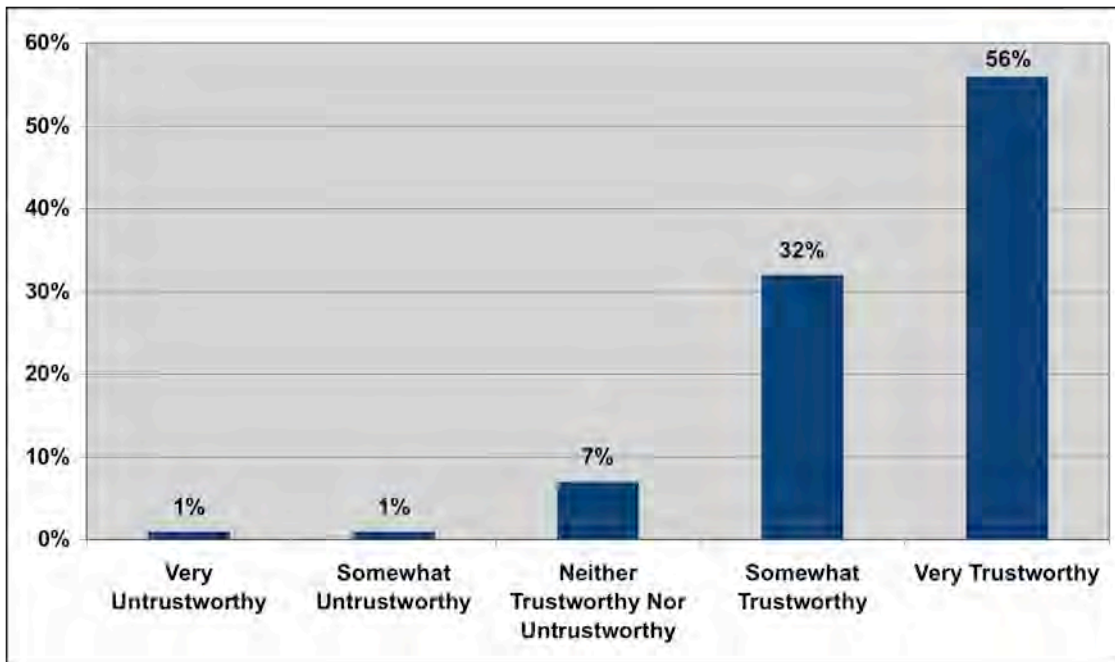
Additional questions were asked regarding satisfaction with specific elements relating to energy efficiency using the same 7-point scale and these results are shown in Figure 7. As before, customers were generally satisfied with information and services provided. In terms of providing new products and services, 39 percent provided a rating of 6 or higher with an average rating of 4.4. Similarly, satisfaction with SCG’s promotion of energy efficiency programs received a 6 or 7 rating from 48 percent of respondents and had an average rating of 4.9. Satisfaction with information provided by SCG on ways to save energy received a rating of 6 or higher from 48 percent of respondents with an average rating of 5.0.

**Figure 7: Customer Satisfaction with SCG Services**



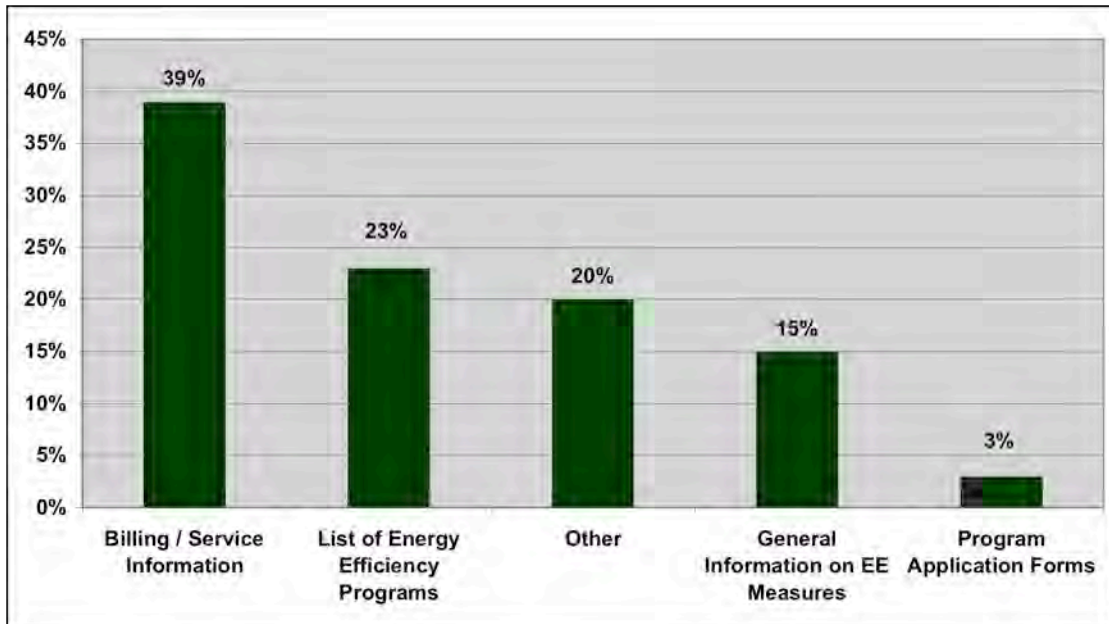
In a related question, customers were also asked about their perception of SCG’s trustworthiness for providing information on energy savings. Customers generally trust information received from SCG, as shown in Figure 8, with over half of the customers considering the utility “very trustworthy”.

**Figure 8: Customer Perception of SCG Trustworthiness in Providing Energy Savings Information**



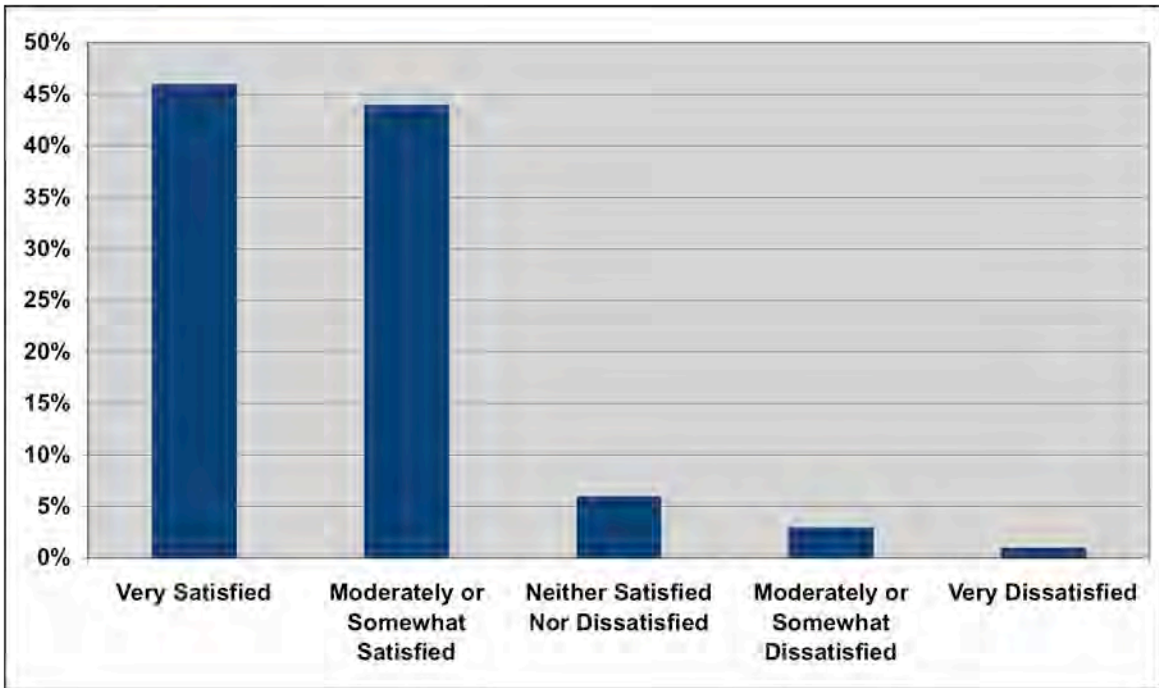
Customers were also asked if they had visited the SCG website for information. Most (82 percent) had not used the website, but those that did were often looking for information on energy efficiency and program opportunities (38 percent). Figure 9 shows the various reasons given for using the website.

**Figure 9: Reasons for Visiting SCG Website (N=69)**



Of the website users, most were quite satisfied with their experience, as shown in Figure 10. The few customers that were dissatisfied indicated that they did not think that the website was very user friendly and did not like having to enter in their account numbers.

**Figure 10: Satisfaction with SCG Website**



Finally, all customers surveyed were asked to provide suggestions for new programs or services they would like to see offered by SCG. The vast majority of customers surveyed did not provide any suggestions for additional program offerings and seemed to be satisfied with the services SCG currently provides. The few suggestions received include the following (some of which are already available through existing programs):

- 1) Provide in-home energy audits
- 2) Rebates for solar energy
- 3) More information on energy efficiency and utility programs
- 4) More TV ads educating on energy efficiency
- 5) More rebates

### **2.3 RESIDENTIAL PORTFOLIO-LEVEL OBSERVATIONS AND RECOMMENDATIONS**

Based on the combined evaluation of the SCG residential programs, we offer the following recommendations for the overall portfolio. Additional program-specific recommendations are provided in the individual program evaluation chapters.

- **There does not appear to be a large savings potential remaining in the residential sector.** Due in part to the aggressive promotion of conservation by SCG and other utilities, customers have already accomplished a significant amount of savings. While examining savings potential was not a primary focus for this evaluation, the customer



surveys indicate that most of the gas appliances are relatively new (less than 10 years old) and therefore have less potential than older appliance vintages.

- **Simplify rebate application process.** As discussed for the single family and multi-family programs, the current rebate form is too long and complicated, which will discourage customers from participating. The length of time and processing costs for the rebate applications are also issues that are hampering the success of these programs. SCG should continue to recruit stores to participate in the point-of-sale rebate process. Furthermore, SCG should develop a method for completing the rebate form on-line using a simpler form that is less demanding on the applicant.
- **Increase the use of the SCG website to promote programs and simplify the application process.** Customers that visit the SCG website are often looking for information on the efficiency programs and/or accessing rebate application forms. Customers also view SCG as a trustworthy source of information regarding energy conservation and are generally satisfied with the utility and its efforts to promote energy conservation information and programs. Increasing reliance on the website could ultimately reduce the costs of implementing these programs, particularly if the rebate application process is automated and available on-line through the SCG website.
- **Improve tracking of audit programs.** SCG can potentially claim savings for its audit programs (such as HEES) if activities are tracked more thoroughly and the utility follows up with HEES participants on actions taken as a result of the audit. For programs such as CLEO and PACE that focus on non-English speaking customers, applications should be provided in-language and then tracked to determine if these outreach events are resulting in increased participation among the non-English speaking customers. Increased tracking and documentation of conservation actions that are a *direct* result of the audit could ultimately be included in SCG's savings claim for the residential portfolio. (The lack of tracking and documentation for these programs currently prohibits claiming savings for the HEES program and for outreach activities done through CLEO and PACE.)

The remainder of this report provides program-specific evaluation findings. At the end of each chapter, we discuss how each residential program is doing relative to industry best practices as described in the California Best Practices Study.<sup>1</sup>

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<sup>1</sup> Practices for Energy Efficiency Programs “Best Practices Self-Benchmarking Tool” (<http://www.eebestpractices.com/>)

### **3. HOME ENERGY EFFICIENCY REBATE (HEER) PROGRAM RESULTS**

#### **3.1 HEER PROGRAM BACKGROUND**

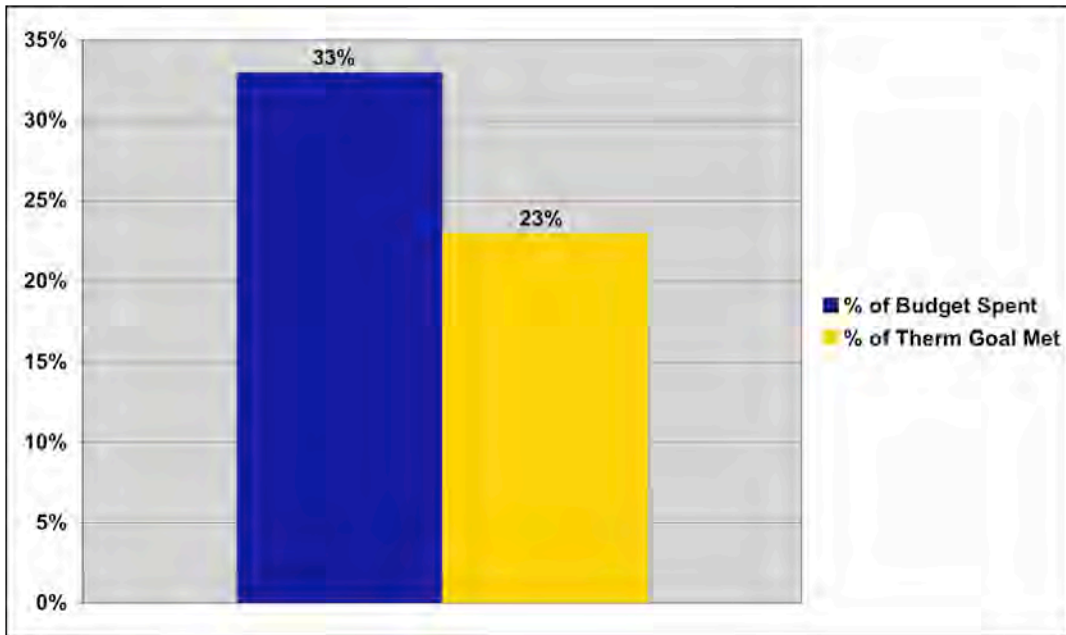
The Home Energy Efficiency Rebate Program (HEER) offers rebates on energy efficiency appliances and home improvements, including refrigerators, dishwashers, water heaters, gas furnaces, room air conditioners, whole-house fans, insulation, and pool pumps and timers that have been purchased at retail stores or installed by contractors. In most cases, the customer must submit a rebate application to SCG. The statewide program has initiated a coordinated effort to convince large stores to offer instant point-of-sale (POS) rebates. Over the past few months, the program has increased the number of participating stores, which now includes 12 chains and single stores, particularly Home Depot, Costco, and Dewey's.

Manufacturers, retailers, and contractors largely are responsible for driving participation in the HEER program, so a key activity is to establish partnerships with these entities. Specifically, the HEER staff assists retailers and manufacturers with in-store marketing materials and POS rebates and incentives for certain energy efficiency equipment. In addition, the program educates sales personnel about HEER resources. The program also teaches contractors about using the incentives as a sales tool.

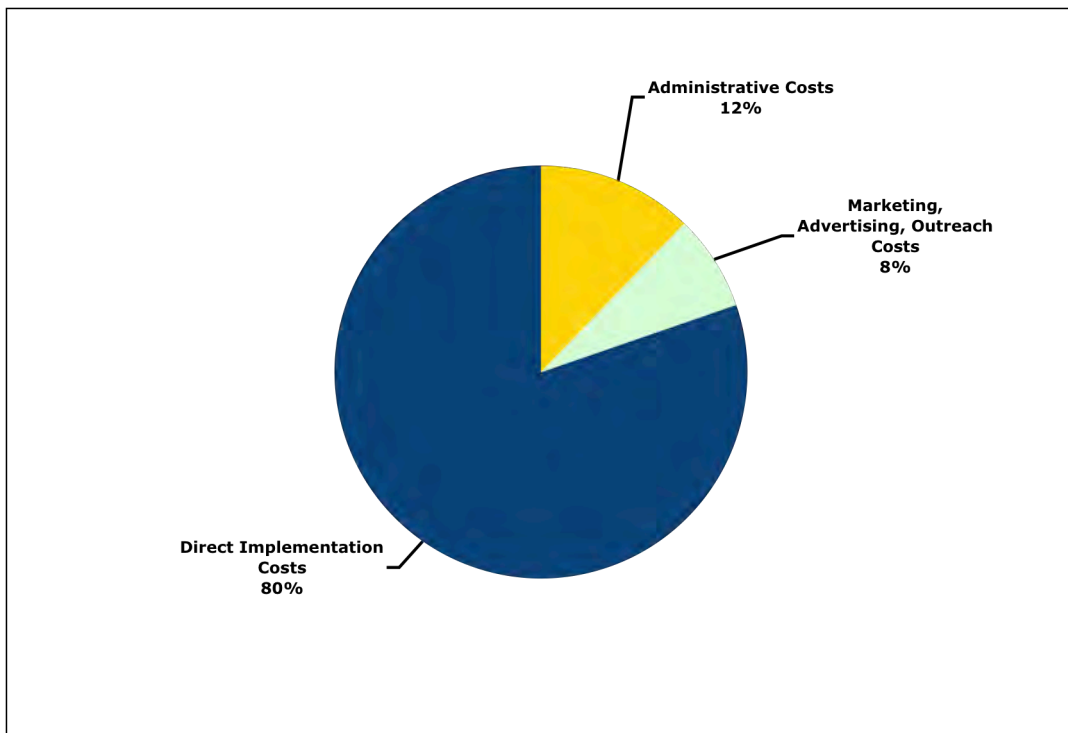
HEER staff develops and distributes marketing materials aimed at increasing homeowners' and renters' awareness of the program. Marketing efforts include bill inserts, community outreach, and direct mailings. The program also coordinates marketing efforts with manufacturers, distributors, and contractors to provide POS signs. In addition, HEER may coordinate with other energy efficiency programs and marketing campaigns, such as Flex Your Power, to promote the program.

Figure 11 shows the HEER program progress toward 2006-08 goals and budget expenditures as of Q3 2007. At the time of this report, the HEER program is falling well short of its therm savings goal and has spent only one-third of its three-year budget.

**Figure 11: HEER Program Progress Toward Goals and Expenditures (Q1 2006 - Q3 2007)**



**Figure 12: HEER Expenditures by Category (Q1 2006 – Q3 2007)**



## 3.2 HEER PROGRAM LOGIC MODEL AND PROGRAM THEORY

One of the first tasks for the evaluation was to develop a program logic model and document the program theory for the HEER program. The structure of the logic model that links activities and outcomes is a useful instrument for identifying specific program assumptions that could be tested using survey or other primary data collection activities. Crucial program evaluation issues often question whether program services are adequately designed and equipped to generate their desired outcomes.

Additionally, the construction of a program theory and logic model provides a common knowledge and language between program implementers, evaluators, and stakeholders. It allows for a more precise conversation about what is occurring within a program and why the program actions should produce the expected outcomes.

The following program theory for SCG's HEER program builds on the program logic model and provides additional detail on program activities, outputs, and outcomes. (The logic model diagram follows the discussion of program theory.)

### Activities

#### *Program support for retail stores*

Retailers participating in the program receive program materials and employee training to implement the program.

#### *Marketing and outreach to trade allies*

Manufacturers, retailers, and contractors are largely responsible for driving participation in the HEER program, and a key activity is to establish partnerships with these entities. The HEER program works with manufacturers, retailers, and contractors to find ways that they can leverage the program. Specifically, the HEER works with retailers and manufacturers to provide in store marketing materials and point of sale rebates and incentives for certain energy efficiency equipment. In addition, the program educates sales personnel about the HEER program resources. The program also works to educate contractors so that they can use the incentives as a sales tool.

#### *Customer education and outreach*

The HEER program develops and distributes marketing materials aimed at increasing awareness among homeowners and renters. Marketing efforts include bill inserts, community outreach, and direct mailings. The program also coordinates marketing efforts with manufacturers, distributors, and contractors to provide point of sale signs. In addition, the HEER program may coordinate with other energy efficiency programs and marketing campaigns, such as Flex Your Power, to promote the program.

#### *Customer rebates*

The HEER program provides rebates to offset the incremental cost of purchasing energy efficiency equipment, rather than standard equipment. The HEER program provides a variety of

ways that customers can claim incentives. One method of providing rebates to customers is to provide Point-of-Sale (POS) rebates through participating retailers, distributors, and manufacturers. POS rebates make it easier for customer to receive their incentives. They also reduce the amount of processing required since retailers provide a single invoice for all POS rebates. For stores where POS rebates are not offered, rebates are available via hard-copy applications, or applications can be printed from the web site.

#### *Coordination with SCG energy efficiency programs*

The HEER program coordinates with other energy efficiency programs to provide collaborative marketing and implementation efforts. These partnerships help to inform customers about different opportunities that exist and help drive participation in various programs.

### **Short Term Outcomes**

#### *Rebates available at retailers and from contractors*

As a result of outreach and marketing activities, retailers, manufacturers, and distributors partner with the HEER program and offer POS rebates and other program promotional materials in their stores. Retail staff members are trained to communicate benefits of energy efficient equipment to customers and to understand the function of the HEER program.

#### *Customers aware of the HEER and energy saving opportunities*

Customers are made aware of the HEER program and available rebates through various marketing materials and in-store promotions, such as direct mailings, bill inserts, announcements on SCG's website, and emails. Customers may also learn about the HEER program through collaborate marketing efforts with other energy efficiency programs and marketing campaigns such as the statewide Flex Your Power campaign. The program also works with trade allies to help them promote energy efficient equipment and SCG's energy efficiency programs.

#### *Customers purchase energy efficiency equipment*

After becoming aware of the opportunities offered by the HEER program, customers purchase energy efficient equipment either through contractors or directly from vendors.

#### *Therm savings and energy bill reductions*

Energy savings are achieved as a result of customers' decision to purchase energy efficiency equipment and recycle old equipment.

### **Mid Term Outcomes**

#### *Participants more knowledgeable about energy efficiency and recognize the benefits of energy efficiency investments*

Customers who participated in the HEER program gain a better understanding of the benefits of purchasing energy efficient equipment. They also recognize the performance benefits of purchasing energy efficiency equipment.

### *Demand for energy efficient equipment increases*

Customers who install energy efficient equipment and recognize the performance benefits begin to incorporate energy efficiency as part of their standard purchase decisions, resulting in increased demand for energy efficient equipment.

### *Market participants view energy efficiency programs as a business opportunity and actively promote energy efficiency*

Retailers, manufacturers, and distributors recognize the growing demand for energy efficient equipment. As a result, they increasingly view energy efficiency programs as a business opportunity and look for more opportunities to leverage programs and promote energy efficiency.

## **Long Term Outcomes**

### *Increased availability of energy efficient equipment*

Due to a sustained demand for energy efficient equipment and increased understanding of its benefits, energy efficient products become more widely available.

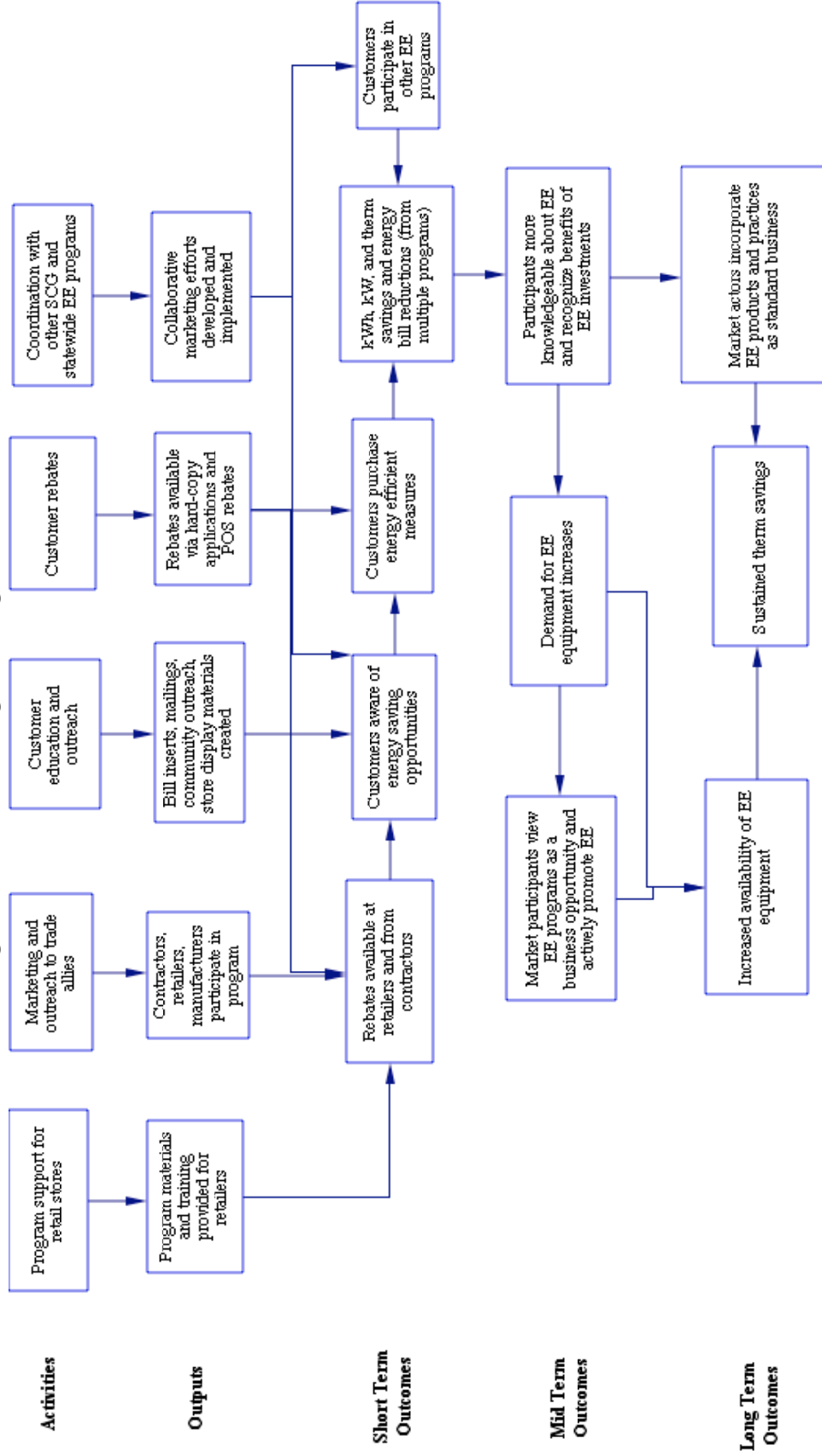
### *Market actors incorporate energy efficient products and services as standard business practices*

Due to their first-hand experience with the equipment, market actors begin to implement energy efficient measures into standard practice. This includes homeowners looking to replace older equipment and retailers and contractors who are involved with the sale and installation of these measures.

### *Sustained energy savings*

Due to the increase in supply and demand for energy efficient measures and a permanent change in customer and contractor attitudes, sustained energy savings are achieved in the single-family retrofit market sector.

**Figure 13: HEER Program Logic Model**



### **3.3 HEER EVALUATION OVERVIEW**

Based on in-depth interviews with HEER program staff conducted at the beginning of the evaluation, several key research issues were identified that provided the focus of the evaluation activities. Additional research issues were identified as the program logic model and program theory were developed. The major evaluation research issues for the HEER program are described below.

#### **HEER Research Issues**

##### **Identifying Set of Measures that are Cost-Effective to Promote**

As noted in the portfolio discussion, one of the challenges faced by the HEER program is the limited availability of technologies with quickly exploitable potential to integrate into the program's rebate options. There may be some opportunities for expansion in the program's mobile home and multi-family efforts, though it is not clear that these will be cost effective.

##### **Managing Processing of Rebates**

An additional research issue is the accessibility of the rebate application process. Notably, the on-line rebate form is 12 pages in length, and as there is no on-line submission, applications must be mailed. Moreover, application processing requires about four to eight weeks and results in very high rejection rates. There is a need to develop both an on-line form and a processing strategy that does not depend on the physical transfer of paper forms from one stage to the next.

Furthermore, it currently costs the HEER program \$14 to process each rebate application, a procedure that screens each application through numerous steps. However, SCG has recently signed a contract with a private firm to process rebates at \$3 per rebate, although it is unknown if this firm will employ a similar multi-stage process or if the new process will affect the rejection rate. It is also unknown what the ultimate costs will be once the private firm passes the rejected applications on to SCG.

Program staffers indicated that they were concerned that rejection rate would increase under this new system. They also raised questions about the ability of the contracted firm to process the rebate applications at that lower cost if the forms remain complicated.

##### **Encourage More Point of Sales**

Next, program staffers suggested that the program would benefit from an increase in the number of stores that offer point-of-sale (POS) instant rebates to the customers. At the beginning of the evaluation, Home Depot was the only large store offering POS rebates. Aggressive promotion and support by all four statewide utilities, has expanded the list of firms, including other large chains. While the program has tried to recruit smaller stores to offer POS, the small stores are concerned with slow repayment and tracking issues. Two factors may encourage small store participation: co-branding and providing program personnel to help set-up the rebate system at the sites.



## Determine the Extent to Which Energy Efficient Products Are Displayed and Promoted in Stores

The HEER program employs a third-party to provide marketing support for the rebate offerings. The third party distributes materials to the 300 equipment stores in the service territories and trains the sales staffs.

## Determine Awareness of Households for Energy Efficient Products

The HEER program has limited marketing resources, and therefore an additional area of research is the extent to which potential buyers are aware of the rebates. While the circuit rider does provide signage for the stores, signage text does not always effectively communicate which products qualify for the program. Many small stores use a software company to produce the sale informational signs and SCG should work with this firm to include specific rebate information on the postings. One viable marketing strategy is to assist the stores to promote rebates available from all utilities, rather than producing signs that only advertise what their own utility offers. One store suggested that the HEER program fax a sheet every month that lists the available rebates across the various utilities and water districts.

## Developing Whole House—Building Performance Component

The HEER program staffers expressed a desire for a more comprehensive focus, rather than just installing a few energy efficiency measures at a time. However, there is some concern as to whether offering more comprehensive rebates can be cost-effective and uncertainly exists about how to develop this whole house capability. For example, will the program be an expansion of the multi-family approach which depends heavily on program support, or will it develop into an independent building performance specialist industry, as has been done elsewhere?

These research issues helped shape the evaluation data collection and analysis activities for the HEER program. The remainder of this chapter presents the evaluation results specific to these research issues.

### **3.4 HEER PROGRAM EVALUATION RESULTS**

The evaluation activities completed for this program included:

1. In-depth interviews with program managers and staff
2. A phone survey of 152 participants in the HEER program
3. A ride-along with the contractor who serves as the circuit rider, visiting six appliance and home improvement stores in the SCG service territory
4. Interviews with rebate processing and verification personnel.

The evaluation began in May 2007 with most of the data collection occurring during the summer. Detailed results of the data collection and analysis are discussed below.

## HEER Participant Phone Survey Results

A telephone survey was performed for 152 randomly selected HEER program participants in the SCG service territory. Table 1 shows the distribution of the sample. Table 2 shows the relationship of the survey sample to the distribution of all participants in the program.

**Table 1: Type of Equipment in Sample**

Measure	Frequency
Dishwasher	33
Water heater	14
Clothes washer	72
Refrigerator	0
Insulation	20
Pool pump or timer	0
Gas furnace	13
Total	152

A comparison of the sample to the actual population distribution is shown in Table 2 for SCG. For the participant survey, the sample distribution is very close to the distribution of the population of SCG participants.

**Table 2: Comparison of Sample to Actual Rebate Distribution – SCG**

Measure	Actual Rebates	Sample Totals	Number per 1,000 Participants
Dishwasher	13,089	33	3
Water heater	3,486	14	4
Clothes washer	26,706	72	3
Insulation	6,735	20	3
Gas furnace	3,519	13	4
Aerators and showerheads	61	0	0
Total	53,596	152	3

The HEER program provides incentives to customers who either purchased items in stores or who hired contractors to do the work. As Table 3 shows, most of the sample interviewees (78 percent) bought their equipment in retail stores.

**Table 3: Contractor vs. Self Purchase**

<b>How Purchased</b>	<b>(N=152)</b>
Bought through contractor	22%
Purchased myself	78%

Each respondent was asked if the contractor or salesperson had informed him/her about the HEER program. Table 4 indicates that contractors were more likely to inform their customers about the program than were the salespeople. Just 40 percent of the salespeople informed participants about the program.

**Table 4: Did Contractor or Salesperson Inform Customer about Program?**

<b>Response</b>	<b>Contractor (N=33)</b>	<b>Salesperson (N=53)</b>
Yes	64%	40%
No	36%	49%
Don't know		11%

Participants were asked whether they already had decided which product to buy before talking to their contractor/salesperson and before hearing about the program. Table 5 shows that most of the respondents had not made the decision before consulting their salesperson/contractor. However, Table 6 indicates that about half of each group had made up their mind before hearing about the program.

**Table 5: Did Customer Make Decision on Product Prior to Talking with Contractor/Salesperson?**

<b>Response</b>	<b>Contractor (N=33)</b>	<b>Salesperson (N=21)</b>
Yes	39%	38%
No	61%	57%
Don't know		5%

**Table 6: Did Customer Make Decision on Product Prior to Being Aware of Program?**

Response	Contractor (N=32)	Salesperson (N=53)	Total (N=85)
Yes	50%	40%	44%
No	47%	57%	53%
Don't know	3%	3%	3%

Participants also were asked if the information from the contractor included any suggestions about buying an energy efficient option. Table 7 indicates that about 76 percent of contractors suggested the energy efficient option.

**Table 7: Did Contractor Suggest Efficiency**

Response	Contractor (N=33)
Yes	76%
No	21%
Don't know	3%

Customers who had not decided which product to buy before coming to the store were asked the major reason that they purchased the efficient model. Table 8 indicates that few of these respondents changed their minds specifically due to the rebates. It is important to note that saving energy and money are very big decision factors for these buyers.

**Table 8: Major Reason Customers Changed Mind and Purchased Energy Efficient Option**

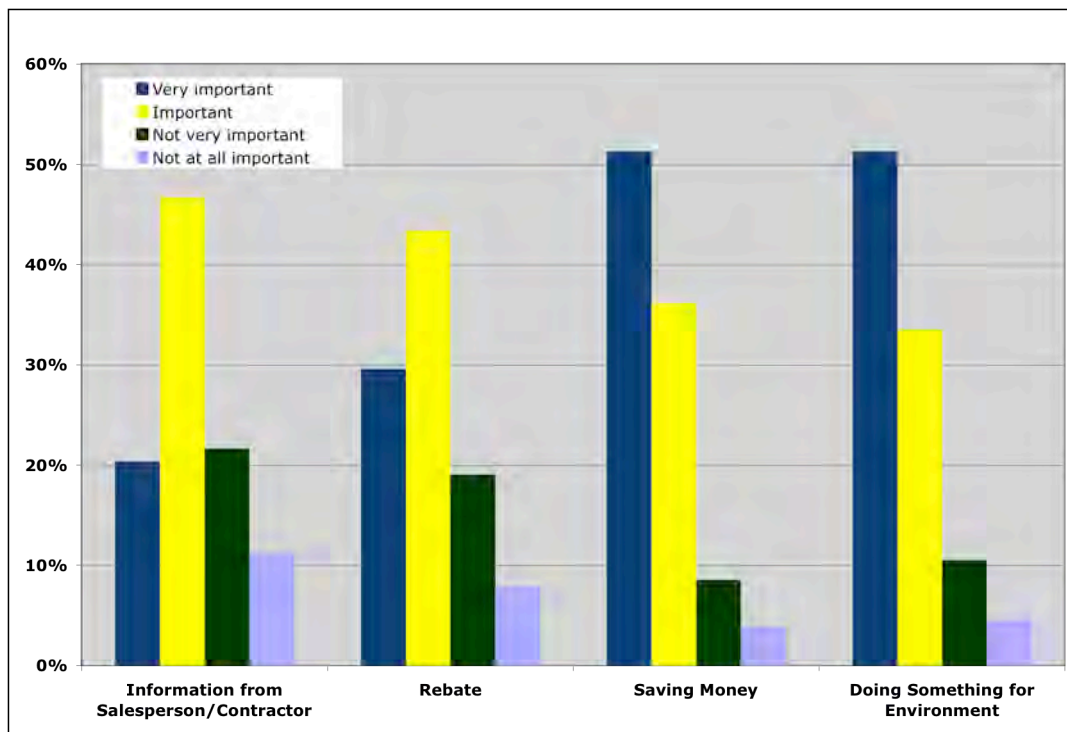
	Contractor (N=24)	Salesperson (N=98)	Total (N=122)
Save energy	4%	19%	16%
Sales price/Save money	4%	20%	17%
Unit non-energy features	21%	20%	20%
Rebate/Program	13%	8%	9%
Contractor/Salesperson	17%	7%	9%
Other/Research	8%	8%	8%
Don't know	33%	16%	20%

All respondents were asked to gauge the importance of four factors in influencing their decisions about which appliance or measure to select: information from the salesperson or contractor, program rebates, saving money and helping the environment. Figure 14 shows that saving money

and the environment were more important than the rebates in influencing the purchase of energy efficient options. The importance of rebates varied per appliance. 59 percent of respondents who said the cash rebate was very important bought a clothes washer, 16 percent bought attic insulation, and 11 percent purchased a dishwasher. Less than seven percent of people who bought a gas furnace, a water heater, or wall insulation rated the cash rebate as very important to their decisions.

Table 9 conveys a similar message. In this case, respondents were asked to list the most important reasons for buying an item. Lower energy bills were the most important factor for 40 percent of the respondents. Only 16 percent mentioned the rebates.

**Figure 14: Importance of Salesperson, Rebate, Money and Environment**



**Table 9: Most Important Factor in Purchase Decision**

Purchase Decision Factors	Percentage of Respondents (N=152)
Lower energy bills	40%
Non-energy factors	18%
Doing good for the environment	16%
Cash rebate	16%
Information/encouragement from salesperson/contractor	11%

HEER participants were asked a series of questions about their satisfaction with different aspects of the program. Figure 15 shows respondents’ overall satisfaction with all aspects of the program. Respondents were least satisfied with the rebate level.

Customers who were not satisfied were asked to identify what would have made their experiences more satisfactory. Of the few responses received, a few customers did not get the rebate and another felt that the sales staff did not know which products qualified for the rebate. The program has experienced some delays in getting rebates to customers—one respondent noted that even a six-week turnaround would have made him/her satisfied.

**Figure 15: HEER Participant Satisfaction with Program**

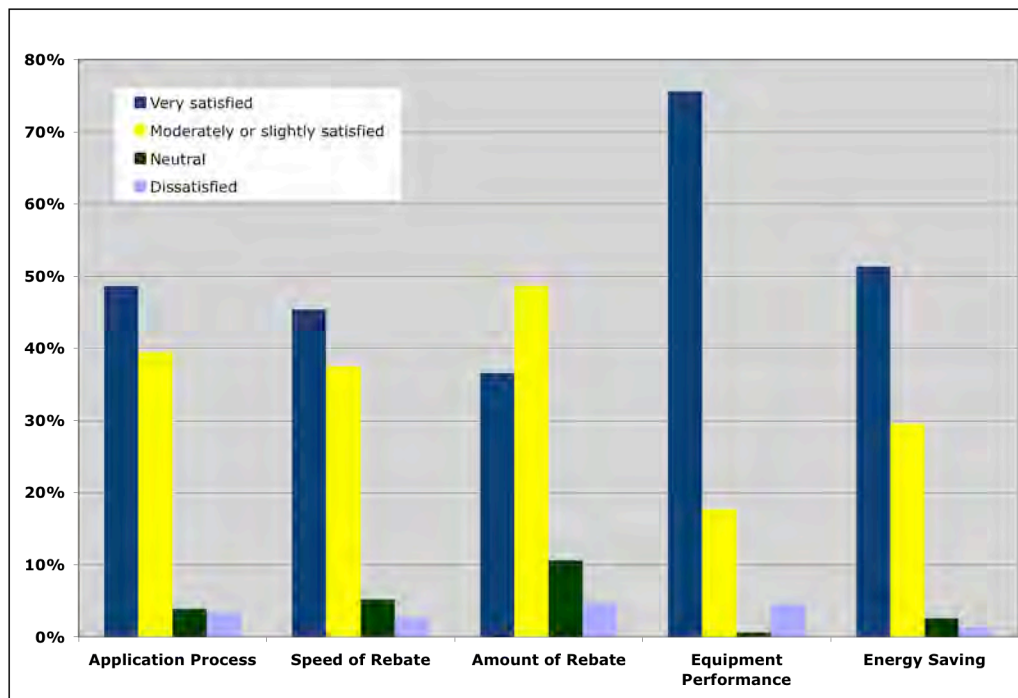


Table 10 shows the responses to a summary question about the respondents’ overall satisfaction with the program. Almost all respondents voiced at least some satisfaction with the program.

**Table 10: Overall Satisfaction with HEER Program**

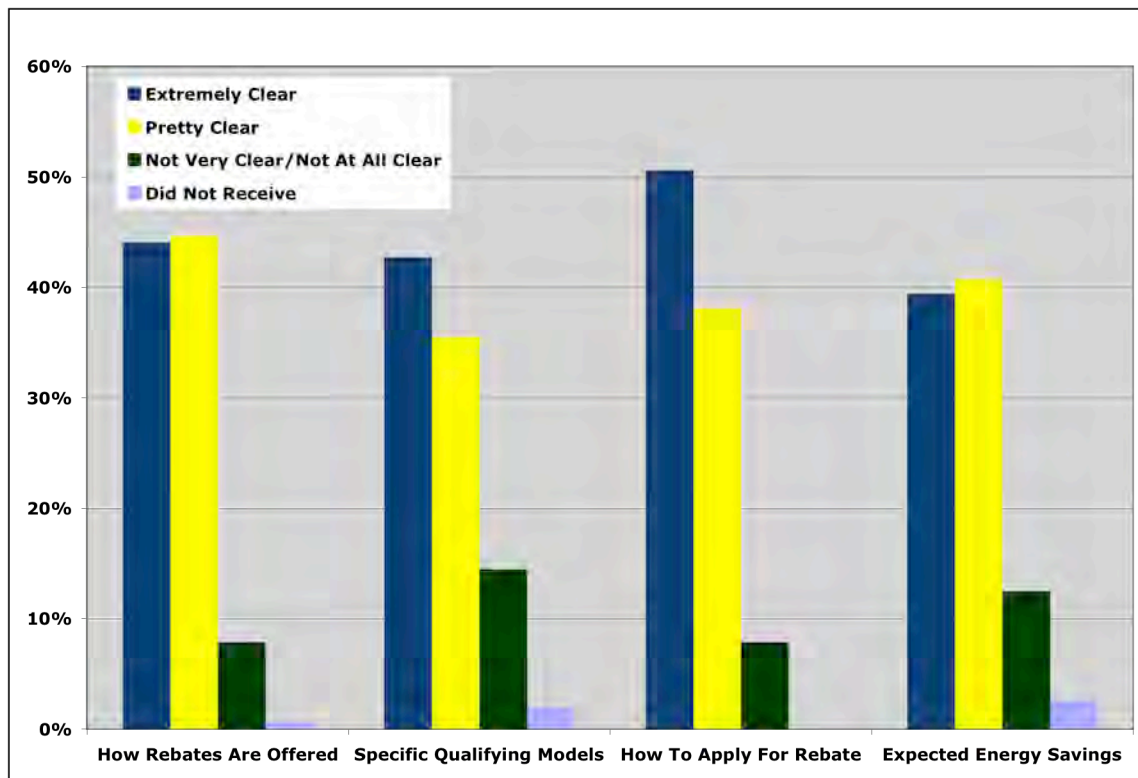
Satisfaction Level	Contractor Involved Respondents (N=33)	Salesperson Involved Respondents (N=119)	All Respondents (N=152)
Very satisfied	61%	69%	67%
Moderately or slightly satisfied	36%	26%	28%
Neutral	3%	2%	2%
Dissatisfied	0%	3%	3%

Over half of respondents (83 of 152 total respondents) said that they recommended this rebate program to someone else. Of those who suggested the program to others, 68 percent mentioned the rebate and 32 percent mentioned the higher efficiency or the energy savings associated with the equipment.

11 percent respondent households remember receiving a verification inspection. 94 percent of these respondents were very or moderately satisfied with the inspection, and one person was moderately dissatisfied because he/she saw no reason for the visit.

Respondents also were asked about the clarity of various program components. Figure 16 indicates that most people felt the material was clear. About 15 percent of the respondents said the information about the expected energy savings and which models qualified for incentives was unclear.

**Figure 16: Customer Ratings on Clarity of Information Received**



Customers were asked if they had any doubts about the program materials and the documentation. Table 11 displays customer responses. Respondents were primarily concerned with the actual (versus estimated) energy savings and the rebate process.

**Table 11: Doubts About Program**

<b>Doubt</b>	<b>Percent Saying Yes (N=152)</b>	<b>Issues</b>
Energy savings overstated	15%	All but one questioned this, but purchased the equipment anyway. One was reassured by the salesperson.
Rebate process	9%	Doubts were: getting paid (6), time it takes to complete the rebate application or receive the rebate payment (1), and the legitimacy of the offer (1).
Finding a contractor	8%	
Energy savings not being worth the extra cost	8%	
Finding a repairman or parts to maintain equipment	5%	

Respondents were asked an open-ended question about how to improve the program. Table 12 summarizes their responses. Many people felt the program was not publicized well enough, while others wanted a simpler rebate process, higher rebates, or an expansion of the program.

**Table 12: Suggestions to Improve Program**

<b>Suggested Improvement</b>	<b>Percent (N=76)*</b>
Simpler application/Rebate issues	33%
More advertising	32%
Higher rebates	16%
Point-of-sale rebates	12%
Expand/extend program	8%

\*152 responses were recorded, but only 76 of them provided applicable suggestions.

Respondents were asked to suggest additional measures the program should include. The list in Table 13 includes a number of these suggestions, most of which are already covered by the program.



**Table 13: Other Programs (Measures) That Should Be Covered**

Measure	Percent (N=47)
More information (unspecified)	19%
Solar water heat, alternative energy	15%
Water heating	15%
Insulation	15%
Other appliances (unspecified)	9%
Calculation tools/home audits	9%
Lighting	9%
AC, heaters	7%
Windows	2%
Gas Dryers	2%

\*152 responses were recorded, but only 47 of them provided applicable suggestions.

Furthermore, 19 percent of respondents said that they completed an energy audit (Home Energy and Water Efficiency Survey) for their homes. 13 percent of these were done in person, five percent were completed on-line, and only one percent was by mail. 76 percent of these respondents implemented at least one of the audit's recommendations, although several respondents said their audits were conducted a long time ago. Table 14 shows the equipment measures implemented as a result of these audits.

**Table 14: Measures Installed as a Result of Audits**

Measure	Percent (N=22)
Windows/doors	27%
Insulation	23%
Ceiling fans	15%
CFLs	12%
Weather-stripping	4%
Other appliances	4%
Reset thermostat or water heater setting	4%
Disconnected or recycled refrigerator	4%
Air conditioner	4%
Refrigerators	4%

Multiple responses were accepted

32 percent of respondents said they had participated in other energy efficiency rebate programs. Table 15 shows the measures they received through these programs. In many cases, the SCG

respondents incorrectly noted that they received the measures from SCE. Two respondents mentioned a hybrid vehicle.

**Table 15: Measures Received Through Other Efficiency Programs**

Measure	Percent (N=49)
HVAC	19%
Dishwasher	16%
Refrigerators	16%
Washing machine/Dryer	11%
Pool motors or pumps	8%
Windows/Doors	8%
Insulation	8%
CFLs	5%
Water heater	5%
Stove/Oven	3%

Multiple responses were accepted

Respondents were asked about their familiarity with and participation in other energy efficiency programs. Table 16 shows that Flex Your Power is the most recognized program name. However, more respondents have participated in the Appliance Recycling program than in any other program.

**Table 16: Familiarity and Participation in Other Programs**

	SCG (N=126)
<b>Familiarity</b>	
Flex Your Power	73%
Appliance Recycling	48%
Lighting Exchange	24%
20/20	16%
<b>Participation</b>	
Appliance Recycling	17%
Flex Your Power	15%
Lighting Exchange	4%
20/20	0%

People who purchased a new refrigerator were asked about what they did with their old unit. Table 17 indicates that 32 percent of respondents recycled their refrigerators

**Table 17: What Happened to Old Refrigerator?**

<b>Disposition of Old Refrigerator</b>	<b>Percent (N=19)</b>
Recycled	32%
Gave away or sold	32%
Deliverer took away	11%
Still in use	11%
No refrigerator to replace	10%
Other	4%

Table 18 shows that 26 percent of all respondents participated in an energy efficiency program as part of a remodeling project.

**Table 18: Was Participation Part of Remodeling Project?**

<b>Response</b>	<b>Contractor Involved (N=33)</b>	<b>Salesperson Involved (N=119)</b>	<b>Total (N=152)</b>
Yes	39%	23%	26%
No	61%	77%	74%

Respondents were asked about their use of the utility website. Table 19 indicates that 43 percent of respondents visited the utility website, and Table 20 shows that over half of this group used the website to download program application forms. The majority of respondents also said that they would like the ability to track their rebate applications on-line.

**Table 19: Use of Online Information**

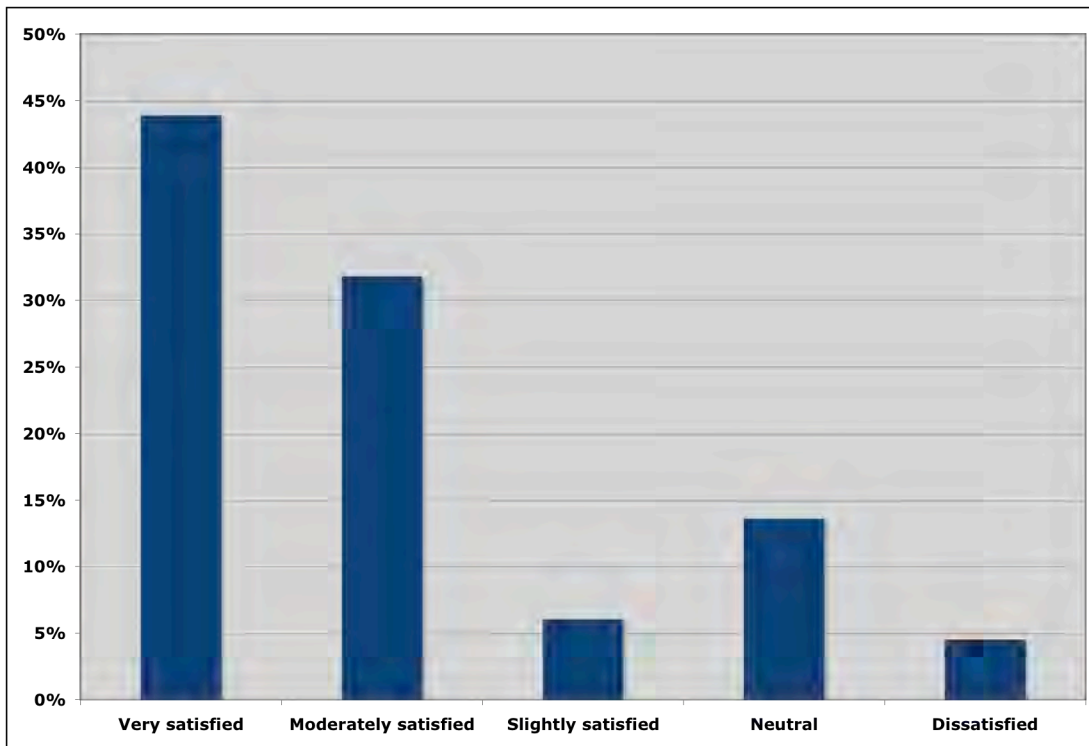
<b>Response</b>	<b>Percent Who Recalled Visiting Utility Website (N=152)</b>	<b>Percent Who Would Like Ability to Track Rebate Application On-line (N=152)</b>
Yes	43%	63%
No	57%	30%
Not sure		7%

**Table 20: Information Sought from Website**

Information Sought	Percent (N=66)
List of energy efficiency programs	41%
Program information and application forms	32%
General energy efficiency information	23%
Billing/Service information	17%
List of contractors	3%
Other	4%

Figure 17 indicates that most website visitors (76 percent) were very or moderately satisfied with their experience.

**Figure 17: Satisfaction with Website**



The final set of questions collected demographic information about the respondents (Table 21 and Table 22). Almost all of the respondents owned their homes (rather than rented) and lived in single-family detached homes.

**Table 21: Housing Characteristics of Respondents**

<b>Housing Characteristic</b>	<b>Percent (N=152)</b>
Home Ownership	97%
House Type	
Single-family	93%
Condo	5%
Townhouse	1%
Mobile/manufactured	1%
Number of Occupants	
1	10%
2	36%
3-4	38%
5-6	13%
6+	2%
House size in ft <sup>2</sup>	
less than 1,400	22%
1,401 to 2,500	51%
2,501 to 3,500	20%
Don't know	4%
When Home Was Built	
1930s and before	5%
1941 to 1969	43%
1970s	18%
1980s	15%
1990s	9%
2000 and later	6%
Don't know	3%

**Table 22: Demographic Characteristics of Respondents**

Characteristic	Percent (N=152)
Age	
under 35	7%
35 to 54	43%
55 to 65	25%
over 65	19%
Refused	6%
Ethnicity	
White	66%
African-American	3%
Asian	5%
Hispanic	10%
Other	6%
Refused	11%
Education Level	
high school or less	15%
some college	13%
associate's degree	13%
bachelor's degree	23%
graduate or professional degree	26%
Refused	11%
Household Income	
less than \$20,000	1%
\$20,001 to \$40,000	7%
\$40,001 to \$60,000	6%
\$60,001 to \$100,000	20%
\$100,001 to \$150,000	21%
\$150,001 or more	13%
Refused	32%

## Ride-alongs

As part of the process evaluation, the ECONorthwest team interviewed a contractor from Organizational Support Services (OSS) who provides circuit rider services to retail stores that sell products covered by the HEER program. At the time of the interview, OSS offered this service only in the SCG area. Since the interview, OSS has been hired to supply similar services in the SDG&E territory. OSS also supplies services for SCE.

OSS has identified approximately 400 stores in the SCE/SCG territory that sell measures covered by HEER. OSS staff visits these stores periodically to supply updated information about the rebates, signage, and rebate applications. Display of the signage is complicated, due to the variety of stores and whether or not they provide instant rebates. Therefore, OSS field staff members each carry three different sets of materials in order to give the correct materials to each store. OSS visits each store approximately four times per year.

As an incentive, the SCG program offered OSS field staff \$100 for each of the 100 independent stores that agreed to do instant rebates. The OSS staff was excited by the incentive and worked hard to sell the idea. However, despite their enthusiastic promotion, just six stores agreed to provide instant rebates.

## Field stops at Sears, Home Depot, and three independent appliance stores

The evaluation team representative visited five stores while accompanying the OSS circuit rider. The following observations were made:

**Sears:** Sears sells water heaters, clothes washers, and dishwashers. The sales staff has sold appliances successfully for a long time, however, this does not mean they are selling the energy efficient models. Some program signs were posted, and there were plenty of rebate applications available. Staff said they ran out of SCE refrigerator rebate forms and so they made copies of them, but they did not use many SCG forms. Salespeople also said that Sears displays only three models of water heaters in varying sizes, which may not include those that qualify for the rebates or the most energy efficient products. In addition, the Energy Factor, which determines if a water heater qualifies for the program, is not posted on the product label. In addition, the expensive units do not qualify for the program. Therefore, it is hard to determine how and where to post program signage. The salespeople said that with the exception of clothes washers, rebates did not seem to be that important because other rebates were available from the water and electric utilities.

**Home Depot:** Home Depot had POS instant rebates, so the sales staff was very aware of them. Most of the signage for the appliance rebates was placed effectively. An exception was the signage for water heaters: the qualified models had been moved, but the signage had not been moved and was located with equipment that was not covered by the program. Signage for insulation was not visible. It is apparent that this was due to two reasons: 1) The signage is too wide for the display area (a shelf post or under a shelf), and 2) There was no sign just for insulation.

**Independent stores:** Three independent appliance stores were visited. Signs had not been moved since the previous visit, but it was hard to tell if specific models qualified for the rebate. The SCE signs for refrigerators were very visible, and each refrigerator had its own sticker. The OSS circuit rider places these stickers on the products for SCE. However, it is difficult to ensure that every floor model has a sticker, due to turnover in equipment related to sales or display changes. Store staff also had issues with the size and stickiness of the tag. To make the program more successful, HEER must create these signs and have circuit riders visit each store more often, or compensate the stores to keep signs on qualifying units.

However, this may be difficult because store salespeople did not have much incentive to keep the signs in place. They received no direct compensation for the sale of an energy efficient model. The only incentive is if the rebate and energy efficiency features made it easier to sell the product. Rebates were not really a factor in sales because the rebates are so small. The exception was clothes washers, due to the magnitude of the combined water, electric and gas rebates.

Moreover, the salespeople at these independent stores tended to be family members who have been in the business for a long time. They were generally well-informed about the rebates, with the exception of the clothes washers. Notably, none of the salespeople knew about the combined water, gas and electric rebates. Therefore, it will be beneficial for HEER to inform each salesperson about all of the rebates. However, each water district

has its own rebate, and it is unrealistic to expect dealers to know the current information about all of them. To address this, HEER should give salespeople monthly charts of all the available rebates.

**Instant Rebates:** OSS representatives signed up one of the independent stores to participate in the instant rebate program. However, at the time of the field visit (six weeks after that agreement was signed), the store had heard nothing from SCG. The two other independent stores that OSS approached were not interested in being responsible for the instant rebates. One questioned SCG's ability to compensate them within a reasonable amount of time. At the time of the ride-along, there was no reported pressure on these stores to have instant rebates because Home Depot offered them, and customers generally were unaware of the existence of instant rebates. Now that 12 firms offer the instant rebates, there may be more pressure on the other stores to follow suit.

**Education of Sales Force:** While the program is straightforward and program requirements do not change frequently, there still is a need to keep the sales force up-to-date. The program needs to find an effective way to accomplish that. The circuit rider can help supply materials to the stores, but this contact should not be the only means of transmitting information to the sales staff. One problem is timing. It is neither possible nor desirable for the circuit riders to meet with every salesperson. In large stores such as Sears and Home Depot, there are too many salespeople and not all of them are present at any one time. Therefore, the program needs to develop other means to communicate with salespeople.

One method is to have the companies that generate the sales tags for the small appliance stores include the rebate on the sales tag. For instance, several independent stores use Price Tag Pro to produce their sales tags. For \$29/month, this service keeps information on every available model, so the store can look up a model and print an appropriate sales tag. Sales tags include an ENERGY STAR® label when appropriate. With support from the program, the software could be revised to include rebate information. OSS is following up on this strategy with Price Tag Pro.

## **Review of Rebate Processing**

Rebate processing is a big issue in many programs, particularly HEER. In 2006, HEER reported that it was taking up to eight weeks to process rebate payments, and it cost more than \$14 to process each one. Since many of the rebates were for \$25-35, this cost was disproportionately high. In addition, the rebate form for HEER was very long (12 pages), and although it could be downloaded from the SCG website, it could not be filled out and submitted on-line.

While the processing of rebates is beyond the scope of this evaluation, the difficulties encountered by customers in completing the forms and receiving payment did affect participation in the energy efficiency programs. Therefore, the process evaluation team interviewed the people in charge of rebate processing and on-site verification. They also observed the rebate processing and payment process.

The head of rebate processing said the department had made some changes that reduced processing from eight weeks to 30-42 days. The manager either did not have or was unwilling to



share any data that showed the payment aging records or explanations about the delays. She explained that the longer processing times sometimes were due to absences of application approval staff. Now, she delegates that responsibility if those people are unavailable. She acknowledged that forms still can be delayed if the program manager is unavailable to sign them.

## Rebate Process Steps

The application processing procedures need a complete overhaul if the process is to be sped up.

Below is a review of the rebate application processing process.

1. The rebate form is filled out and received.
2. The mailroom date-stamps the application form and sends it to the processing center.
3. Processors pull the application and enter the information in the Energy Efficiency Tracking System (EETS), which is a payment and tracking system.
4. Some of the applications are pulled for inspection. Currently, HEER applications with multiple measures, do-it-yourself applicants, or homes that have previously received rebates are inspected. For other applications, five percent of the applications are selected for inspection.
5. All forms are reviewed for accuracy and some are double-checked. There is no data about how many errors are caught through this review.
6. The form packet is transferred to the program manager, who reviews the application and approves it if it is complete or notes missing information.
7. Rebate processing managers review and sign approved applications.
8. The information is uploaded to the payment program.

## Rebate Processing Issues

SCG needs to fix the existing application processing system because the current approach is affecting the level of program participation. The application was too long, and in response, the HEER program manager recently reduced the form from 12 pages to three. However, the long waiting period and the inability to file on-line still discourages potential applicants.

A recent internal study explored a number of options for making improvements. The evaluation team has not reviewed this report, although they did discuss it briefly with one of its senior contributors. The internal study identified two obstacles to developing an on-line rebate system: a need to wait to develop the new data tracking system and a lack of certainty about how to do an on-line rebate while still obtaining the receipts necessary to verify purchase.

If these issues are not resolved, they will continue to undermine program participation. It is recommended that SCG develop some type of on-line form and not wait until the new system is developed. This could involve the use of a system independent of the EETS, which fully

processes the applications or alternatively uses an intermediate step to bring these on-line applications into EETS.

More importantly, the processing system must be converted to an electronic approval system that eliminates the need to shuttle the physical files from stage to stage. The current process of moving paper folders is antiquated and serves no useful purpose in this age of computer approval and signature systems. The existing approach is time-consuming, risks losing or misplacing files, and makes it impossible to accurately track the rebate processing flow.

A percentage of the delays are due to incomplete information from the applicant. Rebate processors previously sent everything back to the customer if the application was not complete. Now, they call customers to get the missing information. Electronic tracking would allow this step to be automated and could include a computer-generated phone message, email, or postcard to the customer about the missing information. These contacts could include a help line number and a reference number so program staff could incorporate the additional information more quickly.

A thorough analysis of these and other problems would identify how to make the program less confusing for applicants. The rebate processing department does not do this type of accounting. The programs also should assess which data they need and eliminate anything else. This would shorten the application form and reduce problems. Each application also could include a simple checklist of required information.

At the time of the interview, SCG was negotiating with a private company to do some of the rebate processing. It is unclear how this outsourcing will be accomplished, so it is difficult to assess if this will help address the issues mentioned above. It seems likely that outsourcing could reduce the existing backlog. However, it is not clear how the processing contractor will handle applications with problems and it is also unknown if all of the signatures required now will still be needed.

An informal interview with the head of on-site inspection also was conducted. He said his teams did inspections quickly and did not really slow down the rebate application process. The inspection department head noted that there was a process to transfer application packets and file inspection reports. While the system appeared to work, packets still were mislaid or fell through cracks. Again, it is recommended that the tracking system use an electronic packet at each step and eliminate the need to send the physical package.

### **3.5 HEER PROGRAM ISSUES AND OBSERVATIONS**

The HEER program is an important component of the SCG portfolio. In the future, the potential savings from these efforts will diminish as the program's success makes it harder to identify measures that can be rebated cost-effectively.

As discussed in the portfolio analysis section of this report, there are few areas of savings growth in the residential market. Under these circumstances, SCG can expect to find it more difficult to squeeze savings from residential homes. Programs must either lower the costs of the programs or reduce rebate amounts. Increasingly, the programs must reach out to customers that have not participated. This will require more targeted programs with marketing that is focused on

engaging those that have not been easily drawn in before. The use of standard broad marketing campaigns will become less and less productive in coming years.

Rebate information was available at the stores visited by the evaluation representative, however, only a little more than 50 percent of the applicants recalled seeing the materials. The recall is no better at the SCG-area stores than at the SDG&E stores, even though a circuit rider supported SCG stores during the study period.

Not surprisingly, the existence of the rebates was a small factor in motivating customers to buy the energy efficient products they purchased. Only about 14 percent of the respondents thought it was an important factor. Saving money and energy were more important factors. Yet, salespeople and customers did not have accurate estimates of how much energy and dollars the efficient products would save.

## Recommended Program Improvements

Based on the evaluation results, the following are recommendations for the HEER program:

- **Increase communication with the participating retail stores to energize rebate marketing.** The retail locations are not always keeping the rebate signs in place and often salespeople are not aware of the most up-to-date rebate information. To address this, HEER should give salespeople monthly charts of all the available rebates, create these signs, and have circuit riders visit each store more often or compensate the stores to keep signs on qualifying units. One viable marketing method for small appliance stores is to have them enroll in the Price Tag Pro service in order to pre-print sales tags with the appropriate rebate information.
- **Simplify the rebate application process.** The major focus of the HEER program needs to be simplification of the rebate application process. There should be a continued emphasis on POS rebates. The recruitment of the 11 new companies this summer ranks as one of the most important accomplishments of the year. Despite the difficulties reported by the task force, it should be a priority to develop an on-line application. Making this available will eliminate much of the time and expense involved in processing the rebates. It also will make it possible for stores not able or willing to offer instant rebates to assist customers in completing the rebates at the time of purchase. The company needs to overhaul its rebate processing and eliminate the antiquated process of passing hard copy folders from approval station to approval station. The current system cannot even supply the data needed to calculate the time it takes to process rebates, nor easily identify applications that have been in the system too long.

Other rebate processing recommendations include:

- Implement an application processing report that provides weekly summaries and aging reports on specific applications.
- Implement internal deadlines for the resolution of application processing issues.

- Eliminate the need for the program manager to sign off on every rebate. Allow subordinates to sign off on rebates below certain thresholds.
- Redesign the application forms to eliminate data that is not required for rebate processing and impact calculations. Include a simple checklist of required information.
- **Provide combined information on available rebates.** Clothes washers represent one of the most promising measures in SCG’s portfolio, largely because rebates are offered by the water, gas, and electric utilities. This combining of rebates would be even more effective if the stores selling clothes washers had sales materials listing all three available rebates. Getting current rebate information to the sales staff, particularly about the combined rebates from all water, electric and gas utilities, needs to be a priority.

### 3.6 HEER BEST PRACTICES REVIEW

#### Program Theory and Design

- *Is the program design effective?* The HEER program provides rebates to offset the incremental cost of purchasing energy efficiency equipment for a range of home appliances and measures that are attractive to customers, including clothes washers, dishwashers, water heaters, gas furnaces, and insulation. The program provides a variety of ways that customers (or their contractors) can claim incentives. One effective method is to provide point-of-sale rebates through participating retailers, distributors, and manufacturers. POS rebates make it easy for customer to receive their incentives and also reduces the amount of processing required since retailers can provide a single invoice for all POS rebates. For stores where POS rebates are not offered, rebates are available via hard-copy applications that can also be printed from the web site.

Some of the program’s rebates are more effective than others. For clothes washers, for instance, there is still a large therm gap between the much more expensive ENERGY STAR washers and standard washers. When one combines the water, gas, and, electric rebates that can apply—there is a substantial and effective rebate. (Because the programs are marketed separately, however, the value of the combined rebates is often lost on customers.) In contrast, new standards for dishwashers (enacted after the program rollout) have brought regular units close to the performance of ENERGY STAR units, and thus the program cannot offer large rebates. For dishwashers the rebates are having little effect on customers.

- *Is the market well understood?* The program has made strong and targeted efforts to recruit more large retailers into the program to expand the market, and has tried to increase in the number of stores that offer convenient POS rebates to customers. Aggressive marketing by the program has expanded the list of participating retailers, including some new large chains.

## Program Management

### Project Management

- *Are responsibilities defined and understood?* Program roles and responsibilities among program staff, the circuit rider contractor and participating manufacturers, distributors and retailers appear to be clearly defined and understood; no significant coordination or implementation problems were mentioned.
- *Is there adequate staffing?* No HEER program staffing deficiencies were noted in this evaluation.

### Reporting and Tracking

- *Are data easy to track and report?* The program database was not assessed in this evaluation. The program captures customer information for about 80 percent of all participants through POS transactions and rebate applications. One major retailer, Home Depot, only provides aggregate sales data by month and does not have customer names for point-of-sale rebates. Some customer names are obtained through monthly drawings, however.
- *Are routine functions automated?* Rebates processing requires the physical transfer of paper forms from one stage to the next, and processing can be delayed when application approval staff or the processing manager are absent. The existing approach is time-consuming, risks losing or misplacing files, and makes it difficult to track the rebate processing flow. Electronic tracking would help to automate the entire process and could include computerized tasks such as information screening and customer communications to obtain missing information.

### Quality Control and Verification

- *Does the program manager have a strong relationship with vendors involved in the project?* While manufacturers, retailers, and circuit-rider contractors are largely responsible for driving customer participation in the program, in-house oversight of the program has been retained, and the program manager has adequate contact with all participating parties. Program staff members are actively involved in developing and distributing marketing and rebate materials and educating contractors and retail sales staff on equipment features and energy efficiency benefits.
- *Does the program verify reporting systems (e.g., rebates, invoices)?* Not addressed in this evaluation.
- *Are customers satisfied with the product?* Customers reported that they are satisfied with the range of equipment that is covered and the performance of the equipment they purchased.

## Program Implementation

### Participation Process

- *Is participation simple?* Customer participation is simple for POS purchases. It is not simple when the standard hard copy and on-line rebate applications are used, which are 12 pages long and require very detailed information. The lengthy application form has negatively affected program participation.
- *Are participation strategies multi-pronged and inclusive?* Not applicable.
- *Does the program provide quick, timely feedback to applicants?* No. The program has not had a good system in place to expedite rebate processing, and in the past it has taken four to eight weeks to process applications. This should improve when the new processing system is implemented.
- *Is participation part of routine transactions?* Yes, customers can obtain rebates immediately (through POS) or else as a discount through their contractor that installs the equipment.
- *Does the program facilitate participation through the use of internet/electronic means?* No, the on-line applications are lengthy and cannot actually be filled out on-line; they must be printed out, filled in, and then returned as a hard copy.
- *Does the program offer a single point of contact for their customers?* Not applicable.
- *Are incentive levels well understood and appropriate?* Customers reported that they are only moderately satisfied with the program rebate levels. In addition, exactly which products are eligible for rebates is not always clear to them, and sometimes sales staff does not know for sure either.

### Marketing and Outreach

- *Use target-marketing strategies?* The program has not done much target marketing and has relied primarily on bill inserts and in-store signage. As a result, most customers first hear about the program from dealers at the time of purchase.
- *Are products stocked and advertised?* No stocking problems were reported, and the rebated products appear to be generally available. Store signage, however, does not always effectively communicate which products qualify for the program. Also, salespeople and customers sometimes do not have accurate estimates of how much energy and dollars the efficient products will save due to signage problems.
- *Are trade allies and utility staff trained to enhance marketing?* The HEER program employs a third-party to provide marketing support for the rebate offerings. The third party distributes materials to the participating equipment stores in the service territory and trains the sales staffs on the rebates and equipment benefits.

## 4. MULTI-FAMILY ENERGY EFFICIENCY REBATE (MULTI-FAMILY) PROGRAM

### 4.1 MULTI-FAMILY PROGRAM BACKGROUND

SCG's Multi-Family Energy Efficiency Rebate (Multi-Family) program is a statewide program that targets property owners and managers of multi-family residential dwellings, homeowners' associations, and mobile home park associations. The program encourages property owners and managers to install qualifying energy efficiency products in common areas and tenant-occupied areas in residential apartments, mobile home parks, and condominium complexes. The program is designed for flexibility; it offers agreed-upon measures for coordinated implementation, but is designed to adapt easily to market changes, including adding new, cost-effective measures.

Cash rebates are available for the following energy efficiency measures:

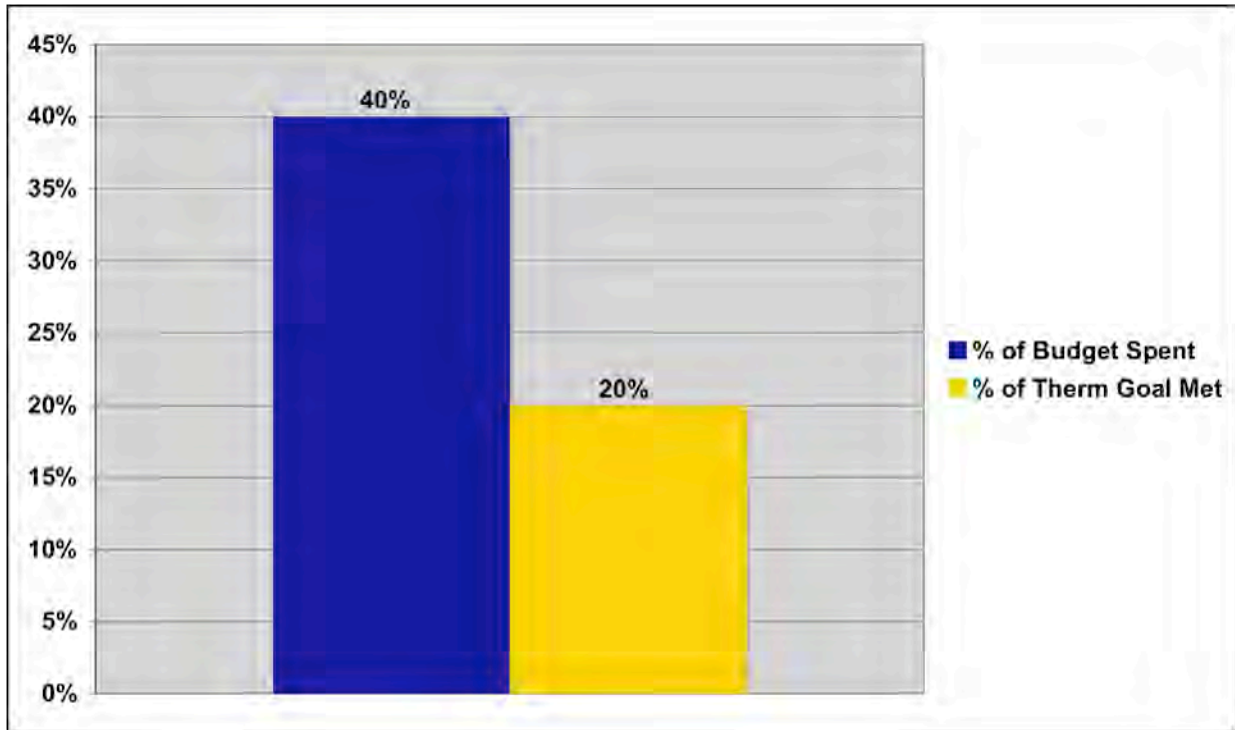
- High Efficiency Qualified Dishwashers
- Attic Insulation
- Wall Insulation
- Natural Gas Storage Water Heaters
- ENERGY STAR® Central Natural Gas Furnaces
- Central System Natural Gas Water Heaters
- Natural Gas Water Heater and/or Boiler Controllers
  - Digital graph models
  - Non-digital graph models
- Central System Natural Gas Boilers
  - Space Heating
  - Water Heating

Most of the program's savings come from the three most frequently installed measures: boilers, central water heaters and boiler controllers. Controllers play an especially important role—75 percent of program savings are tied to boiler controllers. The program is marketed through periodic mailings to multi-family property owners and outreach to apartment associations. The program's website provides downloadable rebate applications. The program does not have a marketing plan.

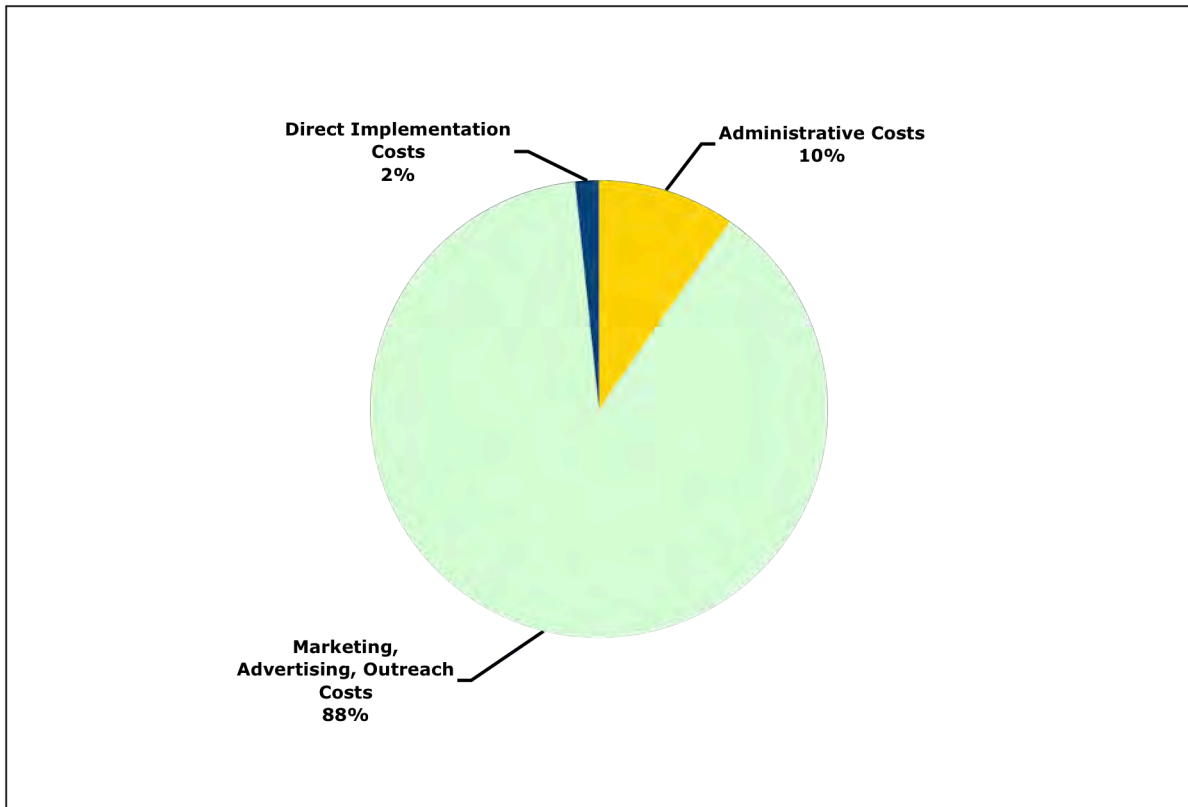
The most recent quarterly report (third quarter of 2007) indicated that the program was falling short of its participation and savings goals. Through the end of September 2007, 1,206 applications had been received for the 2006-2008 program. Forty-two percent of the incentive goal for 2006-2007 had been paid, and the program had achieved 40 percent of the therm savings goal.

Upon receiving a Boiler Control analysis from Itron in early February 2007, SCG placed restrictions on boiler controllers from February 22, 2007 through April 28, 2007. The website posted information and read as follows: Please note, effective February 22, 2007, requests for rebates on Boiler and Water Heater Controllers will only be granted for installations in multifamily buildings prior to 1970. Noting that the study would be delayed, the restrictions were lifted in April 28, 2007 and program returned to regular functions.

**Figure 18: Multi-Family Progress Toward Goals and Program Spending**



**Figure 19: Multi-Family Expenditures by Category (Q1 2006 – Q3 2007)**





## **4.2 MULTI-FAMILY LOGIC MODEL AND PROGRAM THEORY**

The following program theory for the SCG Multi-Family program builds on the program logic model and provides additional detail on program activities, outputs, and outcomes.

### **Activities**

#### *Marketing and Outreach*

The Multi-Family program targets property owners and managers of residential apartments, mobile home parks, and condominium complexes. Multi-family property owners/managers will be contacted about the program through direct mailings, presentations at community housing workshops, ads in trade magazines, brochures, newsletters, special events, local multi-family association meetings, and on the SCG website. Methods involved for outreach include site visits, IOU call centers, project specialists, customer service representatives, field and phone account representatives, customer-convenient seminars, and trade organizations

#### *Rebates*

Rebates are available for eligible multi-family property owners/managers who install energy efficient products in their complexes. Rebates may be paid to the multi-family building owner, a condominium association, or directly to the installing contractor.

#### *Collaboration with trade allies*

In order to facilitate the installation of gas measures, the Multi-Family Program will focus on educating and expanding alliances with gas product distributors, contractors, and plumbers.

#### *Quality assurance and verification*

Quality assurance procedures are established for applications to the Multi-Family program.

### **Short-term Outcomes**

#### *Property owners understand EE benefits and are aware of program options*

As a result of the various marketing and outreach activities, property owners begin to understand the potential benefits of installing energy efficiency measures and are aware of the financial incentives available through the program. Consequently, the “split incentives” barrier is reduced.

#### *Property owners participate in program, install measures*

Through the use of financial incentives the property owners will participate in the program and install energy efficient products in their complexes. The measures will be installed in individual dwelling units as well as common areas.

### **Mid-term Outcomes**

#### *Energy cost savings to property owners, tenants*

The property owners will have reduced energy costs from installing energy efficient equipment in the common areas of the buildings for which they pay the operating cost. Tenants will see reduced energy costs from the installation of energy efficient equipment in their individual dwelling units.

*Owners recognize benefits and continue to participate in program*

Building owners will see the monetary benefits of participating in the rebate program and be more inclined to install additional efficiency updates in the future.

*Inspections of 50 percent of project applications received*

SCG will inspect 50 percent of all applications submitted for processing.

## **Long-term Outcomes**

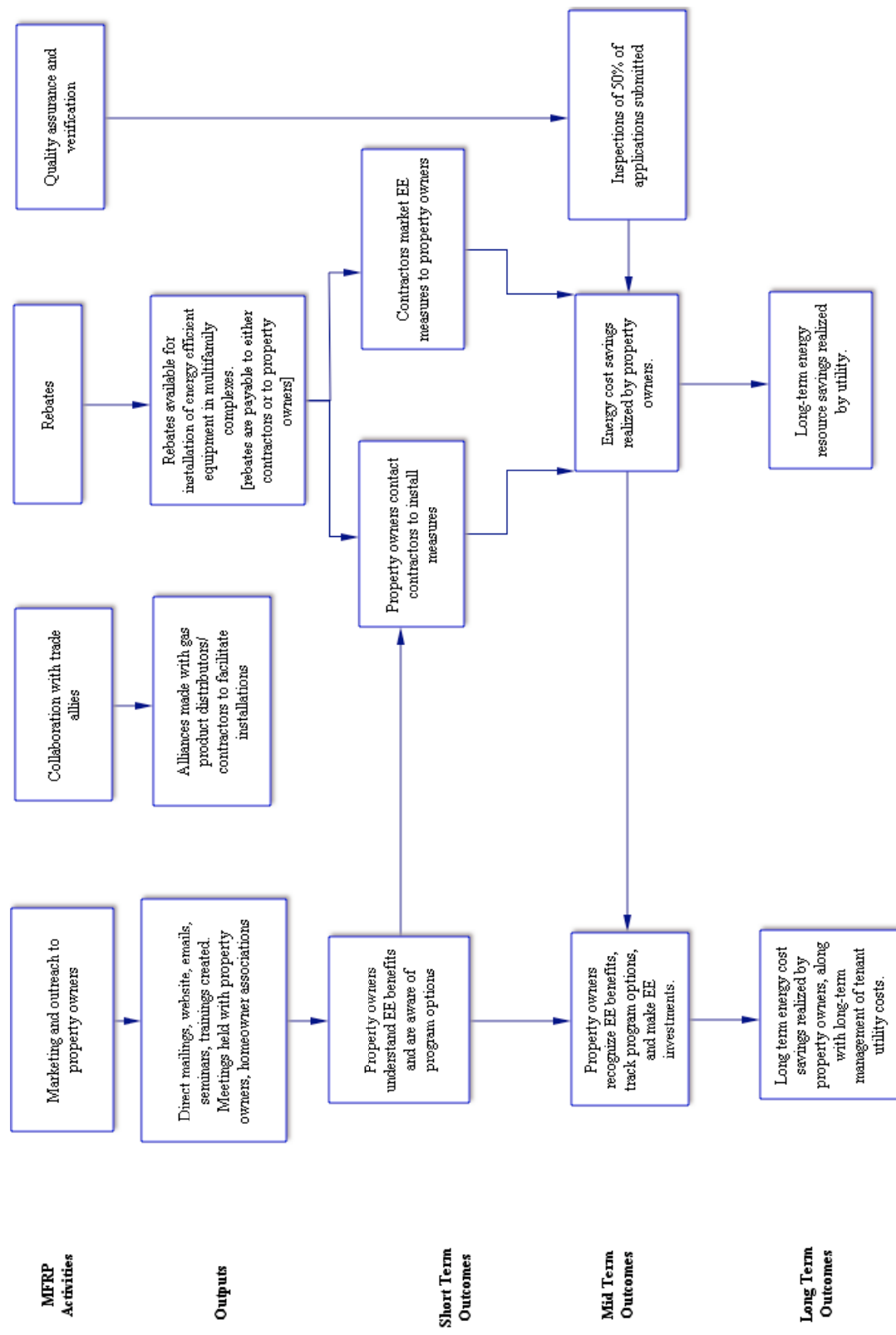
*Long term energy savings to property owners and tenants*

Energy savings will continue to occur as long as energy efficient products are being used in multi-family residences. The property owners will save energy in common areas and the tenants will save energy in their individual dwelling units.

*Utilities realize long-term resource savings.*

Energy savings realized through the installation of energy efficient measures will provide the utilities with cost-effective long-term energy resources.

**Figure 20: Multi-Family Program Logic Model**



## **4.3 MULTI-FAMILY PROGRAM EVALUATION OVERVIEW**

### **Multi-Family Program Research Issues**

Key issues faced by the SCG Multifamily Rebate program are (1) limited measures in the SCG territory, (2) potentially low savings from gas measures that are being installed, (3) customers lack of access to information about qualifying measures, and (4) a lengthy application form. The second issue regarding savings realization is being addressed by SCG through a monitoring and verification effort.

#### **Are There Additional Measures that Can Be Installed Through the Program?**

There are limited program-sponsored products and technologies available to install in multifamily buildings in the SCG territory.

#### **Do Customers Have Adequate Information to Identify Qualifying Equipment?**

SCG reports that a significant number of applications for incentives are denied because the installed equipment does not qualify for the program. There is, at present, no single consolidated list that customers may reference to assess eligibility.

#### **Review the Application Form Requirements**

The application form for this program is very lengthy and may serve as a barrier to participation, especially in cases where the rebate is very small.

## **4.4 MULTI-FAMILY PROGRAM EVALUATION RESULTS**

Three different interview efforts were completed to gather information about the Multi-Family program.

- 1) An interview with the Multi-Family Program Manager, which focused on gathering high-level information about the program, participants, energy savings goals, and other important issues
- 2) Telephone surveys of 70 multi-family property owners and managers (35 participants and 35 nonparticipants) in SCG's service territory
- 3) In-depth telephone interviews with 12 property managers and five contractors.

Information from the telephone surveys and in-depth interviews are summarized separately in the next two sections of this chapter. Key findings and program information are summarized at the end of the chapter and are followed by recommendations for program improvements.

### **Telephone Surveys of Property Owners and Managers**

Seventy managers and/or owners of properties located in SCG's service territory participated in a telephone survey. Half of these individuals had participated in the rebate program (participants) and half had not (nonparticipants). Both groups were asked about the facilities they worked at or owned, their perceptions and awareness of the program, their attitudes about utility-sponsored

programs and their actions and attitudes regarding energy efficiency at their properties. Participants also were asked questions about their experiences with the program.

## Pre-participation

Table 23 shows that about half (51 percent) of nonparticipants were aware of the Multi-Family program.

**Table 23: Nonparticipants' Awareness of Program**

Aware of Program?	Nonparticipants (N=35)
No	51%
Yes	49%

As indicated in Table 24, two-thirds (65 percent) of participants and nearly one-third (29 percent) of nonparticipants cited contractors or vendors as their first source of information about the program. About one-third of nonparticipants also learned about the program from property owners or managers.

**Table 24: Initial Knowledge of Program**

First Source of Program Information	Participants (N=34)	Nonparticipants (N=17)
Contractor or vendor	65%	29%
Website	12%	0%
Property owner or manager	9%	29%
Utility brochure	9%	18%
Don't know	6%	6%
Television	0%	6%

Table 25 shows the program features that interested the respondents. Participants primarily were interested in the opportunity to receive a rebate, upgrade the building, and reduce energy costs. Nonparticipants showed a significant level of interest in all features of the program, particularly the opportunity to reduce energy costs.

**Table 25: Program Features of Interest**

<b>Feature</b>	<b>Participants (N=34)</b>	<b>Nonparticipants (N=35)</b>
Rebates on installed measures	68%	49%
Building upgrades	50%	37%
Reduced energy costs	47%	54%
Tenant unit upgrades	18%	43%
Types of improvements available	15%	34%
None	3%	11%

Respondents were asked what questions they would need to have answered before participating in the program. Participants and nonparticipants cited several issues, as shown in Table 26. Note there is significant concern regarding the amount of paperwork involved and the length of time it will take to get paid.

**Table 26: Pre-participation Questions**

<b>Pre-participation Question</b>	<b>Participants (N=34)</b>	<b>Nonparticipants (N=35)</b>
What rebate will I receive?	56%	9%
What paperwork is required, or what forms do I need to fill out?	50%	9%
What is the cost of the installation?	47%	29%
How long will it take to get paid?	47%	6%
Do the contractors in the program do quality installation work?	44%	3%
What quality are the lights, appliances and other equipment?	38%	6%
How much should my utility bills decrease as a result of the installation?	38%	11%
How do I participate?	35%	23%
None	15%	23%
What types of items are available?	0%	3%
How long will it take from start to finish?	0%	3%
What is the extent of my involvement?	0%	3%
What old appliances do you upgrade?	0%	6%

## Application Form and Process

Table 27 shows that the majority of participants did not have difficulty with the application; 79 percent indicated it was either “very easy” or “somewhat easy” to complete.

**Table 27: Difficulty of Application**

Level of Difficulty	Participants (N=34)
Very easy	38%
Somewhat easy	41%
Somewhat hard	12%
Very hard	6%
Don't know	3%

Still, as Table 28 shows, one-third (33 percent) of the participants required some assistance to complete the application, and most of these sought help from utility staff. Table 29 shows that nearly all of those who required help with their rebate application indicated they would like to contact a utility representative for that assistance.

**Table 28: Need for Assistance with Application**

Needed Help with Application?	Participants (N= 33)
No	67%
Yes	33%
From utility staff	27%
From contractor	6%

**Table 29: Preferred Contact for Application Assistance**

Source of Assistance	Participants (N=11)
Utility representative	91%
Contractor representative	9%

## Location of Measures

As Table 30 shows, nearly all participants (93 percent) had measures installed in common areas, while slightly less than half had measures installed in tenant-occupied areas.

**Table 30: Measures Installed in Common and Tenant Areas - Participants**

Response	Common Areas (N=30)	Tenant- occupied Spaces (N=14)
Yes	93%	43%
No	7%	57%

Table 31 and Table 32 show the gas-related measures nonparticipants were interested in installing in tenant and common areas. While there was some interest in equipment such as faucet aerators and high efficiency boilers, most respondents said that they were unlikely to have them installed.

**Table 31: Potential Installations in Tenant Spaces – Nonparticipants**

Measure (Rebate)	Measures of Interest (N=35)	Measures Most Likely to Install (N=31)
Faucet aerators (\$1.25 each)	31%	7%
Low-flow showerheads (\$5 each)	26%	7%
ENERGY STAR® dishwasher (\$30/unit)	20%	13%
ENERGY STAR® clothes washers (\$75 /unit)	9%	0%

**Table 32: Potential Installations in Common Areas – Nonparticipants**

Measure (Rebate)	Measures of Interest (N=35)	Measures Most Likely to Install (N=29)
High efficiency boilers (up to \$1,500/unit)	37%	13%
High efficiency water heaters (up to \$500/unit)	31%	17%
Natural gas water heater or boiler controllers (up to \$750 or \$1500/unit)	31%	7%
Coin-operated clothes washers (\$150/unit)	0%	3%

## Measure Costs

As shown in Table 33, participants were asked whether or not they had to pay for the measures installed in their facilities. While some of the measures for both common and tenant-occupied areas were offered free of charge (18 percent and 33 percent, respectively), a larger number of participants indicated they paid for over 80 percent of the common-area measures installed through the program, and two-thirds of those installed in tenant-occupied spaces. Note that just six participants had measures installed in tenant-occupied spaces.



**Table 33: Payment for Program Measures - Participants**

Did Participant Pay for Measure?	Common Areas (N=28)	Tenant-occupied Spaces (N=6)
Yes	82%	67%
No	18%	33%

Of those who had to pay for the installation of measures in common areas, about half indicated that the cost of the installation was not a major issue affecting the decision to participate, as shown in Table 34. All participants who installed measures in tenant-occupied spaces said cost was not an issue; however, note that only four participants paid for measures in tenant spaces.

**Table 34: Did Installation Costs Affect Participants' Decisions?**

Response	Common Areas (N=23)	Tenant-occupied Spaces (N=4)
Yes	48%	0%
No	52%	100%

Table 35 includes the responses of 11 participants who paid for measures and indicated that cost was a major issue influencing the decision to participate. Nearly two-thirds of them looked at the total cost of the installation to assess the costs. The table also shows how nonparticipants would have assessed the cost of measures offered through the program. Nearly 60 percent of nonparticipants said they would look either at the total cost of the installation or the return on the investment.

**Table 35: Method of Assessing Cost of Installation**

Assessment Method	Participants (N=11)	Nonparticipants (N=33)
Return on investment	0%	30%
Total cost of the installation	64%	27%
Don't know	0%	18%
Payback (in years)	0%	12%
Urgent replacement	18%	0%
Total cost relative to projected energy savings	27%	6%
Did not judge, because cost was minimal	9%	6%

## Decision-making

Respondents also were asked whether or not factors besides investment costs would influence their decisions to participate in the program. As noted in Table 36, participants and nonparticipants differed slightly in their answers. Participants were more likely to indicate that cost was the only issue. A slightly larger percentage of participants than nonparticipants said there were no other factors involved in their decision. Note that only four participants responded to the question for tenant-occupied areas.

**Table 36: Factors Influencing Installation Decisions**

Factor	Participants – Common Areas (N=28)	Participants – Tenant-occupied Spaces (N=4)	Nonparticipants – All Areas (N=33)
Repair, maintenance issues	50%	25%	45%
Product quality	21%	25%	42%
Tenant acceptance, aesthetics	4%	0%	33%
Installation difficulties	0%	0%	24%
None, no other factors	21%	50%	12
Don't know	0%	0%	6%
Monthly costs	0%	0%	3%
Other	7%	0%	0%
Energy savings	7%	0%	0%
Environment	4%	0%	3%
Need to meet code	0%	25%	0%

Participants and nonparticipants were asked if other individuals would be involved in decision-making. Table 37 shows that property owners were involved most often in making decisions about installations at the property, and that a significant number of supervisors at property management companies and property managers also were involved. This finding illustrates that multi-family properties frequently have different decision-making structures and processes and that it can be difficult to find the right person to secure participation in the program.

**Table 37: Others Involved in Decision-making**

Other Decision Makers	Participants – Common Areas (N=28)	Participants – Tenant-occupied Spaces (N=4)	Nonparticipants – All Areas (N=33)
Property owner	43%	50%	73%
Supervisor at property management company	18%	25%	42%
Property manager	18%	25%	21%
Purchasing manager at property management company	0%	0%	6%
No one	11%	0%	3%
Board of directors/Home owners' association	18%	0%	3%
Other partners	4%	0%	0%

### Finding Contractors for Installations

Nonparticipants were asked two questions about the process they would use to find a contractor to complete measure installations offered through the program. Table 38 shows that most nonparticipants (58 percent) would seek bids from three contractors; all but six (73 percent) said they would seek more than one bid. Nearly 80 percent of nonparticipants would ask the utility for a list of contractors working with the program, as shown in Table 39.

**Table 38: Number of Bids Nonparticipants Would Seek from Contractors**

Number of Bids	Percent (N=33)
1 bid	6%
2 bids	3%
3 bids	58%
4 or more bids	12%
Do it in-house	9%
Don't know	9%

**Table 39: Would Nonparticipant Request List of Contractors?**

Response	Percent (N=33)
Yes	79%
No	21%

## Difficulties with the Program

Both participants and nonparticipants were asked about the difficulties they encountered or would expect to encounter during their participation in the Multi-Family program. As shown in Table 40, the large majority of participants reported that they didn't experience any problems. A small number of participants said the only difficulties that they encountered were the application itself and the quality of the contractors and the work. Nonparticipants expected to experience a wider array of difficulties, with only 42 percent expecting to have no difficulties at all.

There were two nonparticipants who indicated they were not interested in installing any measures. These respondents indicated that they had already done what they could to conserve energy in their buildings and did not believe that participating in the program would be worth the cost and hassle.

**Table 40: Difficulties Encountered or Expected to Encounter with Program**

Difficulty	Nonparticipants (N=26)	Participants – Common Areas (N=28)	Participants – Tenant- occupied Spaces (N=4)
None	42%	89%	50%
Disturbing or interfering with tenants	19%	0%	0%
Approval from owners/ supervisor	15%	0%	0%
Costs/ finding money	12%	0%	0%
Don't know	8%	0%	0%
Building characteristics (e.g., age)	8%	0%	0%
Quality of contractors and work	4%	0%	25%
Difficulty with application	0%	4%	25%
Extra costs contractors don't mention	0%	4%	0%
Length of time to receive rebate	0%	4%	0%

## Additional Measures

Table 41 and Table 42 show nonparticipants' level of interest in measures that were not offered through the program. Slightly less than one-third of all nonparticipants surveyed were interested in additional measures. Solar domestic water heaters, photovoltaic panels, cool roofs, and stoves generated the most interest.

**Table 41: Nonparticipants Interested in Additional Measures for the Program?**

Response	Percent (N=33)
No	71%
Yes	29%

**Table 42: Additional Measures of Interest – Nonparticipants**

Measure	Percent (N=10)
Solar domestic water heaters	30%
Photovoltaic (PV) panels	30%
Cool roofs	20%
Stoves	20%
ENERGY STAR® refrigerators	10%
ENERGY STAR® window or through-wall air conditioners	10%
ENERGY STAR® coin-operated clothes washers	10%
Sprinkler timers	10%
Anything	10%
Don't know	10%
Fluorescent lamps	10%
Shut-off valves for earthquakes	10%
Water-saving measures	10%

## Participant Satisfaction

Participants were asked a series of questions about their satisfaction with the program and installed measures. Table 43 shows participants' satisfaction with work completed by the contractor. Nearly all (97 percent) were either "extremely satisfied" or "somewhat satisfied" and only three percent (just one respondent) was neither satisfied nor dissatisfied. This individual was asked a follow-up question to determine why he/she was not satisfied, and extra costs were the reason for the lower rating.

**Table 43: Participants' Satisfaction with Contractor Work**

Satisfaction Level	Percent (N=34)
Extremely satisfied	79%
Somewhat satisfied	18%
Neither satisfied nor dissatisfied	3%
Somewhat dissatisfied	0%
Dissatisfied	0%

Participants' satisfaction with the performance of the equipment is shown in Table 44. Ninety-seven percent of participants reported that they were either "extremely satisfied" or "somewhat satisfied." The one individual who reported a lower level of satisfaction was asked the reason for the rating, and cited rising costs and uncertainty about the lifespan of a new heater.

**Table 44: Participants' Satisfaction with Performance**

Satisfaction Level	Percent (N=34)
Extremely satisfied	82%
Somewhat satisfied	15%
Neither satisfied nor dissatisfied	3%
Somewhat dissatisfied	0%
Dissatisfied	0%

Participants' satisfaction with the equipment installed in tenant-occupied areas is shown in Table 45. Again, the majority of participants were either "extremely satisfied" or "somewhat satisfied." The two individuals who were less satisfied were asked why they selected their rating. They indicated they were having difficulties with the quality of the equipment, or tenants had complained about something related to the installation.

**Table 45: Participants' Satisfaction with Tenant Unit Installations**

Satisfaction Level	Percent (N=34)
Extremely satisfied	59%
Somewhat satisfied	24%
Neither satisfied nor dissatisfied	0%
Somewhat dissatisfied	0%
Dissatisfied	0%
Does not apply	18%

Participants also were asked about what tenants liked most about the work that was completed in their units. As Table 46 shows, 60 percent of interviewed participants reported that they were unaware of or had not received any comments from tenants, while 29 percent reported that tenants enjoyed the higher quality of hot water.

**Table 46: Reason for Tenant Satisfaction – Participants**

Reason	Percent (N=28)
Don't know	39%
Better hot water quality	29%
No comment from tenants	21%
Tenants are generally happy with improvements	4%
That the work is done	4%

Table 47 shows that the majority of participants felt that their expectations for the program had been met adequately. For the six percent who did not feel this way, most cited problems with the rebate as the main reason their expectations were not met.

**Table 47: Participants' Expectations of Program Met?**

Response	Percent (N=34)
Yes	94%
No - Problem with rebate	6%

As Table 48 shows, nearly all participants indicated they would recommend the Multi-Family program to property managers at other facilities. However, three percent (one respondent) stated that they would not recommend the program to others, primarily because of poor experiences with the rebate.

**Table 48: Likelihood to Recommend Program to Others – Participants**

Response	Percent (N=34)
Yes	97%
No - Problem with rebate	3%

## Marketing

Both participants and nonparticipants were asked how they would like to receive information about similar utility programs in the future. As Table 49 shows, over half of all nonparticipants indicated that direct mail was the best way for them to get information about utility programs. Bill stuffers and direct mail were common responses among participants. Taken as a whole, these findings suggest that mailing effective marketing materials may be the best way to communicate information and advertise features of utility-sponsored programs to the multi-family industry.

**Table 49: Preferred Marketing Methods**

<b>Marketing Method</b>	<b>Participants (N=34)</b>	<b>Nonparticipants (N=35)</b>
Bill stuffers	38%	9%
Direct mail	35%	51%
Email	35%	34%
Utility website	12%	6%
Contractors or other vendors	9%	3%
Radio	6%	6%
Fax	3%	11%
Newspapers	3%	3%
TV	0%	9%
Trade association	0%	0%
None of these	0%	3%

Table 50 shows how participants and nonparticipants rated the importance of various features of a utility program. The level of importance placed on each of the six issues was roughly the same for both groups. The quality of the installation work and products were rated the most important.



**Table 50: Importance of Program Features**

	Participants (N=34)	Nonparticipants (N=35)
<b>Simple/no paperwork</b>		
Very important	62%	51%
Somewhat important	29%	40%
Not at all important	6%	6%
Don't know	3%	3%
<b>Amount of the energy savings</b>		
Very important	68%	69%
Somewhat important	26%	26%
Not at all important	3%	3%
Don't know	3%	3%
<b>No cost for installation/equipment</b>		
Very important	56%	66%
Somewhat important	26%	31%
Not at all important	12%	0%
Don't know	6%	3%
<b>Quality products</b>		
Very important	85%	74%
Somewhat important	15%	23%
Not at all important	0%	0%
Don't know	0%	3%
<b>Quality installation work</b>		
Very important	91%	80%
Somewhat important	9%	17%
Not at all important	0%	0%
Don't know	0%	3%
<b>List of all approved vendors in my area</b>		
Very important	26%	23%
Somewhat important	47%	57%
Not at all important	21%	14%
Don't know	6%	6%

## Program Impacts

Table 51 and Table 52 show participants' responses to two questions to determine if their energy bills had changed as a result of participating in the program. Nearly 70 percent of those surveyed noted program-related energy savings. Of the individuals who had access to this information, 61 percent also had seen decreases in their energy bills after participating in the program.

**Table 51: In Position to Observe Decrease in Energy Bills – Participants**

Response	Percent (N=34)
Yes	68%
No	32%

**Table 52: Decrease in Energy Bills Observed – Participants**

Response	Percent (N=23)
Yes	61%
No	39%

## Suggestions for Improvement

Table 53 through Table 58 show participants' suggestions for improving various aspects of the Multi-Family program. Though most participants did not have suggestions for improvement, some noted ways in which the products and services offered could be improved.

**Table 53: Suggestions for Improvement –  
Products Offered?**

Response	Participants (N=34)
No	88%
Yes	12%
Easier to get newer equipment	3%
Have a list of products	3%
Advertise by direct mail	3%
Keep communication simple in writing	3%

**Table 54: Suggestions for Improvement –  
Services Provided?**

Response	Participants (N=34)
No	94%
Yes	6%
List of services	3%
Notify appliance people	3%

**Table 55: Suggestions for Improvement –  
Rules and Restrictions?**

Response	Participants (N=34)
No	88%
Yes	12%
Fewer rules and restrictions	6%
Make paperwork easier for tenants	3%
Other	3%

**Table 56: Suggestions for Improvement –  
Communications with Property Managers?**

Response	Participants (N=34)
No	94%
Yes	6%
Use mail or media	3%
Account numbers hard for tenants to find	3%

**Table 57: Suggestions for Improvement –  
Forms and Paperwork?**

Response	Participants (N=34)
No	85%
Yes	15%
Simpler paperwork	9%
Less paperwork	6%

**Table 58: Suggestions for Improvement –  
Other Aspects of the Program?**

Response	Participants (N=34)
No	88%
Yes	12%
Ensure rebate is paid	3%
More money	3%
Send offers by mail	3%
Vendors should also offer an incentive	3%

### Level of Interest in Energy Efficiency

Table 59 shows whether or not participants or nonparticipants had installed any energy efficiency improvements outside of the Multi-Family program. Results are similar for both groups, with just under 40 percent answering that they had installed measures external to the program.

**Table 59: Prior Energy Efficiency Improvements**

Response	Participants (N = 34)	Nonparticipants (N = 35)
No	62%	63%
Yes	38%	37%

The 13 individuals who made some sort of efficiency improvement were asked a follow-up question to determine what had been installed. As Table 60 shows, participants and nonparticipants mentioned a variety of measures. A significant number of members of both

groups had had lighting measures installed, as well as dishwashers, clothes washers, and high efficiency boilers.

**Table 60: Prior Efficiency Installations at Property**

Measure	Participants (N=13)	Nonparticipants (N=13)
Hardwired fluorescent porch/outdoor lights	62%	31%
ENERGY STAR® programmable thermostats	54%	8%
Photocell controls for exterior lighting	54%	8%
High efficiency water heaters	54%	15%
Screw-in CFLs	46%	69%
Hardwired fluorescent fixtures	46%	46%
ENERGY STAR® dishwashers	38%	23%
High efficiency boilers	38%	31%
High efficiency air conditioners or heat pumps	38%	8%
ENERGY STAR® clothes washers	31%	23%
Natural gas water heater or boiler controllers	31%	0%
High performance dual-paned windows	23%	8%
Attic or wall insulation	15%	8%
Occupancy sensors	15%	0%
ENERGY STAR® ceiling fans	8%	8%
Solar water heating	8%	0%
Solar photovoltaic (PV) panels	8%	8%
High efficiency exit signs	0%	12%
Cool roofs	0%	0%

Both groups were asked if they planned to make any energy efficiency improvements to their properties over the next two to three years. Participants were more likely to have such plans, although there was only a 10 percent difference between the groups.

**Table 61: Plans for Future Efficiency Improvements at Property?**

Response	Participants (N=34)	Nonparticipants (N=35)
Yes	59%	49%
No	38%	51%
Don't know	3%	0%

Individuals with plans to make energy efficiency improvements over the next two to three years were asked an additional question to determine what they planned to install in tenant-occupied areas (both gas and electric measures were allowed as responses). Table 62 shows that no single measure was the most common for either group, with a significant number expressing interest in a variety of measures. As shown in Table 63, nearly half of participants who planned to make energy efficiency improvements did not plan to make any in common areas.

**Table 62: Energy Efficiency Improvements Planned for Tenant-occupied Areas**

Measure	Participants (N=20)	Nonparticipants (N=17)
None in tenant-occupied spaces	30%	29%
ENERGY STAR® refrigerators	15%	18%
ENERGY STAR® dishwashers	15%	12%
High performance dual-paned windows	15%	24%
CFLs	15%	29%
ENERGY STAR® clothes washers	10%	0%
ENERGY STAR® programmable thermostats	10%	6%
Hardwired fluorescent fixtures	10%	29%
Attic or wall insulation	10%	0%
ENERGY STAR® ceiling fans	5%	0%
High efficiency window or through-wall air conditioners	5%	18%
Don't know	5%	0%
Pool pumps	5%	0%
Instant water heaters for sinks	5%	0%
Stoves	5%	12%
Wall heaters	5%	0%
Water heaters	5%	6%
Many	0%	6%
Water savings	0%	6%

**Table 63: Energy Efficiency Improvements Planned for Common Areas**

Measure	Participants (N=20)	Nonparticipants (N=17)
None in common areas	45%	12%
High efficiency water heaters	35%	18%
Natural gas water heater or boiler controllers	20%	0%
ENERGY STAR® coin-operated clothes washers	10%	6%
CFLs	10%	29%
Solar water heating	10%	12%
High efficiency air conditioning	5%	6%
Hardwired fluorescent or high efficiency outdoor lighting	5%	35%
High efficiency central boilers	5%	18%
Attic or wall insulation	5%	0%
Photocell controls for exterior lighting	5%	12%
Solar photovoltaic (PV) panels	5%	12%
Dryers	5%	0%
Hardwired fluorescent indoor lighting	0%	53%
Cool roofs	0%	6%
High efficiency furnaces	0%	0%
High efficiency exit signs	0%	12%
Occupancy sensors for interior lighting	0%	6%
Dual-paned windows	0%	12%
Stoves	0%	6%

Table 64 shows participants’ and nonparticipants’ interest in incentives to encourage the replacement of refrigerators. Roughly half of both groups were interested in such incentives.

**Table 64: Interest in Incentives for Refrigerator Replacements**

Response	Participants (N=34)	Nonparticipants (N=35)
Yes	50%	56%
No	50%	46%

Table 65 shows participants’ and nonparticipants’ interest in incentives to encourage the replacement of coin-operated clothes washers. Interestingly, while a small majority (53 percent) of participants were interested in such incentives, 74 percent of the nonparticipants said they were interested.

**Table 65: Interest in Incentives for Clothes Washer Replacements**

<b>Response</b>	<b>Participants (N = 34)</b>	<b>Nonparticipants (N = 35)</b>
Yes	53%	74%
No	47%	26%

Participants were asked if they were interested in incentives for other technologies. The 44 percent who responded “yes” listed a variety of technologies. Some of these responses are for measures already covered by the program, which indicates a lack of awareness among participants on all the measures that are eligible.

**Table 66: Desired Incentives for Other Technologies**

<b>Response</b>	<b>Participants (N = 34)</b>
No	56%
Yes	44%
Anything you can offer	15%
Stoves	12%
Furnaces	9%
Dryers	6%
Dishwashers	6%
Tankless water systems	3%
Air conditioning	3%

## Property and Management Characteristics

Participants and nonparticipants were asked a series of questions about their multi-family facilities, the firms employing them, and their professional backgrounds. Table 67 shows the number of apartment units in the facilities of those surveyed. Participants said their facilities were of varying sizes, while nonparticipants seemed to manage larger buildings—at least 89 percent had more than 20 units and 26 percent had 100 or more.



**Table 67: Number of Apartment Units at Property**

<b>Number of Units</b>	<b>Participants (N = 34)</b>	<b>Nonparticipants (N = 35)</b>
1-4	12%	0%
5-9	35%	6%
10-19	18%	0%
20-49	21%	40%
50-99	9%	23%
100 or more	6%	26%
Don't know	0%	6%

Table 68 shows the number of stories in participants' and nonparticipants' multi-family buildings. The majority (74 percent) of participants' buildings were two-storied. Eighty-three percent of nonparticipants' buildings had at least three stories.

**Table 68: Stories in Building**

<b>Number of Stories</b>	<b>Participants (N = 34)</b>	<b>Nonparticipants (N = 35)</b>
1	3%	0%
2	74%	14%
3	15%	43%
4	6%	20%
5 or more	3%	20%
Don't know	0%	3%

Table 69 shows that most of the respondents owned and managed the properties discussed in the telephone survey.

**Table 69: Ownership or Management**

<b>Ownership/Management?</b>	<b>Participants (N = 34)</b>	<b>Nonparticipants (N = 35)</b>
Own and manage this property?	65%	69%
Manage this property only?	29%	29%
Own this property but not manage it?	3%	3%
Refused	3%	0%

Table 70 shows the number of years the respondents had been in their current positions at the multi-family properties. Nearly 40 percent of participants reported being in their current positions for between one and 10 years, while another 41 percent had held their positions between 11 and 20 years. Over 50 percent of nonparticipants reported being in their current positions for between one and five years and the majority of the remaining nonparticipants reported being in their position for six years or more.

**Table 70: Years in Current Position of Employment**

	<b>Participants (N = 34)</b>	<b>Nonparticipants (N = 35)</b>
Less than 1 year	0%	3%
1-2 years	12%	43%
3-5 years	21%	17%
6-10 years	6%	9%
11-20 years	41%	14%
21 or more years	18%	9%
Refused	3%	0%
Don't know	0%	6%

Both groups also were asked how long they had been in control of other complexes. As noted in Table 71, roughly one-third of each group reported they had been in control of other complexes for less than one year.

**Table 71: Years in Control of Other Complexes**

<b>Years</b>	<b>Participants (N = 34)</b>	<b>Nonparticipants (N = 35)</b>
Less than 1 year	35%	31%
1-5 years	9%	23%
6-10 years	0%	17%
11-20 years	12%	9%
21 or more years	18%	6%
Don't know	15%	11%
Refused	12%	3%

## **In-Depth Interviews**

This section presents some of the primary results of the in-depth telephone interviews with randomly selected contractors and property managers, and also with the Multi-Family program staff. Some property managers worked on-site, while others worked for a property management company.

These interviews were scheduled over a two-week period in December 2007. Each interview took approximately 15 to 25 minutes to complete.

The purpose of these in-depth interviews was to gather a complete view of individual experiences with the program and explore some of the issues identified during the earlier telephone surveys and the interview with the Multi-Family Program Manager. Discussion topics included: initial knowledge of the program, decision-making structures in the multi-family sector, experiences with the application, and other important aspects of the program. Each subsection below highlights key findings, quotes, and observations identified during the interviews.

### **General Characteristics and Background Information**

Five interviews were completed with participating contractors working in SCG's service territory. Two of the contractors worked primarily with controllers, while the other three worked with boilers and water heaters. These contractors represented companies with 10 to 50 employees. All contractors did their work only in California, except one that did a limited amount work outside of California in Nevada and Arizona.

Twelve in-depth telephone interviews were completed with property managers of multi-family facilities in SCG's service territory. These individuals were pulled at random from a list of hundreds of multi-family property managers who had participated in the rebate program. The property managers interviewed represented facilities with six to over 500 units. These individuals had a wide range of experience in the industry; some had worked as a property manager for less than a year, while others had held their position for more than 25 years. Many managers were members of trade associations such as the Apartment Association of Greater Los Angeles.

### **Initial Knowledge of the Program**

All contractors interviewed had participated in SCG's efficiency programs during the last three to 10 years. Contractors generally were aware of the programs and communicated relatively regularly with utility staff or other contractors to stay informed about the rebate programs.

Almost all contractors completing the in-depth interviews indicated they had informed their customers about the multi-family rebate program. Many had contacted existing customers to let them know about the rebates or had marketed their rebated services in person. Most said they were the initial source of information about the program for most of their clients or that clients had participated in the past and were aware of the rebates. These findings are consistent with results from the larger telephone survey, which found that most participants and nonparticipants first learned about the program from a contractor or vendor.

Property managers participating in the in-depth interviews said they usually learned about the program from SCG mailings or through their apartment association. Findings from the telephone survey indicate that the majority of participants first learned about the program from contractors or vendors, which suggests that these three channels were the primary methods by which property managers were informed about the program and its services.

## Decision-making Structures

According to respondents, several decision-making structures exist in the multi-family sector. This makes it hard to use a single technique or point of contact to install measures under the rebate program. Contractors cited these decision-making structures as a barrier to program participation. These barriers are discussed below.

- 1) *Finding the right point of contact at multi-family properties is difficult.* Multi-family properties frequently are managed by a variety of individuals who are responsible for discrete operations and decisions. Many of the individuals responsible for decisions such as authorizing new installations frequently work off-site and are hard to locate. As a result, property managers working at the property may have little authority or knowledge about the program and related activities, such as installing and paying for energy efficient measures. This makes it hard for contractors to contact the appropriate people to authorize participation in the program.
- 2) *Energy efficiency typically is not a major concern for property managers.* Several property managers interviewed indicated that energy efficiency was not a top priority at their property. According to a property manager who also owned his building, property management companies often are not concerned with and remain unaware of energy efficiency measures because they feel they do not directly impact their business since they do not pay for installations or improvements to the property.

## Installation of Measures

SCG customers experienced few difficulties with program-related installations. Property managers had few negative experiences concerning installations—97 percent were satisfied with the work done by contractors for the program. Issues relating to the installation of measures are discussed below.

- 1) *Gaining access to tenant areas was not perceived as a barrier to participation.* All 12 property managers interviewed said that gaining access to tenant units was not a major problem and would not prevent participation in the rebate program. They noted that property managers must give tenants 24 hours notice of planned projects and said few tenants complained about such work.
- 2) *Because of financing issues, installations usually are made only to replace broken items.* Multi-family property owners or managers usually install energy efficient measures only to replace old or broken equipment. One major reason is that the first-cost of energy efficient measures usually is too high to justify an investment before the older item has broken. This is not an issue for free measures provided by other programs.

## Rebate Application

The rebate application drew the most complaints from contractors participating in the in-depth interviews. Contractors considered it unnecessarily long and complex, and many needed help completing it from someone more knowledgeable about the program. Though many respondents said the application was not necessarily difficult, they highlighted several key issues during their in-depth interviews.

- 1) *Individuals responsible for filling out the rebate application were less satisfied with the program.* These individuals were more likely to consider the program complex and difficult to participate in. They thought the application asked for an unreasonable amount of information that took a significant amount of time to collect. This was especially true for smaller measures. Even the Program Manager said that a 10-page application for a \$30 rebate was far too long and complex.
- 2) *Several property managers required some assistance to complete the application.* Although 79 percent of property managers rated the application as “very easy” or “somewhat easy” to complete, 12 percent said it was “somewhat hard” and 33 percent needed some assistance to complete it. As property managers and contractors noted, this likely was due to the fact that several individuals typically needed to provide the required information, including: property management company supervisors (utility account information and property tax ID numbers), contractors (product information), and owners (approvals).
- 3) *The PDF format of the application is not computer-friendly.* Several contractors who completed multiple applications said the PDF format did not allow them to fill out and save information electronically. A different format, such as Word or Excel, would make it much easier to save information, and consequently, save time.

## Rebates and Funding Levels

Contractors and property managers identified several issues concerning rebate levels for various measures covered by the program. In general, contractors appreciated the rebates and believed they encouraged customers to buy more efficient equipment. Individuals from both groups suggested changes to several rebates, as discussed below.

- 1) *Rebates increase business for contractors and encourage customers to purchase more efficient models.* Many property managers replaced old or broken boilers and water heaters when they participated in the program. Contractors said the rebates help encourage customers to purchase more efficient models when they replace old or broken equipment.
- 2) *Rebates for controllers were unnecessarily high.* Several gas contractors who participated in the program felt that the rebates for controllers were too high. They explained that controllers generally have short payback periods that are enticing enough to sell without a rebate. They also were concerned that property managers could reprogram or alter the controllers, thereby reducing or eliminating the energy savings. The contractors

recommended eliminating the rebates for controllers and instead use rebates to verify that controllers achieve projected therm savings.

- 3) *Property managers become accustomed to rebates and will put off installations until funding becomes available.* Some contractors noted that rebates can act as a “double-edged sword” by encouraging business when funding is available and hurting business when programs are discontinued. They described situations in which property managers forego an energy efficiency upgrade until utility funding is available, even if they would have made the upgrade without the rebate. This can delay energy savings from the property.
- 4) *Rebates are too low for costly measures.* Some property managers said the rebates for high efficiency boilers and water heaters were too low to stimulate installations. This is in line with data from the telephone survey.

## Program Satisfaction

The majority of participating contractors and property managers were satisfied with all aspects of the program. They said the rebates encouraged installations by contractors and offered energy efficient measures for multi-family properties at a reduced cost. However, individuals from both groups identified the following problems with the program.

- 1) *Property managers and contractors were very satisfied with the program.* Individuals from both groups who participated in the in-depth interviews gave the program high ratings. This matches results from the telephone survey, in which 94 percent of property managers said their expectations of the program had been met.
- 2) *Abrupt notification that the program would be discontinued hurt contractors.* One of the most common contractor complaints about the program was the abrupt notification that funding no longer would be available. Projects involving major gas measures often take a long time to complete. Obviously, it is particularly difficult for contractors if they must inform a property manager during project installation that program funding no longer is available and therefore, that costs have increased. Abrupt discontinuation of the program also makes it hard for contractors to forecast their cash flows.
- 3) *The lengthy rebate processing period presented financial difficulties for program participants.* Several program participants noted that the rebate often took much longer to process than anticipated. Instead of less than two months, it often took up to four months. This was difficult for both property managers and contractors, who had planned on receiving the rebate much more quickly.
- 4) *Specific measures, such as controller mechanisms and high efficiency boilers, were well regarded.* Respondents said these measures provided gas savings, lowered costs, and contributed to their high level of satisfaction with the program. This high level of satisfaction is consistent with the telephone survey data, which showed that 97 percent of participants were satisfaction with the contractors’ performance and installations.

- 5) *Tenants noted program benefits.* Many participating property managers and owners had heard positive responses from tenants about improved hot water quality and lower gas bills.

#### **4.5 MULTI-FAMILY PROGRAM ISSUES AND OBSERVATIONS**

The majority of contractors and property managers reported being satisfied with SCG's Multi-Family program. Property managers liked having the new products installed in their facilities for free or at a reduced cost and appreciated the savings generated by the efficiency measures. They liked being able to upgrade both common and tenant-occupied areas and generally were pleased with how the program operates. Tenants also appreciated the program's impacts and considered participating properties more attractive due to their lower gas bills and better hot water quality. Contractors were able to increase their business due to the rebates and noted that customers were more likely to buy efficient options due to the program.

Though customer satisfaction was high, the program was falling short of its therm-saving goals. As of September 2007, the program was at 24 percent of its three-year goal, with slightly over 1.2 million therms saved. Most of the savings were due to three technologies: boilers, central water heaters, and boiler controllers.

Several barriers that prevent the achievement of program goals were identified during the in-depth interviews with property managers, contractors, and the SCG program manager. These interviews allowed individuals involved with the program to discuss their experiences and give suggestions to improve the program. They identified several opportunities for improvement, including better communication, simplification of the application, development of a clear marketing strategy for the program, and coordination with SCE and SDG&E programs.

Overall, the community appreciated the rebates provided by the Multi-Family program, and the rebates help encourage the installation of more efficient measures. Although the program has had difficulty meeting its goals, there is an opportunity to achieve them by addressing some of the major issues identified by this evaluation to make the program more user-friendly, provide credible and usable data for SCG program managers, and increase overall program activity.

The recommendations below are based on information gathered through the surveys and interviews with program staff, participating and nonparticipating property managers, and contractors. These recommendations highlight specific strategies SCG can pursue to improve the effectiveness of the Multi-Family program.

#### **Recommended Program Improvements**

- **The rebate application should be simplified.** One of the most consistent complaints about the program from contractors, property managers, and program staff was the length and complexity of the application. The application was 10 pages long and required detailed information, including data about the property, utility accounts, and the measures installed. Everyone involved with the program said it was hard to find this information, much of which they felt was unnecessary. Therefore, it is recommended that SCG reduce the complexity and length of the application to eliminate one of the major barriers to participation in the program.

- **SCG needs to make an effort to update information on the program website routinely.** SCG staff indicated that the biggest barrier to program participation is the fact that the program’s website does not provide an up-to-date list of qualifying equipment. They said maintaining the list is time-consuming. As a result, a large number of applications for central water heaters are being rejected. SCG needs to update the information on qualifying equipment regularly.
- **SCG should develop a clear marketing strategy for the program.** The program did not have a formal marketing strategy with defined objectives and outcomes. The utility had done mailing campaigns targeted toward apartment complexes and outreach through apartment associations and events. Interviews with program participants and contractors identified additional marketing channels the program should pursue to increase exposure and participation.

Contractors presented the greatest opportunity for SCG to pursue additional marketing efforts. Sixty-five percent of participants from the telephone survey indicated that they first learned about the program from contractors or vendors, and all five contractors who did in-depth interviews said they were the primary source of initial information for customers who participated in the program. Several of these contractors noted that marketing materials from the utility, such as informative brochures with the SCG logo, would provide additional sales tools and improve the credibility of the contractors and the program.

SCG also should continue marketing and outreach efforts directed at property managers and the apartment industry. Direct mailings, bill inserts, and outreach through apartment associations were identified as effective channels for communicating information about the program and should be included in the program’s marketing strategy.

- **Verification of controllers should be an integral part of the program.** 75 percent of the program’s savings were tied to boiler controllers. However, several contractors who worked with these controllers expressed concern that customers frequently adjusted controller settings and thereby drastically reduced the energy savings these measures could provide. Initial results from a KEMA impact evaluation echoed these concerns. This suggests that the actual savings from controllers may be much lower than expected. In order to address this major issue and get accurate data on program impacts, SCG should make verification an integral part of the Multi-Family program.
- **SCG should coordinate with similar or complementary programs offered by SCE and SDG&E.** Several property managers expressed interest in having efficient lighting measures installed after having positive experiences with gas measures. Although it may be difficult to accomplish, SCG has an opportunity to team with SCE on programs targeting the multi-family sector to increase participation and savings for both of the utilities. SCG also could benefit from coordinating its Multi-Family program with SDG&E’s similar Multi-Family program. Many of the area’s gas contractors work in both the SCG and SDG&E service territories. Because both of these utilities are owned by Sempra Utilities, they could explore collaborating on issues such as simplifying the



rebate application, increasing marketing materials and efforts, and improving the verification of controllers.

- **SCG should improve its customer tracking system.** Program staff said it was difficult to track specific information about participating properties and customers, which is information that would aid program planning. SCG program staff should attempt to adjust the tracking system so this information is available when the restriction on changes to the new tracking system is lifted.
- **SCG should explore alternate funding methods to achieve therm savings goals.** Contractors suggested that a funding scheme that allowed several contractors to receive guaranteed funding in exchange for providing a set amount of savings would increase program savings. This funding method also could reduce paperwork and let SCG set targets that contractors would compete to provide. Although this may not be SCG's preferred approach, it is important that SCG explore and evaluate alternate funding methods and models to meet program goals.

## 4.6 MULTI-FAMILY PROGRAM BEST PRACTICES REVIEW

### Program Theory and Design

- *Is the program design effective?* The program offers a broad range of eligible measures that collectively support a whole-building approach to (potentially) achieve maximum energy savings. In particular, building owners and managers like being able to upgrade both common and tenant-occupied areas. The program offers agreed-upon measures for coordinated implementation, but is designed to adapt easily to market changes, including adding new, cost-effective measures. Contractors have been able to increase their business due to the rebates and note that customers are more likely to buy efficient options due to the program. To link rebates for popular and less utilized measures the program offers bonus rebates to owners who install three or more energy efficient measures at a time, although to date, only a few measures account for the majority of installations.
- *Is the market well understood?* Yes. The program knows that multi-family properties can have different decision-making structures, and that decision makers can include property owners, owner associations, management company supervisors and purchasing managers, and on-site facility managers. These actors may have different levels of purchasing authority and awareness of building energy consumption, availability of energy efficiency equipment, and specific program offerings. This makes it challenging for program staff and contractors to contact the appropriate people to authorize participation in the program.

### Program Management

#### Project Management

- *Are responsibilities defined and understood?* Not applicable (no program delivery functions are contracted to third parties).
- *Is there adequate staffing?* No staffing problems were reported.

## Reporting and Tracking

- *Are data easy to track and report?* Although the program does collect information on many aspects of multi-family buildings (complex and unit level data, units treated/untreated, measures information) via the rebate application forms, the current tracking and reporting system design does not fully address the program's information and data needs. Program staff said it is still difficult to find specific information about participating properties and customers, which would aid program planning.
- *Are routine functions automated?* Not addressed in this evaluation.

## Quality Control and Verification

- *Does the program manager have a strong relationship with vendors involved in the project?* The program has successfully built relationships with firms responsible for equipment installations, operations, and maintenance. Program contractors communicate relatively regularly with utility staff and other contractors to stay informed about the rebate program.
- *Does the program verify reporting systems (e.g., rebates, invoices)?* Not addressed in this evaluation.
- *Are customers satisfied with the product?* Customers reported high degrees of satisfaction for most program elements, including eligible products and contractor services.

## Program Implementation

### Participation Process

- *Is participation simple?* No. Many participants require utility staff assistance to complete the long and detailed rebate application forms, and the forms deter some would-be participants. Also, there is no single current and consolidated list that customers may reference to determine equipment eligibility. Thus a significant number of applications for incentives are denied because the installed equipment does not qualify for the program.
- *Are participation strategies multi-pronged and inclusive?* The number of channels through which customers can enter the program (self-initiated installations, contractor recommendations) is limited but appropriate for this market segment.
- *Does the program provide quick, timely feedback to applicants?* No. Many participants noted that the rebate often took much longer to process than anticipated, sometimes taking up to four months.
- *Is participation part of routine transactions?* No, customers must initiate participation by acting upon marketing information from the utility or recommendations from a contractor.
- *Does the program facilitate participation through the use of internet/electronic means?* No. The program's website provides downloadable rebate applications, however the PDF format does not allow them to fill out and save information electronically. A different format could make it much easier to save time and information.

- *Does the program offer a single point of contact for their customers?* Installation contractors are also used to deliver the program, which is appropriate for this program.
- *Are incentive levels well understood and appropriate?* Overall, customers appreciate the rebates provided by the program and they are generally understood. There is some evidence that rebates for controllers, which are attractive and have a short payback period, may be too high. Conversely, rebates for high efficiency boilers and water heaters are probably too low to stimulate installations.

## Marketing and Outreach

- *Use target-marketing strategies?* The program does not have a strategic marketing plan. Presumably, the program uses a database of multi-family property information to track the customer population and identify project candidates. The program is then marketed primarily through periodic mailings to multi-family property owners and outreach to apartment associations. (Despite this, most property owners and managers continue to learn about the program through installation contractors.) Most multi-family owners and managers indicated, however, that direct mailings are still the best way to communicate program information generally.
- *Are products stocked and advertised?* Not applicable.
- *Are trade allies and utility staff trained to enhance marketing?* The evaluation team did not hear about any training for contractors to market the program. Contractors noted that having marketing materials from the utility, such as informative brochures with the SCG logo, would provide additional sales tools and improve the credibility of the contractors and the program.

## 5. COMPREHENSIVE MOBILE HOME PROGRAM

### 5.1 MOBILE HOME PROGRAM BACKGROUND

This chapter describes the Comprehensive Mobile Home program (Mobile Home program) provided by Synergy in the (mostly overlapping) SCG and SCE service territories. Synergy's interaction with SCG is limited because they communicate primarily with SCE as the sponsoring utility for the program. The chapter includes an assessment of the program's success to date and recommends actions for improvement.

The Mobile Home program is designed to provide energy efficiency measures to owners and renters of mobile and manufactured homes in the SCG service territory. Synergy designed this program based on its prior experience with a program in the Pacific Gas & Electric (PG&E) service territory.

Synergy has found that this market segment is hesitant to take advantage of mainstream energy efficiency programs because of language, economic, and educational barriers. According to Synergy, many of the customers in this segment are senior citizens, on fixed incomes, and often are physically unable to install the measures themselves. These factors present significant barriers to participation in other energy efficiency programs. Therefore, the Mobile Home Program seeks to overcome or reduce these barriers through direct marketing and direct installation of energy efficiency measures.

The Mobile Home program is marketed to mobile home park residents through community meetings and referrals. Once residents sign up, program technicians install some or all of the following energy efficiency measures: testing and sealing ducts, and installing aerators, low-flow showerheads, pipe wrapping, and water heater blankets. Program staff includes the nine key individuals listed in Table 72, nine office staff members that provide scheduling and administrative support, and 15 technicians.

**Table 72: Synergy Mobile Home Program Key Staff**

<b>Job Title</b>	<b>Job Description</b>
CEO	Chief Executive Officer
Operations Manager	Program Management
Office Manager	General Office Management
Production Manager	Supervises Technicians
Quality Control Manager	Coordinates Quality Assurance and Control
General Manager	Mobile Home Park Identification, QA Surveys, Marketing
Senior Project Coordinator	Interface with Mobile Home Parks and Saturation Lead
Project Coordinators (2)	Interface with Mobile Home Parks

The program provides economic, environmental and other non-energy benefits. First, participants spend less on energy. Second, the installed measures help reduce greenhouse gas emissions and peak demand, which helps utilities buy less power. Additionally, as noted above,

exposure to the program and the installed measures reduces market barriers related to the lack of information about and experience with energy efficiency measures.

Quality assurance (QA) activities confirm customer satisfaction with the program and the performance of energy efficiency measures. QA findings allow Mobile Home program managers to adjust activities or measures that do not meet customer expectations or the program’s energy savings goals.

Table 73 displays the program status relative to program goals as of September 2007.

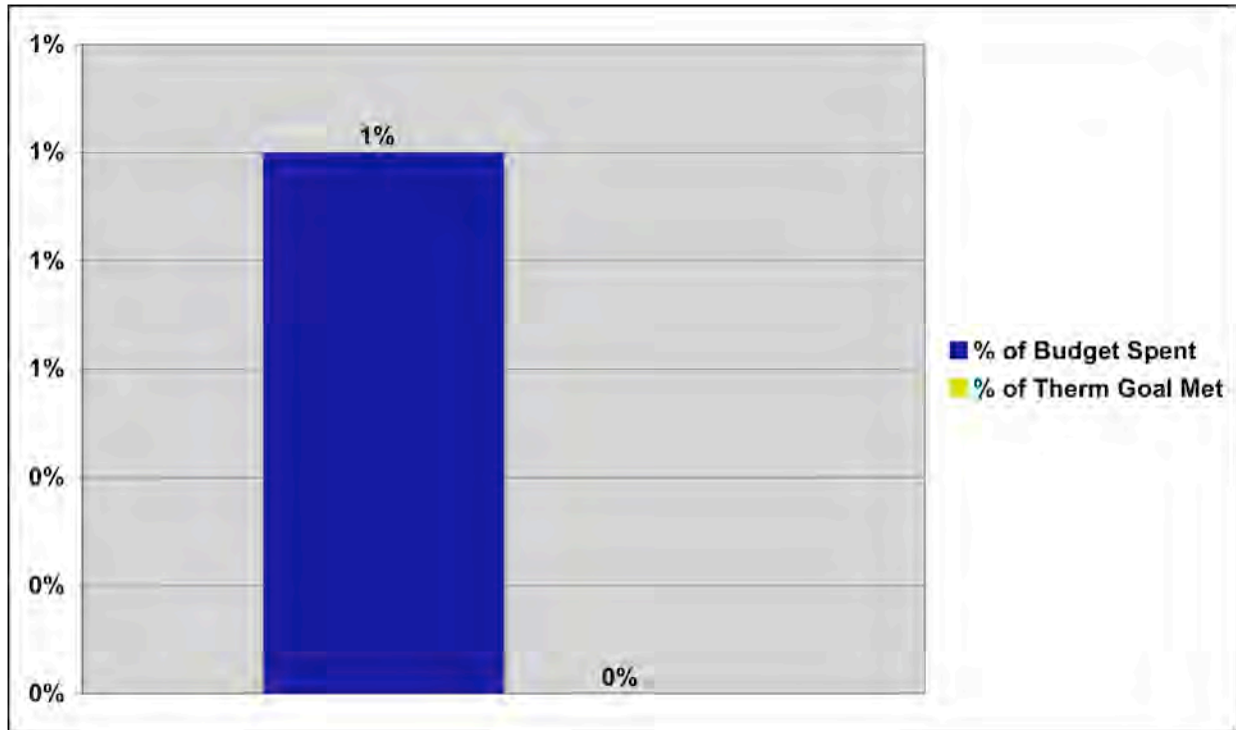
**Table 73: Mobile Home Program Goals Per Measure and Percentage Installed**

Measures	Quantity to be Installed (N)	% Installed
<b>SCG – March 2006 - September 2007</b>		
Duct Test & Seal	1,535	15%
Aerators	22,502	62%
Low-flow Showerhead	22,500	42%
Pipe Wrap	6,001	47%
Overall	52,538	50%

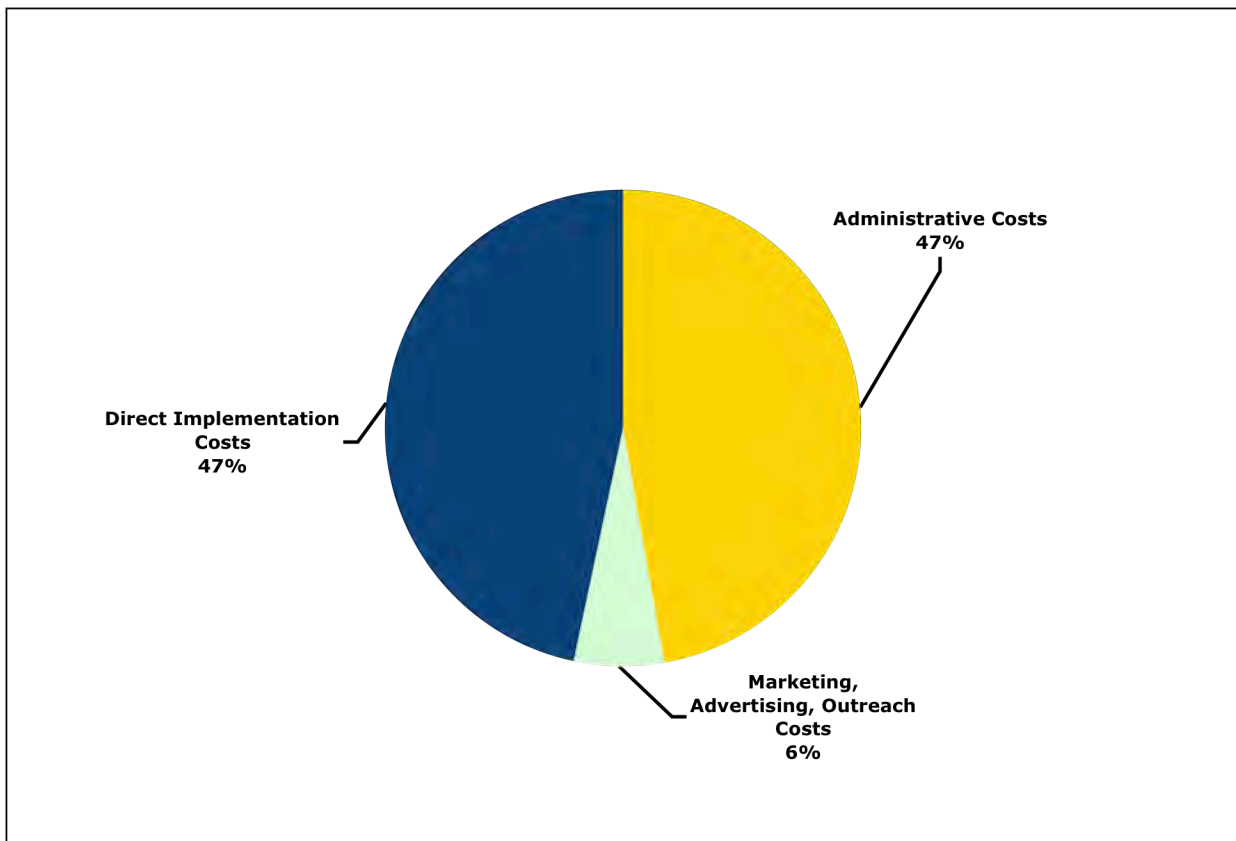
Fifty percent of program measures were installed within the first 18 months of program implementation (March 2006 through September 2007). In order to achieve program goals, the remaining fifty percent of measures must be installed during the final 14 months of the contract (between October 2007 and December 2008).

Figure 22 and Figure 22 show the Mobile Home program’s progress toward goals and expenditures as reported in the quarterly reports filed with the CPUC. Based on these filings, there appears to be a disconnect between the reported program activities and claimed savings for this program. Although no savings have been claimed yet (according to the quarterly reports), the activities shown in Table 73 clearly will result in therm savings.

**Figure 21: Mobile Home Program Progress Toward Goals and Program Spending**



**Figure 22: Mobile Home Expenditures by Category (Q1 2006 – Q3 2007)**



## 5.2 MOBILE HOME LOGIC MODEL AND PROGRAM THEORY

### Activities

#### *Program Outreach and Recruitment*

The primary targets of the program are the residents of the estimated 400,000 mobile homes in Southern California, including 156,000 mobile homes in SCG territory. Program staff identify target sites for program education and introduction, contact mobile home park managers, and establish the credibility of the program and the implementers with park managers. Participants are identified and signed up to participate.

#### *Education*

As part of outreach activities, information is provided at neighborhood meetings, through brochures about energy efficiency, via walk through audits, and through information provided about other programs.

#### *Measure Installation*

Program technicians treat mobile homes through duct testing and sealing, installation of aerators and low flow showerheads, pipe wrapping, and installing water heater blankets.

#### *Quality Assurance*

Field testing, software verification of duct sealing, customer satisfaction surveys, and random inspections confirm measures are installed and operating as expected, that participants are satisfied with their program experience and that measures remain in place.

### Short Term Outcomes

*Cost-effective therm savings and resulting reductions of greenhouse gas emissions from installation of measures.*

Measures installed in participating mobile homes result in cost-effective gas savings and coincident reductions of GHG emissions.

*Relationships built and communications established that improve the availability of energy efficiency services to residents of mobile homes.*

Residents are more aware of energy efficiency measures and opportunities and more receptive to these measures following their experience with the program.

*Marginalized, hard-to-reach population benefits from reduced energy cost burden.*

Mobile home residents, who are often difficult to reach, receive valuable energy efficiency services and measures, ultimately reducing their energy costs.

*Quality assurance activities confirm satisfaction with the program and performance of measures.*

QA findings allow the program to adjust any activities or measures not meeting the expectations of residents or any that are not meeting the energy savings expectations of the program calculations.

## **Long Term Outcomes**

*Economic, environmental and other non-energy benefits realized.*

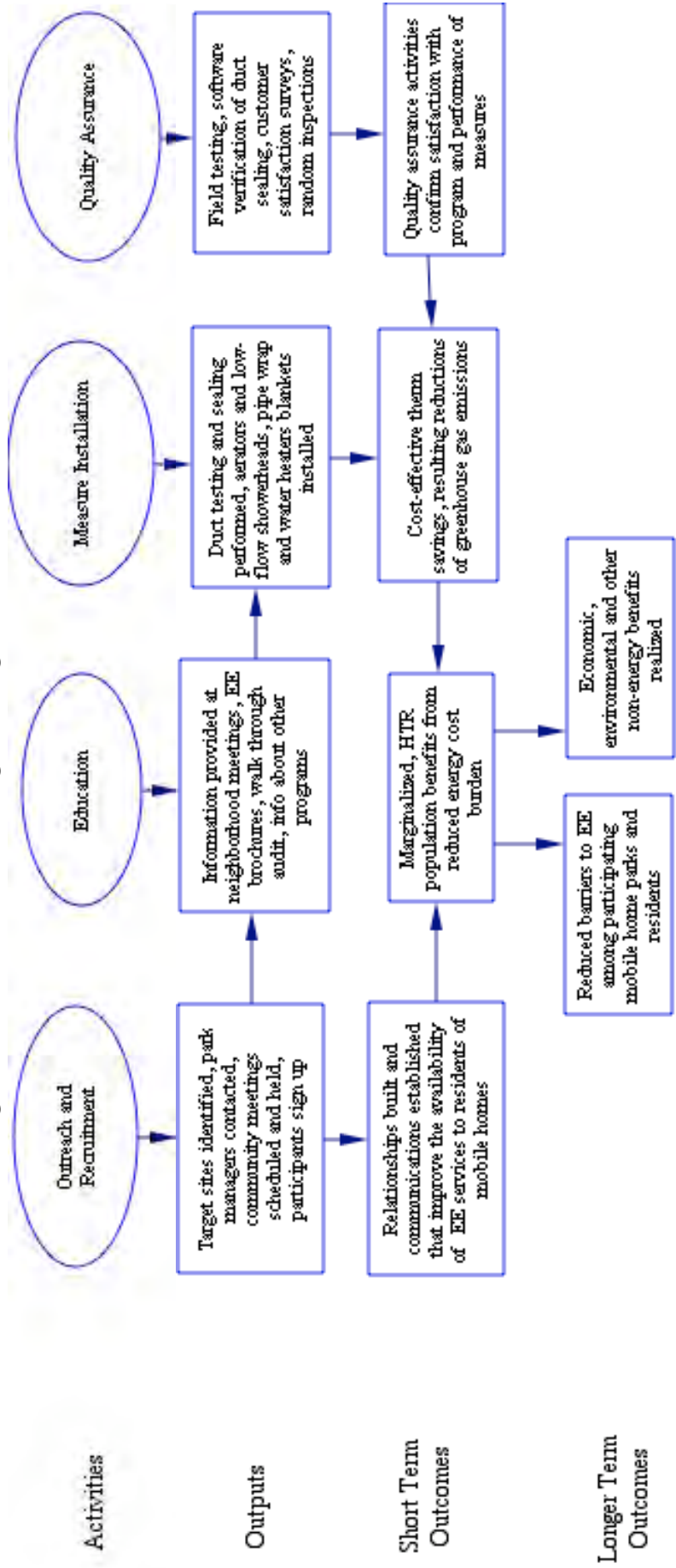
Participants spend less on energy due to the measures installed through the program, helping to reduce emissions, lowering peak demand, and avoiding the need to purchase additional power to serve Southern California. Measures may also provide non-energy benefits (lowered maintenance, fewer bulb replacements, water savings).

*Reduced barriers to energy efficiency implementation among participating mobile home parks and residents.*

Barriers related to information and lack of experience are reduced through exposure to the program and the installed measures.



Figure 23: Mobile Home Program Logic Model



## **5.3 MOBILE HOME PROGRAM EVALUATION OVERVIEW**

The first step in the evaluation was a review of Mobile Home Program promotional, training and educational materials, and audit reports. The next step was interviews with Synergy program staff to collect additional background information and to develop a thorough understanding of the program design.

Using this information, the logic model and program theory were developed. Using the logic model as a starting point, a list of four researchable issues was created, from which testable hypotheses and research questions for Synergy program staff were selected.

### **Mobile Home Research Issues**

#### **Identify Effective Marketing Strategies**

The Comprehensive Mobile Home program relies heavily upon the credibility of park managers and word-of-mouth to promote participation by residents of mobile home parks. Thus, a primary research area explores the effectiveness of this park-manager dependent marketing strategy. For the program to reach its greatest market penetration, there must be enthusiastic support for the program by the park manager or other neighborhood program representatives. In addition, participant satisfaction with measure installation and performance must be high.

#### **Expansion of Program to Manufactured Homes**

Manufactured housing presents energy efficiency opportunities and challenges that are similar to those that exist for mobile homes. However, locating appropriate manufactured housing sites is often difficult. Such homes are not always located in parks with a designated manager who can serve as the lead contact for the program.

#### **Installer Experiences**

For installers to be effective program advocates, they must have the training and experience to install program measures correctly and with minimal inconvenience to home occupants. They must also be prepared to market the program while on site in order to encourage more widespread resident participation.

#### **Utility's Role**

The SCG brand name typically carries weight for customers and SCG's level of support for the program can affect program participation. This includes the degree to which the utility can accurately field customer inquiries regarding the program and verify American Synergy's role in program delivery. Additionally, the ability of the utility to provide concise guidelines regarding data reporting expectations can affect the rate of program delivery.

## **5.4 MOBILE HOME PROGRAM EVALUATION RESULTS**

This section discusses implementation of the program and the experience of program staff and technicians with program marketing, program management, and customer response.

In July 2007, the evaluators interviewed seven Synergy staff in person at program headquarters in Moreno Valley, CA and one by telephone. The evaluators also interviewed five Synergy technicians in person as they performed their work. Additionally, the evaluators surveyed 30 participating and 30 nonparticipating mobile home park managers, split equally between the San Diego Gas and Electric (SDG&E) and SCG service territories. The small sample in each utility service territory made it more meaningful to report results as a larger data set.

## **Program Marketing**

The process evaluation explored the program marketing activities through the general marketing strategy, role of technicians and the utility, approach to saturation, and opportunities for manufactured housing.

### **General Marketing Strategy**

#### ***Identify Target Markets***

Synergy's General Manager uses an InfoUSA database to locate all manufactured and mobile home parks and residences within the SCG service territory. Following recommendations from a previous evaluation, Synergy targets mobile home parks in the warmest areas within each service territory, because they have the greatest demand for air conditioning, and therefore are likely to obtain the greatest energy and gas savings from the program measures.<sup>2</sup> Project Coordinators then organize their efforts to cover the targeted parks within each geographical area most efficiently.

#### ***Understand Market Barriers***

Synergy has identified three major market barriers to customer participation in this program:

- Refusal of park managers to allow personal contacts with park residents
- Reluctance of senior citizens to allow unfamiliar individuals into their homes
- Language barriers.

Most mobile home parks in Southern California do not allow door-to-door canvassing. Therefore, Project Coordinators begin their marketing efforts by gaining permission from each mobile home park manager to hold an open house or fair within the park. At neighborhood meetings, Project Coordinators describe the program offerings and recruit participants. The customer group targeted by this program typically is over the age of 55. Synergy's Senior Project Coordinator, who is over 55, reported that being a peer of this age group helped him establish a relationship of trust with Synergy's target population.

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<sup>2</sup> "The AC Diagnostic and Tune-up energy savings in Palm Desert (climate zone 15) is approximately five times greater than Rosemead (climate zone 8), and approximately twenty times greater than Torrance (climate zone 6)." LaPalme, Glen, 2007, Comprehensive Hard-to-Reach Mobile Home Energy Savings Program Evaluation, Measurement and Verification Report.

Program contacts reported that the most common reasons residents give for not participating are skepticism about “free” programs and concerns about scams. As one program contact stated, “Their biggest question is: ‘Why is it for free?’ and ‘If it’s not going to cost me anything, then what’s the catch?’”

Synergy staff also reported that the most effective strategy to address residents’ concerns about the legitimacy of the program is to convince them that Synergy is a direct contractor of the utility. Program contacts universally agreed that “co-branding” with the utility, such as using utility logos on promotional materials, also is an effective technique to reduce customer skepticism. According to one program contact, the utility’s authorization of the limited use of their logos on Synergy marketing materials has a very positive impact on marketing the program.

Synergy’s program materials state that, in order to address language differences among their targeted market, “Synergy has bilingual capable staff, including individuals who speak English, Spanish, and Navajo.” According to a Synergy Project Coordinator, “Sometimes we have a language barrier, but we have bilingual staff in just about every department. We work with people from setting an appointment to working with the technicians.”

Synergy expanded its efforts to market the program via mobile home journals and trade publications. According to a Project Coordinator, “We had tried to get involved in these groups before and received limited reaction, but because we had a customer who was really excited about the program and was involved in these groups, we have made more progress in this area in the past two months than in the entire previous year.” Following these efforts, one homeowner group took the initiative to have its own managers present the program to residents. Synergy plans to do additional marketing within this category, including advertising in related trade publications and presenting the program at trade association conventions and meetings.

## Technicians’ Role in Marketing

In order to address the reluctance of residents to allow unfamiliar individuals into their homes, Synergy often introduces the technicians to residents at neighborhood meetings. In addition, while the technicians are working in the parks, they are expected to market the program. Technicians receive a checklist that outlines all of the steps necessary to complete a service appointment. The list includes obtaining customer referrals, which is one of the tools to increase saturation. Technicians are reminded about this at their monthly meetings.

Due to the importance of customer referrals in meeting marketing goals, one Synergy contact mentioned that ensuring that technicians are “doing good work” is vital to preserving Synergy’s reputation and the success of the program. According to one Synergy staff person, “Usually, most residents hear about the program through word-of-mouth. It’s the most effective tool. Someone who has personal experience with it and is happy with the service, that’s where we get the majority of people signing up.”

## Utility Support

Synergy staff noted that the utilities play very important roles in program marketing efforts. Synergy and SCG reported a good overall relationship. However, because Synergy

communicates primarily with SCE as the sponsoring utility for the program, its interaction with SCG is limited.

Synergy outreach staff had some concerns about the ability of utility customer service staff to field customer inquiries about the program and to verify Synergy's role in program delivery. As one program contact explained, "If the utility receives a call from someone who wants to check up on us, the telephone representative at the utility may have never heard of us."

Program staff reported that visual information, such as utility logos, is very effective in establishing Synergy's status as a direct contractor for the utility. The recent authorization by the utility to use its logos on selected marketing materials has been very valuable in reducing customers' skepticism about the program.

Utilities also can help third-party programs by identifying other programs that reach a similar market segment and encouraging cross marketing with those programs. Synergy staff reported that neither SCG nor SCE are particularly active in cross marketing the Mobile Home program with other utility programs. However, according to SCG staff, cross marketing opportunities are limited because there is not a lot of overlap between this market and others.

## Activities to Improve Saturation Rates

One of Synergy's goals is to achieve a customer participation rate or "saturation rate" of 80 percent within parks. Synergy staff estimate that they are currently achieving an average saturation rate of 30-50 percent in parks where they market the program.

To achieve its goals, Synergy implements an initial round of marketing within a park and then follow-up strategies, including the following:

- Drafting an article for mobile home park community newsletters
- Organizing an additional open house within the park
- Sending individually addressed letters to mobile home park residents that explain the program.
- Getting help and representation for the program from management, associations, and residents within the park, including block captains
- Enlisting individuals within the park to do door-to-door canvassing of residents who have not yet signed up for the program (Occasionally, these internal representatives will receive a commission for each individual they sign up for the program.).
- Arranging a mailing that demonstrates support from park management, association leaders, or individual park residents.

Synergy has found that the most effective strategy is to demonstrate local support by arranging a mailing that explains the program using park manager or mobile home park letterhead.

Synergy also has found that enlisting internal representatives to help market the program is effective. Synergy contacts reported that one park manager was so supportive of the program that she asked each resident if they wanted to sign up for it when they brought in their rent payments. Due to her efforts, 50 percent of park residents signed up for the program.

## Expansion of the Program to Manufactured Homes

Owners and renters of manufactured homes are also eligible for the program, but Synergy contacts reported that it was more challenging to engage them in the program than residents of mobile home parks. Program staff said one explanation is that it is harder to find manufactured home owners because, unlike mobile home owners, they rarely are identified in public records. Additionally, there are few manufactured home networks comparable to mobile home community staff that can provide an access point for marketing purposes.

Therefore, Synergy focuses on identifying the manufactured housing communities in the geographical areas that they target for mobile homes. This has resulted in a few potential opportunities but no large-scale solution.

## Summary

Synergy staff members estimate that they achieve an average saturation rate of 30-50 percent in parks where they market the program. Synergy has found it difficult to increase saturation in mobile home parks, but the company identified and implemented several techniques to reach customers, and these appear to be somewhat successful.

Manufactured home owners and renters present a much more challenging target group because they are hard to locate.

## Program Management

The process evaluation looked at the following components of program management: technician training, quality control, and data tracking, and reporting.

### Technician Training

All five Synergy technicians interviewed for this study reported receiving sufficient training to install program measures correctly. Technicians also reported receiving customer service and marketing training. Training protocols include all aspects of duct testing and sealing, air conditioning tune-ups, and installation of energy efficient measures. Technicians learn about the importance of looking professional and creating a sense of trust with customers.

At monthly technician meetings, Synergy staff give technicians updated information about installation techniques, data-tracking protocols, and customer service approaches. Program evaluators attended one technician meeting and observed that program staff reminded technicians that they are the “face” of the organization and encouraged them to pay close attention to their personal appearance and to the level of customer service they provide. As one technician remarked, “We’re setting the standard for the program we run.”

Technicians reported that their work can be fairly routine at times, and difficult. As one technician said, “Going underneath to reconnect the ducts is difficult in older mobile homes, and

in attics.” Another technician reported that excessive heat and other extreme weather conditions can make the work exceedingly difficult. One technician reported an occasional lack of instruction from supervisors about specific tasks: “Sometimes it’s like a treasure hunt looking for duct work – the notes field (on our forms) is often left blank.”

All of the technicians interviewed reported feeling that they were performing a service to the community. As a Synergy supervisor said, “I’ve had employees come to me and say, ‘I don’t know what it is about being a technician on your program, but I really love it. It’s the sense of doing a service for someone.’”

The evaluators noted that Synergy had fewer technicians than optimal in the early months of 2007, which lengthened the waiting periods between customer sign-up and installation. In order to address this problem, Synergy implemented an aggressive hiring strategy during the summer of 2007, by offering bonuses to employees who referred candidates for technician positions.

## Quality Control

Synergy’s Quality Assurance Specialist physically inspects five percent of all completed jobs and tries to see a percentage of each technician’s work. The Operations Manager and Production Specialist analyze the data and use the findings from the inspections to improve training procedures and measure installation processes. If a technician’s numbers are inaccurate, Synergy staff recommend how best to complete the work, or take a disciplinary action.

Synergy offers productivity bonuses to qualifying technicians at the end of each month. If technicians receive any quality assurance failures, they can’t get the bonus. Technicians receive feedback about their performance via copies of their inspection reports.

## Data Tracking and Reporting

Synergy technicians track all installations in mobile and manufactured homes. Other staff members review the data for completeness and accuracy, enter it into the program tracking system, and compare it to the platform. The tracking database lists completed jobs, including statistical samples of on-site measurements of installed measures. Synergy’s CEO uses the data to prepare the formal reports required by the utility.

Technicians manually record the installation of physical measures, such as CFLs, aerators, etc., on data-tracking worksheets. However, two of the measures—the Duct Test and Seal and the Air Conditioning Tune-up—are measured and tracked electronically. The system’s sensors automatically load information into the computer or handheld datalogger, so technicians cannot manipulate it. The data then are uploaded to the Internet, and are processed and analyzed to verify the quality of measure implementation. This technology dramatically improves the acquisition of accurate energy savings data, because it reduces errors and intentional data manipulation.

When asked what issues have emerged regarding data tracking and reporting, a Synergy supervisor reported, “The paperwork that’s out in the field is completed by technicians who are crawling under mobile homes, etc. Sometimes the paperwork can be a little hard to read or be incomplete in parts.” Therefore, Synergy contacts reported that they continually revise the format for technicians’ reports in order to increase the completeness and accuracy of the data.

## Summary

As indicated in customer feedback about program technicians, the Mobile Home program is having substantial success in training technicians and integrating quality assurance procedures into their practices. The program's data tracking also appears to be functioning satisfactorily.

## Customer Response

For this report, customer response has two components: measure performance and customer satisfaction tracking.

## Measure Performance

Customers' feedback indicates that no specific measures provided by the program are prone to failure or customer complaint. In an evaluation of a previous mobile home program provided by Synergy to PG&E, the evaluators found that digital thermostats offered by the program were too hard for residents to understand or use effectively.<sup>3</sup> In response, Synergy stopped providing digital thermostats. The evaluation also found that the 800-lumen CFLs offered by the PG&E program did not provide adequate illumination. As a result, the program switched to CFLs that produce 1,425 lumens.

Although customers did not indicate problems with measures provided by the program, Synergy's staff expressed concern about two: attic duct sealing in mobile homes and pin-based CFLs. One Synergy contact said it was hard to service mobile homes with duct work in the attic, instead of underneath the structure, and felt that it would be useful for the "utility company to study what is the best way to do ceiling supply systems." Another staff member noted that pin-style CFLs were not standardized, which might make it harder for customers to replace burned-out bulbs.

## Customer Satisfaction Tracking

Synergy's quality control office conducts telephone surveys of 20 percent of customers to determine customer satisfaction levels and obtain other important customer data. Table 74 summarizes customer quality assurance data from April 2006 through June 2007. These data indicate that participants were highly satisfied with the program.

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<sup>3</sup> LaPalme, Glen, 2007, Comprehensive Hard-to-Reach Mobile Home Energy Savings Program Evaluation, Measurement and Verification Report.



**Table 74: Quality Assurance Telephone Survey Results –April 2006 – June 2007 – Technician Activities**

	SCG Percent (N=972)
Technician was polite and looking presentable	98%
Technician was on time and correctly identified themselves	98%
Measures were installed correctly	99%

Table 75 summarizes the length of Synergy service appointments, as reported by customers of the program. In general, appointments took less than two hours to complete.

**Table 75: Quality Assurance Telephone Survey Results –April 2006 – June 2007 – Technician Activities**

Length of Synergy Service Appointment	SCG Percent (N=972)
Technician took 0-1 hour to complete installation	21%
Technician took 1-2 hours to complete installation	52%
Technician took 2-3 hours to complete installation	20%
Technician took 3+ hours to complete installation	7%

## Summary

Customers of the Mobile Home Program appear to be satisfied with the measures and service. Synergy staff continues to monitor satisfaction and track customers’ responses to the installed measures.

## Mobile Home Park Manager Perspectives

This section reviews market characteristics, pre-participation by both participating and nonparticipating park managers (sample of 30 each), current participation (participating managers), and ways to stimulate resident response (participants and nonparticipants). Pre-participation issues include program awareness, administrative authority regarding participation, and concerns related to participation. Current participation issues include satisfaction levels with program information; Synergy and the program overall; managerial involvement with the program; residents’ responses at open houses; and managers’ opinions of the program. The section on resident responses describes park managers’ willingness to support a similar program in the future and their views about effective ways to recruit residents to participate in the program.

## Market Characteristics

Participant and nonparticipant samples were compared per selected demographics (age and size of park and tenure of manager) as shown in Table 76 below.

Participating and nonparticipating contacts reported that their parks have been in operation between six and 50 years and that they have been a manager for periods ranging from less than one year to up to 30 years. These data suggest that the tenure of managers averages six years (for nonparticipants) and eight years (for participants).

Data reveal that the number of units in mobile home parks varies from 35 to over 500, although almost twice as many nonparticipating parks are in the 200-299 unit range and fewer are in the smallest range (eight percent fewer than participating parks). The differences between the samples are not significant (Chi-Square of .266).

Synergy has experience working with parks of various ages and sizes and with managers with short to long tenures. Therefore, it is anticipated that Synergy will not have difficulty contacting park managers in the future.

**Table 76: Participating and Nonparticipating Park Characteristics**

Park demographics	Participants	Nonparticipants
<b>Years Managing the Park (N= 30, 30 respectively)</b>		
< 5 Yrs	33%	50%
5 to <10 Yrs	27%	30%
10 to <15 Yrs	17%	10%
15 to <20 Yrs	3%	3%
20 to <25 Yrs	10%	3%
25 to <30 Yrs	0%	3%
<b>Age of Park (N=28, 30 respectively)</b>		
6-34 Yrs	18%	37%
35-39 Yrs	25%	20%
40-44 Yrs	36%	7%
45-49 Yrs	14%	23%
50 + Yrs	7%	13%
<b>Number of Units in Park (N=29, 30 respectively)</b>		
35-99	31%	23%
100-199	38%	40%
200-299	17%	30%
300-399	3%	3%
400-499	0%	3%
500+	10%	0%

## Pre-participation Issues

Pre-participation issues include program awareness, administrative authority regarding participation, and concerns related to participation. Generally, in residential direct-install programs, the utility contractor is responsible for marketing the program to targeted residents. Although that is the case in the Mobile Home Program, the program contractors also must consider park administration.

The program involves four actors: the utility company sponsor, utility contractor, park administration, and park residents. Effective program administration depends on the flow of information across and between these actors (see the logic model). Program elements (measures and outcomes) must be outlined to managers first and then to residents. For Synergy to reach a high proportion of residents within a mobile home park, actors must understand their roles and responsibilities vis-à-vis the program *and* they must understand the roles and responsibilities of the three other actors. Responses regarding pre-participation illustrate if park managers understand these issues.

## Program Awareness

The source of program awareness varied between participants and nonparticipating managers. As seen in Table 77 below, over half of the managerial contacts from participating parks (57 percent) reported becoming aware of the program from Synergy directly. Table 77 also shows that 14 percent of participating park managers learned about the program from other park managers and residents.

**Table 77: Source of Program Awareness**

Sources	Participant Percent (N=30)	Nonparticipant Percent (N=15)
Synergy	57%	20%
Other park managers	7%	7%
Resident mentioned it to me	7%	73%
SDG&E website	3%	0%
Friend or colleague	3%	0%
Other specified	23%	0%

Nonparticipating managers indicated that program/contractor awareness levels are high: Over half (53 percent) of managers already are aware of Synergy or the Mobile Home Program without direct program marketing. Unlike participants, who reported hearing about the program from residents seven percent of the time, residents are the major source (73 percent) of program information for nonparticipating managers. This was a large difference between the two samples. It confirms that Synergy has not been marketing to these parks. Participating managers, on the other hand, said they heard about the program directly from Synergy. They reported being satisfied with the level of information provided by Synergy (see Table 77). Moreover, the discussion about the clarity of program information and that utility sponsorship carried weight with residents, which increased the likelihood of their participation. Additional efforts to

improve awareness of the program through available *manager* networks (e.g., trade press, associations, etc.) and the utility might help promote the program by providing credible program information in advance of direct marketing by Synergy.

## Prior Program Experience

Just over half (53 percent) of participating park managers indicated that working with the Mobile Home program was their first involvement with an utility-sponsored program. Among 14 participating park managers who had prior experience with utility-sponsored programs, over half participated within the past two years. The remaining six contacts had a prior experience from three to nine years ago. As for the type of previous program experience, 10 contacts identified participating in the following programs: weatherization (three), lighting (three), low-income rebate programs (one), and previous programs offered by Synergy (three). Somewhat fewer of the nonparticipating park managers (40 percent) reported experience with previous utility programs. Of these, very few mentioned the type of energy program with which they had previous experience, although nine mentioned the CARE program. Managers' concerns over participating in the Mobile Home program were not correlated with prior program experience.

## Decision Making

In the vast majority of cases, participant managers said they were able to make the decision to participate in the Mobile Home program by themselves (70 percent). However, these managers also consulted with their community board (13 percent), the park owner (10 percent), and a supervisor (three percent). Overall, these managers decided to participate to help residents save energy or money (90 percent)—see Table 78).

**Table 78: Reasons for Participating**

Reasons	Percent (N=30)
Save residents energy or money	90%
Because it was free	10%
Utility sponsorship	3%
Help the environment	7%

Multiple responses allowed

In contrast, fewer than half (43 percent) of the nonparticipating managers reported being able to make the decision themselves. The majority of nonparticipating managers said they would consult a park owner (40 percent), a general or regional manager (10 percent), or a board or association (seven percent).

These results demonstrate that the administrative level among parks varies. In many cases, not only the local manager, but also off-site administrators share in the decision to participate in a program. Therefore, marketing materials that describe benefits that appeal to various levels of administration may be effective (e.g., high resident satisfaction levels). Also, since the vast majority of managers (90 percent) decide to participate because the program saves residents energy and money, marketing information also should emphasize benefits to residents. This resonated with nonparticipating managers who heard about the program from their residents.

## Concerns

Park managers were asked if any issues raised questions or concerns about participation in the program. Few managers voiced concerns about participating in the program (three participants and seven nonparticipants, which is not significant at the .05 level). Participating managers overwhelmingly responded “no” (87 percent). Most of the participating managers who voiced concern commented on the time involved or whether the program really was free. However, none of these concerns was serious enough to reverse the managers’ decisions to participate in the program.

The types of concerns voiced by nonparticipating park managers reflected a lack of detailed information about the program. The following quotes provide a sense of the types of concerns voiced by nonparticipating park managers:

- “Difficulty of participating”
- “Concern about strangers coming to residents’ homes.”
- “Saving money on energy bill is not important.”
- “How to let people know”
- “Would need to see program in writing”

Concerns of nonparticipating park managers are not shared by participating park managers. This suggests that Synergy is successfully addressing such concerns in their marketing process.

## Current Participation Issues

Current participation issues include satisfaction with program information, Synergy, and the program overall; managerial involvement with the program; residents’ responses at open houses; and managers’ opinions. This section draws upon only the participating managers’ survey responses.

## Satisfaction with Program Information

As noted previously, to effectively administer a program that involves multiple actors, information must flow between the actors, and all actors must understand their roles during program implementation. To determine the perceived clarity of the information provided to participating managers, they were to rate the information they received regarding each of the following:

- Expectations about the managers’ role in the program
- How residents could apply to participate
- Which measures would be installed
- Expected energy savings from improvements

- How long the installations would take
- Synergy’s role as a contractor to the utility.

Managers rated the clarity of information on a five-point scale where 1 was “not at all clear” and five was “very clear.” Table 79 shows the responses. For the purposes of the table, “1” and “2” ratings were collapsed and reported as “not at all clear to somewhat clear” and “4” and “5” ratings were collapsed into “somewhat clear to very clear.” The generally positive responses across all categories of information, ranging from 73 percent to 85 percent with a rating of “somewhat clear to very clear,” show that Synergy has done a credible job of informing both administrators and residents.

**Table 79: Clarity of Program Information by Subject**

Subject	“Somewhat Clear” to “Very Clear” Percent	“Not At All Clear” to “Somewhat Unclear” Percent
How residents could apply to participate (N=27)	85%	7%
Which measures would be installed (N=27)	85%	3%
Expected energy savings from improvements (N= 27)	81%	3%
How long the installations would take (N=27)	79%	7%
That Synergy is a contractor for the utility (N=28)	79%	7%
Expectations of the manager’s role in the program (N=30)	73%	4%

Managers also rated several program outcomes and the Synergy staff using a five-point scale where “1” was “not at all satisfied” and “5” was “very satisfied.” In Table 80, “1” and “2” (and “4” and “5”) ratings were collapsed to give a general indication of satisfaction. Participating managers reported high rates of satisfaction across the listed aspects of the program. In terms of Synergy staff, only two managers mentioned a cause for dissatisfaction—getting the home inspection done right on the first try (only one case mentioned), and staff not being on time.

In some cases, managers indicated no opinion, for example in the areas of satisfaction with “energy savings from improvements” (where several managers reported “don’t know”) and “comfort of homes since improvements” (where five managers reported “don’t know”). Notable is the very high rating that the program received overall (13 percent of managers reported being “somewhat satisfied” while 67 percent reported being “very satisfied” (“4” and “5” ratings, respectively).

**Table 80: Satisfaction with Synergy and the Mobile Home Program**

Subject	“Somewhat” to “Very” Satisfied Percent	“Not At All” to “Somewhat” Satisfied Percent
Program overall (N=29)	93%	0%
Comfort of homes since improvements were made (N=24)	88%	0%
How Synergy staff treated residents (N=28)	85%	7%
How Synergy staff cleaned up after working (N= 27)	85%	0%
Level of involvement in the program (N=29)	83%	3%
Energy savings from the improvements (N=21)	81%	0%

Overall, there is a very high level of satisfaction with Synergy and the Mobile Home program, but there is room for improvement. Although interview contacts ranked the clarity of information above 80 percent in three areas, the levels fell below 80 percent in three other areas: “expectations for the manager’s role in the program,” “how long the installations would take,” and “that Synergy is a contractor to the utility.”

### Participating Manager Involvement

As noted in Table 80, 83 percent of managers reported being satisfied with their role in facilitating residents’ participation in the Mobile Home program. However, self-reported managerial involvement is more varied (see Table 81).

Over half of the participating managers (57 percent) said they were “somewhat involved” in the program. They described their involvement (mostly in their own words) to include:

- “Just helping out”
- “Passing out flyers and information to residents”
- “Newsletters (including program info)”
- ”Going to meetings”
- “Putting info on the bulletin board.”

The “closely involved” managers (20 percent) reported they also passed out flyers. However, in contrast to the “somewhat involved” managers, these participating managers made additional efforts to get program-related messages to residents by:

- “Including information in rent statements”
- “Making personal visits”

- “Answering questions about the program” (One took a class on energy efficiency in order to be knowledgeable)
- “Talking with residents (assuring them)”

Park manager involvement was self-reported. Therefore, it is possible that managers reporting “no involvement” simply had a different definition of “involvement” than the others. For example, these managers may have hung up flyers or made program information available to residents at the office and simply not considered these noteworthy activities. Synergy encourages managers to be as involved as they wish, and it is likely that the self-reported high satisfaction, given the wide range in levels of involvement, is consistent with managers being able to decide how much they wanted to participate in the program.

**Table 81: Manager Level of Involvement, Beyond Allowing an Open House**

Level	Percentage (N=30)
Closely involved	20%
Somewhat involved	57%
Not at all involved	23%

## Resident Response

This section discusses managers’ perceptions of responses to the program in their park and their suggestions for how to effectively reach their residents.

## Breaking the Ice with an Open House

Synergy uses open houses to familiarize park residents with aspects of the Mobile Home Program, such as utility sponsorship, cost (free), Synergy’s role as the installer, what residents must do to participate, measures that might be installed, and expected outcomes from measures. Synergy held an open house at 48 percent of participating parks (13 out of 27 cases, excluding three “don’t know” responses). As seen in Table 82, attendance varied from 10 percent to over 50 percent of residents.

**Table 82: Attendance at Open House**

Attendance	Percentage (N=12)
10% attending	17%
15% attending	17%
20% attending	17%
25% attending	0%
30% attending	33%
40% attending	8%
50% or more	8%



Participating managers suggested four ways to improve open house attendance, including offering refreshments (provided at some, but not all), giving managers at least a month notice to get the word out, improving Synergy’s advertising, and planning open houses in the summer. Open house attendance did not correlate to the manager’s level of involvement. Oddly enough, the open house with 50 percent or more of residents attending was held at a park where the manager reported not being involved with the program.

Managers were positive about open houses. They felt that, whether small or large, they were well worth the time it took to arrange them. It appears to be a good idea to provide a snack.

## Beyond the Open House

Synergy staff found two types of program support to be particularly effective at increasing the level of program participation within parks: the use of mobile home park letterhead for announcements and promotion of the program by managers or other staff when residents come into the office to pay monthly fees. In addition, closed-circuit park television, where available, could be an effective tool. To gauge the likelihood of the availability of these types of program support efforts in the future, park managers were asked about their willingness to provide these resources. Table 83 shows that the majority of participating park managers and nonparticipating park managers surveyed said they would be willing to promote the program when residents come into the park office to pay monthly fees and/or offer the use of mobile home park letterhead for advertisements.

**Table 83: Future Resource Availability**

Future Resource	Participants Percent	Nonparticipants Percent
Staff promotion while fees are paid (N=19, 26, respectively)	68%	77%
Letterhead for announcements (N=22, 23, respectively)	59%	70%
Closed-circuit TV (N=22, 28, respectively)	9%	4%

It is interesting that managers (68 percent) were more willing to support the program by *personally* promoting it as residents pay their fees. The low rate of willingness to use closed-circuit TV presumably reflects the low saturation of this service in the parks surveyed. Future support did not correlate to the self-reported levels of current Mobile Home program involvement.

When asked if they could think of other ways to provide program support in the future, park managers reiterated current practices, such as: including the program information with the rent statement, posting flyers on bulletin boards or in the lobby, promoting the program when residents pay rent, and announcing the program in newsletters or monthly magazines. In one instance, a manager suggested cold calling residents.

There was no significant difference between the samples of participating and nonparticipating park managers regarding the levels of support each would be willing to provide in the future.

One nonparticipant reported that having “someone from the gas company speak to residents” would be effective.”

### Compensation for Manager Assistance

Table 84 shows how nonparticipating park managers responded when asked how willing they would be to assist in resident recruitment if they were compensated for their time.

**Table 84: Nonparticipant Willingness to Assist If Compensated**

Opinion	Would Offer Help in Future Percent (N=26)	Would Not offer Help in Future Percent (N=2)
Very willing	19%	0%
Somewhat willing	42%	0%
Not at all willing	39%	100%

The data in Table 83 reveal that the majority of nonparticipating managers would be willing to offer future help with resident recruitment for programs such as the Mobile Home program. 26 managers predicted they likely would offer some type of help (use of letterhead, closed-circuit TV, asking residents about signing up when they come into the office). However, as shown in Table 84, offering managers compensation actually may *lower* future participation rates, since about 40 percent of nonparticipating managers refused that option. Although evaluators did not probe into the reason behind this “not at all willing if compensated” response, it may be that these managers consider compensation a conflict of interest with their roles as park managers. Alternatively, there may be another barrier, such as park rules.

These findings suggest that the current tactics should continue and that offering compensation to increase manager participation (and program buy-in) is not an effective strategy. Other options, such as offering rewards directly to residents and/or professional recognition to park administration for high levels of participation, should be considered.

The most important addition to the program to increase participation would be to expand the involvement and awareness of utility sponsorship. This would be especially effective among current nonparticipating managers. Table 85 shows that non-participants place a higher value than participants on utility sponsorship for resident recruitment (significant at the .05 level).

**Table 85: Utility Sponsorship and Future Participation**

Likelihood	Participants (N=21)	Non-participants (N=29)
More Likely	62%	86%
Less Likely	0%	3%
Just as Likely	38%	10%

Chi-Square=.051

## 5.5 MOBILE HOME PROGRAM ISSUES AND OBSERVATIONS

Synergy has operated the Mobile Home Program in SCG service territory since March 2006. The program is well on its way to meeting its goals and is well received by customers and park managers. Nonparticipating mobile home park managers are aware of the program. Word-of-mouth among residents of mobile home parks increases interest in the program.

In conducting the process evaluation four issues of interest were identified:

1. What are effective strategies to market the program?
2. How can the Mobile Home Program be expanded to manufactured homes?
3. What impact do technicians have on the program?
4. What is the role of the sponsoring utilities in the program?

Answers to these questions do not reveal other resources Synergy can use to identify manufactured home communities. In general, Synergy appears to have developed an effective marketing strategy and there is no major need to revise or modify it in order to meet program goals. It also appears that Synergy uses their technical staff well and trains them sufficiently.

Responses to questions 1, 3 and 4 above could provide useful information for Synergy to meet program goals. There also is the potential increase saturation in parks that already are participating, since current saturation is around 30-50 percent and Synergy's goal is 80 percent. The following suggestions are targeted at these opportunities.

### Expanding on Effective Marketing Strategies

The Mobile Home program relies on mobile home park managers to facilitate Synergy's entry into the mobile home parks. Multiple actors influence park managers' decision to participate in the program. In many cases, not only the local manager but also off-site administrators share in the decision-making process. Synergy has begun using trade publications, homeowners' associations and other media resources to help promote the program. This approach should help by providing credible program information in advance of direct marketing by Synergy.

Synergy long has used advocates within parks to help with outreach when Synergy staff is not in the park. Advocates have included park managers and residents. This approach seems to be valuable, and it is recommended that Synergy continue to invest in it.

### Recommended Program Improvements

Based on the evaluation findings, several recommendations emerge that can enhance marketing:

- **Clarify responsibilities of park managers.** While park managers said the overall clarity of information provided by Synergy was high, responses from those surveyed indicate three areas for improved communication about the program:
  - How long the installations would take

- Expectations for the manager's role in the program
  - That Synergy is a contractor to the utility.
- **Ensure that marketing materials stress factors important to residents and managers.** Marketing materials should stress that the program saves residents energy and money. For residents, marketing materials should emphasize that the program is free, produces environmental benefits, and is sponsored by the utilities.
  - **Strengthen the impact of neighborhood meetings.** Neighborhood meetings were held at approximately one-half of participating parks surveyed and appeared to be very important to participation. The following could improve participation in neighborhood meetings: refreshments offered and noted on flyers, increased number of flyers advertising events, and distribution of flyers at least one month prior to the meeting date.
  - **Take full advantage of park managers' willingness to help market the program.** The majority of participating park managers (60-70 percent) and nonparticipating park managers (70-80 percent) surveyed said they would be willing to offer the use of mobile home park letterhead for flyers advertising the program and/or be willing to promote the program when residents come into the park office to pay monthly fees. Synergy should take full advantage of the willingness of park managers to help market the program in these ways.
  - **Do not compensate park managers for participating.** Park managers clearly indicate that offering financial compensation as a strategy to increase their participation will not be effective. Synergy could explore other structures to boost participation in the program, such as offering rewards directly to residents and/or professional recognition of park administration for high levels of participation.
  - **Ensure that technicians can be effective in stimulating referrals.** Mobile home parks are highly networked and the potential for customer referrals is very high. Synergy technicians are trained to ask for customer referrals, yet evidence of this practice was not noticeable during ride-alongs with Synergy technicians.
  - Two actions are recommended to enhance technicians' role in the marketing process: 1) **Make sure there is at least one Synergy technician present at all neighborhood meetings to address residents' concerns about strangers coming into their homes.** At the same time, it will be easy to assure residents that technicians are professionally trained and that they are certified by the State of California. 2) **Give technicians a magnet or a lawn sign to give each resident when the job is done that has a phone number for referrals.** Have the technicians ask for a referral and provide the lawn sign or magnet at that time.
  - **Maintain optimal staffing levels.** Sub-optimal technician staffing levels created delays in program delivery and implementation. It is recommended that Synergy continue its strategy of offering bonuses to employees who refer candidates to fill technician positions. Additional recommendations to improve hiring procedures include: identifying training programs from which Synergy can recruit individuals with skills that closely

match the skill set required by Synergy technicians and advertising job vacancies in area newspapers and/or trade publications.

- **Consider increasing utility market support for the program.** Responses from Synergy staff and park managers supported the importance of a prominent and visible utility role. Additionally, research conducted by Nadel, Pye, & Jordan (1994), suggests that interaction between the utility and customers (both in person and over the phone), contribute to high program participation.<sup>3</sup> In order to enhance the success of the program, SCG can increase their marketing efforts. Suggested marketing efforts include: mailing program information to customers, authorizing Synergy's use of utility logos, cross marketing the Mobile Home Program with other utility programs, and ensuring that customer service staff are familiar with the Mobile Home program in case customers ask for information. Synergy should also take full advantage of any support that SCG can provide, such as website links, market support, and utility review of Synergy marketing materials.

## 5.6 MOBILE HOME PROGRAM BEST PRACTICES REVIEW

### Program Theory and Design

- *Is the program design effective?* This resource acquisition program is well designed to deliver a comprehensive energy efficiency package to the unique mobile and manufactured homes market in a cost effective manner. This market segment is typically hesitant to participate in mainstream energy efficiency programs because of informational, language, and economic barriers. Many of the customers in this market are senior citizens, on fixed incomes, and often are physically unable to install the measures themselves. The program seeks to overcome these barriers through direct, personalized marketing and direct installation of energy efficiency measures, which include: testing and sealing ducts, aerators, low-flow showerheads, pipe wrapping, and water heater blankets. The program packages popular measures with equipment and services that otherwise would not be requested or self-installed, and the overall package of measures and services is attractive to customers. When needed, the measures are adjusted to improve customer satisfaction and meet SCG savings goals.
- *Is the market well understood?* Yes. The program understands that much of the market is comprised of retirees and senior citizens that are unfamiliar with new measures (late adopters), skeptical about sales pitches and generally "set in their ways". Other participation barriers the program recognizes and addresses are: restrictions on door-to-door canvassing, language barriers, and the reluctance of senior citizens to allow unfamiliar people into their homes.

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<sup>3</sup> Nadel, S., Pye, M., & Jordan, J., 1994, Achieving High Participation Rates: Lessons Taught by Successful DSM Programs, (Berkeley, CA: American Council for an Energy Efficient Economy).

## Program Management

### Project Management

- *Are responsibilities defined and understood?* The expectations of the contractor are clearly established and there is no evidence of implementation ambiguity or conflicts. This is likely because the contractor has a history of successfully delivering these program services and is skilled at writing contracts that work well for them.
- *Is there adequate staffing?* Yes. When the contractor temporarily had a shortage of technicians in early 2007, an aggressive hiring and training campaign was implemented to improve program responsiveness.

### Reporting and Tracking

- *Are data easy to track and report?* Synergy technicians track all installations in mobile and manufactured homes. Other contractor staff reviews the data for completeness and accuracy and enter it into the program tracking system. The tracking database lists completed jobs, including statistical samples of on-site measurements of installed measures. Synergy's CEO uses the data to prepare the formal reports required by the utility. While Synergy obtains comprehensive and real-time data that could be used for systematic analysis, we did not confirm what data SCG receives or how it is used.
- *Are routine functions automated?* Technicians manually record the installation of physical measures (e.g., aerators) on paper worksheets. However, two of the measures—the Duct Test and Seal and the Air Conditioning Tune-up—are measured and tracked electronically via handheld dataloggers. The data are then uploaded to the Internet so technicians cannot manipulate it, and are processed and analyzed to verify the quality of measure implementation.

### Quality Control and Verification

- *Does the program manager have a strong relationship with vendors involved in the project?* Synergy's interaction with SCG is limited because they communicate primarily with SCE as the sponsoring utility for the program. In practice, the PM function has largely been outsourced to the contractor. Although this is often not advisable, in this case it seems to be a good thing as Synergy is very experienced and has a strong track record of delivering savings and running their programs well. That said, it would be good for SCG staff to increase its involvement by visiting with Synergy staff more and doing some field visits with them.
- *Does the program verify reporting systems (e.g., rebates, invoices)?* Not addressed in this evaluation.
- *Are customers satisfied with the product?* Customers' feedback indicates that no specific measures provided by the program are prone to failure or customer complaint. Overall, the program receives high satisfaction ratings.

## Program Implementation

### Participation Process

- *Is participation simple?* The one-stop-shop design makes it easy for customers to participate. They simply sign up for appointments at group meetings or schedule by phone.
- *Are participation strategies multi-pronged and inclusive?* By design, there are few ways to learn about and participate in the program, which is appropriate for this customer market.
- *Does the program provide quick, timely feedback to applicants?* Yes. Synergy has generally been able to schedule appointments immediately after program sign-ups, and technicians usually come out to the homes within two weeks after sign-ups. Customer questions and complaints are fielded by the Synergy staff person who initially scheduled the appointment, and responses are typically provided within 24 hours (and complaints are formally logged). Installation issues are then addressed by the technician who originally did the work, or another technician if that will improve the response time.
- *Is participation part of routine transactions?* Not applicable for this market.
- *Does the program facilitate participation through the use of internet/electronic means?* No, but most of these customers are older and probably less comfortable using email and the Internet.
- *Does the program offer a single point of contact for their customers?* Yes, customers only deal with Synergy regarding scheduling and installations, although some marketing may also be conducted by other park residents (sometimes for commissions).
- *Are incentive levels well understood and appropriate?* Yes. Measures are provided free of charge, recognizing that many program customers have fixed or limited incomes.

### Marketing and Outreach

- *Use target-marketing strategies?* Yes. Synergy targets mobile home parks in the warmest areas within each service territory, because they have the greatest demand for air conditioning, and therefore are likely to obtain the greatest energy and gas savings from the program measures. At that point, marketing efforts are heavily geared towards earning the trust of (often wary) park residents. Strategies that are used include: face-to-face community meetings utilizing peer-age presenters (where technicians are also introduced), endorsements from homeowner associations and park managers, neighbor referrals (word of mouth), and utility co-branding.
- *Are products stocked and advertised?* Not applicable.
- *Are trade allies and utility staff trained to enhance marketing?* On-site presentations are conducted by only a few contractor staff that are very experienced at marketing the program successfully. Technicians regularly receive updated checklists that outline all of the steps necessary to complete a service appointment. The list emphasizes obtaining customer

referrals, which is one of the tools to increase saturation. Technicians are also reminded about this referrals goal at their monthly meetings.



## 6. HOME ENERGY EFFICIENCY SURVEY PROGRAM

### 6.1 HEES PROGRAM BACKGROUND

The Home Energy Efficiency Survey (HEES) program is an education/outreach program that provides residential customers with a mail-in, on-line, or in-home energy analysis of their home. KEMA is the program implementer for all survey modes. Notably, the 2006-2008 program phase has focused its efforts on the on-line survey because it is the most cost-effective program delivery method. All surveys are available in English and Spanish and the mail-in version is also offered in Chinese, Vietnamese, and Korean. On-line versions of Chinese, Vietnamese, and Korean surveys are in progress. Primary marketing strategies include advertising at community events, e-mail blasts, mailers, newsletters, advertisements on the SCG website, and incentive gifts. The HEES program has partnered with the Single Family Rebate program to provide an incentive gift—one low-flow showerhead and three faucet aerators—to all HEES participants. Overall, the education/outreach program aims to increase customer awareness of energy efficiency measures and prompt participation in other energy efficiency programs.

The survey tool, marketed as the Home Energy and Water Efficiency Survey, uses a series of questions to determine energy and water efficiency opportunities that exist within the participant's home and offers behavioral tips and appliance upgrade recommendations. The survey results pair recommendations with phone numbers to call and websites to visit to access appropriate appliance rebate programs and other energy efficiency services.

In addition to energy efficiency recommendations, the survey tool presents a summary of the customer's water and energy use. The results include charts that depict water, electric, and gas usage and bill dollar amounts over the past year, and by appliance, including a comparison of the customer's water and energy consumption to other similar households in the region. The HEES program coordinates with Southern California Edison (electric utility) and Golden State Water Company (water utility) to retrieve electric and water account information, in addition to the customer's gas bill history. If the bill history is not available, the survey tool estimates energy and water usage. Currently, HEES participants must manually enter in each of their gas, electric, and water account numbers. However, the program managers are developing an automated system to eliminate this hassle.

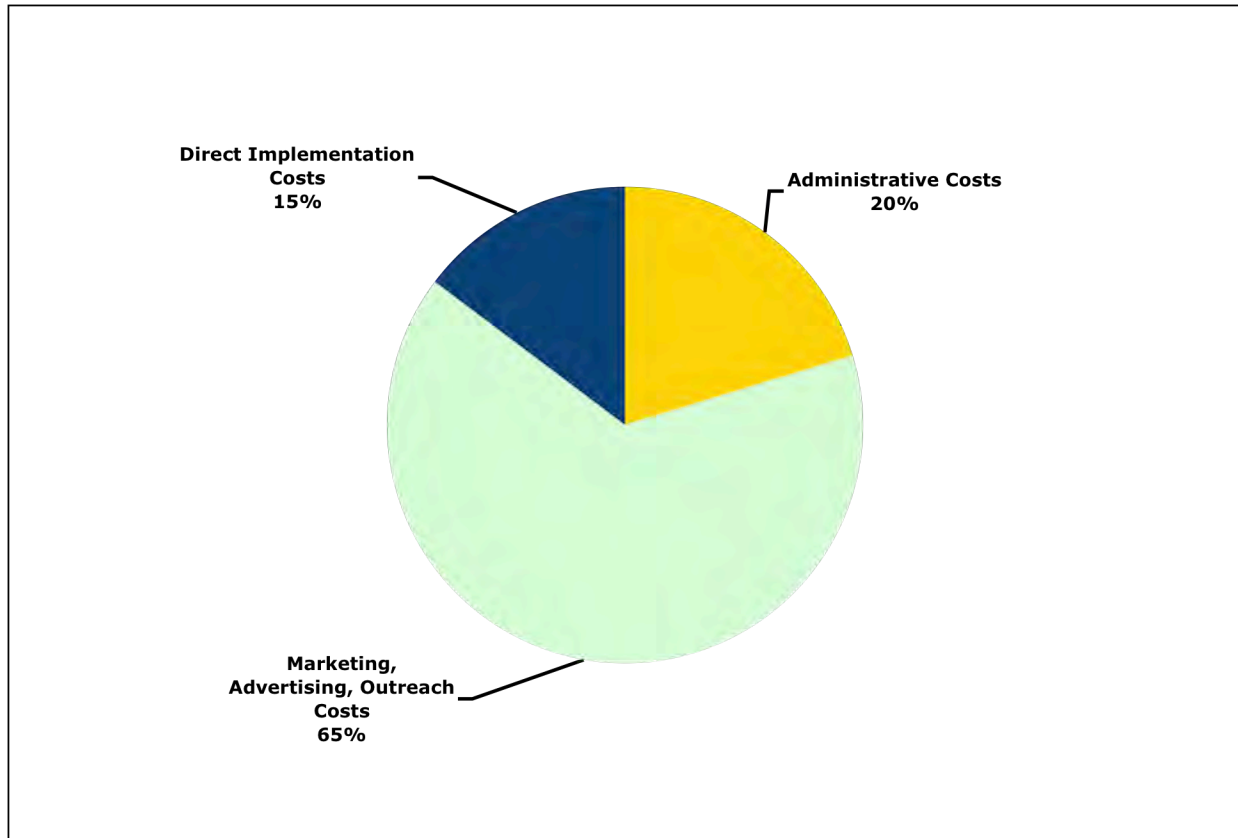
As an education/outreach entity, the program has set 2006-2008 participation goals for each survey mode. The HEES program's on-line survey served as the most robust survey mode since it was launched in Q1 2007 and surpassed its three-year goal in May 2007. In Q3 2007, the mail-in HEES had accomplished 63 percent of its 2006-2007 goal. The program reported 15,721 completed on-line surveys, 7,927 completed mail-in surveys, and 1,204 completed in-home surveys as of Q3 2007. In addition, the program projected that it would meet 85 percent of its total three-year survey goal. In Q3 2007, the program was reported to be on-target.<sup>4</sup>

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<sup>4</sup> SCG Program Narrative, Q3 2007, filed with CPUC (<http://eega2006.cpuc.ca.gov/>)

However, the broader program goal is to influence participants to adopt more energy efficient behaviors, install energy efficient appliances, and enroll in other energy efficiency programs. No tracking system is currently in place to measure the behavioral impact of the HEES program.

**Figure 24: HEES Expenditures by Category (Q1 2006 – Q3 2007)**



## 6.2 HEES PROGRAM LOGIC MODEL AND PROGRAM THEORY

The following program theory for SCG's Home Energy Efficiency Survey Program (HEES) builds on the program logic model and provides additional detail on program activities, outputs, and outcomes.

### Activities

#### *Marketing to customers*

The goal of the marketing for HEES is to increase customer awareness of the survey, inform customers about the various ways that they can complete the survey, and encourage customers to complete the survey. Specific marketing activities include bill inserts, newsletters, emails, and IOU websites.

#### *Develop surveys*

The HEES develops surveys that are designed to educate customers about energy efficient equipment and practice. In order to offer maximum flexibility to customers, surveys are created

in a number of formats including print, online, and in-home, which is conducted by an auditor. Surveys are available in multiple languages to meet the needs of hard-to-reach customers.

#### *Coordination with other Energy Efficiency programs*

One of the objectives of the HEES is to provide customers with information about different IOU energy efficiency programs. The HEES must therefore coordinate with different energy efficiency programs in order to deliver relevant and up-to-date program information to customers. In addition, the HEES needs to coordinate with energy efficiency programs to ensure that the survey collects information that the energy efficiency programs need to enhance future program planning efforts.

### **Short Term Outcomes**

#### *Customers are aware of the HEES and complete the survey*

Customers learn about the surveys through the various marketing activities employed by the HEES. They then complete the survey. Customers that complete the online version receive instantaneous results. Customers that complete the mail-in version receive the survey results by mail within two weeks. Customers who request an in-home survey receive some immediate feedback from the auditor and then receive the complete survey results by mail within two weeks.

#### *Customers aware of energy saving opportunities and more knowledgeable of energy efficient practices, equipment, and programs*

The survey results provide participants with specific information about ways that they can reduce their energy consumption. The results also inform participants about energy efficiency programs that are available to assist them in implementing the energy saving recommendations included in the survey results.

#### *Customers implement energy saving recommendations and participate in energy efficiency programs identified in the survey*

After receiving survey results, participants implement some or all of the energy saving recommendations included in the results. In addition, participants contact and participate in the energy efficiency programs identified in the survey results.

#### *Survey data is shared with energy efficiency program implementers and planners*

In addition to providing participants with information, the surveys also collect data that can be used to assist with future planning and implementation efforts for energy efficiency programs. This information is shared with energy efficiency program implementers and planners to assist them in delivering more effective programs to customers.

### **Mid Term Outcomes**

#### *Survey data informs energy efficiency program implementation and planning enabling the programs to deliver services more effectively*

Energy efficiency program implementers and planners are able to use the data collected from the surveys to deliver more effective programs to customers.

*Participants more knowledgeable about energy efficiency and recognize benefits of energy efficient investments*

As a result of taking the survey and subsequently participating in other EE programs, customers become more knowledgeable about ways to reduce their energy consumption and recognize the benefits of doing so.

*kWh, kW, and therm savings and energy bill reductions*

After implanting the recommendations made in the survey results, participants achieve energy savings, which translate to reduced energy bills.

*Demand for energy efficient equipment increases*

Customers who install energy efficient equipment and recognize the performance benefits begin to incorporate energy efficiency as part of their standard purchase decisions, resulting in increased demand for energy efficient equipment.

## **Long Term Outcomes**

*Increased availability of energy efficient equipment, market actors incorporate energy efficient products and practices as standard business*

As a result of sustained demand for energy efficient equipment and increased understanding of the benefits of purchasing energy efficiency equipment, energy efficient products and services become standard business practices.

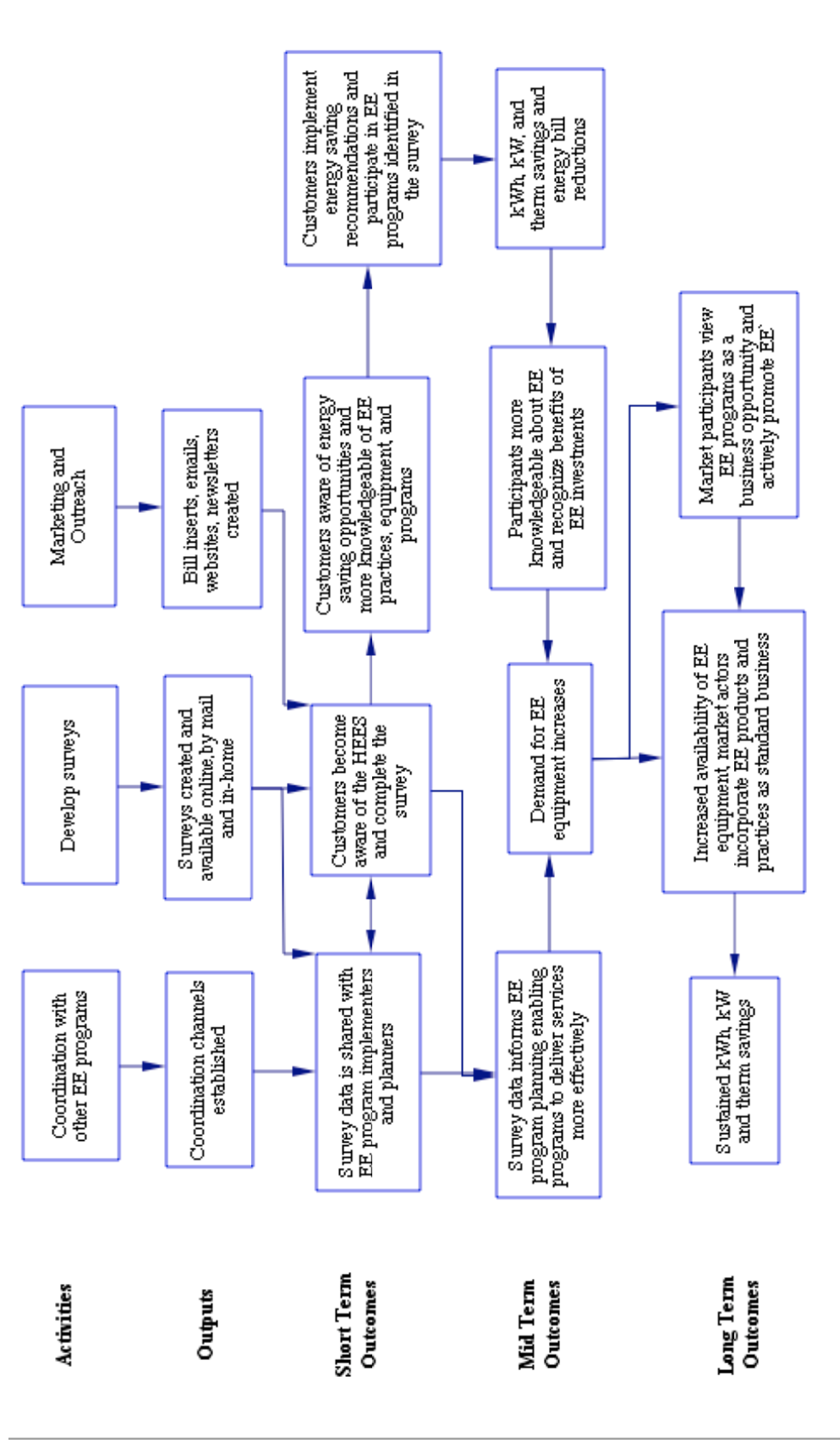
*Market participants view energy efficiency programs as a business opportunity and actively promote energy efficiency*

Retailers, manufacturers, and distributors recognize the growing demand for energy efficient equipment. As a result, they increasingly view energy efficiency programs as a business opportunity and look for more opportunities to leverage programs and promote energy efficiency.

*Sustained kWh, kW and therm savings*

Energy efficiency becomes a standard part of customers purchase decisions. In addition, market actors incorporate energy efficient products and services as standard business practices. As a result, customers continue to purchase energy efficient equipment and sustained energy savings are achieved.

Figure 25: HEES Program Logic Model



## **6.3 HEES PROGRAM EVALUATION OVERVIEW**

The evaluation's first step was to interview the HEES program manager, the program implementer (KEMA), and the program manager of the Single Family Rebate program in order to better understand the program mechanics and to discuss potential research topics. The in-depth interviews took about an hour to complete, and subsequent questions were addressed via email correspondence. The interviews were based on a series of open-ended questions, and issues that were discussed include:

1. Program purpose (as perceived by the interviewee)
2. How the program actually works
3. What metrics the program is tracking
4. What is working well, and not working well
5. Potential program changes to consider
6. Coordination with other programs (SCG, SCE, and GSW)

### **Key Research Issues**

Based on the program theory, a review of program documents (e.g., quarterly reports, PIP), and through the in-depth interviews, the following research issues were identified. These research issues are meant to direct the focus of all data collection tasks, including participant survey development, review of program documents and marketing materials, and subsequent interviews. The fundamental research question is if the HEES tool is effectively designed to increase the residential adoption of energy efficiency and water conservation practices. To that end, there are two researchable issues.

#### **Determine the effectiveness of the HEES recruitment strategies**

The process evaluation can assess the efficacy of the HEES marketing program. Marketing collateral includes mailers, e-mails, advertisements on the SCG website, newsletters, and free gifts.

#### **Determine the behavioral impact of HEES**

The program is meant to incite action, that is to inform participants of opportunities to save money and provide resources to execute the recommendations. However, HEES program staffers have not been tracking if participants actually implement the survey recommendations or if participants use the corresponding web links or phone numbers for other energy efficiency programs (rebates, products, services) to do so. It is important to know if the HEES report is successfully imparting useful knowledge, referring participants to helpful resources, and if this coordination effort is motivating participants to adopt more energy and water efficient behaviors. The process evaluation can assess if HEES elicits the desired behavior impact.

## 6.4 HEES PROGRAM EVALUATION RESULTS

To address these research issues, ECONorthwest fielded an on-line participant feedback survey through a third-party website “Survey Monkey” for program participants that completed the on-line HEES survey-only. The evaluation team commissioned the e-mail marketing firm Silverpop to dispatch an e-mail invitation to recent HEES on-line participants that provided their e-mail addresses on the HEES initial screen. The on-line participant feedback survey began on November 27, 2007 closed on December 17 with 843 responses. The survey took between five and 10 minutes to complete. Participant feedback surveys were not conducted for the mail-in or in-home HEES modes.

### Program Effectiveness

The following tables summarize the responses of the 843 program participants who were surveyed for this evaluation. Due to the nature of a web survey in which participants are able to skip past some questions, the sample size for each question varies slightly.

### Marketing Efforts

Early in the participant survey, respondents were asked how they learned about the HEES. Table 86 shows that the core marketing efforts for the on-line HEES, e-mail blasts and mailed brochures, are effective. Half of the respondents learned about the HEES program from an e-mail blast, one-quarter learned about it from a bill insert, and 18 percent learned about it from a utility website.

**Table 86: How Participants Learned about HEES**

<b>Marketing Method</b>	<b>Percent (N = 837)</b>
E-mail	49%
Bill insert	24%
The Gas Company website	9%
SCE website	9%
Community Event	2%
Other flyer or brochure	1%
Contractor	1%
Newsletter	1%
Utility representative	1%
Other	4%

Table 87 shows that before they participated in the HEES program, most respondents were somewhat knowledgeable about opportunities for improving the energy efficiency of their homes (66 percent) and about energy efficiency program offerings for their homes (55 percent). The respondents reported to have more knowledge about opportunities for improving the energy

efficiency of their homes than about the various energy efficiency program offerings available for their homes.

**Table 87: Base Level of Knowledge Before Completed HEES**

Before taking the Survey, how knowledgeable were you about...	Very Knowledgeable	Somewhat Knowledgeable	Not Very Knowledgeable
Opportunities for improving the energy efficiency of your home (N = 829)	24%	66%	10%
Energy efficiency program offerings for your home (N = 831)	16%	55%	28%

Table 88 shows that most respondents took the HEES to save energy/reduce their bill (86 percent). 46 percent of respondents identified a concern for the environment as a motivating factor, 43 percent wanted information on energy efficiency programs they could participate in, and 33 percent wanted to receive a free energy efficiency starter kit.

**Table 88: Motivation for Taking Survey**

Marketing Method	Percent (N = 821)
Wanted to save energy/reduce bill	86%
Concern for the environment	46%
Wanted information on energy efficiency programs I could participate in	43%
Wanted the free energy-efficiency starter kit (1 showerhead/3 aerators)	33%
Friend/family member recommended it	2%

Note: Multiple responses were accepted

Table 89 shows that 70 percent of respondents took between five and 15 minutes to complete the survey. When asked if they completed the standard Energy 15 HEES or the abbreviated Energy 5 HEES (N = 826), 59 percent of respondents said they took the Energy 15 version, only four percent said they completed the Energy 5 version, and 37 percent did not know.

**Table 89: HEES Length**

Time to complete survey	Percent (N = 827)
Less than 5 Minutes	18%
5 to 10 Minutes	43%
10 to 15 Minutes	27%
15 to 20 Minutes	9%
More than 20 Minutes	3%



Table 90 shows that 83 percent of respondents received an Energy Efficiency Starter Kit (1 low-flow showerhead, 1 kitchen faucet aerator, and 2 bathroom faucet aerators). Over half (57 percent) of that group installed the low-flow showerhead. 39 percent of respondents installed the kitchen faucet aerator, 29 percent installed one of the two bathroom faucet aerators, and 30 percent installed both of the bathroom faucet aerators. 13 percent of respondents installed all four items in the kit. 73 percent of respondents installed at least one of the items and therefore the incentive kit ensures that most surveys generate at least some energy savings.

**Table 90: Energy-Efficiency Starter Kit**

<b>Received Kit</b>	<b>Percent (N = 843)</b>
Yes	83%
No	17%

<b>Installed Items*</b>	<b>Percent (N = 691)</b>
Low-flow showerhead	57%
Kitchen faucet aerator	39%
1 Bathroom faucet aerator	29%
2 Bathroom faucet aerators	30%
Have not installed any of the items	27%

Note: Multiple responses were accepted

## HEES Recommendations

The core of the participant survey investigated if the HEES motivated its participants to implement its energy savings recommendations. For the participant survey, HEES recommendations were categorized among insulation, air conditioning, furnace and space heating, air distribution system, water heater, pool/spa, dishwasher, clothes washer, and lighting measures. To better understand the baseline residential market, all participants were asked which measures within each category they had already implemented before they took the HEES survey. Furthermore, all participants were asked if they received any recommendations for a given category, such as insulation. The respondents in the subset who answered “yes,” were then asked to identify which insulation measures they implemented as a result of the HEES. Therefore a smaller pool of respondents recounted which measures they installed for each category.

As shown in Table 91, 56 percent of respondents who recalled receiving insulation recommendations implemented at least one of the measures because of the HEES. As a result of the HEES, the insulation measures most commonly installed were to weatherize doors (26 percent), weatherize windows (25 percent), and to close fireplace dampers (23 percent). These three measures were also the same ones that respondents had most frequently already implemented before they took the HEES. 28 percent of respondents had already weatherized their doors, 25 percent had already weatherized their windows, and 33 percent had already closed their fireplace dampers. In general, fewer respondents adopted measures that required new installations, such as installing new windows, doors, or ceiling installation.

**Table 91: Insulation Measures**

	<b>Implemented as a Result of HEES</b>	<b>Already Implemented Before HEES</b>
	<b>Percent (N = 190)</b>	<b>Percent (N = 809)</b>
Weatherize doors	26%	28%
Weatherize windows	25%	25%
Close fireplace dampers	23%	33%
Install ceiling insulation	13%	24%
Install wall insulation	6%	13%
Install floor insulation	2%	4%
Install storm windows	2%	3%
Install storm doors	1%	3%
None	44%	43%

Note: Multiple responses were accepted

As shown in Table 91, 84 percent of respondents who recalled receiving air conditioning tips implemented at least one of the recommendations. As a result of the HEES, over 40 percent of respondents claimed that they set their thermostat at 78 degrees or higher, used portable or whole house fans when possible, cleaned/replaced dirty filters, turned off their air conditioner when away, used the outside air for cooling when possible, and reduced use of heat generating appliances during the day. These five measures were also the ones that most respondents had already implemented before they took the HEES. Again, fewer respondents adopted measures that required new installations, such as installing new vents in the attic or adding reflective coating/solar screening on windows.

**Table 92: Air Conditioning Measures**

	Implemented as a Result of HEES	Already Implemented Before HEES
	Percent (N = 181)	Percent (N = 806)
Set thermostat at 78 degrees or higher	53%	56%
Use portable or whole house fans when possible	52%	63%
Clean/replace dirty filters	52%	61%
Turn off air conditioner when away for extended periods	49%	63%
Use outside air for cooling when possible	43%	63%
Reduce use of heat generating appliances during the day	40%	51%
Shade window areas from direct sunlight	34%	50%
Install vents in attic	8%	17%
Add reflecting coating/solar screening on windows	4%	11%
None	16%	12%

Note: Multiple responses were accepted

Table 93 shows that 77 percent of respondents who recalled receiving furnace or space heating recommendations followed-through with at least one of the suggestions. Due to the HEES, 43 percent of respondents closed their windows, 43 percent cleaned/replaced dirty filters, 42 percent turned the heat off/down when away for extended periods, and 37 percent set their thermostats at 68 degrees or lower at day. In parallel, the vast majority of survey respondents claimed they were already executing these top four measures. 80 percent were already closing their windows, 64 percent were already cleaning/replacing dirty filters, 76 percent were already turning their heat off/down when away for extended periods, and 59 percent were already setting their thermostats at 68 degrees or lower at day. The lowest adoption rates are for the measures that necessitate new installations, such as installing a programmable thermostat or insulating ducts.

**Table 93: Furnace or Space Heating Measures**

	Implemented as a Result of HEES	Already Implemented Before HEES
	Percent (N = 142)	Percent (N = 801 )
Close windows	43%	80%
Clean/replace dirty filters	43%	64%
Turn heat off/down when away for extended period	42%	76%
Set thermostat at 68 degrees or lower at day	37%	59%
Set thermostat at 58 degrees or lower at night	27%	40%
Limit portable electric heater use	23%	34%
Install programmable thermostat	21%	42%
Insulate ducts	7%	12%
None	23%	8%

Note: Multiple responses were accepted

As shown in Table 94, 55 percent of respondents who recalled receiving air distribution (duct) system recommendations implemented at least one of the suggestions as a result of the HEES. Due to the HEES, 30 percent of respondents tested their home for carbon monoxide, 26 percent sealed their ducts, and 23 percent tested their ducts for leakage. Moreover, before they took the HEES, 17 percent of respondents had already tested their home for carbon monoxide, 12 percent had already sealed their ducts, and 12 percent had already tested their ducts for leakage.

**Table 94: Air Distribution (Duct) System Measures**

	Implemented as a Result of HEES	Already Implemented Before HEES
	Percent (N = 47)	Percent (N = 787)
Test home for carbon	30%	17%
Seal ducts	26%	12%
Test ducts for leakage	23%	12%
None	45%	73%

Note: Multiple responses were accepted

As shown in Table 95, 74 percent of respondents who recall receiving water heater recommendations installed at least one of the measures as a result of the HEES. The most frequently implemented measures were to install low flow showerheads (45 percent), install aerators (42 percent), and to turn down the thermostat to 120 degrees or lower (35 percent). Most commonly, 46 percent of respondents had already turned down their thermostats to 120 degrees or lower (46 percent), already repaired leaky faucets and pipes (46 percent), and/or already

installed low flow showerheads (42 percent). Analogous to the previous categories, fewer respondents adopted measures that required new installations, such as wrapping the hot water heater, insulating the hot water pipes, or installing a water heater timer.

**Table 95: Water Heater Measures**

	<b>Implemented as a Result of HEES</b>	<b>Already Implemented Before HEES</b>
	<b>Percent (N = 159)</b>	<b>Percent (N = 787)</b>
Install low flow showerheads	45%	42%
Install aerators	42%	31%
Turn down thermostat to 120 degrees or lower	35%	46%
Turn heat off/down when away for extended periods	28%	39%
Repair leaky faucets and pipes	25%	46%
Wrap water heater	22%	33%
Insulate hot water pipes	8%	18 %
Install water heater timer	3 %	2%
None	26%	20%

Note: Multiple responses were accepted

Table 96 shows that 63 percent of respondents who recalled receiving pool/spa recommendations installed at least one of the measures because of the HEES. As a result of the HEES, 48 percent of respondents minimized the operating time of their pumps and pool sweeps, 44 percent kept their filters and strainers clean, 34 percent operated their pool equipment during the cool times of the day/evening, and 21 percent covered their pools/spas when they were not in use. Before they completed the HEES, 15 percent of respondents had already minimized the operating time of their pumps and pool sweeps, 20 percent had already kept their filters and strainers clean, 14 percent had already operated their pool equipment during the cool times of the day/evening, and 11 percent had already covered their pools/spas when they were not in use.

**Table 96: Pool/Spa Measures**

	<b>Implemented as a Result of HEES</b>	<b>Already Implemented Before HEES</b>
	<b>Percent (N = 62)</b>	<b>Percent (N = 767)</b>
Minimize operating time of pump and pool sweep	48%	15%
Keep filters and strainers clean	44%	20%
Operating pool equipment during cool times of day/evening	34%	14%
Cover when not in use	21%	11%
None	37%	76%

Note: Multiple responses were accepted

Table 97 shows that 69 percent of respondents who recalled receiving dishwasher recommendations installed at least one of the measures because of the HEES. As a result of the HEES, 53 percent of respondents washed full loads, 47 percent operated their dishwashers during cool times of day/evening, and 30 percent turned off their dishwashers during the dry cycle. Before they completed the HEES, most respondents were already washing with full loads (66 percent) and already operating their dishwashers during the cool times of the day/evening (47 percent).

**Table 97: Dishwasher Measures**

	<b>Implemented as a Result of HEES</b>	<b>Already Implemented Before HEES</b>
	<b>Percent (N = 83)</b>	<b>Percent (N = 785)</b>
Wash full loads	53%	66%
Operate during cool times of day/evening	47%	47%
Turn off during dry cycle	30%	26%
None	31%	32%

Note: Multiple responses were accepted

Table 98 shows that 81 percent of respondents who recalled receiving clothes washer recommendations installed at least one of the measures because of the HEES. As a result of the HEES, the most frequently adopted measures were to wash full loads (54 percent), to use cool/warm water instead of hot when possible (54 percent), to operate their clothes washers during the cool times of the day/evening (50 percent), to check vent/filters regularly (48 percent), and to empty lint filters between loads (46 percent). Most respondents claimed they were already doing most of the clothes washer measures. 85 percent of respondents were already washing full loads, 82 percent were already emptying their lint filters between loads, 79 percent were already using cool/warm water instead of hot when possible, 70 percent were already drying full and consecutive loads, 68 percent were already checking their vents/filters regularly, 65 percent were already venting the exhaust to the outside, and 64 percent were already operating the clothes washer during the cool times of day/evening.

**Table 98: Clothes Washer Measures**

	Yes	Already installed
	Percent (N = 127)	Percent (N = 789)
Wash full loads	54%	85%
Use cool/warm water instead of hot when possible	54%	79%
Operate during cool times of day/evening	50%	64%
Check vent/filter regularly	48%	68%
Empty lint filter between loads	46%	82%
Dry full and consecutive loads	34%	70%
Vent exhaust to outside	34%	65%
None	19%	8%

Note: Multiple responses were accepted

Table 99 shows that 88 percent of respondents who recalled receiving lighting recommendations installed at least one of the measures as a result of the HEES. Due to the HEES, 81 percent of respondents replaced incandescent light bulbs with CFLs, 54 percent turned off unnecessary/decorative lighting, and 17 percent installed timers/photocells on security lighting. However, before they took the HEES, most respondents had already replaced their incandescent light bulbs with CFLs (69 percent) and were already turning off unnecessary/decorative lighting (68 percent).

**Table 99: Lighting Measures**

	Yes	Already installed
	Percent (N = 430)	Percent (N = 784)
Replace incandescent light bulbs with CFLs	81%	69%
Turn off unnecessary/decorative lighting	54%	68%
Install timers/photocells on security lighting	17%	31%
None	12%	10%

Note: Multiple responses were accepted

Program theory expects that HEES participants will use the links and phone numbers embedded in their results to explore the utility website and call the energy efficiency information line. Table 100 shows what further actions respondents took once they received their survey results. The most common next step (36 percent of respondents) was to visit a utility website to get additional information on energy efficiency programs. 10 percent of respondents called the utility to get additional information on energy efficiency programs and 12 percent called a contractor to install energy efficient equipment.

**Table 100: Action Taken After Survey**

<b>Find out more info about other energy efficiency programs, products, and rebates by...</b>	<b>Percent</b>
Visiting a utility website (N=782)	36%
Calling the utility (N=778)	10%
Calling a contractor (N=779)	12%

As shown in Table 101, most respondents (65 percent) did not join other energy efficiency program as a result of the HEES. 21 percent of respondents participated in the SCE Summer Discount Plan, 13 percent participated in the SCE Appliance Rebate Program, nine percent participated in the SCE Refrigerator/Freezer Recycling Program, and eight percent participated in The Gas Company Appliance Rebate Program.

Of the respondents that joined a program as a result of the HEES, the equipment most frequently purchased through the programs was lighting (42 percent), refrigerators (36 percent), clothes washers (26 percent), and dishwashers (23 percent). Within this same group, 40 percent of respondents received a rebate for their purchases. Rebates were most often collected for refrigerators (46 percent), clothes washers (39 percent), dishwashers (23 percent), and air conditioners (22 percent).

**Table 101: Programs Joined as a Result of HEES**

<b>Participate in...</b>	<b>Percent (N = 718)</b>
SCE Summer Discount Plan (AC cycling)	21%
SCE Rebate Program	13%
SCE Refrigerator/Freezer Recycling Program	9%
The Gas Company Rebate Program	8%
Received a rebate but don't remember the program name	3%
Water utility rebate program (GSW or LADWP)	1%
The Gas Company Home Energy Upgrade Finance Program	1%
None	65%

Note: Multiple responses were accepted

## Program Satisfaction

Table 102 shows that most respondents had a generally positive response to the section of the HEES report that provided charts with the customer's water and energy costs, by month and by appliance. Most respondents (48 percent) found them to be somewhat useful and 30 percent said they were very useful. 44 percent of respondents found the comparison with the regional average to be somewhat useful and 28 percent found it to be somewhat useful.



**Table 102: Usefulness of HEES Energy and Water Use Analysis**

	<b>Charts of energy and water history</b>	<b>Comparison with regional average</b>
	<b>Percent (N = 614)</b>	<b>Percent (N = 609)</b>
Very useful	30%	28%
Somewhat useful	48%	44%
Not very useful	8%	12%
Not at all useful	2%	4%
Don't know	12%	12%

Similarly, as shown in Table 103, most respondents found the charts of their energy and water history somewhat influential (55 percent) on their decisions to implement the HEES recommendations. 26 percent of respondents found the charts very influential and 19 percent found them not very or not at all influential. Furthermore, 74 percent of respondents who found the charts very or moderately useful also reported that the charts were very or somewhat influential on their decision to implement the HEES recommendations.

**Table 103: Influence of Energy and Water Use Analysis**

	<b>Percent (N = 602)</b>
Very influential	26%
Somewhat influential	55%
Not very influential	12%
Not at all influential	7%

As shown in Table 104, respondents were also asked to indicate their satisfaction levels with various aspects of the HEES tool. The majority of respondents offered favorable reviews of the HEES program. 71 percent of respondents were very satisfied or moderately satisfied with the amount of time it took to complete the survey and five percent were dissatisfied. 73 percent of respondents were either very satisfied or moderately satisfied with the clarity of the recommendations and five percent were dissatisfied. 68 percent of respondents were either very satisfied or moderately satisfied with the usefulness of the recommendations provided and seven percent were dissatisfied. 64 percent of respondents were either very satisfied or moderately satisfied with the information provided on other energy efficiency programs and six percent were dissatisfied. 73 percent of respondents were very satisfied or moderately satisfied with the HEES overall and only six percent were dissatisfied.

Respondents were also asked to rate the HEES on-line tool in terms of how easy it was to use. The majority of respondents (58 percent) said the HEES was very easy to use, 37 percent said it was somewhat easy, four percent said it was somewhat difficult, and only one percent said it was very difficult.

**Table 104: Satisfaction with the HEES Tool**

	Very Satisfied	Moderately Satisfied	Slightly Satisfied	Neutral	Slightly Dissatisfied	Moderately Dissatisfied	Very Dissatisfied
Level of satisfaction with...	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Amount of time it took to complete the survey (N= 772)	37%	34%	8%	15%	4%	1%	1%
Clarity of the recommendations provided by the survey (N= 770)	40%	33%	11%	13%	2%	1%	2%
Usefulness of the recommendations provided (N= 767)	35%	33%	13%	12%	3%	1%	3%
Information provided on other energy efficiency programs (N= 764)	32%	32%	12%	19%	3%	2%	1%
Overall satisfaction with the Home Energy and Water Efficiency Survey (N= 761)	39%	34%	10%	12%	3%	1%	2%

Table 105 shows that 40 percent of respondents recommended the HEES to others.

**Table 105: Recommended HEES to Others**

	Percent (N = 761)
Yes	40%
No	61%

## Demographics

The following four tables provide basic demographic information about the respondents who were surveyed for this evaluation. As shown in Table 106, most respondents live in single-family detached homes (76 percent). Eight percent live in apartments, six percent live in condos, four

percent live in townhomes, three percent live in mobile or manufactured homes, and two percent live in duplexes.

**Table 106: Type of Home**

<b>Housing Type</b>	<b>Percent (N = 767)</b>
Single-family detached	76%
Apartment	8%
Condo	6%
Townhouse	4%
Mobile home/ manufactured home	3%
Duplex	2%

Furthermore, Table 107 shows that most respondents own their homes. 80 percent of respondents own their homes, while only 20 percent rent their homes

**Table 107: Own or Rent**

<b>Housing Status</b>	<b>Percent (N = 766)</b>
Own	80%
Rent	20%

Table 108 shows that highest level of education reached by the respondents is widely distributed. 10 percent of respondents said their highest level of education reached was a high school diploma or less, 28 percent said their highest level was some college, 11 percent said their highest level was an Associates degree, 27 percent said their highest level was a Bachelors degree, and 27 percent said their highest level was a graduate or professional degree. Overall, 62 percent of respondents had at least a Bachelor’s degree.

**Table 108: Highest Level of Education**

<b>Level of Education</b>	<b>Percent (N = 762)</b>
High school diploma or less	10%
Some college	28%
Associates degree	11%
Bachelors degree	27%
Graduate or professional degree	24%

As shown in Table 130, the annual household income of respondents is also widely dispersed. The poorest (less than \$20,000) account for eight percent of respondents and the richest (more than \$150,000) represent nine percent of respondents. Each of the five middle-income categories accounts for roughly 20 percent of respondents.

**Table 109: Annual Household Income**

Income	Percent (N = 697)
Less than \$20,000	8%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	17%
\$80,000 to less than \$100,000	16%
\$100,000 to less than \$150,000	17%
More than \$150,000	9%

At the end of the survey, respondents were asked three open-ended questions to provide general feedback on the HEES program. The most common responses are summarized below.

*Open-End 1) If you could change one thing about the Home Energy and Water Efficiency Survey, what would that be?*

1. The survey could be better tailored to renters who have less information about their appliances and less ability to implement energy efficiency measures.
2. Utility account numbers should be automatically filled-in (Note: The evaluation team recognizes that the HEES program is currently developing an automated system).
3. The survey should be shorter (Note: The evaluation team recognizes that there is an abbreviated Energy 5 option).
4. There should be a skip options for customers who do not have dishwashers, pools, and/or air conditioning (Note: The evaluation team recognizes that the HEES does allow participants to indicate that they do not have a dishwasher, pool/spa, or air conditioning system).
5. There should be more in-depth information about energy efficiency programs and rebates.

*Open-End 2) What was the most difficult thing about completing the Home Energy Efficiency Survey?*

1. Entering in individual account numbers for energy and water utilities

2. Gathering all the requested information about the household appliances and estimating water and energy usage
3. Finding time to take the survey

*What other programs or offerings could the utility provide to help you manage your energy use better?*

1. More assistance with solar energy, such as help locating reliable contractors for solar installations and more financial incentive offerings.
2. Senior citizen discounts
3. Discounts on CFLs and non-fluorescent efficient lighting

## **6.5 HEES PROGRAM ISSUES AND OBSERVATIONS**

Program theory expects the HEES will encourage its participants to adopt more energy efficient behaviors, install more energy efficient equipment, and participate in other energy efficiency programs. A primary goal of this evaluation was to determine if the HEES program was effectively motivating these actions. The following are some of the key findings of this program evaluation:

1. *The HEES program prompts more energy efficient behaviors.* HEES participants are implementing a share of the recommendations that they receive. The highest adoption rates are in the areas of air conditioning, dishwashers, clothes washers, and lighting. The most commonly adopted measures are ones that most other respondents were already doing anyway. The most frequently implemented recommendations are also behavioral practices, and thus require little or initial capital investment. Fewer respondents adopted measures that required new installations, such as installing storm doors or a water heater timer.
2. *There is a high base level of knowledge about energy efficient practices in the SCG territory.* The rate at which respondents were already doing the measures before they took the HEES is high. This trend is particularly acute within the furnace and clothes washer recommendation sets. These data suggest that there is a high base level of knowledge about energy efficient practices in the SCG territory. Therefore, it may be difficult for respondents to pinpoint exactly what particular energy efficiency program or information source motivated them to implement a specific energy efficiency measure. With this in mind, the results of the participants survey may have a positive bias, as participants attribute ideas they acquired elsewhere to the HEES program.
3. *To a lesser extent, the HEES is channeling its participants toward other energy efficiency programs that can subsidize more expensive equipment upgrade.* 35 percent of respondents participated in another energy efficiency program as a result of the HEES. Respondents most frequently purchased lighting, refrigerators, clothes washers, and dishwashers through these programs. 40 percent of these respondents received rebates for their purchases, primarily for refrigerators, clothes washers, dishwashers, and air

conditioners. When asked what they would change about the HEES, many participants said that they would like more in-depth information about rebate programs in the survey results. Thus, more comprehensive advertising for the other energy efficiency programs may convince a higher percentage of participants to install more energy efficient equipment, instead of merely implementing behavioral adjustments.

4. *Once the bill history system is automated, the energy and water use analysis may serve as a more useful and convincing information source.* Program theory assumes that the energy and water use analysis included in the HEES results will encourage participants to implement the recommended savings tips and join other energy efficiency programs. Most respondents found the analysis to be somewhat useful and somewhat influential on their decision to adopt the HEES measures, however there is room for improvement. Notably, when asked about the most difficult part of the survey or what they would change about the HEES program, many respondents said that they could not find all of their account numbers to enter in. Therefore, many HEES participants omit the account information, so this technical barrier may limit the accuracy and credibility of the energy and water analysis results.
5. *Overall, satisfaction levels with the HEES program are high.* The majority of people found the HEES tool very easy to use and 40 percent of respondents reported that they encouraged others to participate in the future.
6. *E-mail blasts and mailers are the most effective marketing tools for the on-line HEES.* About half of the respondents learned about the HEES from an e-mail and one-quarter found out about it from a mailed brochure. The energy efficiency starter kits are also valuable tool to encourage participation, as one-third of respondents cited the incentive kit as a motivating factor for completing the survey. In addition, most respondents who received a kit installed at least one of the items and therefore the incentive kit ensures that most surveys generate at least some energy savings.

Potential program changes that should be considered include:

## **Recommended Program Improvements**

1. **Offer more detailed information about other energy efficiency programs in the HEES results.** The HEES program could increase the rate at which participants implement its equipment upgrade recommendations by more aggressively advertising other SCG and SCE energy efficiency programs on the results pages. More detailed information about program offerings and more specific links to program services would be helpful.
2. **Include more advanced recommendations for the well-informed customer.** A high percentage of SCG customers are practicing most of the basic energy efficient behaviors incorporated into the HEES program. These types of customers would benefit from information about more advanced options such as solar energy and demand response programs. This may require increased coordination efforts with other energy efficiency programs.

3. **Make the bill history automation project a key priority.** A tool that automatically accesses the customer's billing information will increase the credibility and usefulness of the energy and water analysis.
4. **Re-assess the value of the Energy 5.** Few participants take the Energy 5 survey. The program managers should decide if the more cursory Energy 5 is a useful program element to maintain.
5. **Create a tracking database to document program progress to assist further evaluation efforts.** Implement follow-up activities (i.e., phone calls, site-visits for in-home surveys) to verify which of the recommended HEES measures each customer has actually implemented. The tracking database should also record which energy efficiency programs the customer has joined as a result of the HEES. In addition to supporting future evaluation efforts, SCG can potentially claim savings for HEES if activities are tracked more thoroughly.

## 6.6 HEES BEST PRACTICES REVIEW

### Program Theory and Design

- *Is the program design effective?* Overall, the program aims to increase customer awareness of energy efficiency measures and prompt participation in other energy efficiency programs. The survey questions and recommendations appropriately address a broad range of equipment and measures, and the free incentive kit (low-flow showerhead and three aerators) provided to all participants ensures that most surveys lead to some energy savings. From the survey, participants learn about their energy and water usage and receive recommendations on how to be more energy efficient. They also receive information about specific programs they may be eligible for, and sometimes program-specific phone numbers or websites. While the program does not systematically track actual behavior and equipment changes inspired by the survey, this evaluation determined that many participants have changed or reinforced their energy behaviors, and that roughly one-third subsequently participated in another energy efficiency program as a result of the HEES.
- *Is the market well understood?* This residential mass-market program tries to promote a comprehensive range of energy efficient equipment and behaviors to a diverse customer base. It does not focus on specific target markets.

### Program Management

#### Project Management

- *Are responsibilities defined and understood?* Yes. The program is delivered through a single prime contractor, KEMA, whose roles and responsibilities are clearly defined.
- *Is there adequate staffing?* No staffing deficiencies were mentioned to the evaluation team.

## Reporting and Tracking

- *Are data easy to track and report?* Although good records are kept on HEES participation, the program does not systematically track which measures participants subsequently implement as a result of the survey, or which energy efficiency programs participants subsequently join.
- *Are routine functions automated?* Some steps are automated but not others. The in-home and on-line versions are processed electronically after they are completed. However, the on-line system does not automatically access each customer's unique billing information, which would increase the credibility and usefulness of the energy and water analysis. Customers must provide their full gas, water, and electric account numbers for HEES to utilize their detailed information, and many customers do not have this information readily accessible. The mailed-in version is entered by-hand. In the future, an automatic account number retrieval system will be employed, and mail-in audit forms will be pre-printed with customer account numbers.

## Quality Control and Verification

- *Does the program manager have a strong relationship with vendors involved in the project?* No problems or issues were mentioned regarding the program implementer (KEMA).
- *Does the program verify reporting systems (e.g., rebates, invoices)?* Not applicable.
- *Are customers satisfied with the product?* The HEES program does not systematically track customer satisfaction. The survey conducted for this evaluation, however, showed that most respondents have favorable perceptions of various aspects of the survey (usage charts, clarity of recommendations, usefulness of recommendations, information on other energy programs, time to complete survey).

## Program Implementation

### Participation Process

- *Is participation simple?* Participation is facilitated through in-language surveys. All surveys are available in English and Spanish and the mail-in version is also offered in Chinese, Vietnamese, and Korean. (On-line versions in Chinese, Vietnamese, and Korean surveys are in progress.) For the mail-in mode, the paper survey is provided along with the promotional advertisement. In the feedback survey conducted for this evaluation, most respondents indicated that HEES is "very" or "somewhat" easy to use.
- *Are participation strategies multi-pronged and inclusive?* Yes. The survey is available in multiple languages and multiple modes (electronic, paper, in-person). In addition, some customers complete the HEES at community energy fairs, although this is a small part of the overall participation.
- *Does the program provide quick, timely feedback to applicants?* Yes. On-line survey feedback is instantaneous. In-home auditors give a summary of the results in person and then



there is a two-week turnaround for the detailed report. The mail-in survey also has a two-week turn around.

- *Is participation part of routine transactions?* Not applicable.
- *Does the program facilitate participation through the use of internet/electronic means?* Yes, an on-line version of the survey is available, and is the most popular option.
- *Does the program offer a single point of contact for their customers?* Yes. All inquiries and issues are addressed by KEMA.
- *Are incentive levels well understood and appropriate?* Not applicable.

## Marketing and Outreach

- *Use target-marketing strategies?* This mass-market program does not do extensive target marketing, although advertising for the in-home survey is currently targeted geographically to high gas or electric users. Primary marketing strategies include advertising at community events, e-mail blasts, mailers, newsletters, advertisements on the SCG website, and incentive gifts.
- *Are products stocked and advertised?* Not applicable.
- *Are trade allies and utility staff trained to enhance marketing?* Not applicable.

## 7. CUSTOM LANGUAGE EFFICIENCY OUTREACH (CLEO) PROGRAM

### 7.1 CLEO PROGRAM BACKGROUND

The CLEO Program is a narrowly focused residential and small commercial energy efficiency marketing, outreach and education program that targets the hard-to-reach Vietnamese-, Indian-, Chinese- and Korean-(VICK) speaking residential and small business customers of SCE and SCG. In particular, the CLEO program targets joint SCE and SCG customers in demographic belts in Los Angeles, San Bernardino, and Orange counties with a high concentration of ethnic Asian customers.

The program's goal is to educate ethnic communities about energy efficient behaviors and equipment and available SCE and SCG programs via a range of locally focused activities. Program outreach relies on trusted community officials and local ethnic media that are readily accessible to Asian customers. All program offerings (e.g., energy efficiency classes, take-home materials, and phone assistance) are in-language. The program strongly emphasizes personal interaction in its marketing and education, and participants are encouraged to ask questions during classroom training and then share their knowledge with family and friends in their communities.

The CLEO program is an element of SCE's Education, Training, and Outreach Program. It is a non-resource acquisition program with no explicit energy saving goals. Whenever possible, however, the program attempts to close the energy information loop by encouraging the installation of energy efficiency measures and providing personalized customer assistance as needed.

Table 110 shows the quantitative performance goals for the CLEO program, and reveals that the program has made good progress toward meeting those goals.

**Table 110: CLEO Progress Toward Goals (Through September 2007)<sup>5</sup>**

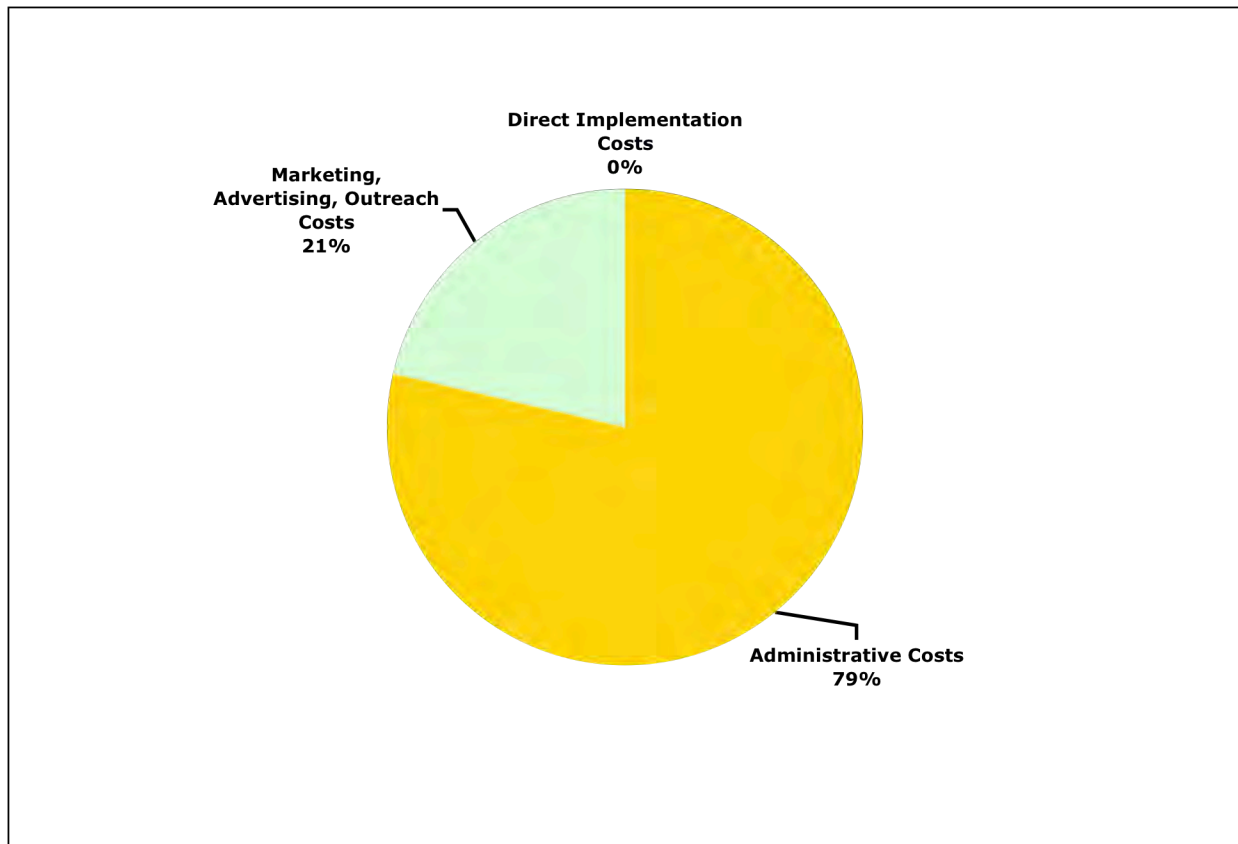
<b>Deliverable</b>	<b>Goal</b>	<b>Cumulative Activity</b>	<b>Percent of Goal Achieved</b>
HEES	2,000	1,541	77%
Event Booths	15	10	67%
Energy Seminars <sup>6</sup>	75	42	56%
Radio Ads	240	151	63%
Newspaper Ads	240	150	62%
Television Ads	240	120	50%

<sup>5</sup> Provided by Global Energy Services, October 2007.

<sup>6</sup> Each seminar was attended by an average of 35 to 40 customers.

Figure 26 shows the program expenditures by spending category through Q3 2007.

**Figure 26: CLEO Expenditures by Category**



## 7.2 CLEO PROGRAM LOGIC MODEL AND PROGRAM THEORY

The following program theory for the CLEO Program builds on the program logic model and provides additional detail on program activities, outputs and outcomes.

### Activities

#### *Program outreach and targeted marketing*

The program targets Vietnamese-, Indian-, Chinese- and Korean-speaking residential customers in high-density areas such as the San Gabriel Valley, Orange County, and South Bay. Program outreach strongly emphasizes direct personal contact, and customers are reached through local community-based organizations, faith-based organizations, “Green Ambassadors,” and local governments. In-language media campaigns are conducted through local ethnic newspapers, radio, and television; an email campaign is planned for Indian customers. Senior centers and adult day care programs also market the program and host educational seminars. Energy information booths at community events also play a prominent role, and host efficiency contests with prizes, promote utility programs, and home energy audits (HEES) and sign up customers for educational seminars.

### *Energy efficiency education*

Classroom-style “Energy Knowledge for Real Power” seminars are designed to teach customers common energy/gas/water saving strategies, inform them of utility incentive programs, and generally empower them to adopt measures and change behaviors.<sup>7</sup> The seminars last about two hours and include a slideshow presentation, take-home materials, lunch, and a gift raffle. Professional engineers with extensive energy efficiency experience teach the classes. School activities are designed to include take-home audits, efficiency quiz contests, and energy-artist competitions. The program also offers free in-language phone support and a dedicated website in four languages ([www.cleosave.com](http://www.cleosave.com)) to answer questions about energy efficiency and utility rebate programs.

### *Home energy audits (HEES)*

Program participants can complete free home energy surveys (the short version) in Asian languages in person at energy seminars and community events, and by phone and mailed instruments.

### *Free measures*

Free measures are available to program participants at community booths and the energy efficiency seminars. Participants can receive free indoor CFLs and LED night-lights, plus phone cards, bio-degradable plant fiber bags, and CLEO mugs and t-shirts.<sup>8</sup>

### *Customer feedback and program refinement*

Customer satisfaction surveys ask customers about media effectiveness, program delivery, program effectiveness (i.e., new awareness of utility and local energy programs), and the value of the program phone line and website. Program participation tracking processes have been established.

## **Short Term Outcomes**

### *Customers aware of program opportunities and other efficiency programs*

As a result of the intense and focused media campaign, community presentations, personal contacts and event booths, customers are aware of other program opportunities, such as classroom seminars and home energy surveys. Customers also learn about the availability of other utility energy efficiency programs.

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<sup>7</sup> The program does not distribute rebate forms.

<sup>8</sup> The program originally planned to distribute 20W photocell CFL lamps for customers to install on their outdoor home porches to visibly promote energy efficiency and increase awareness of other utility programs. The outdoor lamps were not distributed, however, because there was a high possibility they would be installed indoors, resulting in performance complaints.

### *Home surveys completed*

Customers complete the home energy surveys and learn about specific opportunities to adopt energy efficient measures in their homes.

### *Customers attend seminars*

Customers attend the classroom seminars and learn about energy saving equipment and behaviors, and the availability of other utility energy efficiency programs. Seminar attendees receive in-language handouts of the information, which includes contact information for additional in-language assistance with rebate program enrollment.

### *Students learn about energy efficiency*

Students hear presentations about energy efficiency, take part in energy quizzes and contests, and complete take-home energy audits. They learn about the economic and environmental benefits of energy efficiency and strategies for saving energy.

### *Energy efficiency questions answered*

Customers use the in-language phone line and website information to learn more about energy efficiency and other utility programs. Personal assistance via the phone line strengthens customer trust in the program and promotes participation in other utility programs.

### *Free measures distributed*

Program participants receive the free measures at the community event booths and classroom seminars.

### *Customer satisfaction surveys completed*

Customer feedback and improvement recommendations are solicited at seminars, community booths, and after home energy audits. Based on the feedback, the program is fine-tuned as necessary and future program offerings will be considered.

## **Mid Term Outcomes**

### *Students and parents practice energy efficiency at home*

As a result of the energy efficiency seminars and school activities, students and parents look for opportunities to apply their new knowledge of energy efficiency at home by changing behaviors and installing efficient measures.

### *Free measures promote energy efficiency and utility programs*

In addition to reducing energy use and improving neighborhood safety, the efficient CFL porch lighting that participants install serves to visibly promote energy efficiency and thereby other utility programs.

*Customers participate in utility energy efficiency programs*

Customers have become aware of utility energy efficiency program offerings through a variety of in-language promotions and choose to participate in these other utility programs.

*Customers install energy efficient products and therm savings are achieved*

Customers install new energy efficient measures and equipment through other utility programs. As a result of the installed measures, energy usage and costs are reduced.

## **Long Term Outcomes**

*More efficient homes and reduced energy costs*

Customers who have installed measures through the utility energy efficiency programs have more efficient homes and lower energy bills, and more money to spend on other necessities such as clothing, education, medication, or childcare.

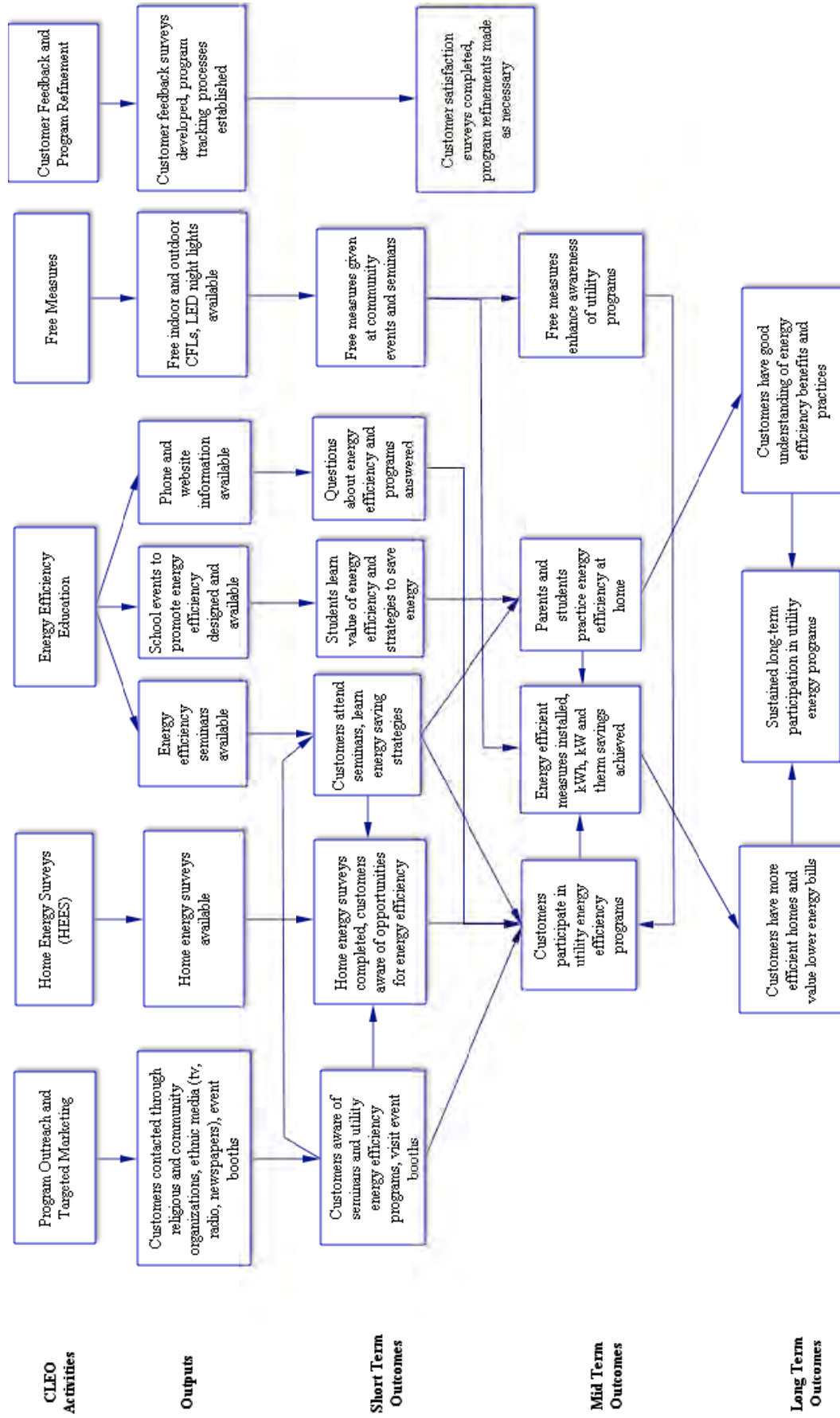
*Customers have good knowledge about energy efficient products and behaviors*

Customers and their children have become very knowledgeable about energy efficient products and behaviors due to their initial education, program participation, and continuing education.

*Sustained long-term participation in utility energy programs*

Due to the actual energy savings they have achieved, increased knowledge of energy efficient equipment, and positive program experience, customers continue to participate in utility energy programs to implement energy efficiency in their homes.

Figure 27: CLEO Program Logic Model



Shaded boxes indicate induced outcomes that are outside of the direct program influence

### **7.3 CLEO EVALUATION OVERVIEW**

At the beginning of the evaluation, in-depth telephone interviews were conducted with Global Energy Services, Inc. (GES), the program implementer, and full-time and interim SCG program managers. These interviews were based on a series of open-ended questions. Discussion topics included:

7. Program purpose (as perceived by the interviewee)
8. How the program actually works
9. Challenges that might make it difficult to attain the program goals
10. What is working well, and not working well
11. Who is participating, and who is not
12. Potential program changes to consider
13. Coordination with other SCG programs

Each in-depth interview took about an hour to complete, and subsequent questions were addressed via email correspondence.

In addition, Freeman, Sullivan & Company (FSC) fielded a telephone survey of Chinese program participants in Mandarin Chinese from mid-August to mid-September 2007 and obtained 100 completed surveys from a sample of 648 participants.<sup>9</sup> The participants were randomly selected from the sample and the sample was not stratified. Before conducting the survey, FSC tested the instrument internally in English and Chinese and modified the Chinese version so that it would be more comprehensible to the respondents, as literal translations were problematic. The survey took about 15 minutes to complete.

#### **CLEO Research Issues**

Based on the program theory and the in-depth interviews, the following research issues were identified. These directed all data collection tasks, including participant survey development, review of program documents and marketing materials, and subsequent interviews. While this evaluation could not address each issue due to project budget and timing constraints, they are listed here for future consideration and evaluation.

#### **Effective Program Outreach**

The primary goal of the CLEO program is to conduct in-language outreach using a broad range of media tools to inform ethnic communities of program-sponsored events (e.g., community

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<sup>9</sup> Eleven (two percent) of the participants in the sample also were in the PACE sample. Ten of these participants completed the CLEO survey, which was fielded first; they did not complete a PACE survey. All 11 participated in the PACE program prior to participating in CLEO, but there were no other strong participation patterns (e.g., same home ZIP code or all attending the same PACE or CLEO event).



booths, presentations, and training) to learn about energy efficiency and SCG programs. While the program seeks to disseminate information as widely as possible so that information sharing occurs, the program also should strategically target residents who have a greater need for energy efficiency and/or are more likely to participate in SCG programs.

### **Actual Programs Enrollment**

As stated earlier, the CLEO program does not have defined, measurable goals regarding new program participation and energy savings. However, a logical and desirable outcome of the outreach and education activities is to have program participants actually enroll in SCG rebate programs.

### **Participant Learning**

The CLEO program provides basic education about energy efficiency benefits and strategies through a variety of media (e.g., in-language brochures, energy surveys, classroom training, and take-home materials). It is important to know if these educational tools are successfully imparting useful knowledge and if they are changing energy efficiency behaviors.

### **Third-Party Program Delivery**

Firms that bid to deliver ethnic outreach programs often have strong community connections and grassroots outreach capabilities, but have fewer resources or less expertise to develop high-quality informational materials that meet SCG standards. As a result, the materials development/translation phase of the program can be long and frustrating for everyone involved. In addition, the CLEO and PACE programs target many of the same ethnic customer groups (e.g., Chinese, Korean, and Vietnamese) and the programs actively coordinate so their representatives do not attend the same events or use the same training venues.

## **7.4 CLEO EVALUATION RESULTS**

### **Program Start-up and Implementation**

According to the research, the few difficulties with the early phases of the CLEO program pertained primarily to program scoping and materials development. These initial difficulties have been overcome, and the program is being delivered largely as envisioned and has been successful in reaching the targeted ethnic communities.

The CLEO program is offered in partnership with SCE, which is the lead IOU. According to the SCG program manager, the proposed program scope and participation materials initially focused too much on electric measures, so it was somewhat challenging to integrate SCG messages and perspectives into the program. In addition, SCG had some concerns about the initial quality of the presentation materials. In the end, however, the IOUs achieved a fair balance regarding the program/measures focus, and both IOUs believe the quality of the final program materials is satisfactory. Furthermore, one SCG program manager said SCG preferred having SCE serve as the lead IOU, and noted that there had not been any major coordination issues after the scope and materials were approved.

GES completed the original materials translations into Chinese, Korean, and Vietnamese and worked with SCE on editing and revisions. Eventually, SCE Corporate Communications took over the translation task due to perceived delays and a sense that some revisions had not been incorporated properly. Toward the end of the materials development process, SCG also reviewed and approved the materials. After a three-month review process, the materials were given to GES for implementation.

To promote the program, CLEO staff has participated in several high-profile events, including: Indian Independence Day celebrations, the Orange County Korean Festival, Vietnamese New Year (TET) festivals (attracting over 200,000 people), Chinese New Year festivals (attracting over 100,000 people), and Chinese Harvest Moon festivals. In addition, GES has contacted over 100 community organizations and presented the program to cultural groups, religious organizations, news organizations, apartment complexes, adult day care centers, and senior centers (except for Indian populations, which do not have senior centers).<sup>10</sup>

CLEO has also conducted media blitzes to promote the program through multiple media channels simultaneously. The program has been advertised heavily in Chinese newspapers and on radio and television. As a result, there have been waiting lists for some Chinese seminars. Similarly, the Vietnamese program rollout was preceded by an aggressive media blitz in local Vietnamese newspapers (*Nguoi Viet* and *Viet Bao*) and on Vietnamese radio (Little Saigon Radio). According to GES (and confirmed by the participant survey), newspaper advertising has been the most effective medium for attracting Chinese and Vietnamese participants, followed in order by advertising on radio and television. Free public-access television, however, has been effective for reaching low-income customers.<sup>11</sup>

In response to initial program participation rates and additional marketing research, the program adjusted its public outreach strategy. For instance, program managers discovered several challenges in reaching the Indian community. This population recognizes 14 official languages, and, with the increase in satellite television channels beamed directly from India, Indian viewers watch substantially fewer local television shows than in the past. In response, CLEO replaced Indian television and radio campaigns with an email campaign to members of different faith-based organizations in the Indian community. The program provides information in English to Indian customers. Personal interaction, however, can be in English, Hindi, or Bengali.

The program has also used key community leaders to earn the trust of potential participants, and has partnered effectively with local city staff and officials to promote the program. Local officials, for instance, have participated in press conferences and told their constituents to “attend the energy seminars and take the HEES survey.” In addition, some local mayors and council members have attended energy seminars and generated good publicity for the program. Because

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<sup>10</sup> According to SCG staff, senior centers are somewhat reluctant to participate in CLEO seminars. The program requires customers to sign up for seminars in advance. Requesting this information sometimes has caused suspicion. Some senior centers refuse to participate due to this requirement.

<sup>11</sup> GES also collects program awareness and satisfaction data from participants for its own quality control purposes.

of these comprehensive and coordinated activities (event attendance, media outreach, and public partnering) the program has achieved strong participation in new geographic areas.

## Program Effectiveness

Early in the telephone survey, respondents were asked if they are aware of SCG rebate programs for energy efficient equipment. The goal was to measure how much they recalled about their participation in the CLEO program. As shown in Table 111, 44 percent of the respondents were aware of the general availability of SCG rebates, while 55 percent were not.

**Table 111: Awareness of Gas Company Rebates After Participation**

Response	Percent (N = 100)
Yes	44%
No	55%
Don't know	1%

Twelve percent of the respondents indicated they had received rebates from SCG prior to participating in the CLEO program.<sup>12</sup> Table 112 shows the reasons why 88 percent of the respondents had not tried to receive rebates in the past (multiple responses were accepted). Half of the respondents were not aware that rebates for energy efficiency equipment were available, and 40 percent did not apply for other reasons, including the fact that they may not have purchased any energy efficiency equipment. Fifteen percent of the respondents specifically indicated they had language barriers or didn't understand the application. Taken together, the responses in Table 111 and Table 112 suggest that customers' awareness of SCG rebate programs did not increase significantly after their participation in the program, and that awareness levels still were relatively low.

**Table 112: Reasons for not Getting Rebates Before Participation**

Reason	Percent (N = 88)
Not aware that rebates existed	50%
Did not try to apply	40%
Didn't understand rebate program or application	8%
Language barriers with application process	7%
Too much hassle	2%
Don't know	2%

<sup>12</sup> Eighteen percent of the respondents said they have access to the Internet, but none of them had tried to use the SCG website to get an application for energy efficiency rebates.

Seventeen of the 100 respondents visited an energy efficiency information booth at a community event as part of their program participation. Nine of these respondents learned about the information booths through newspaper advertising, seven visitors noticed a booth while attending an event, and one visitor learned about the booths through radio advertising. When asked about their reasons for visiting a booth, most visitors indicated they wanted to learn about general energy saving ideas, while one specifically wanted to learn about SCG programs. Among the nine visitors who reviewed or took home energy efficiency information from a booth, six indicated it was very useful or pretty useful, while three said it was only slightly useful.

Table 113 shows the reasons that 83 of the respondents chose not to visit an information booth. Almost half of the respondents said they did not have time to visit a booth, and 14 percent specifically said they were not interested in the information. Among the 31 percent who said they did not know or could not recall why they did not visit a booth, it is possible that some were not aware that the booths were available; this was not tested in the survey.

**Table 113: Reasons For Not Visiting Energy Booth**

Reason	Percent (N = 83)
Did not have time	48%
Not interested in information	14%
Was a long line	5%
Had attended an energy class or seminar	4%
Already knew about energy efficiency	1%
Don't know	31%

Seventy-three of the respondents were aware of the energy efficiency training classes offered through the program, and all but one of these respondents chose to attend a class. As shown in Table 114, the majority of respondents learned about the classes through newspaper advertising (87 percent), while 10 percent learned about them through radio and television advertising.

**Table 114: Source of Energy Class Awareness**

Source	Percent (N = 73)
Newspaper advertising	87%
Radio advertising	7%
TV advertising	3%
CLEO staff	3%
Energy booth at community event	1%
Friend or family member	1%

Table 115 shows that the majority of respondents (89 percent) chose to attend a class in order to learn about how to save energy and 25 percent were generally curious about the information that would be presented. Eight percent of the respondents specifically wanted to learn about SCG programs.

**Table 115: Reasons for Attending Energy Class**

<b>Reason</b>	<b>Percent (N = 72)</b>
To learn about ways to save energy	89%
Was curious	25%
To learn about SCG programs	8%
Someone recommended	3%
Friends or family attending	1%

When asked to rate the usefulness of the information they received in class, the largest percentage of respondents (44 percent) indicated that the information was pretty useful (i.e., the middle or neutral rating). As shown in Table 116, 32 percent considered the information to be extremely useful or very useful, compared to 23 percent who considered the information to be slightly useful or not at all useful. In a separate question, 47 percent of the respondents indicated that the class did not really help them understand how to use SCG rebate programs, compared to 39 percent who said the classes were helpful in this regard; 14 percent were not sure.

**Table 116: Usefulness of Energy Class Information**

<b>Rating</b>	<b>Percent (N = 72)</b>
Extremely useful	7%
Very useful	25%
Pretty useful	44%
Slightly useful	17%
Not at all useful	6%
Don't know	1%

Table 117 shows that 78 percent of the respondents noted no problems with the energy efficiency classes. The most significant problems attendees identified were that the information was not detailed enough (11 percent) and that more knowledgeable trainers were needed (10 percent). In a separate question, 33 percent of the respondents said they recommended the class to others, 53 percent did not, and 14 percent could not recall if they had recommended it to others.

**Table 117: Energy Class Deficiencies**

<b>Problem</b>	<b>Percent (N = 72)</b>
None	78%
Information not detailed enough	11%
Needs more knowledgeable trainer	10%
Class is too short	3%
Class is too crowded	3%
Need classes in Chinese language <sup>13</sup>	3%
Don't know	3%
Information too detailed	1%

Forty percent of all respondents completed a written Home Energy Efficiency Survey (HEES) in an energy efficiency class or at an energy efficiency booth at a community event. The vast majority (83 percent) indicated that the survey was somewhat easy to complete, 10 percent said it was very easy to complete, and five percent said it was somewhat difficult. As shown in Table 118, more than half of the respondents (58 percent) took the survey to better understand their home energy use, and secondarily they wanted to learn about specific energy saving opportunities (20 percent).

**Table 118: Reason for Completing HEES Survey**

<b>Reason</b>	<b>Percent (N = 40)</b>
To better understand my home energy use	58%
To learn about energy savings opportunities for my home	20%
Don't know	13%
Friends/family recommended it	5%
To get free prizes or equipment	5%
Was curious	5%

Table 119 shows that 35 percent of the respondents thought that the HEES survey was pretty useful for improving their understanding of energy saving opportunities, while 35 percent thought the survey was only slightly useful. In comparison, only eight percent thought the survey was very useful. In a separate question, 75 percent of the respondents said they had not recommended the HEES survey to others, while 25 percent could not recall if they had done so.

<sup>13</sup> All CLEO materials/instruction are offered in-language. It is possible that these respondents desired *additional* materials or training in Chinese, as the information they received was in Chinese.

**Table 119: Usefulness of HEES Survey**

<b>Rating</b>	<b>Percent (N = 40)</b>
Extremely useful	0%
Very useful	8%
Pretty useful	35%
Slightly useful	35%
Not at all useful	3%
Don't know	20%

Seventy-eight percent of all 100 respondents received free CFL lights bulbs as a result of participating in the CLEO program; 96 percent reported actually installing the lights and 32 percent told friends, family and/or neighbors about their new lights<sup>14</sup>. Most of these respondents told others that the lights save money and energy, while a few also mentioned that they are inexpensive, easy to obtain, other people are using them and/or that they don't burn out easily. This supports the program theory that the free measures distributed through the program are helping to promote energy efficiency in the broader Chinese community.

Importantly, all of the survey respondents were asked to describe any energy use behaviors and equipment they changed after participating in the CLEO program. Table 120 shows that the greatest changes pertained to turning off lights more often and using less lighting in general. Thirty-three percent of the respondents also indicated that they had raised their thermostat setting for home cooling. In addition, over 20 percent of the respondents reported that they now wash and dry clothing in full loads, wash with cold water, and/or no longer heat or cool unused rooms. This supports the program theory that program participants are applying the knowledge they have gained through the program to practice energy efficiency at home.

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<sup>14</sup> The survey specifically asked respondents about their experience with free outdoor photocell *porch* CFL lights they may have received, since the program implementer originally planned to distribute porch lighting due to its high public visibility. According to the implementer, however, they did not distribute those lights, and instead provided only regular indoor 20W and 23W CFLs, because most customers could not distinguish between the two types. Although some of these regular CFLs may have been installed in outdoor porch fixtures, it was assumed that respondents were describing their experience with regular CFLs in general.

**Table 120: Changes in Energy Use Behavior**

Type of Change	Percent (N = 100)
Reduce lighting use	88%
Turn off lights more	79%
Raise thermostat setting for cooling	33%
Always wash full load	31%
Always dry full load	26%
Don't heat/cool unused rooms	23%
Wash with cold water	21%
Dry clothes on line or rack	14%
Turn on refrigerator energy saver switch	11%
Thaw food before cooking	10%
Lowered thermostat setting for heating	4%
Shade windows to keep house cool	3%
Don't know	2%
Keep refrigerator full	1%
Use microwave whenever possible	1%

Table 121 shows the energy efficient equipment respondents installed after participating in the program. Not surprisingly, the most common type of new equipment they installed was new CFL or T-8 lighting (99 percent). In addition, 23 percent of the respondents installed new energy efficient refrigerators, and 13 percent installed new efficient central or window air conditioning units. This supports the program theory that program participants are applying the knowledge they have gained through the program to install energy efficient equipment as opportunities arise.



**Table 121: New Energy Efficient Equipment Installed**

Type of Equipment	Percent (N = 100)
Compact fluorescent or T-8 lighting	99%
Efficient refrigerator	23%
Efficient window unit air conditioner	7%
Efficient central air conditioner	6%
Efficient clothes washer	4%
Efficient clothes dryer	2%
More wall insulation	1%
Whole-house fan	1%
High-efficiency gas furnace	1%
Efficient dishwasher	1%
Efficient water heater	1%
Efficient windows	1%
Efficient television	1%
Don't know	1%

Program participants were also asked to rate their satisfaction with the energy savings resulting from installations of new energy efficient equipment. Table 122 shows that 57 percent of the respondents were somewhat satisfied with their energy savings and 25 percent were very satisfied.

**Table 122: Satisfaction with Energy Savings**

Rating	Percent (N = 100)
Extremely satisfied	6%
Very satisfied	25%
Somewhat satisfied	57%
Not very satisfied	4%
Don't know	8%

Fourteen respondents said they had called the CLEO telephone help line to get additional information about energy efficiency or available rebate programs. Three of these respondents called specifically to get help applying for a rebate, and two of them indicated that the help they received was sufficient. Table 123 shows that 43 percent of those who called the help line thought the service was only slightly or not at all helpful, compared to 28 percent who thought the service was extremely or very helpful.

**Table 123: Value of Phone Assistance**

<b>Rating</b>	<b>Percent (N = 14)</b>
Extremely helpful	7%
Very helpful	21%
Pretty helpful	29%
Slightly helpful	14%
Not at all helpful	29%

Table 124 shows that the CLEO program received generally positive reviews from program participants. While about half of the survey respondents said they were somewhat satisfied with the program (the middle rating), 33 percent of the respondents were either very or extremely satisfied with the program, and just seven percent said they were not very satisfied. While 94 percent of the respondents could not identify additional SCG programs or offerings to help them manage their energy use (asked in a separate question), three respondents said they wanted more programs, information, and phone assistance available in Chinese languages.

**Table 124: Overall Satisfaction with CLEO Program**

<b>Rating</b>	<b>Percent (N = 100)</b>
Extremely satisfied	2%
Very satisfied	31%
Somewhat satisfied	53%
Not very satisfied	7%
Not at all satisfied	0%
Don't know	7%

Going forward, 79 percent of the respondents said that they would select energy efficient equipment when they buy or replace home energy appliances and equipment. This supports the program theory that program participants will apply the knowledge they have gained through the program to install energy efficient equipment as opportunities arise.

As shown in Table 125, the respondents were less certain that they would try to use SCG rebates in the next year; 42 percent said they didn't know what they would do and 39 percent said they probably would try to use rebates. Among the respondents who said they did plan to use rebates or probably would, only one knew the equipment for which they would seek rebates (a clothes washer), and the rest did not know.

**Table 125: Will Apply for Rebates in Next Year**

<b>Response</b>	<b>Percent (N = 100)</b>
Yes	8%
Probably	39%
No	11%
Don't know	42%

Table 126 shows the reasons why respondents said they would not or might not seek rebates in the future. Not surprisingly, the largest share of respondents (32 percent) indicated that they still did not understand the available rebate programs, which is consistent with the relatively low level of rebate awareness described previously. In addition, 32 percent of the respondents said that getting rebates was too much hassle and/or that the rebate forms were too long and complicated, while 13 percent cited language barriers as an obstacle.

**Table 126: Reasons for not Getting Rebates in Future**

<b>Reason</b>	<b>Percent (N = 53)</b>
Don't understand rebate programs	32%
Too much hassle	17%
Application too long/too many questions	15%
Language barriers	13%
Rebates are too low	6%
Efficient equipment is too expensive	2%
Don't know	22%

Taken together, Table 125 and Table 126 show mixed results regarding future rebate program participation. On the one hand, it is encouraging that 39 percent said they will probably try to use rebates in the future when they make energy efficiency purchases, although predicting such purchases is difficult to do. On the other hand, the Chinese community still lacks awareness and understanding of utility programs. Therefore, this may require additional attention through the CLEO program or other educational efforts.

The following four tables provide basic demographic information about the 100 program participants who were surveyed for this evaluation. As shown in Table 127, 65 percent of the respondents live in single-family detached homes, 13 percent in rental apartments, 10 percent in condominiums, and 11 percent in townhouses or duplexes. In a separate question, 76 percent of the survey respondents said they own their dwelling, 23 percent rent, and one percent was not sure.

**Table 127: Type of Home**

<b>Housing Type</b>	<b>Percent (N = 100)</b>
Single-family detached	65%
Apartment	13%
Condo	10%
Townhouse	6%
Duplex	5%
Don't know	1%

Table 128 shows that the age of the respondents' housing varies considerably. The largest percentage (31 percent) of respondents inhabits housing that was built between 1940 and 1969, with each subsequent decade accounting for roughly 10 percent of the responses. It is possible that a majority of the respondents' homes were built in the pre-Title 24 era, although the data could not confirm this. Thus, there is some potential for energy efficiency improvements in this housing.

**Table 128: Age of Home**

<b>Year Built</b>	<b>Percent (N = 100)</b>
1930's or Older	9%
1940 - 1969	31%
1970 - 1979	13%
1980 - 1989	13%
1990 - 1999	12%
2000 - 2007	8%
Refused/Don't know	14%

As shown in Table 129, most of the respondents live in small to moderately sized housing. Thirty-seven percent of the respondents live in housing that is less than 1,400 square feet, while 34 percent live in housing that is 1,400 to 2,500 square feet.

**Table 129: Size of Home**

<b>Square Feet</b>	<b>Percent (N = 100)</b>
Less than 1,400	37%
1,400 to 2,500	34%
2,501 to 3,500	5%
3,501 to 5,000	1%
Over 5,000	0%
Don't know	23%

Table 130 shows that many of the survey respondents also have low to moderate annual incomes. Fifty-nine percent of the respondents earn less than \$40,000 per year, while 36 percent earn less than \$20,000. In a separate question, 67 percent of the respondents said there are three or more people in their household, including children. This indicates that the program is successfully reaching hard-to-reach, low-income households.

**Table 130: Annual Household Income**

<b>Income</b>	<b>Percent (N = 100)</b>
Less than \$20,000	36%
\$20,000 to less than \$40,000	23%
\$40,000 to less than \$60,000	5%
\$60,000 to less than \$80,000	2%
\$80,000 to less than \$100,000	1%
\$100,000 to less than \$150,000	1%
Refused	32%

## **7.5 CLEO PROGRAM ISSUES AND OBSERVATIONS**

The CLEO program has been offered for several years; GES, the current implementer, has run the program since 2002. Over time the main change has been to implement the program in new geographic areas. The most significant challenges for this program pertained to the initial scoping with SCE and the materials translations; both of these issues have been resolved. Since then, the program has been successful in reaching a broad base of the targeted ethnic communities using a variety of media and strategies. In addition to being on track to meet the program's quantitative goals (e.g., number of trainings conducted), the program appears to be meeting many of the qualitative goals that are reflected in the program logic. Following are some of the key findings of this program evaluation:

1. *Participant satisfaction with the energy classes and overall program generally is neutral.* Although more participants are satisfied than dissatisfied with the usefulness of the classroom information and the overall program, the largest groups of participants gave only “middle” or “neutral” satisfaction ratings. The program improvements most desired by participants are more detailed energy efficiency information and more knowledgeable trainers.
  2. *Program participants are adopting desired energy efficiency behaviors and intentions.* Based on the survey, participants appear to be adapting their behavior to save energy, and many have purchased energy efficient equipment since they participated in the program. Encouragingly, the survey also shows that participants are inclined to buy energy efficient equipment in the future.
  3. *Participants are sharing their program experience and energy knowledge with others.* About a third of the participants are recommending energy classes and energy efficient equipment to their friends and family, which should help develop a critical mass of energy awareness within these communities.
1. *Participant awareness of other SCG programs is lacking.* The survey results suggest that over half of the participants are still not aware of utility programs to help them acquire energy efficient equipment. One potential improvement strategy for the program is to focus on increasing awareness and understanding of SCG rebate programs specifically, while acknowledging that these program processes and requirements still may be too complicated for many hard-to-reach customers to understand.
  2. *Participants are generally dissatisfied with the program phone support.* Relatively few participants have used the phone line, and survey results suggest that it has not been very helpful to them. Another potential improvement area is the program’s phone assistance service.

## Recommended Program Improvements

Potential program changes that should be considered for the short term (i.e., in 2008) include:

1. **Distribute in-language rebate applications at events and in classes to serve as an additional educational vehicle (as desired by SCG Rebates staff).** While most participants do not note any problems with the classes, the largest desire is for more detailed information (although they do not say regarding what topic). Even if the applications were not used in the immediate future, they could serve as a reminder that the utility does offer programs to help implement energy efficiency, and the CLEO program could use many of the same in-language applications that were developed for the PACE program.
1. **Make the long version of HEES available in the energy classes.** The survey shows that most participants feel that the short version of HEES is fairly easy to complete. At the

same time, they also said it is not very useful, and they are not recommending it to their peers. It is possible that the longer version of HEES will be more educational and useful to participants.

Changes that should be considered for the 2009-2011 program cycle include:

2. **Have the utilities complete all in-language translations and materials development.** The materials translation was the most cumbersome aspect of the program rollout, in part due to the large number of required approvals and conflicting quality standards. One way to facilitate this is to reduce the number of parties involved in materials development and allow the contractor to focus on their particular strengths – grassroots market development, event organizing, delivering information, etc.
3. **Adopt measurable goals for new program participation.** The program already strives to change energy consumption behavior, equipment preferences, and SCG program awareness. Assuming that SCG program awareness can be improved, it is logical to assume that some portion of CLEO participants will want to participate in these programs. In fact, this already is an objective of the CLEO program.
4. **Develop a mechanism to track subsequent participation in other SCG programs.** Currently this cannot be done automatically and it should be required if new program participation is adopted as an official goal. Even if new program participation or savings goals are not adopted, tracking mechanisms should be implemented to better understand how participants actually behave after participating in the CLEO program. This is particularly true if ethnic customers are sometimes confused regarding what programs they have participated in, which probably is the case.
5. **Develop a tighter or more direct linkage between the CLEO program and other residential programs.** CLEO potentially could deliver some residential programs/measures directly to the target groups it already is reaching effectively. For instance, CLEO could enroll ethnic customers for in-home audits as part of a whole-house program, since it already has developed a high level of trust in the CLEO program areas and has engaged and captive audiences at its energy efficiency classes.

## 7.6 CLEO BEST PRACTICES REVIEW

### Program Theory and Design

- *Is the program design effective?* The overall program design is achieving respectable results. Participants appear to be adapting their behavior to save energy, and many have purchased energy efficient equipment since they participated in the program. The survey also showed that participants are inclined to buy energy efficient equipment in the future. At the same time, the HEES surveys are only somewhat useful to participants, as is the classroom information about SCG rebate programs. While most participants are satisfied with the program offerings, there is still a desire for more detailed information about their own energy consumption and SCG rebate programs. Program effectiveness could be measured more

conclusively, however, if SCG's systems systematically tracked subsequent participation in other rebate programs.

- *Is the market well understood?* GES recognizes the inherent challenges in targeting many ethnic groups and has partnered effectively with local ethnic city staff and officials to market the program and earn customers' trust. Over the years, the implementer has also developed a good understanding of which media are most effective for reaching different ethnic groups, and has developed relationships with key media providers.

## Program Management

### Project Management

- *Are responsibilities defined and understood?* Yes. After some initial difficulties developing some of the program materials, GES has had no problems delivering the program.
- *Is there adequate staffing?* No staffing deficiencies were described to the evaluation team.

### Reporting and Tracking

- *Are data easy to track and report?* This was not assessed for this evaluation.
- *Are routine functions automated?* Not applicable.

### Quality Control and Verification

- *Does the program manager have a strong relationship with vendors involved in the project?* SCE is the lead IOU for this program and GES communicates with them primarily. No communications problems between GES and the SCG program manager were described to the evaluation team.
- *Does the program verify reporting systems (e.g., rebates, invoices)?* This was not assessed (e.g., for seminar attendance).
- *Are customers satisfied with the product?* Participant satisfaction with the overall program generally was positive, although as mentioned earlier, there is still a desire for more detailed energy information.

## Program Implementation

### Participation Process

- *Is participation simple?* No significant participation barriers were described to the evaluation team, and it appears that most customers that want to participate in the program are able to do so. Customers can take part in the program by visiting an information booth at a community event or attending an educational presentation, and filling out a HEES survey.
- *Are participation strategies multi-pronged and inclusive?* Yes. CLEO program services are offered in-language for the Chinese, Korean, Vietnamese, and Indian communities. Customers can complete home energy surveys in ethnic languages in person at community



events and education seminars, and by phone, mailed instruments, and the Internet (English only).

- *Does the program provide quick, timely feedback to applicants?* Not applicable.
- *Is participation part of routine transactions?* No, by design customers must proactively choose to visit an energy booth or attend an energy seminar.
- *Does the program facilitate participation through the use of internet/electronic means?* Yes, the CLEO website provides program information and customer assistance to actual and prospective participants, and the program also refers customers to the on-line version of HEES.
- *Does the program offer a single point of contact for their customers?* Yes. All inquiries and issues are addressed by GES.
- *Are incentive levels well understood and appropriate?* Seminar attendees and booth visitors can receive free CFLs and LED night lights, which helps to improve attendance.

## Marketing and Outreach

- *Use target-marketing strategies?* Yes. GES has a good understanding of the best ways to reach each distinct ethnic group based in part on its past experience delivering this program.
- *Are products stocked and advertised?* Not applicable.
- *Are trade allies and utility staff trained to enhance marketing?* Not applicable.

## **8. PACE ENERGY EFFICIENCY ETHNIC OUTREACH PROGRAM (PACE)**

### **8.1 PACE PROGRAM BACKGROUND**

PACE's Energy Efficiency Ethnic Outreach Program promotes SCG programs in Chinese, Korean, Vietnamese and Hispanic ethnic communities, which have historically had low program participation rates. The program targets three specific categories of customers and market actors: individual residential gas users, businesses that serve multi-family owners/managers, and other small ethnic businesses (e.g., restaurants, nail/beauty salons, dry cleaners). This section focuses on the residential customer element of the program.<sup>15</sup>

The program's goal is to educate ethnic residential customers and communities about energy efficient behaviors and equipment and available SCG programs via a range of locally focused activities. Program outreach relies on PACE's existing network of clients and programs, the networks of other hard-to-reach service providers in Southern California, and penetrating specific ethnic communities via trusted local citizen leaders, elected officials, and ethnic media. All program offerings (e.g., energy efficiency presentations, energy surveys, take-home information, and phone assistance) are available in-language.

The PACE program is a non-resource acquisition program with no explicit energy savings goals. However, the program does encourage the installation of energy efficiency measures and provides personalized customer assistance as needed.

Table 131 shows the original quantitative performance goals for the PACE program. The program was not on track to meet some its key goals as of November 2007. As a result, both the program goals and outreach strategies were being reviewed by SCG and PACE in November 2007 and likely will be revised for implementation in January 2008.

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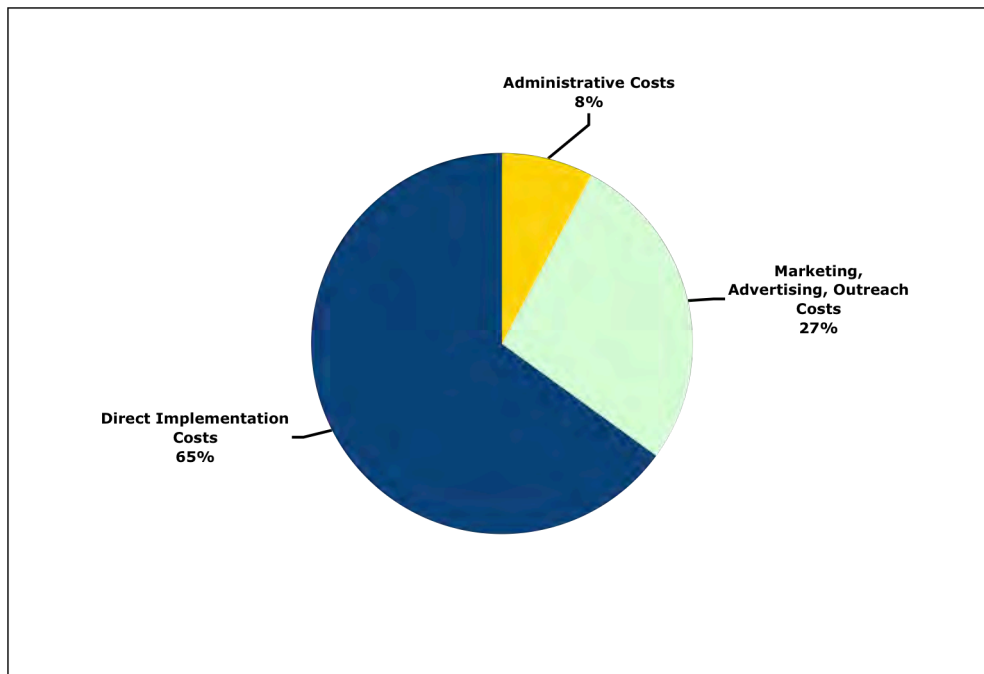
<sup>15</sup> The other business elements of the program will be assessed in a separate evaluation.

**Table 131: PACE Progress Toward Goals (Through September 2007)<sup>16</sup>**

<b>Deliverable</b>	<b>Goal</b>	<b>Cumulative Activity</b>	<b>Percent of Goal Achieved</b>
Residential customers reached	60,000	3,000	5%
HEES – paper surveys	5,000	3,328	67%
HEES – on-line surveys	9,000	269	3%
Aerator sets distributed – Single Family	4,500	2,574	57%
Aerator sets distributed – Multi-family	500	327	65%
Event booths	25	14	56%
Mass media articles/placements <sup>17</sup>	10	10	100%
Press releases <sup>18</sup>	10	4	40%

Figure 28 shows the PACE program expenditures by cost type.

**Figure 28: PACE Expenditures by Category (Q1 2006 – Q3 2007)**



<sup>16</sup> Provided by PACE November 2007.

<sup>17</sup> PACE expects to place an additional 10 or more news items in 2008.

<sup>18</sup> Three had been approved by SCG and one was under review.

## 8.2 PACE LOGIC MODEL AND PROGRAM THEORY

The following program theory for the PACE program builds on the program logic model and provides additional detail on program activities, outputs and outcomes.

### Activities

#### *Program outreach and targeted marketing*

The PACE program targets Chinese, Korean, Vietnamese, and Hispanic residential and businesses customers who make up almost 60 percent of the population of Los Angeles County. Other counties and ethnic groups, such as African-Americans and Native Americans, also are being served. Outreach is conducted via the PACE website ([www.pacelaenergy.org](http://www.pacelaenergy.org)), existing PACE programs and client lists, other service providers such as HeadStart and WorkSource Centers, ethnic community leaders and their recommended contacts, local cultural and religious institutions, translated energy efficiency brochures, and ethnic language media campaigns with community leader endorsements. The goal of the program is to conduct significant outreach to these growing ethnic groups using trusted community institutions and in-language, culturally appropriate media to promote energy efficiency education and program opportunities.

#### *Energy efficiency education*

Classroom-style seminars are designed to teach residential customers gas/water saving strategies and inform them of available SCG efficiency programs.<sup>19</sup> Informational booths at community events also play a prominent role, as venues to distribute energy efficiency educational materials, host efficiency contests with prizes, promote SCG programs and sign up customers for educational seminars. At both the booths and seminars, in-language rebate program forms are available for customers to take home and complete.<sup>20</sup> Seminar attendees and booth visitors can receive free water faucet aerators if they provide some basic personal information. The program also provides personal in-language counseling to individuals who need additional assistance understanding the educational materials or the energy programs available to them.

#### *Home energy surveys*

Customers can complete home energy surveys in ethnic languages in person at community events and education seminars, and by phone, mailed instruments, and the Internet (English only).

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<sup>19</sup> Industry-specific seminars at SCG facilities also are available for targeted business groups (e.g., Chinese restaurant owners).

<sup>20</sup> At the time of the participant survey, the rebate forms were available only in English and were not available at all events; they since have been translated into the ethnic languages and approved. The rebate forms include SCG's phone number for rebate assistance, as SCG prefers to take calls directly to screen eligibility.

### *Free measures*

Free measures are available to program participants at community booths and the energy efficiency seminars. Participants can receive a free water faucet aerator set if they have an active SCG account and meet certain conditions (e.g., they live in an apartment complex with five or more units, have one kitchen faucet, and at least one lavatory faucet). The free measures are intended to draw customers to the events, help them save energy immediately and serve as a physical reminder of SCG's efficiency programs.

### *Customer feedback and program refinement*

Customer satisfaction surveys ask about media effectiveness, program delivery, and program effectiveness (e.g., understanding of energy saving strategies and awareness of SCG energy programs). Program participation tracking processes are also established (e.g., number of people trained, people counseled).

## **Short Term Outcomes**

### *Customers aware of program opportunities and other efficiency programs*

As a result of the intense in-language media campaign, existing PACE community connections and community leader involvement, customers become aware of the other program opportunities such as the classroom training seminars, community events (with educational booths), and home energy surveys. Customers also learn about the availability of other SCG energy efficiency programs through the outreach effort.

### *Customers visit community energy booths and attend energy seminars*

Customers visit the community event educational booths and attend the energy training seminars to learn about the benefits of saving energy, energy saving equipment and strategies, and the availability of other SCG energy efficiency programs. At the booths and seminars, customers receive free water faucet aerators and they can complete home energy surveys.

### *Home energy surveys completed*

Customers complete the home energy surveys and learn about specific opportunities to adopt energy efficient measures in their homes.

### *Energy efficiency questions answered*

If needed, customers utilize the available one-on-one counseling and learn about energy efficiency and other SCG programs and to ensure that they are equipped to adopt energy conservation strategies. This in-language personal assistance strengthens customers' trust in the program and promotes participation in other programs.

### *Free measures distributed*

Program participants receive the free aerator sets at the community event booths and classroom seminars.

### *Customer satisfaction surveys completed*

Customer satisfaction and training effectiveness surveys are completed at the training seminars. The feedback will help the implementer fine-tune the program and training as necessary.

## **Mid Term Outcomes**

### *Participants practice energy efficiency in homes and businesses*

As a result of the energy efficiency training seminars and educational booths, program participants look for opportunities to apply their new knowledge of energy efficiency in their homes and businesses by changing behaviors and installing efficient measures.

### *Customers participate in SCG resource acquisition programs*

Customers are aware of SCG energy efficiency program offerings through a variety of in-language promotions and choose to participate in these programs.

### *Customers install energy efficient products, therm savings achieved*

Customers install new energy efficient measures and equipment in their homes and businesses through other SCG programs. The installed measures reduce customers' energy usage and costs

### *Free measures promote energy efficiency and SCG programs*

In addition to immediately reducing water consumption and energy use, the free aerator sets visibly remind customers about other beneficial SCG energy efficiency programs.

## **Long Term Outcomes**

### *More efficient homes and businesses and reduced energy costs*

Customers who have installed measures through SCG's energy efficiency programs have more efficient homes and businesses and lower energy bills.

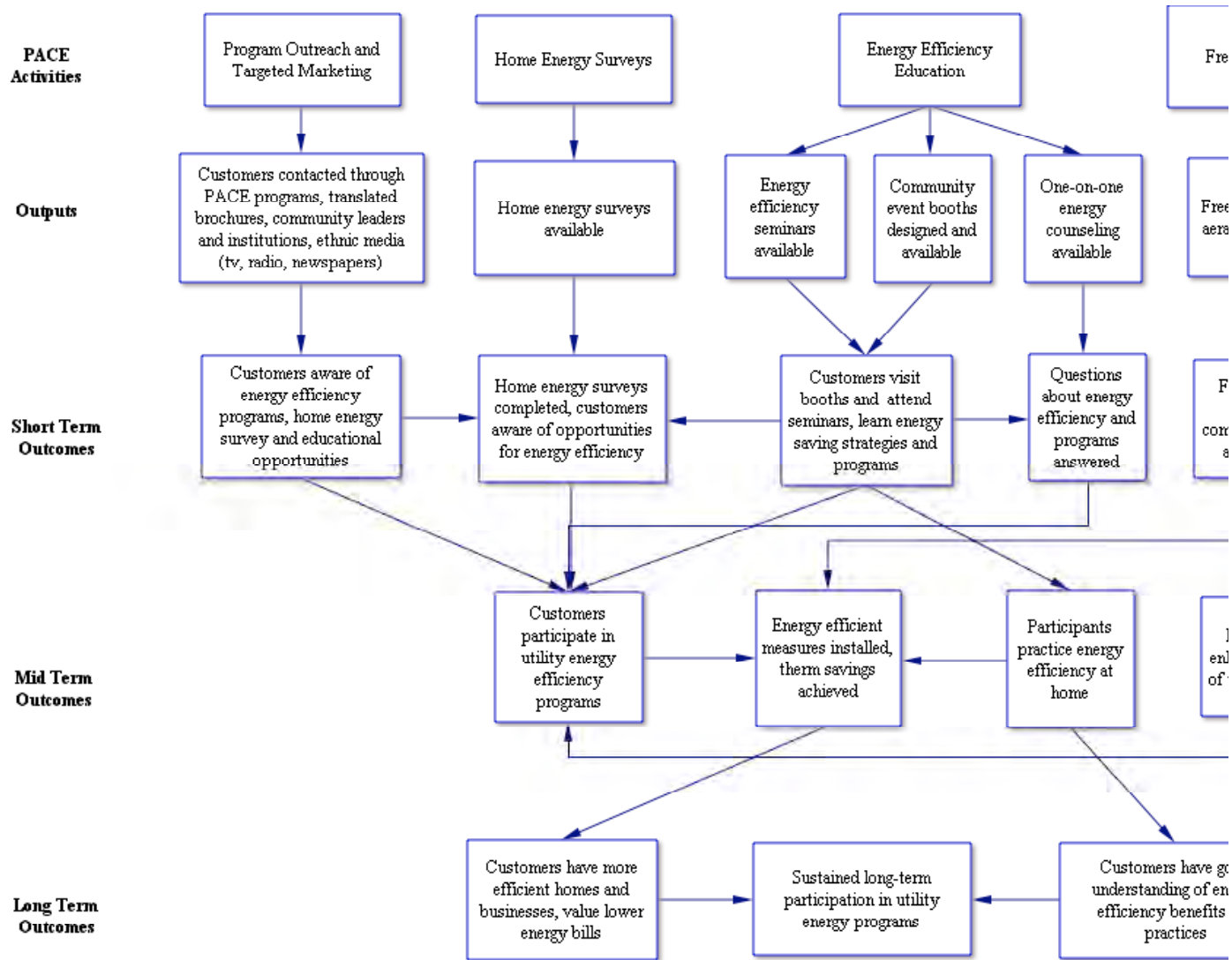
### *Customers have good knowledge about energy efficient products and behaviors*

Customers have become more knowledgeable about energy efficient products and behaviors due to their initial education, program participation, and continuing education.

### *Sustained long-term participation in SCG energy programs*

Due to the energy savings they have achieved, their increased knowledge of energy efficient equipment and positive program experience, customers continue to participate in SCG's programs to implement energy efficiency in their homes and businesses.

**Figure 29: PACE Program Logic Model**



Shaded boxes indicate induced outcomes that are outside of the direct program influence

### 8.3 PACE EVALUATION OVERVIEW

At the beginning of the evaluation, in-depth telephone interviews were conducted with the program implementer (PACE) and full-time and interim SCG program managers. These interviews were based on a series of open-ended questions. Discussion topics included:

14. Program purpose (as perceived by the interviewee)
15. How the program actually works
16. Challenges that might make it difficult to attain the program goals

17. What is working well, and not working well
18. Who is participating, and who is not
19. Potential program changes
20. Coordination with other SCG programs

Each in-depth interview took about an hour to complete, and subsequent questions were addressed via email correspondence.

In addition, Freeman, Sullivan & Company (FSC) fielded a telephone survey of Chinese program participants in English and Mandarin Chinese in September 2007 and completed 78 surveys from a sample of 501 participants. Ten were completed in English and 68 were completed in Chinese.<sup>21</sup> The participants were selected randomly from the sample and the sample was not stratified. Before conducting the survey, FSC tested the instrument internally in English and Chinese and modified the Chinese version so that it would be more comprehensible to the respondents, as literal translations were problematic. The survey took about 15 minutes to complete.

## **PACE Research Issues**

Based on the program theory and the in-depth interviews, the following research issues were identified. These directed all data collection tasks, including participant survey development, review of program documents and marketing materials and subsequent interviews. While this evaluation could not address each issue due to project budget and timing constraints, they are listed here for future consideration and evaluation.

## **Effective Program Outreach**

The primary goal of the PACE program is to conduct in-language outreach using a broad range of media tools to inform ethnic communities of program-sponsored events (e.g., community booths, presentations and training) to learn about energy efficiency and SCG programs. While the program seeks to disseminate information as widely as possible so that information sharing occurs, the program also should strategically target residents who have a greater need for energy efficiency and/or are more likely to participate in SCG programs.

## **Actual Programs Enrollment**

As stated earlier, the PACE program does not have defined measurable goals regarding new programs participation and energy savings. However, a logical and desirable outcome of the outreach and education activities is to have program participants actually enroll in SCG rebate programs.

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<sup>21</sup> Eleven participants in the sample also were in the CLEO sample. Ten of these participants completed the CLEO survey, which was fielded first; they did not complete a PACE survey. All 11 participated in the PACE program prior to participating in CLEO, but there were no other strong participation patterns (e.g., same home ZIP code, or all attending the same PACE or CLEO event).



## Participant Learning

The PACE program provides basic education about energy efficiency benefits and strategies through a variety of media (e.g., in-language brochures, energy surveys, classroom training, and take-home materials). It is important to know if these educational tools are successfully imparting useful knowledge and if they are changing energy usage behaviors.

## Third-Party Program Delivery

Firms that bid to deliver ethnic outreach programs often have strong community connections and grassroots outreach capabilities, but have fewer resources or less expertise to develop high-quality informational materials that meet SCG standards. As a result, the materials development/translation phase of the program can be long and frustrating for everyone involved. In addition, the CLEO and PACE programs target many of the same ethnic customer groups (e.g., Chinese, Korean and Vietnamese) and the programs actively coordinate so their representatives do not attend the same events or use the same training venues.

## 8.4 PACE PROGRAM EVALUATION RESULTS

### Program Start-up and Implementation

The main difficulties with the PACE program pertain to materials development (e.g., original copy, translations, and printing) and effective marketing and outreach. It has taken much more time than envisioned to develop satisfactory program materials and a viable marketing plan, leaving a shortened time period to reach the program targets.

According to SCG staff, PACE and its subcontractors have had many difficulties developing, translating, proofing, editing, and printing program materials.<sup>22</sup> The program managers do not consider PACE a true full service program development and delivery organization (e.g., they may not normally do copy development), and instead perceive their primary strength to be grassroots community outreach, using materials developed by others. SCG staff also said that PACE appears to be overly focused on “just checking off task boxes” and not delivering high-quality materials.<sup>23</sup> Both SCG and PACE noted that the SCG internal review process is long and frustrating and requires input from many parties, which often delays materials submittals. Layout, translation, and printing problems continued into the third quarter of 2007.

According to program managers, PACE also has had problems developing credible marketing and media plans, and negotiating with media for outreach (i.e., they are not really a full-service PR firm). More specifically, they perceived that PACE has been marketing too generally (e.g., to existing PACE clients who stop by for other programs) and that the optimal customers were not being reached. Marketing to these ethnic groups requires careful identification of

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<sup>22</sup> PACE’s translation and printing subcontractors are SCG-approved per the contract requirements. Some materials have been translated by a subcontractor (e.g., single-family and multi-family rebate brochures) while others have been translated by PACE (e.g., registration forms and press releases).

<sup>23</sup> While the CLEO program also experienced problems developing some materials, the problems were less significant and persistent, and the implementer is considered more “engaged”.

individuals/businesses targets. Again, program managers thought PACE has focused too much on “pushing papers” and not on developing good contacts.

PACE was not meeting its outreach goals early on and the program contract was amended in the first quarter of 2007 to address initial materials and marketing problems. Among the items addressed in the amendments were: clarified goals and details of PACE’s scope of work, budget reallocations to cover unanticipated materials printing by PACE and more guidance regarding desired marketing and outreach activities. While the amended contract has helped guide the program toward its desired outcomes, the contract still provides less flexibility than is desired by the SCG program manager. The marketing plan was being revised as of November 2007.

As the program has unfolded, PACE staff have participated in a number of high-profile events, including: the Asian American Expo, the Lunar New Year Festival, the Cherry Blossom Festival, New Year and Lantern Festivals, the Annual Pacific Islander Festival (20,000 participants), and the Feria Hispania “Salud Y Hogar” (Healthcare & Home-Life) Hispanic Community Street Fair.<sup>24</sup> PACE program representatives also have attended many other local events and gatherings to promote the program and network with key community contacts. Examples of these events and groups include: ethnic organization inaugural and swearing-in ceremonies; ethnic media events; youth recognition events (e.g., scholarship awards); meetings of ethnic cultural group members and committees, ethnic political action groups, PACE Head Start and the Home Energy Assistance Program (HEAP); home remodeling and improvement shows; and visits to a food bank, ethnic senior centers, ethnic churches, and local health education and job fairs.

According to PACE, the original outreach goal of 60,000 was to include any ethnic target who “would at least hear about or become aware of” SCG’s energy efficiency programs via an energy class, community presentation, event booth, personal consultation, or hits to SCG program links via the PACE website. SCG subsequently clarified that “program contacts” should be “active customers” of SCG, however. Therefore, program participants are required to provide their name, address, phone number, and account number (when available) to verify that they are SCG customers. According to PACE, the following factors have contributed to the poor outreach that has been measured so far:<sup>25</sup>

- a. Cultural barriers – The targets often are not very open and welcoming, and have a history of not trusting and participating in “government/official” programs and/or programs that require them to provide personal information.

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<sup>24</sup> Only events associated primarily with residential customers are listed. Other activities also occur, particularly targeting Chinese food service owners/operators.)

<sup>25</sup> In addition, PACE originally assumed that a large percent of its existing weatherization/insulation clients would participate in the program. PACE later learned that many of these customers already have aerators, and therefore are not likely to participate.

- b. Paperwork – The program paperwork participants complete (program sign-up forms, one-page aerator distribution forms, and HEES surveys) has deterred potential participants.
- c. A general lack of ethnic community leaders – These leaders often are wary, and respond best when PACE approaches them with a trusted mutual contact.

PACE noted that too many non-customers are participating inadvertently, and it has been cumbersome to identify these individuals through SCG. For instance, SCG typically takes four or more weeks to process the HEES surveys and then informs PACE of accepts/rejects (the rate of rejections ranges from five to 15 percent). PACE then must reconcile its past reports with revised goal attainment figures, and resubmit reports. In response, PACE has asked for access to SCG customer lists or databases to conduct up-front participant screening (and help focus program outreach), but SCG has declined to provide customer data.

In addition, PACE indicated that the on-line HEES survey goal of 9,000 completes is probably unrealistic for the targeted communities, owing to computer accessibility and literacy issues. Importantly, the PACE program website, which was to serve as a portal to the HEES survey, was not available to the public in early November 2007 due to content and technical issues.<sup>26</sup> Although some on-line surveys *have* been completed using terminals at events, SCG staff feels that too many of the five-minute on-line surveys are being completed, and would prefer that more 20-minute surveys be completed, which would imply that more education is occurring.<sup>27</sup>

Finally, PACE noted that people attending the community events are very attracted to the free water aerators, which helps interest them in taking the HEES surveys. When the program reaches the aerator goal (cap) for multi-family distribution, however, it is likely that renters no longer will participate (e.g., sign up and take the survey and materials). PACE noted that more aerators should be available for multi-family tenants so they can continue to be educated about energy saving strategies and reduce their energy consumption.

## **Program Effectiveness**

Early in the telephone survey, respondents were asked if they are aware of SCG rebates for energy efficient equipment. The goal was to measure how much they recalled about their participation in the PACE program. As shown in Table 132, 55 percent of the respondents were aware of the general availability of SCG rebates, while 45 percent were not.

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<sup>26</sup> After the English version is approved by SCG and goes “live”, PACE will translate the website into Chinese, Korean, Spanish, and Vietnamese. PACE expects that each translated version can be posted two days after SCG approval.

<sup>27</sup> The program has no official goals for the short and long versions of the on-line survey.

**Table 132: Awareness of SCG Rebates After Participation**

<b>Response</b>	<b>Percent (N = 78)</b>
Yes	55%
No	45%

Seventeen percent of the respondents indicated they had received rebates from SCG prior to participating in the PACE program.<sup>28</sup> Table 112 shows the reasons why 83 percent of the respondents had not received rebates in the past (multiple responses were accepted). Forty-five percent of these respondents were not aware that rebates for energy efficiency equipment are available, and 31 percent did not apply for other reasons. Twelve percent of the respondents indicated they had language barriers or didn't understand the application. Reasons for not getting rebates in the "other" category include forgetting to mail completed applications, applying too late, and not getting replies to mailed applications. Taken together, the responses in Table 132 and Table 133 suggest that customers' awareness of SCG rebate programs did not increase significantly after their participation in the program, and that awareness levels still were relatively low.

**Table 133: Reasons for not Getting Rebates Before Participation**

<b>Reason</b>	<b>Percent (N = 65)</b>
Not aware that rebates existed	45%
Did not try to apply	31%
Didn't understand rebate program or application	6%
Language barriers with application process	6%
Didn't want/need energy efficiency equipment	5%
Did not qualify	5%
Efficient equipment is too expensive	3%
Too much hassle	2%
Other	6%
Don't know	9%

As shown in Table 134, program participants are becoming aware of the program through a wide variety of sources. The largest share of participants (26 percent) learned about the program by

<sup>28</sup> Sixty-five percent of the respondents said they have access to the Internet, but none of them had tried to use the SCG website to get an application for energy efficiency rebates.

visiting or observing an energy efficiency information booth at a community event or street fair. The second and third most common sources of program awareness are newspaper advertising (15 percent) and letters mailed to the home (14 percent). Additional information sources include radio and television advertising, recommendations from family and friends, store displays, cultural organizations, and senior centers.

**Table 134: Source of PACE Program Awareness**

Source	Percent (N = 78)
Booth at community event/street fair	26%
Newspaper advertising	15%
Letter in mail	14%
Radio advertising	9%
Friend or family member	8%
Chinese New Year parade	8%
Display in store	7%
TV advertising	6%
Chinese cultural organization	5%
Senior citizen center	5%
PACE seminar/job fair	3%
Internet	1%
Brochure	1%

Sixty-two percent of the respondents visited an energy efficiency information booth at a community event as part of their program participation. Most of these respondents simply noticed a booth while attending an event. About a third (30 percent) of the respondents became aware of the booths through newspaper, radio, or television advertising. When asked about their reasons for visiting a booth, most visitors (69 percent) said they wanted to learn about ways to save energy in general, as shown in Table 135. In addition, 21 percent of the visitors generally were curious about the information that would be presented. Free prizes or equipment attracted 17 percent of the visitors. Last, eight percent of the visitors said they visited the booth specifically to learn about SCG programs.

**Table 135: Reasons for Visiting Energy Booth**

<b>Reason</b>	<b>Percent (N = 48)</b>
To learn about ways to save energy	69%
Was curious	21%
To get free prizes or equipment	17%
To learn about SCG programs	8%
Someone recommended	6%
Friends or family attending	6%

Among the respondents who visited an energy booth, 70 percent said they reviewed or took home energy efficiency information. Regarding the usefulness of the information they reviewed, in roughly equal percentages these visitors said the information was very useful, pretty useful, and slightly useful. When asked if the information helped them understand how to use SCG rebate programs, 53 percent said the information did help them, 32 percent said it did not, and 15 percent did not know.

Table 136 shows the reasons why 38 percent of the respondents did not visit an information booth. Forty percent of these respondents said they did not have time to visit a booth, and 20 percent were not aware of the booths. In addition, 10 percent said they were not interested in the information. Among the 17 percent who said they did not know or could not recall why they did not visit a booth, it is possible that some were not aware that the booths were available, although some respondents gave this response.

**Table 136: Reasons for not Visiting Energy Booth**

<b>Reason</b>	<b>Percent (N = 30)</b>
Did not have time	40%
Did not see booth	20%
Not interested in information	10%
Was a long line	7%
Had received energy information elsewhere	7%
Did not see staff there	3%
Don't know	17%

Only eight respondents said they were aware of the energy efficiency training classes offered through the program, and only four of these respondents chose to attend a class to learn how to save energy in general. When the survey was fielded, participants were being reached through community event booths and short presentations at PACE facilities, as the energy class PowerPoint presentation still was in the development and approvals process. (While the English

version of the PowerPoint presentation was approved by SCG in August 2007, it was being translated as of November 2007 and no classes were being held). Therefore it must be assumed that these four respondents attended one of the short presentations.

Three of the class attendees said the information they received was very useful and one said it was pretty useful. In a separate question, two respondents indicated that the class did not really help them understand how to use SCG rebate programs, while one said that the class was helpful in this regard and one was not sure. Two of the attendees recommended the presentation to others.

Forty-two percent of the respondents completed a Home Energy Efficiency Survey (HEES) as part of their program participation. Most of these respondents (65 percent) completed a written survey in-person, while 28 percent completed mail-return surveys; only three percent completed on-line surveys. Fifty-eight percent of the survey takers reported that the survey was very easy to complete and 39 percent said it was somewhat easy to complete.<sup>29</sup> As shown in Table 137, 70 percent of the HEES participants took the survey to learn about energy saving opportunities in their homes, while 39 percent said they wanted to understand their home energy use better

**Table 137: Reason for Completing HEES Survey**

Reason	Percent (N = 33)
To learn about energy savings opportunities for my home	70%
To better understand my home energy use	39%
To learn about rebates/save money	12%
To get free prizes or equipment	12%
Was curious	6%
Don't know	3%

Table 138 shows that 52 percent of the respondents thought the HEES survey was very useful for improving their understanding of energy saving opportunities, while 24 percent thought the survey was pretty useful. Only 18 percent thought the survey was slightly or not at all useful. In a separate question, 58 percent of the HEES participants said they recommended the HEES survey to others, 36 percent did not, and six percent could not recall if they had done so.

<sup>29</sup> The evaluation survey did not ask if they completed the short or long version of HEES.

**Table 138: Usefulness of HEES Survey**

<b>Rating</b>	<b>Percent (N = 33)</b>
Extremely useful	3%
Very useful	52%
Pretty useful	24%
Slightly useful	9%
Not at all useful	9%
Don't know	3%

Importantly, all of the survey respondents were asked to describe any energy use behaviors and equipment they changed after participating in the PACE program. Table 139 shows that the greatest changes pertained to turning off lights more often and using less lighting in general. Twenty-two percent of the respondents also indicated that they generally are using less or no air conditioning, and 10 percent mentioned that they had raised their thermostat setting for home cooling. (There was little overlap between these two groups. In addition, 12 percent of the respondents reported that they now wash their laundry in cold water, and nine percent always wash full loads. This supports the program theory that program participants are applying the knowledge they have gained through the program to practice energy efficiency at home.



**Table 139: Changes in Energy Use Behavior**

Type of Change	Percent (N = 78)
Reduce lighting use	56%
Turn off lights more	30%
Use air conditioning less, fans more	22%
Wash with cold water	12%
Raise thermostat setting for cooling	10%
Always wash full load	9%
Don't know	6%
Use less water	5%
Dry clothes on line or rack	5%
Lower thermostat setting for heating	5%
Don't heat/cool unused rooms	4%
Turn off appliances immediately after use	4%
Always dry full load	3%
Shade windows to keep house cool	1%
Thaw food before cooking	1%

Table 140 shows the energy efficient equipment respondents installed after participating in the program. Not surprisingly, the most common type of new equipment they installed was CFL or T-8 lighting (80 percent). In addition, 18 percent of the respondents installed new energy efficient refrigerators, and 12 percent installed new efficient central or window air conditioning units. This supports the program theory that program participants are applying the knowledge they have gained through the program to install energy efficient equipment as opportunities arise.

**Table 140: New Energy Efficient Equipment Installed**

Type of Equipment	Percent (N = 78)
Compact fluorescent or T-8 lighting	80%
Efficient refrigerator	18%
Efficient central air conditioner	9%
Efficient clothes washer	8%
Water faucet aerators	8%
Efficient dishwasher	5%
Efficient clothes dryer	3%
Efficient window unit air conditioner	3%
Low-flow showerheads	3%
Efficient water heater	3%
Efficient windows	1%
Whole-house fan	1%
Don't know	3%

Program participants also were asked to rate their satisfaction with the energy savings resulting from installations of new energy efficient equipment. Table 141 shows that 46 percent of the respondents were somewhat satisfied with their energy savings and 32 percent were very satisfied.

**Table 141: Satisfaction with Energy Savings**

Rating	Percent (N = 78)
Extremely satisfied	4%
Very satisfied	32%
Somewhat satisfied	46%
Not very satisfied	3%
Did not install/cannot say	6%
Don't know	9%

Fourteen respondents said they had called the PACE telephone help line to get additional information about energy efficiency or rebate programs. Five of these respondents called specifically to get help applying for a rebate; three indicated the help they received was sufficient, while one said it was not, and one did not know. Table 142 shows that 71 percent of those who called the help line thought the service said it was very helpful or extremely helpful, compared to 14 percent who thought the service was only slightly helpful.

**Table 142: Value of Phone Assistance**

<b>Rating</b>	<b>Percent (N = 14)</b>
Extremely helpful	14%
Very helpful	57%
Pretty helpful	14%
Slightly helpful	14%
Not at all helpful	0%

Table 143 shows that the PACE program receives strongly positive reviews from program participants, as 49 percent of the respondents were very or extremely satisfied with the program compared to two percent who were not satisfied. When asked what other programs or offerings SCG could provide to help them manage their energy use, about half of the respondents offered suggestions, which varied greatly. Some of the more common themes included sending more energy efficiency information directly to homes, increasing public advertising of energy saving benefits and strategies (via newspapers, radio and television), providing additional energy information booths (i.e., expanding the current program), and doing more to promote solar energy equipment.

**Table 143: Overall Satisfaction with PACE Program**

<b>Rating</b>	<b>Percent (N = 78)</b>
Extremely satisfied	5%
Very satisfied	44%
Somewhat satisfied	37%
Not very satisfied	1%
Not at all satisfied	1%
Don't know	12%

Going forward, 95 percent of the respondents said they would select energy efficient equipment when they buy or replace home energy appliances and equipment. This supports the program theory that program participants will apply the knowledge they have gained through the program to install energy efficient equipment as opportunities arise.

As shown in Table 144, 30 percent of the respondents said they would apply for rebates in the next year and 18 percent said they probably would try to use rebates. Among the respondents who said they did plan to use rebates or probably would, about half did not know what equipment they would seek rebates for. The other half expected to use rebates for a diverse range of new measures, including gas furnaces, clothes washers and dryers, dishwashers, attic insulation, water heaters, air conditioners, refrigerators, and kitchen stoves.

**Table 144: Will Apply for Rebates in Next Year**

<b>Response</b>	<b>Percent (N = 78)</b>
Yes	30%
Probably	18%
No	41%
Don't know	12%

Table 145 shows the reasons why respondents said they would not or might not seek rebates in the future. The largest share of respondents (44 percent) said they would not need rebates because their current equipment was new or still usable. Seven percent of the respondents mentioned that language barriers remain an obstacle to rebate program participation, and 10 percent still did not understand the rebate programs.

**Table 145: Reasons for not Getting Rebates in Future**

<b>Reason</b>	<b>Percent (N = 41)</b>
Current equipment is new or usable	44%
Don't understand rebate programs	10%
Does not own equipment	7%
Language barriers	7%
Already conserve energy, new equipment/rebates not worthwhile	7%
Efficient equipment is too expensive	7%
Too much hassle/don't have time	5%
Don't know	12%

Taken together, Table 144 and Table 145 show encouraging results regarding future rebate program participation. Almost half of all the respondents (48 percent) were inclined to participate in rebate programs when they purchase efficient equipment in the future, and among those who were not inclined or were unsure, about half (44 percent) said this was because their current equipment was new or usable. Since they did not mention program-related obstacles, they should be amenable to pursuing rebates when their current equipment needs replacement.

The following four tables provide basic demographic information about the 78 program participants who were surveyed for this evaluation. As shown in Table 146, 63 percent of the respondents live in single-family detached homes, 17 percent in rental apartments, 13 percent in condominiums, and seven percent in townhouses or duplexes. In a separate question, 65 percent of the survey respondents said they own their dwelling and 35 percent rent.

**Table 146: Type of Home**

<b>Housing Type</b>	<b>Percent (N = 78)</b>
Single-family detached	63%
Apartment	17%
Condo	13%
Townhouse	5%
Duplex	2%

Table 147 shows that the age of the respondents' housing varies considerably. The largest percentage (21 percent) of respondents inhabits housing that was built between 1940 and 1969, and each subsequent decade accounts for a declining share of the responses. Almost a quarter of the respondents did not know when their housing was constructed, and a few refused to provide this information. It is possible that a majority of the respondents' homes were built in the pre-Title 24 era, although the data cannot confirm this. Thus, there is some potential for energy efficiency improvements in this housing.

**Table 147: Age of Home**

<b>Year Built</b>	<b>Percent (N = 78)</b>
1930s or older	8%
1940 - 1969	21%
1970 - 1979	15%
1980 - 1989	13%
1990 - 1999	10%
2000 - 2007	5%
Refused/Don't know	28%

As shown in Table 148, most of the respondents live in small to moderately sized housing. Twenty-five percent of the respondents live in housing that is less than 1,400 square feet, while 38 percent live in housing that is 1,400 to 2,500 square feet. One-third (33 percent) of the respondents did not know or would not estimate the size of their housing.

**Table 148: Size of Home<sup>30</sup>**

<b>Square Feet</b>	<b>Percent (N = 76)</b>
Less than 1,400	25%
1,400 to 2,500	38%
2,501 to 3,500	3%
3,501 to 5,000	0%
Over 5,000	1%
Refused/Don't know	33%

Over half of the respondents would not provide information about their annual household income. Among those who did, Table 149 shows that the largest group of respondents (19 percent) earns less than \$20,000 per year. In a separate question, 69 percent of the respondents said there are three or more people in their household, including children.

**Table 149: Annual Household Income**

<b>Income</b>	<b>Percent (N = 78)</b>
Less than \$20,000	19%
\$20,000 to less than \$40,000	5%
\$40,000 to less than \$60,000	6%
\$60,000 to less than \$80,000	3%
\$80,000 to less than \$100,000	1%
\$100,000 to less than \$150,000	3%
More than \$150,000	1%
Refused	62%

## **8.5 PACE PROGRAM ISSUES AND OBSERVATIONS**

Since the program's inception, the program implementer (PACE) has struggled to develop program materials that are satisfactory to SCG and also to implement a comprehensive and well-considered outreach plan. As of November 2007 these issues had not been resolved fully, and SCG continues to work with PACE to finalize program materials and outreach tools (e.g., the PACE website) and refine the marketing strategy. To date, the program has been "limping along" and in order for it to reach its ambitious education goals, it is critical that these issues be addressed conclusively and as soon as possible.

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<sup>30</sup> Values for two respondents were recorded incorrectly and were not tabulated.

Following are some of the other key findings of this program evaluation:

4. *Participant satisfaction with the overall program generally was positive.* Half of the survey respondents were very satisfied or extremely satisfied with the program, and relatively few were dissatisfied.
5. *Program participants are adopting desired energy efficiency behaviors and intentions* Based on the survey, participants appear to be adapting their behavior to save energy, and many have purchased energy efficient equipment since they participated in the program. It is encouraging that the survey also showed that participants are inclined to buy energy efficient equipment in the future.
6. *The energy efficiency event booths are doing a decent job of attracting participants and providing useful information.* About 60 percent of the respondents who were aware of the energy booths chose to visit one. While the booth visitors generally had fairly neutral perceptions about the usefulness of the materials, half of the visitors said the information helped them to understand how to use SCG rebate programs. However, 32 percent said the materials did not help them.
7. *The paper HEES surveys generally are easy to complete and informative.* Most of the survey respondents completed paper or mail-in surveys, and they generally found these to be easy to complete. Furthermore, half of the HEES takers said the survey was very useful and recommended it to others. Twenty-four percent said it was somewhat useful. The number of on-line survey takers was too small to draw any clear conclusions about the friendliness of that mode.
8. *Participants generally are satisfied with the program phone support.* Relatively few participants had used the phone line, although the survey results suggest it has been helpful to them.
3. *Participant awareness of other SCG programs still can be improved.* The survey results show that roughly half of the participants still were not aware of SCG programs to help them acquire energy efficient equipment. It is possible that program awareness will increase, however, when the in-language rebate forms are consistently available at more community events and classroom presentations.

No specific program changes are recommended for the short term (i.e., in 2008), especially since the program goals and marketing strategy continue to be modified by SCG and PACE. The survey results suggest that the program activities *that already have occurred* are having the desired effects (e.g., behavior changes and efficient equipment purchases), and that program participants largely are satisfied with program offerings. Thus, the primary objectives, at this point in the program, are to greatly increase the number of ethnic customers who participate (particularly those with the economic means to install new equipment), and to ensure that all of the envisioned program tools (e.g., PowerPoint presentations and translated rebate forms) are used consistently and effectively, to potentially improve these performance results.

## Recommended Program Improvements

Changes that should be considered for the 2009-2011 program cycle include:

6. **To the extent possible, use a more flexible contract if the program is continued.** It took a long time to develop the initial contract, and it was difficult to adjust mid-stream when problems became apparent (e.g., misunderstandings about roles and responsibilities, and the submission of inadequate deliverables). Furthermore, outreach programs to hard-to-reach groups have some inherent risk in that it often is difficult to know in advance which outreach methods and media will be most effective, or how targets will respond after they have been reached. A more flexible contract (if agreeable to a contractor) could allow for more dynamic shifting of marketing strategies, for example.
7. **Have SCG complete all materials development and in-language translations.** The copy development, materials translations and printings were the most cumbersome and frustrating aspects of the program rollout. One way to improve this process is to reduce the number of parties involved in materials development and allow the contractor to focus on their strengths—grassroots outreach, event organizing, delivering information, etc.
8. **Adopt measurable goals for new program participation.** The program already strives to change energy consumption behavior, equipment preferences, and SCG program awareness. Assuming that SCG program awareness can be improved, it is logical to assume that some portion of PACE participants will want to be involved in these programs. In fact, this already is an objective of the PACE program.
9. **Develop a mechanism to track subsequent participation in other SCG programs.** As of November 2007, this cannot be done automatically, and it should be required if new program participation is adopted as an official goal. Even if new program participation or savings goals are not adopted, tracking mechanisms should be implemented to understand better how participants behave after participating in the PACE program. This is particularly true if ethnic customers are confused about which programs they have participated in, as sometimes is the case.

## 8.6 PACE BEST PRACTICES REVIEW

### Program Theory and Design

- *Is the program design effective?* The overall program design should prove to be effective after some of the specific delivery problems are finally resolved and all aspects of the program are implemented (e.g., website, full length educational presentations, in-language rebate forms). The energy efficiency event booths are doing a decent job of attracting customers and most program participants say that the HEES survey provides useful information. Participants also appear to be adapting their behavior to save energy, and many have purchased energy efficient equipment since they participated in the program. The



survey also showed that participants are inclined to buy energy efficient equipment in the future. Program effectiveness could be measured more conclusively, however, if SCG's systems systematically tracked subsequent participation in other rebate programs.

- *Is the market well understood?* PACE recognizes the inherent challenges in targeting many ethnic groups (e.g., distrust of public programs, reluctance to provide personal information). Accordingly, PACE has made efforts to include trusted community contacts in their marketing efforts to identify candidate customers and then earn their trust. That said, the program has struggled to implement a comprehensive and well-considered outreach plan. As a result, the program is lagging behind on its participation goals.

## Program Management

### Project Management

- *Are responsibilities defined and understood?* This has improved since the contract with PACE was amended to better clarify the goals and details of PACE's scope of work, approve budget reallocations to cover unanticipated materials printing by PACE and provide more guidance regarding desired marketing activities.
- *Is there adequate staffing?* Yes. While PACE had to staff a key position to deliver the program initially, no ongoing staffing deficiencies were described to the evaluation team.

### Reporting and Tracking

- *Are data easy to track and report?* It has been cumbersome to identify participating non-customers. SCG takes four or more weeks to process the HEES surveys and then informs PACE of accepts/rejects. PACE then must reconcile its past reports with revised goal attainment figures, and resubmit reports.
- *Are routine functions automated?* Not applicable.

### Quality Control and Verification

- *Does the program manager have a strong relationship with vendors involved in the project?* There has been significant interaction between the program manager and PACE in order to address some of the program's implementation problems (e.g., materials development, marketing planning). The two parties continue to communicate regularly so that as the program is revised and delivered expectations are clearly defined and understood.
- *Does the program verify reporting systems (e.g., rebates, invoices)?* Except for the HEES processing, this was not assessed (e.g., for seminar attendance).
- *Are customers satisfied with the product?* Participant satisfaction with the overall program generally was positive. Half of the survey respondents were very satisfied or extremely satisfied with the program, and relatively few were dissatisfied.

## Program Implementation

### Participation Process

- *Is participation simple?* Customers can take part in the program by visiting an information booth at a community event or attending an educational presentation, and filling out a HEES survey. However, the combined program paperwork that participants have to complete (program sign-up forms, one-page aerator distribution forms, and HEES surveys) has deterred some potential participants.
- *Are participation strategies multi-pronged and inclusive?* Yes. PACE program services are offered in-language for the Chinese, Korean, Vietnamese, and Hispanic communities. Customers can complete home energy surveys in ethnic languages in person at community events and education seminars, and by phone, mailed instruments, and the Internet (English only).
- *Does the program provide quick, timely feedback to applicants?* Not applicable.
- *Is participation part of routine transactions?* No, by design customers must proactively choose to visit an energy booth or attend a presentation.
- *Does the program facilitate participation through the use of internet/electronic means?* PACE offers the on-line HEES survey although few participants choose this option. Importantly, the PACE program website, which was to serve as a portal to the HEES survey, has not been available to the public due to content and technical issues.
- *Does the program offer a single point of contact for their customers?* Yes. All inquiries and issues are addressed by PACE.
- *Are incentive levels well understood and appropriate?* Seminar attendees and booth visitors can receive free water faucet aerators, and PACE has noted that people attending the community events are very attracted to the free water aerators, which leads them to take the HEES surveys.

### Marketing and Outreach

- *Use target-marketing strategies?* Not enough. The goal of the program is to conduct significant outreach to ethnic groups using trusted community institutions and in-language, culturally appropriate media to promote energy efficiency education and program opportunities. However, SCG program managers perceive that PACE has been marketing too generally (e.g., to existing PACE clients who stop by for other programs) and that the optimal customers are not being reached. Program managers thought PACE has focused too much on “pushing papers” and not on developing good contacts.
- *Are products stocked and advertised?* Not applicable.
- *Are trade allies and utility staff trained to enhance marketing?* Not applicable.

## **9. DESIGNED FOR COMFORT PROGRAM**

### **9.1 DESIGNED FOR COMFORT PROGRAM BACKGROUND**

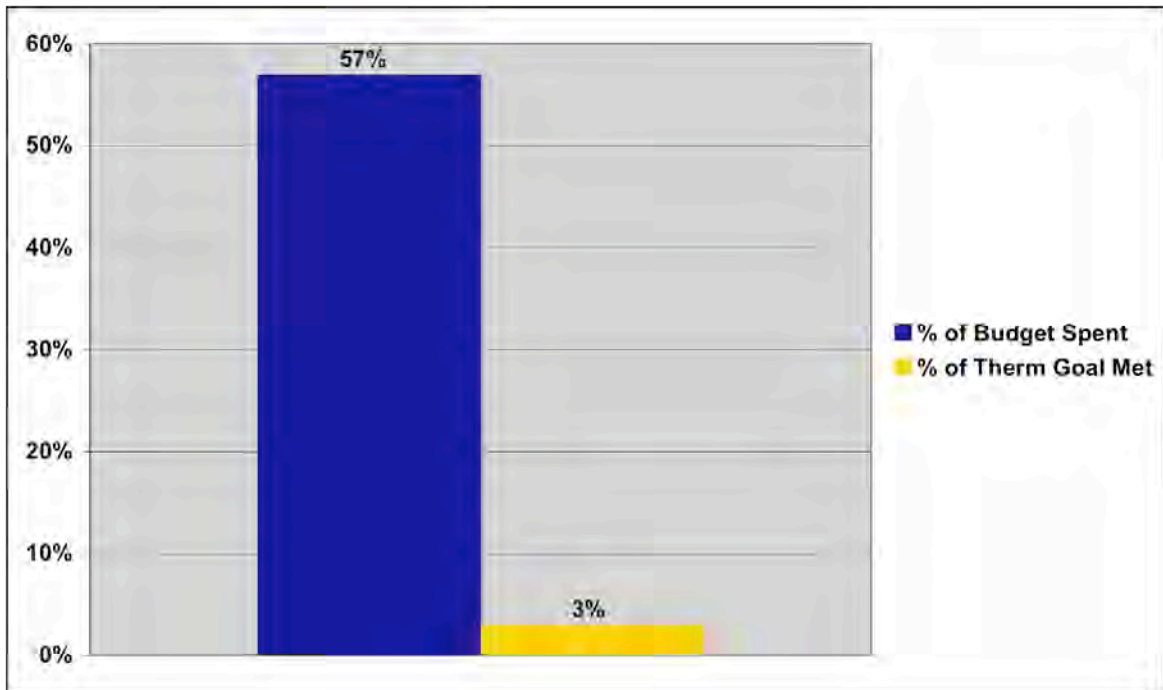
The Designed for Comfort program is a resource acquisition program that addresses the multi-family affordable housing retrofit market segment. It is a third party program offered by Heschong Mahone Group (HMG) for both SCG and SCE. The program uses a performance-based approach to encourage affordable housing property owners to choose the most cost-effective measures to achieve a 20 percent energy improvement over existing building conditions. The program aims to transform the multi-family retrofit market away from a prescriptive, one-size-fits-all approach, toward a comprehensive building analysis approach that uses energy consultants and HERS (Home Energy Rating Systems) raters to evaluate a wide palette of energy efficiency options when rehabilitating multi-family properties. The program provides training to owners and property managers on the effective use of this performance-based approach, and trains tenants on the proper use of their upgraded apartments. The program is also designed to capture both opportunities related to behavioral changes that would otherwise be lost and some lighting energy savings that the residential Title 24 standards would not.

The Designed for Comfort program provides long-term energy benefits by promoting a performance-based, comprehensive, cost-effective package of energy efficient measures with long useful lives (typically 16 to 20 years). These include high performance windows, better insulation, high-efficiency heating, cooling, and water heating equipment, and most likely, a combination of these measures to achieve maximum savings potential.

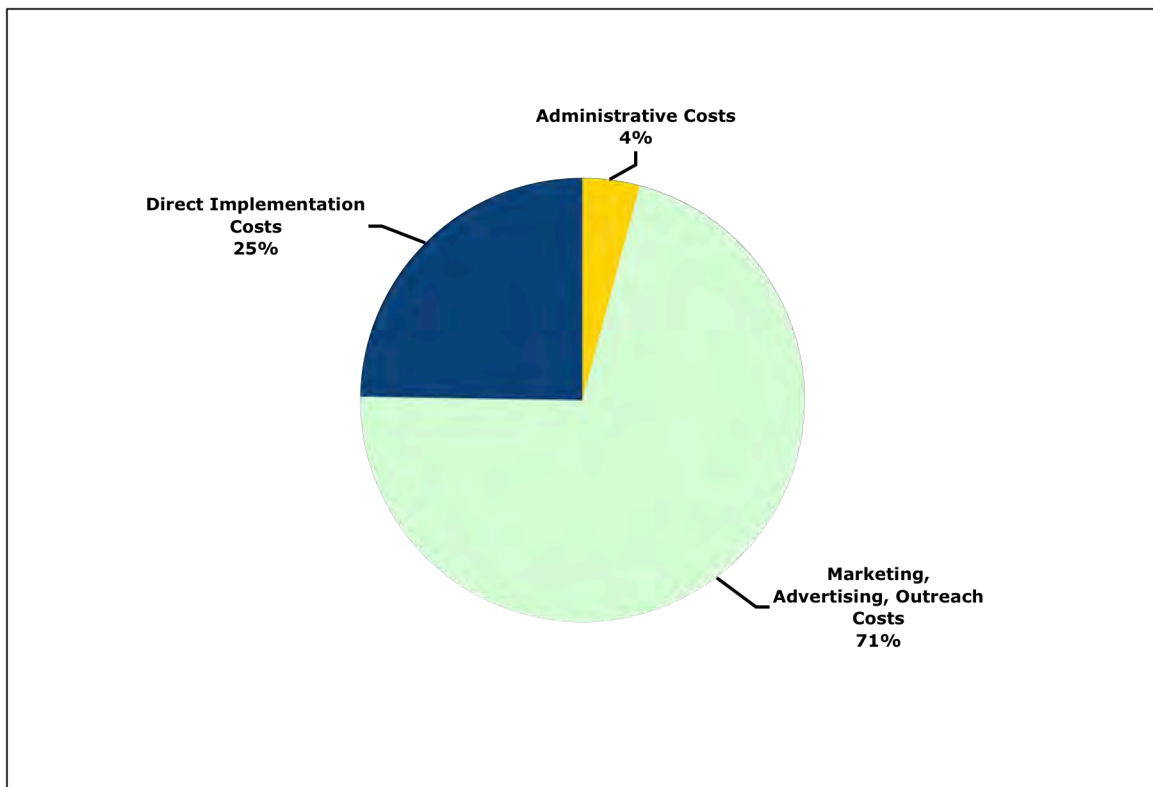
Designed for Comfort offers incentives of up to \$700/unit (for nine or more units) and up to \$1,500/unit (for three to eight units) for qualifying projects. In all cases, the incentive only covers the costs of the upgrades up to the incremental cost or the incentive amount, whichever is less.

By the end of 2006, the Designed for Comfort Program had 1040 units enrolled and had already met its goal of 1025 units by the end of 2007. However, changes in program eligibility criteria as well as customer-specific financial concerns caused some projects to drop out, so that by the end of the third quarter of 2007, HMG was approaching its revised energy goals set in a mid-2007 draft change order. At that time, the Designed for Comfort program had seven projects enrolled for incentives with a total of 897 dwelling units. With these seven projects, HMG expected to reach 80 percent of the gas savings goal of 56,883 therms (as well as 100 percent of the electric savings goal of 281,030 kWh for SCE's portion of the program).

**Figure 30: Designed For Comfort Progress Toward Goals and Program Spending**



**Figure 31: Designed for Comfort Expenditures by Category (Q1 2006 – Q3 2007)**



## 9.2 DESIGNED FOR COMFORT LOGIC MODEL AND PROGRAM THEORY

### Activities

#### *Program Outreach and Targeted Marketing*

The primary targets of the program are public housing authorities, owners of multi-family affordable housing projects, and owners of supportive housing projects (and their tenants). A database of these parties is maintained so they can be informed of the program and available incentives via the program website, brochures, email, industry advertising, workshops, and personal meetings.

#### *Audits and Design Assistance*

Program approved HERS raters and energy consultants are available to program participants to perform residential energy audits and calculations and to recommend the most appropriate and cost-effective energy saving equipment and installation practices.

#### *Incentives*

Financial incentives of \$500 to \$1,500 per housing unit are made available to affordable multi-family property owners, who typically lack financial resources to upgrade major energy equipment or pay for technical energy services themselves. HERS raters and energy consultants receive incentives for audits and energy modeling.

#### *Energy Efficiency Education*

EnergySmart Pak informational materials are available to participating building project tenants to show them how to conserve energy. Program assistance is also available to public housing authorities to help them plan and conduct energy efficiency workshops for their properties, design innovative utility billing schemes to help finance upgrades, and develop comprehensive energy management plans.

#### *Verification and Program QA*

The program establishes project eligibility criteria and energy savings verification procedures. The program maintains the staff certifications of HERS raters and certified energy plans examiners in order to ensure the quality of verifications and project eligibility reviews. Program staff also reviews a sample of energy savings verifications as an added measure of quality assurance.

### Short Term Outcomes

#### *Affordable housing buildings audited, design assistance provided*

Eligible housing properties are audited by HERS raters and energy consultants to develop baseline measures of energy and water consumption. Property owners, who typically lack energy efficiency expertise, are given whole-building advice regarding the most cost-effective improvements for their buildings and help evaluating equipment supply and installation bids. A

particular focus of the program is on replacing old central water heating systems and distribution loops.

*Energy efficient measures installed, therm savings achieved and verified*

Old and inefficient heating, cooling and water heating equipment are replaced such that overall building energy efficiency is increased by 20 percent or more. The installed measures and required energy savings are subsequently verified by the HERS raters and energy consultants.

*Tenants receive educational materials*

Tenants in improved buildings are given EnergySmart Paks, free CFLs, and water saving measures such as low flow showerheads and faucet aerators.

*Public housing staff aware of energy saving strategies*

Public housing agency staff members have received energy efficiency training, have developed energy management plans and strategies, and are generally more aware of their energy efficiency options.

## **Mid Term Outcomes**

*Housing owners more aware of energy efficient practices*

As a result of the building audits and technical assistance provided, property owners have a better understanding of how their buildings perform and how to select the best, most cost-effective energy efficiency upgrades to their buildings. Due to their positive program experience and demonstrated energy savings, property owners look for other buildings to be audited and improved.

*Public housing authorities implement other efficiency strategies*

Public housing authorities have implemented new utility billing schemes to finance upgrades, are implementing comprehensive energy management plans, and have identified other energy efficiency programs to participate in.

*Therm savings achieved, energy bills reduced.*

As a result of the installed measures, energy usage and costs are reduced.

## **Long Term Outcomes**

*Building owners install efficient equipment in new housing buildings*

Affordable housing owners seek to install energy efficient heating, cooling and water equipment in newly constructed buildings, owing to their increased knowledge of energy efficient equipment and installation practices, and the actual energy savings they have achieved from past projects.

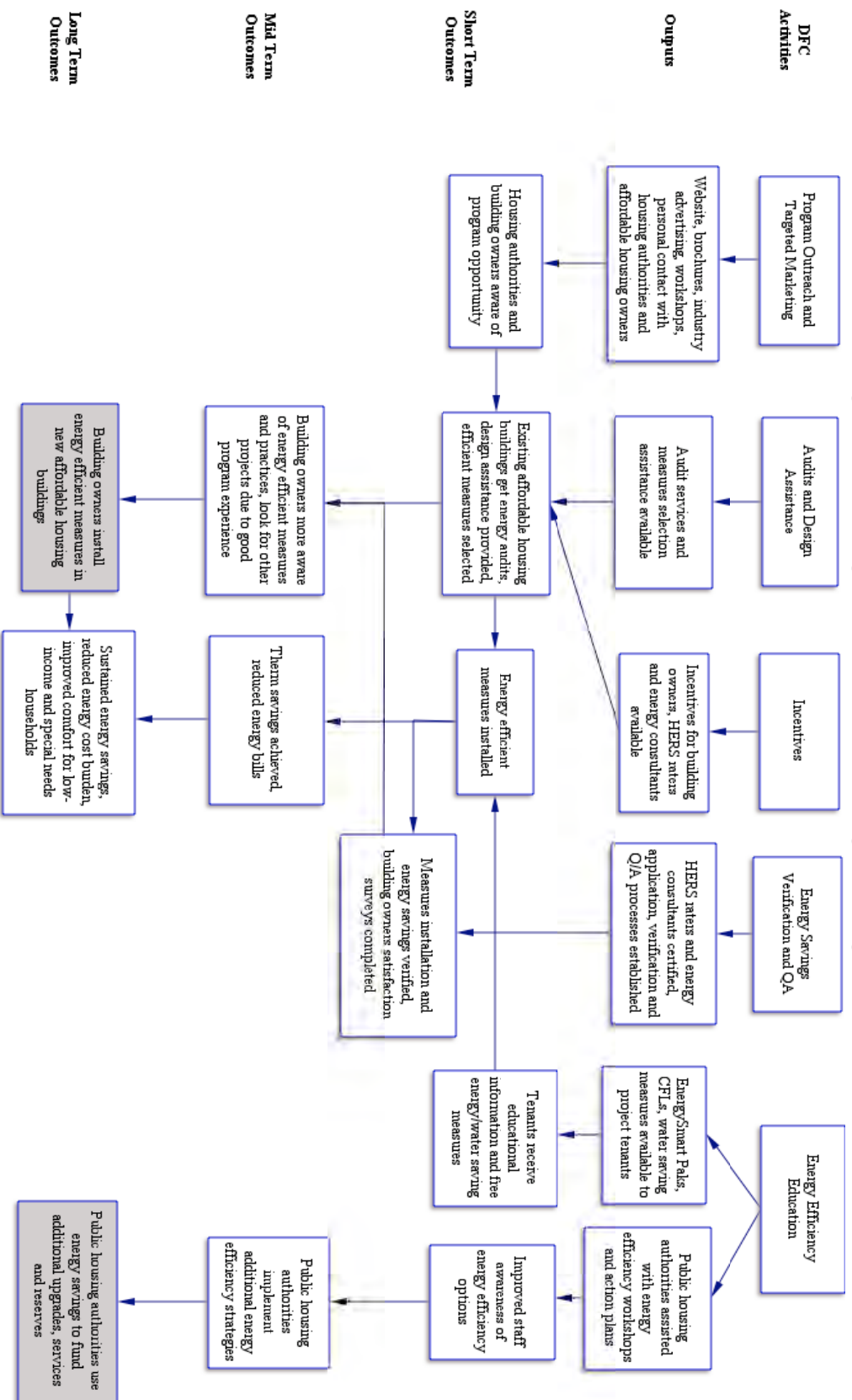
*Sustained energy and therm savings and improved comfort for low-income tenants*

Over time, the energy cost burden for low-income tenants decreases due to the installation of efficient measures, and financial resources are freed up for other necessities such as clothing, medication, or childcare.

*Public housing authorities capture and invest energy savings*

Cash flows from energy savings that are retained by housing owners (supportive housing in particular, which is master-metered) are used to fund additional energy efficiency upgrades, programs and services, or to fund their reserves.

Figure 32: Designed for Comfort Program Logic Model



Shaded boxes indicate outcomes that are outside of the direct program influence



### **9.3 DESIGNED FOR COMFORT PROGRAM EVALUATION OVERVIEW**

In addition to a review of program materials and interviews with the SCG program manager and with several HMG program managers, surveys were conducted with participating inspectors, energy analysts (often the same person), and owners. Data collection activities are summarized below.

1. In-depth interviews with the SCG program manager and HMG program implementers (N=3)
2. Surveys of raters and energy consultants (N=5)
3. Survey of participating owners/developers (N=7)

#### **Research Issues**

Based on in-depth interviews with the program manager and program implementers conducted at the beginning of the evaluation, several key research issues were identified that provided the focus of the evaluation activities. Additional research issues were identified as the program logic model and program theory were developed. The major evaluation research issues for the Designed for Comfort program are described below.

#### **Assess Effect of Program Delays on Effectiveness**

The Designed for Comfort program was offered in SCG territory as part of a statewide low-income multi-family program by Heschong Mahone Group (HMG) in 2004-05, but was revised for 06-08 to be a standalone offering in SCE and SCG territories. Although HMG proposed essentially the same terms for the Designed for Comfort program that it had used in 04-05, with costs and savings evenly split for projects served by two utilities, problems arose when projects that were served by only one of the two sponsoring utilities were not eligible for the full amount of the incentives. This led to a lengthy resolution process, which delayed implementation of some projects, led others to drop out, and caused HMG to stop enrolling new projects until contractual issues were resolved. A research issue therefore is the extent to which these delays impacted the program's ability to attain its goals, the perceptions of participants (building owners and non-profit public housing organizations), and the perceptions of raters and energy consultants who help deliver the program. Notably, both SCG and HMG program managers were interviewed just as procedures for allocating costs and savings were being addressed – a process that ended up taking almost a year and has affected HMG's ability to exceed program goals.

#### **Assess Effect of New Cost and Savings Allocation Methodology**

The allocation of costs and benefits between SCE and SCG (where both serve the project) and the determination of benefits where only one utility serves the project may affect the mix of measures installed by participants.

#### **Assess appropriateness of Program Modeling Tools**

A SCG engineer questioned the appropriateness of the modeling software used by the program, noting that the Title 24 compliance software being used may not be appropriate for modeling incremental changes in energy efficiency.

## 9.4 DESIGNED FOR COMFORT PROGRAM EVALUATION RESULTS

### HERS Rater/Energy Consultant Survey

For this survey the evaluation team interviewed five individuals, representing the raters and energy consultants on all Designed for Comfort projects completed through the summer of 2007. The goals of the survey were to assess sources of program awareness, motivations for participation, and satisfaction with program features and processes.

#### Rater Profile

Characteristics of the respondents are summarized in Table 150 below.

**Table 150: Rater Characteristics**

Respondent	Number of Projects Rated	Number of Projects as Energy Consultant	Number of Employees in Firm	Years of Experience	Percent of revenue from Multi-family
1	4	4	4	17	7%
2	1	0	1	27	0% (now)
3	1	0	2	3	20%
4	3	4	3	26	15%
5	0	1	No response	20	No response

For most projects (seven of nine), the same individual was both the project HERS Rater and Energy Consultant. The raters/consultants comprise very small firms with no more than four employees, but they have substantial experience, with four of the five respondents having more than 15 years experience in this field. On average, respondents said they receive less than 15 percent of their revenues from the inspection and rating of multi-family properties. Most said that the bulk of their business is in Title 24 inspections and working with architects, builders, homeowners, HVAC, and mechanical contractors and consultants.

#### Sources/Levels of Program Awareness, Drivers of Program Participation

Raters/energy consultants learned about the Designed for Comfort program either through utility seminars (two respondents) or through HMG (three respondents). They were told that the program was to help owners improve their properties in the area of energy efficiency and costs savings and that the program was focused on low-income housing and would provide rebates from local utilities. Additional information on program goals and procedures was provided at training sessions led by HMG staff.

Raters said they chose to participate in the program because it represented an additional source of revenue and was a good fit with their current business portfolio. None of the firms had substantial involvement with similar programs in previous years, and they performed little or no work rating or modeling multi-family projects for other programs prior to their participation with the 2006-2008 Designed for Comfort Program.

## The Program Process

All the raters and consultants became involved with the specific projects on which they worked through referrals from HMG. In some cases, HMG provided names of raters/consultants to developers, who then made a selection based on qualifications. Alternatively, one firm contacted developers directly in order to identify projects on which they could collaborate.

The typical process for conducting an inspection and energy assessment of a multi-family building that received rebates through the Designed for Comfort program comprised the following steps:

- The rater contacts a property owner or building supervisor and discussed their energy efficiency goals. The rater describes the process, his role, and what data he will require, and makes an appointment to visit the site.
- The rater visits the site and, if possible, gets as-built drawings of mechanical systems, windows, HVAC, etc. If there are no drawings, he does measurements on site and takes extensive notes. Raters use no automated tools in their data collection efforts, with the exception of one rater who uses a digital camera.
- The rater and/or energy consultant takes the data and uses an energy model to analyze the building for energy efficiency measures that would get to the 20 percent savings goal, running the model with various scenarios or combinations of alternative measures. EnergyPro was the software of choice for the energy consultants, and none of the raters expressed concerns about the accuracy of the software.
- The rater contacts the owner by phone, email, or in person to discuss the scenarios and review recommendations to make a go/no go decision on the project. Sometimes the consultant has to go back and run additional scenarios; he then finalizes the calculations and picks the best option.<sup>31</sup>
- Recommendations for energy efficiency improvements agreed upon by the rater and owner are forwarded to HMG for review and approval. Energy saving measures owners are most likely to accept are replacing windows and adding insulation to the roof if there is access. Insulation is typically one of the easiest measures to reach savings goals, since many of these projects are older buildings that have little or no existing insulation. Other owner accepted recommendations included radiant barriers and duct testing. Owners typically reject improvements that cost the most, such as high efficiency heating and cooling systems.

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<sup>31</sup> In response to our question regarding a preference for electric versus gas measures in developing energy saving scenarios, one consultant stated he had no bias, while another stated that “electric measures are killers” and that it is far easier to reach target savings through incorporation of gas measures. In performing their calculations the energy consultants did not break out gas versus electric savings by measure in their final calculations as they were not required to do so by the Designed for Comfort Program.

- Following approval from HMG, the owner/developer hires a contractor to install the upgrades. Raters say they play no role in recommending or selecting a contractor to perform the work.
- The rater performs a site visit to inspect the work after installation and ensure that it was properly performed, and then documents it in a final report. Although raters are not involved in formal training of tenants, owners or agencies, two individuals stated that they spent a good deal of time during the process educating owners, developers, and site managers. One rater/consultant performed some training with HVAC contractors to instruct them on proper installation techniques.

Raters cited the following problems they encountered in carrying out their Designed for Comfort program procedures.

- Trying to coordinate with project superintendents to keep abreast of project status and schedules (One rater resorted to just driving by and stopping in to determine project status).
- Changing project scope. After the initial inspection, the rater would have to revisit the site to collect more or new data based on new requirements.
- Frustrations dealing with developers who have to be educated about the program participation process. This can be challenging, since sometimes developers do not understand why the upgrades cannot be done their way.

## Program Satisfaction and Suggestions

Raters were asked about their satisfaction with various elements of the Designed for Comfort program. Results are shown in Table 151. The one individual who worked only as an energy consultant was unable to assess the program elements, saying he had no direct experience with the program.

**Table 151: Rater Program Satisfaction**

<b>On a 1 to 5 scale, where 1 means not at all satisfied” and 5 means completely satisfied, how satisfied have you been with:</b>	<b>Average Rating (N=4)</b>
Designed for Comfort program information	3.6
Designed for Comfort program staff	3.9
Designed for Comfort program’s paperwork requirements	3.5
Designed for Comfort program overall	3.3

Raters were moderately satisfied with most elements of the Designed for Comfort program, including program information, which elicited no significant comments. Designed for Comfort program staff received the highest ratings. Three raters were very pleased with their interactions and communications, noting that they had frequent, regular interaction with Designed for

Comfort staff and had no suggestions for improvement. One individual was somewhat dissatisfied (a rating of two) due to the lack of a consistent point of contact and stated that program staff members were not timely in responding. However, when he could reach someone, the communication was effective.

When asked to assess their satisfaction with the Designed for Comfort program's paperwork requirements, three raters reported no problems with the paperwork requirements, but one individual stated that the paperwork for the HERS rater became more and more demanding and ultimately made the program not worth his time.

Overall satisfaction with the Designed for Comfort program was somewhat lower than for individual program elements. Two individuals who were very satisfied with the program and said they had a genuine enthusiasm for this field and their work. One gave his satisfaction with the program a rating of 3 on the 1 to 5 scale and stated that he would recommend the program to others with reservations, while another rated his satisfaction as 1. He explained that as the program stands now, he would not recommend it to others, because "you cannot make any money doing this work."

There was little consistency in rater views regarding the financial incentives associated with the program. One rater said he received the incentive payments from the program in a timely manner and that the financial incentive was commensurate to the amount of effort. A second individual stated he has received no compensation to date and that on bigger projects the incentive is not enough, but that on small projects it is adequate. A third rater was an employee rather than an owner, but believes they were paid on time. However, he is not satisfied with the financial incentives, since the increased complexity of the program makes it no longer worth his time, even though the compensation would have been sufficient as the program originally was designed. A fourth individual stated that there have been some minor delays in receiving payment due to long process of completing an entire Designed for Comfort project, but he is basically satisfied. He said that on a project of at least 100-110 units, they make a decent rate of return. The fifth participant, who only did the energy analysis, says he has yet to receive any compensation.

Overall suggestions for improving the program focused on increased consistency and streamlining of program procedures ("shrink the work to fit the budget or increase the budget to fit the work.") In addition, one individual stated that while incentives for a completed project are reasonable, rater compensation if a project drops out of program is too low. The program need to realize how much work it takes to get to the approval stage and compensate raters accordingly if a project drops out of the program.

## **Owner Survey**

For this survey the evaluation team interviewed seven owner/developers who had experience with Designed for Comfort projects through the summer of 2007. As with the raters, the goals of the survey were to assess sources of program awareness, motivations for participation, and satisfaction with program features and processes.

## Owner Profile

Characteristics of the respondents are summarized in Table 152 below. The Designed for Comfort program has been reaching out to a wide range of potential participants. Owners/developers ranged in size from small family-owned operations with just three multi-family complexes to a large developer with 91 complexes and more than 16,000 units.

**Table 152: Owner Characteristics**

Respondent	Number of Multi-family Complexes in CA	Number of Units	Number of Affordable Complexes	Number of Complexes Served by SCG
1	10	110	10	10
2	38	3,969	38	Don't know
3	25	1,000	25	25
4	15	1,500	15	8
5	3	62	1	3
6	30	4,000	20	20
7	91	16,341	48	22

## Sources/Levels of Program Awareness, Drivers of Program Participation

Participants became knowledgeable of the program over the last five years through a variety of sources including directly from HMG (three respondents); at a low income housing convention (one); through a HERS rater they were working with on another project (one); and through the City of Upland (one). One owner could not remember for certain, but believed it was either the SCE or SCG website, which in turn led them to HMG. All were told that the Designed for Comfort Program was for multi-family, affordable housing for the installation of energy efficiency upgrades and included HERS inspections and refunds/rebates for qualifying participants.

Three participants stated their initial source of program information was from a brochure describing the program, two received similar information via e-mail, one performed research on-line, and one stated he did not recall being given any informational materials. Three participants reported having used the Designed for Comfort website, either to get program related information (two) or to get a program application form (one). The Designed for Comfort website received an average satisfaction rating of 4.6 on a 1 to 5 scale from the three respondents who utilized it.

Overall satisfaction with Designed for Comfort program information was high, with the seven participants assigning an average rating of 4.6 on a 1 to 5 scale. Most commented that the information was very informative.

All the participants cited both the economic benefits/financial incentives and environmental or energy conservation benefits of the program as their reasons for participation. Most of the owners said that they had never participated in similar programs, but one of the developers from

a national firm had taken part in many utility rebate programs throughout the country and now is participating in a program very similar to Designed for Comfort in New York.

When asked if they had any concerns prior to participation, four respondents stated that they had no reservations. Respondents from the three other participants are listed below.

- One respondent was worried about delays and procedural problems associated with satisfying program requirements, which they overcame because they “worked hard with HMG to make it a success.”
- Another respondent said that he worried that he “would have to do a lot of work for too little benefit,” but “overcame the obstacles on a deal-by-deal basis” and now find that it “continues to work out very well”
- Another respondent was worried that measures could not be used that make lighting more effective, and that these concerns have not yet been overcome.

### Involvement and Satisfaction with the Designed for Comfort Program

All seven participants selected their HERS raters based on recommendations/references from HMG/Designed for Comfort staff. Five stated that they had some type of competitive selection process to select from the names provided. None cited previous relationships or other factors as their basis for selection.

Owners recalled the process by which the inspection and energy assessment of their building was conducted through the program as going smoothly, as reflected in the average satisfaction ratings assigned to various program elements, shown in Table 153.

**Table 153: Owner/Developer Program Satisfaction**

<b>On a 1 to 5 scale, where 1 means not at all satisfied and 5 means completely satisfied, how satisfied have you been with:</b>	<b>Average Rating (N=7)</b>
Designed for Comfort program information	4.6
Designed for Comfort website	4.6
The process for assessing the energy efficiency of your property	4.3
Designed for Comfort program staff	4.6
Designed for Comfort program’s paperwork requirements	4.8
Tenant training (N=3)	5.0
Designed for Comfort program overall	4.7

The high levels of satisfaction extended across all aspects of the program. While most owners were very satisfied with the process for assessing the energy efficiency of their properties, one participant stated that it took three months until he received recommendations from the energy consultant. No other owner/developers reported an extended waiting period to receive the consultant recommendations. All participants but one were satisfied with the report and the

recommendations. The reports were typically discussed in a teleconference, although one participant stated that HMG, not the consultant, went over the report with them, which was disappointing because the owner had wanted more information on the costs of the improvements and the estimated savings.

After the raters went over potential energy saving measures, the rater and/or the owner rejected some of them. Example of energy saving recommendations rejected included:

- Replacing HVAC systems in two bedroom units at one complex as they were very costly and hard to find a suitable replacement
- A solar water heating system was rejected for fear the technology was not mature
- Replacing heat pumps and cooling systems for every unit was rejected because it would have been too costly.

Only one participant cited any difficulty obtaining the specified equipment or a contractor to install it (for an estimate and repairs to an older solar hot water unit). With one exception, all the energy efficiency measures were installed correctly and no problems were encountered. The only reported problem was with a demand response circulating hot water pump that has not been effective and that the on-site manager is unable to get it to work.

The owners verified that the Designed for Comfort raters made visits to the sites after installation of the recommended measures and conducted very thorough inspections. One participant still had a final inspection pending at the time of the interview. Four participants stated that energy efficiency measures they installed produced the level of energy savings that they were expecting, two are still in process, and one dropped out of the program due to the cost of the recommended measures. One participant reported energy savings of 30 percent.

Satisfaction among owners was also high for other aspects of the program.

- Most respondents are very satisfied with the Designed for Comfort program's paperwork requirements, noting that forms are “easy to fill out”, “simple,” and “straightforward.” Only one individual stated the program “form could be clearer in some areas, especially in the area of conditioners.”
- Participants also are very satisfied with the Designed for Comfort program staff members and their communications regarding the program, commenting that they were “very effective,” “very efficient,” “excellent,” “very helpful,” and “quick and good.”
- The three owners who reported that Designed for Comfort staff conducted a training session for tenants regarding the energy efficiency measures all gave that training a rating of 5. Participants reported that tenants have expressed only positive feedback on the energy efficiency measures that were installed.
- Participants reported only minor logistical challenges when participating in the Designed for Comfort program. These included:



- 99) Finding the right contractor to repair a solar system
- 100) Making changes to an HVAC system resulted in having to make unanticipated improvements to the electrical system resulting in some additional costs
- 101) Receiving the energy pack that accompanied the program when they were not expecting it and there was no storage space.

While three owners received their rebate payments within 30 days, one participant said it took four months. A review of the HMG Monthly Reports suggests that this was due to delays in SCG's verification inspections.<sup>32</sup>

When asked about the likelihood that they would have implemented the energy efficiency measures if the Designed for Comfort incentives had not been available, owners gave an average likelihood of 2.6 on a scale of 1 to 5, where 1 is not at all likely and 5 is very likely. One respondent said that with or without Designed for Comfort, other State and Federal regulations would have required them to implement some of these upgrades. Based on an average of five participants, 47 percent of the cost of installing the recommended energy efficiency measures was covered by incentives from SCG or SCE. All participants stated they are satisfied with the level of financial incentives provided by the Designed for Comfort program.

Participant satisfaction with the Designed for Comfort program as a whole was very high and all the participants said they would recommend the program to other owners of affordable multi-family housing. Suggestions for improving the program included:

- Would like to see more things that they could get rebates for—for example, replacing old electric stoves with new ones
- The amount of the rebate could be higher, as you would likely get more participation from other owner/developers
- Payment could be a little faster. If they got some preconstruction or "mobilization" costs, they could reduce their program costs through reduced cost of capital.
- As the energy efficiency business becomes more complicated, it would be nice to get a timely, executive summary of information on Designed for Comfort and similar programs.

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<sup>32</sup> According to the June 2007 Monthly Report: "In March, HMG submitted a request for payment and supporting documents for \$396,250 in participant incentives. Despite the NET 30 day payment terms, SCG indicated that SCG staff had to inspect the completed projects prior to approving the request for payment and coupled with a SCG staff change led to almost a two-month delay in receiving the payment. This led to a delay in the participants receiving their incentive payments – over the 90-day expectation. HMG received several inquiries from these participants as to why their payments were delayed."

## 9.5 DESIGNED FOR COMFORT PROGRAM ISSUES AND OBSERVATIONS

The Designed for Comfort program appropriately targets a hard-to-reach market that offers significant opportunities for energy efficiency that otherwise would be missed. By systematically recording the efficiency characteristics of affordable housing units and providing detailed recommendations for actions that will reduce energy usage by 20 percent, the program is able to encourage the installation of cost-effective efficiency measures while also increasing the level of energy awareness among tenants of these housing units.

The greatest strength of the program is that it provides detailed audit information and at the same time gives owners/developers of low income housing a mechanism for acting on it. Most participating owners found the process by which energy efficiency options were identified useful and the incentives sufficient to encourage them to act. Moreover, participating owners were very satisfied with the information they received about the program, the amount of paperwork required, and their interactions with the Designed for Comfort program staff.

Program weaknesses result more from the administration of the program, rather than from flaws in the basic program design. It may be that SCG and other utilities do not devote sufficient attention to the management and administration of Third Party Programs. For example, HMG's original proposal for the 2006-2008 Designed for Comfort Program stated that it intended to use the same method of allocating savings and costs that it had used for the statewide program. While HMG should have alerted the utilities to the risks of this method, SCG and SCE should have anticipated that this practice might cause them to pay for savings in territories other than their own, or to pay for gas or electric savings that did not benefit them.

It is understandable that the SCG and SCE would not want to fund another utility's energy savings. However, once the problem was identified, a long time was spent developing and implementing a solution—which as of early fall 2007 had not been fully implemented—so that all Designed for Comfort marketing was placed on hold and interested owners were put on a waiting list.

A new formula for allocating costs and savings has now been developed that involves calculating energy consumption savings per measure and per fuel type (electric, gas, or other) for each project (based on difference between per annum energy consumption data for existing and proposed measures). The incentive split is then calculated based on percent savings attributed to electric savings (portion to be paid by SCE), the percent savings attributed to gas savings (portion to be paid by SCG), and the proportion of individual measure costs attributable to each type of savings.

While the new incentive split formula is a reasonable way to allocate costs and savings, it makes it impossible to project the dollar amount of incentives paid to the owner, or how this amount will be divided between utilities until a project is analyzed and the plan is checked. In other words, dollar incentives can be calculated only after the project owner has invested in both an energy consultant and a HERS rater. This risk may discourage participation and makes it more costly and difficult to implement this program.

HMG has also expressed frustration at the lack of response from SCG and SCE in other administrative matters, as illustrated by these passages from the Q3 2007 Quarterly Report Narrative.

- HMG worked with SCG to revise the E3 Calculator, budgets, energy saving, and milestone and payment schedule. HMG also updated the E3 calculator using the most current version. HMG provided the rationale behind moving marketing funds to administration. HMG is waiting for the final change order from SCG.
- HMG scheduled a meeting for July 11, 2007 at SCG to tailor the flat file to the Designed for Comfort program. HMG had purchased airfare for staff to attend this meeting. However, the day prior, the meeting was cancelled. HMG is waiting for SCG/SCE to reschedule this meeting.
- HMG attempted to schedule weekly meetings to improve communications about the program. However, SCG/SCE representatives have not attended these meetings. Eventually, HMG cancelled future meetings.

## Recommendations for Program Improvements

### Short-term (2008) recommendations

1. **Finalize a new cost and savings allocation that determines costs and savings as accurately as possible.** This will provide both SCG and HMG program managers with tools to determine whether sufficient resources are available for a project.
2. **Improve communication between SCG and HMG program managers.** This will help resolve administrative and budget issues more quickly and decisively.

### Longer-term (2009 and beyond) recommendations

- **Continue with the Designed for Comfort program to penetrate hard-to-reach markets.** These hard-to-reach markets (affordable and supportive housing) are likely to remain unresponsive to standard energy efficiency initiatives due to lack of awareness, funds, and motivation. In the longer term, the Designed for Comfort program will continue to play a valuable role in targeting a hard-to-reach market, which offers opportunities for 20 percent gains in energy efficiency, that otherwise would be missed. Looking forward to the 2009-2011 program cycle, this program could be an important part of SCG's overall energy efficiency portfolio.
- **Contracting process should be shortened with some SCG administration tasks completed prior to contracting.** Program procedures, including cost sharing, reporting of savings in the E3 Calculator, and treatment of projects in SCG or SCE only territory should be reviewed and approved by SCG before the contract is signed and the program is fielded. It is important that this is done in a timely manner so that rollout is not delayed. Maintaining a consistent program presence and marketing effort across program cycles will enable the Designed for Comfort Program to continue to capture savings in the affordable multi-family housing market.

## 9.6 DESIGNED FOR COMFORT BEST PRACTICES REVIEW

### Program Theory and Design

- *Is the program design effective?* The program effectively delivers detailed audit information to owners/developers of low income housing and gives them a mechanism for acting on it. Most participating owners found the process by which energy efficiency options were identified useful and the incentives sufficient to encourage them to act. Moreover, participating owners were very satisfied with the information they received about the program, the amount of paperwork required, and their interactions with the Designed for Comfort program staff.

Program weaknesses result more from the administration of the program, rather than from flaws in the basic program design. For example, HMG's original proposal for the 2006-2008 Designed for Comfort Program stated that it intended to use the same method of allocating savings and costs that it had used for the statewide program. While HMG should have alerted the utilities to the risks of this method, SCG and SCE should have anticipated that this practice might cause them to pay for savings in territories other than their own, or to pay for gas or electric savings that did not benefit them. Once realized, this led to a lengthy resolution process, which delayed implementation of some projects, led others to drop out, and caused HMG to stop enrolling new projects until contractual issues were resolved.

A new formula has been developed and while the new incentive split formula is a reasonable way to allocate costs and savings, it makes it impossible to project the dollar amount of incentives paid to the owner, or how this amount will be divided between utilities until a project is analyzed and the plan is checked. In other words, dollar incentives can be calculated only after the project owner has invested in both an energy consultant and a HERS rater. This risk may discourage participation and makes it more costly and difficult to implement this program.

- *Is the market well understood?* Yes. The Designed for Comfort program targets public housing authorities, owners of multi-family affordable housing projects, and owners of supportive housing projects. A particular focus of the program is on replacing old central water heating systems and distribution loops. Positive reactions from the customer sites imply that the program implementers sufficiently understand the needs of the market.

### Program Management

#### Project Management

- *Are responsibilities defined and understood?* HMG implements this program and poor coordination with SCG has contributed to program setbacks in the 2006-2008 cycle. For example, HMG did not effectively communicate the risks of its methodology for allocating savings and costs to SCG, which led to turf battles and dropped clients. In addition, HM expressed frustration at the lack of response from SCG in other administrative matters. SCG should work to improve coordination with HMG in the 2009-2011 cycle.
- *Is there adequate staffing?* No staffing deficiencies were mentioned to the evaluation team.

## Reporting and Tracking

- *Are data easy to track and report?* Not addressed by this evaluation.
- *Are routine functions automated?* Not addressed by this evaluation.

## Quality Control and Verification

- *Does the program manager have a strong relationship with vendors involved in the project?* HMG subcontracts with HERS raters and energy consultants to work with individual building owners. The subcontractors do not work directly with SCG.
- *Does the program verify reporting systems (e.g., rebates, invoices)?* Yes. SCG reviews completed projects before incentive payments are processed.
- *Are customers satisfied with the product?* Yes. Participant satisfaction with the Designed for Comfort program as a whole was very high and all the participants said that they would recommend the program to other owners of affordable multi-family housing.

## Program Implementation

### Participation Process

- *Is participation simple?* Usually. The Designed for Comfort program process requires a series of steps from the initial energy audit to finally receiving the equipment incentive. Getting to the end successfully depends on the speed and persistence of the subcontractors. While most interviewed owners were very satisfied with the process for assessing the energy efficiency of their properties, one participant stated that it took three months until he received recommendations from the energy consultant.
- *Are participation strategies multi-pronged and inclusive?* There is only one participation method.
- *Does the program provide quick, timely feedback to applicants?* Incentive payments are expected to be returned within 90 days. Of the interviewed property owners, three owners received their rebate payments within 30 days and one participant said it took four months. A review of the HMG Monthly Reports suggests that this prolonged incentive processing was due to delays in SCG's verification inspections.
- *Is participation part of routine transactions?* No.
- *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, customers contact HMG. HMG refers subcontracted raters and energy consultants to customers for an energy audit and analysis.
- *Are incentive levels well understood and appropriate?* Designed for Comfort offers incentives of up to \$700/unit (for nine or more units) and up to \$1,500/unit (for three to eight

units) for qualifying projects. In all cases, the incentive only covers the costs of the upgrades up to the incremental cost or the incentive amount, whichever is less. When asked about the likelihood that they would have implemented the energy efficiency measures if the incentives had not been available, owners gave an average likelihood of 2.6 on a scale of 1 to 5, where 1 is not at all likely and 5 is very likely. Therefore, the incentives were critical drivers. All participants stated they are satisfied with the level of financial incentives provided by the program.

## Marketing and Outreach

- *Use target-marketing strategies?* Yes. The primary targets of the program are public housing authorities, owners of multi-family affordable housing projects, and owners of supportive housing projects (and their tenants). A database of these parties is maintained so they can be informed of the program and available incentives via the program website, brochures, email, industry advertising, workshops, and personal meetings.
- *Are products stocked and advertised?* Not applicable.
- *Are trade allies and utility staff trained to enhance marketing?* HMG holds training sessions for its HERS raters and energy consultants on program goals and procedures.

## **10. LIVINGWISE PROGRAM**

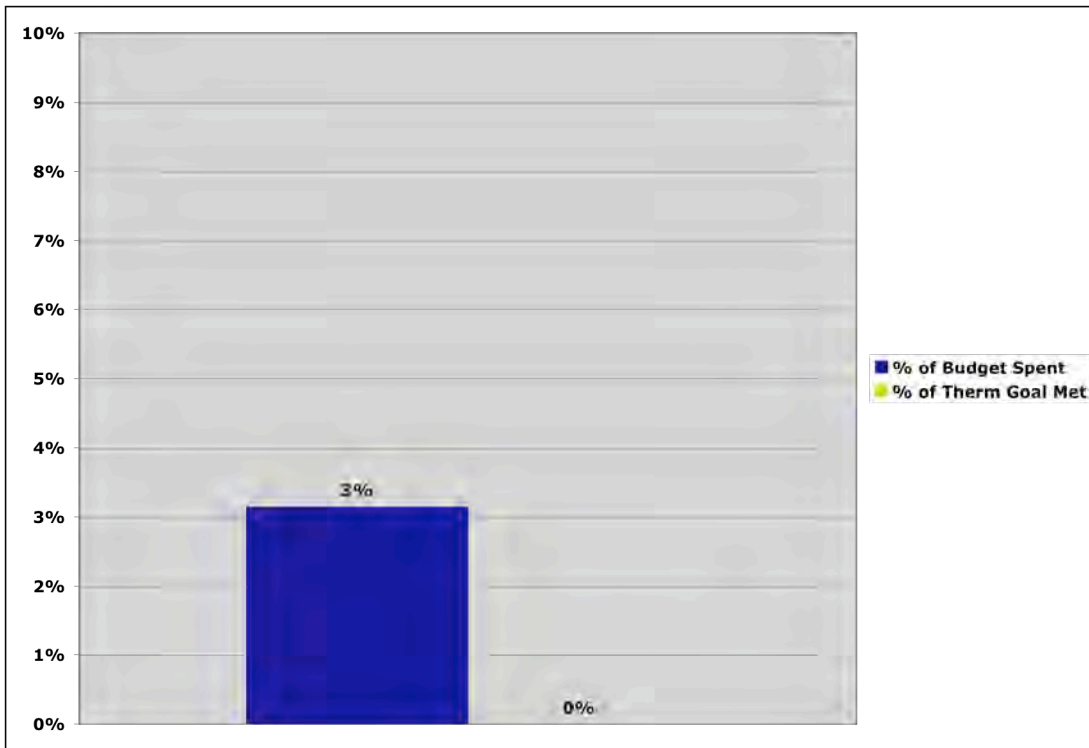
Note: Although the LivingWise program was originally included as part of this evaluation effort, the program did not have significant activity in time to be researched in this evaluation. We were also unable to obtain cooperation from SCE (the primary implementer) to contact teachers to discuss the program (the LivingWise program did not have a contract with SCG). For these reasons, the only evaluation activities completed were the development of the logic model and program theory and identifying potential researchable issues. These are included in this chapter for use in program planning and future evaluations.

### **10.1 LIVINGWISE PROGRAM BACKGROUND**

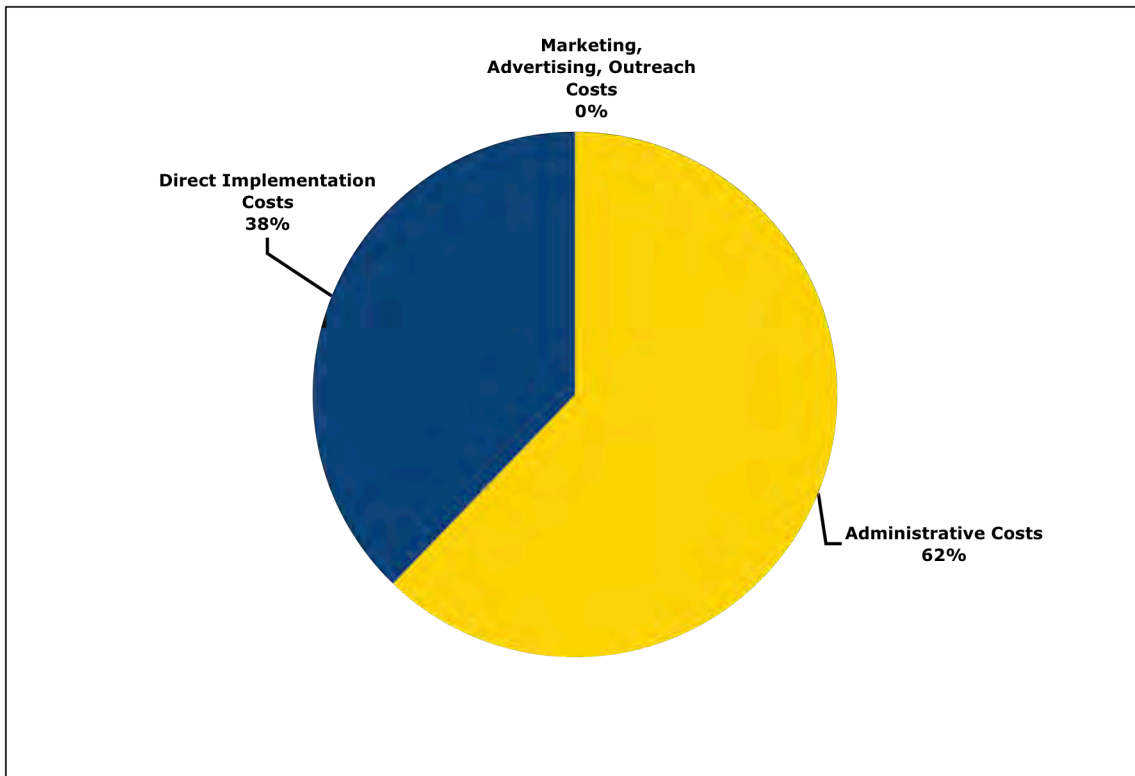
The LivingWise program offers specific curriculum to participating teachers designed to educate sixth grade students about energy use and the effectiveness of energy efficiency measures. It is designed to be part of existing educational efforts and can be targeted to specific regions or neighborhoods through recruitment efforts. Students in participating classrooms apply the concepts covered in class through homework activities that include a simple home audit and installation of efficiency measures (CFLs, low-flow showerheads). Energy savings are based on the installation of these individual measures as reported by students and parents. Sponsors expect that the in-home activities will enhance the educational impact and that students will communicate a direct and personal message about energy efficiency to family members. Ultimately, the program expects to raise awareness of energy-efficiency opportunities generally among participating communities, leading to additional energy-efficiency actions.

According to the program's Q3 2007 report, the program is still waiting to resolve contracting issues before implementation can begin. As shown in Figure 33 and Figure 34, the LivingWise program has only spent three percent of its budget and has not made any progress toward its therm savings goal.

**Figure 33: LivingWise Progress Toward Goals and Program Spending**



**Figure 34: LivingWise Expenditures by Category (Q1 2006 – Q3 2007)**





## 10.2 LIVINGWISE PROGRAM LOGIC MODEL AND PROGRAM THEORY

The following program theory for the Living Wise Program builds on the program logic model and provides additional detail on program activities, outputs, and outcomes.

### Activities

#### *Program Outreach and Recruitment*

The primary targets of the program are teachers and sixth grade students in portions of SCG territory as jointly identified by SCG and SCE. Target areas are identified and teachers are contacted at various events, by phone, fax, or email. Through this outreach and enrollment process, LivingWise staff members secure the commitments of individual teachers.

The recruitment of teachers in targeted areas allows SCG to reach specific communities and populations that may otherwise be difficult to reach. This (combined with the educational activities) is expected to build interest in energy efficiency in the community generally and awareness of other energy efficiency opportunities.

#### *Educational Treatment*

This is the primary activity of the program. Participating teachers implement the program through curricular content in their classrooms. Assignments include home-based activities that require students to complete a simple home audit and install appropriate measures from a Resource Action Kit provided to them. Activities included in the kit are science-based (for example a student will measure water volume in a set time period before and after a low-flow shower head or faucet aerator is installed).

The combination of home-based and school-based activities leads to increased awareness among students, who use the opportunity to inform their parents and families (particularly through conducting the home audit). Students provide an effective and accessible message to their families. Interest in energy efficiency is built in the community and parents may consider participating in other SCG programs.

Hands on experience with the kits and reinforcement at home are expected to positively affect the level of information retained.

#### *Verification and Program QA*

The program collects results information from Household Report Cards, pre/post-test results collected by participating students during the audit, teacher evaluations of curriculum and program, and parent response cards. Information is tabulated and reported.

### Short Term Outcomes

*Cost-effective therm savings and resulting reductions of greenhouse gas emissions from installation of measures contained in Resource Action Kits.*

Measures installed in student homes save energy and contribute to GHG emissions reductions. The program only counts energy savings resulting from these measures.

*Students effectively inform parents and families through assignments and materials.*

Students are expected to take their Resource Action Kits home, conduct a simple home audit, and install measures from the Resource Action Kits. It is assumed that through conversations with their parents and exposure to measures in the Kits, the parents of participating students will become more informed about energy efficiency and opportunities for conservation at home.

*Program participants are satisfied with the program and with the measures installed from the Resource Action Kits*

Quality assurance activities confirm satisfaction with the program and performance of measures and allow the program to adjust any activities or measures not meeting the expectations of teachers, students, or families.

## **Long Term Outcomes**

*Awareness of and interest in SCG efficiency programs grows and leads for other programs are generated by exposure and resultant interest*

Earned media and community interest generated by program implementation in schools could further increase the exposure of energy efficiency programs—ultimately generating leads for other energy efficiency programs.

*Participation in other SCG efficiency programs increases among targeted communities.*

Teachers, students, and parents are becoming more informed about their energy use at home and steps they can take to reduce it. The result is a broader awareness about energy efficiency in the community. Families of LivingWise students participate in other energy efficiency programs.

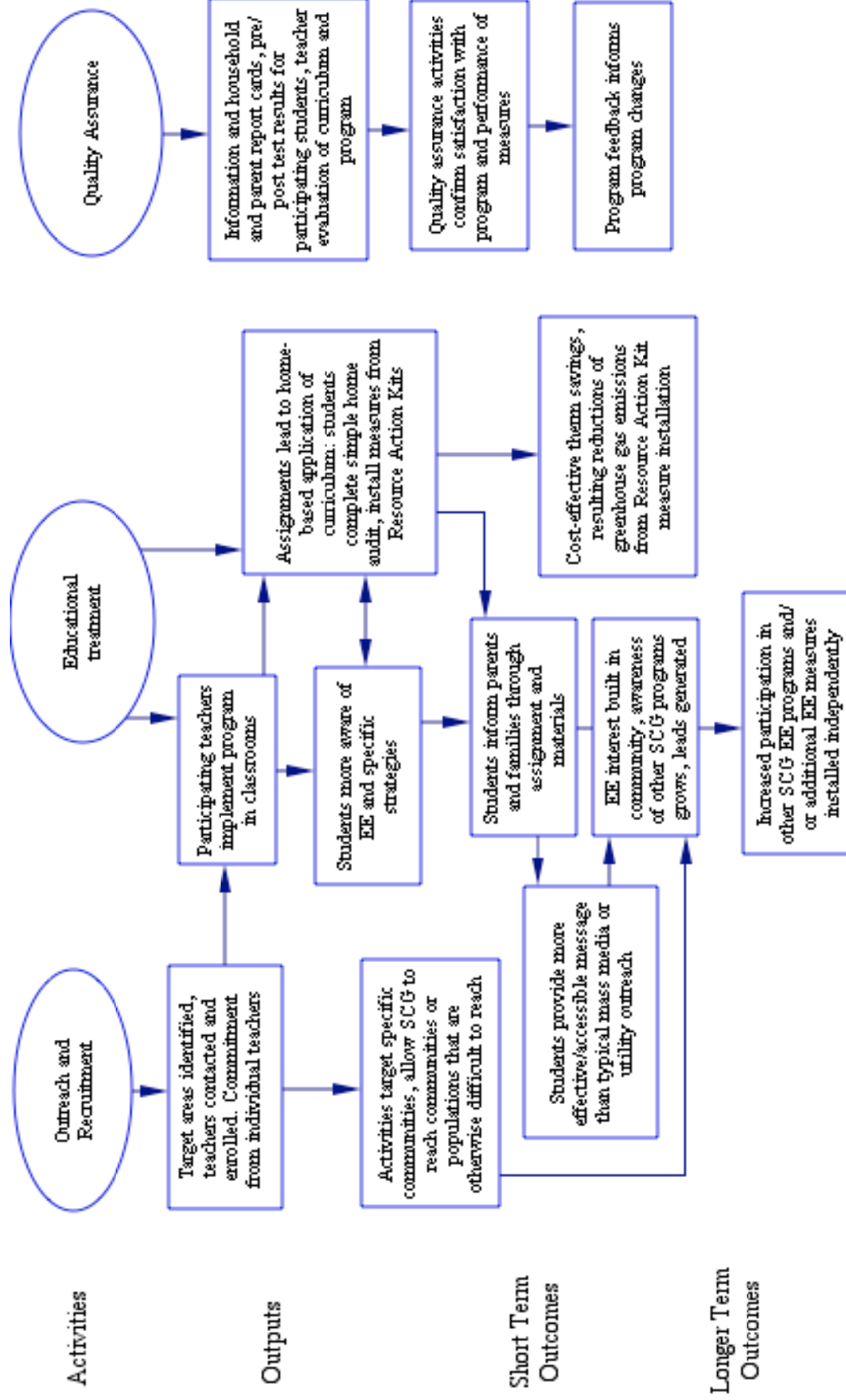
*Additional energy efficiency measures are installed independently among households touched by the LivingWise program.*

Exposure to materials and curriculum reduces barriers associated with information and search costs and performance uncertainties. The opportunity to “test drive” measures through the Resource Action Kits demonstrates the simplicity and effectiveness of energy efficient products and practices. This in-home experience is more personal and effective than advertising, promotion, or other conventional communication. This experience and the resulting knowledge leads to action.

*Program feedback informs program changes*

The quality assurance process implemented by Resource Action provides feedback to the program developers and leads to program changes to improve program effectiveness.

Figure 35: LivingWise Program Logic Model



## **10.3 LIVINGWISE RESEARCH ISSUES**

### **Effectiveness of the Educational Materials**

Residential programs delivered through school classrooms are only be as effective as the curriculum and materials upon which the programs are based. These materials must be easy for teachers to use and effective in conveying their information. Students must be able to learn the information presented and then carry it home and influence their families to follow the guidance.

### **Opportunity to Track More Energy Savings**

To date the program has tracked only savings resulting from measures installed. It is challenging to identify savings attributable to behavioral changes resulting from educational programs. There are evaluation methods and tools for information and education programs that can provide a basis for identifying and measuring savings resulting from behavioral changes. The process evaluation can explore whether there are opportunities for collecting information to support such an evaluation.

### **Identify Characteristics of Participants and Nonparticipants**

High participation rates contribute to a program's success in achieving energy savings. An earlier evaluation reported 28 percent of the students in participating classrooms returned the program's Household Report Cards. Interviews with teachers and parents can identify the barriers to participation and the characteristics of those that do participate.

## **11. ENERGY EFFICIENCY KIOSK PILOT PROGRAM (KIOSK)**

Note: The Energy Efficiency Kiosk Pilot (Kiosk) program did not have significant program activity in time to be addressed in this evaluation. Consequently, the only evaluation activities completed were the development of the logic model and program theory and identifying potential researchable issues. These are included in this chapter for use in program planning and future evaluations.

### **11.1 KIOSK PROGRAM BACKGROUND**

The Kiosk program is an education/outreach program that advocates SCG energy efficiency program offerings to lending institution customers who are in the process of re-modeling or purchasing a new home. The pilot program provides energy efficiency upgrade opportunities to customers who already in the state of mind to improve their housing. The 2006-2008 pilot phase will test if financial institutions are an effective venue for this work, and if so, identify what types of financial incentives successfully trigger customer participation and adoption of energy efficiency upgrades.

Program services are delivered through video kiosks that are installed in financial institutions. Available in Mandarin Chinese, Spanish, and English, the video message channels participants to two other SCG programs, 1) Single Family Rebate program, which offers appliance rebates, and 2) Home Energy Efficiency Survey (HEES) program, an audit tool which provides personalized recommendations to increase the energy efficiency of a home. Kiosk participants receive financial incentives both for watching the video and completing a paper version of the HEES. The program will conduct two six-month phases to test out various financial incentive levels. Appliance rebate applications for the Single Family Rebate program are available at the Kiosk site.

Customer participation in the program depends on the knowledge and initiative of the bank staffers to encourage their customers to explain the program and watch the kiosk video content. A designated employee is trained at each kiosk site and then that contact instructs the other financial institution staff members. Marketing collateral includes a tri-fold brochure, a kiosk poster, a website, and DVD covers.

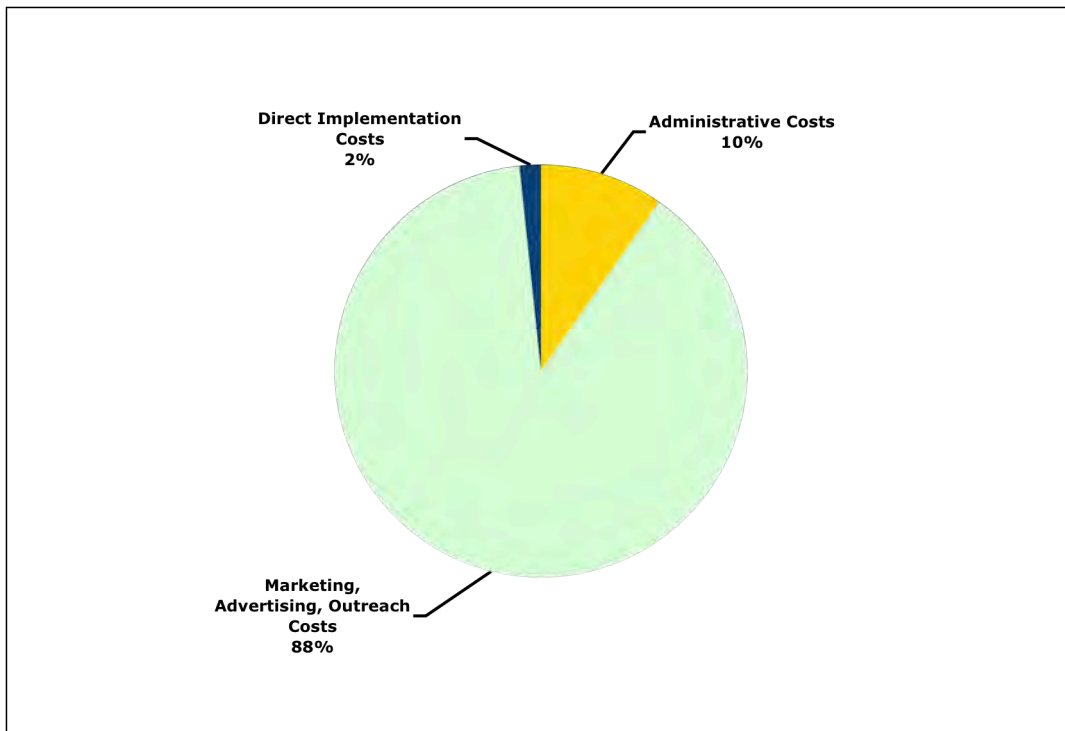
The program's immediate goals are linked to the HEES program, to complete 800 paper HEES surveys by 2008. At present, the kiosk design is not equipped with web capabilities, and therefore on-line HEES surveys are not included in program metrics. Internet access may be added in the future. Since the program is a non-resource acquisition program, it does not have any energy or gas saving goals. However, in the long-term, the program aims to influence customers to adopt a retrofit and participate in a residential rebate program.

Notably, the kiosk program is running behind schedule due to the delay of approval of various program materials. This pilot program is a joint venture between SCG and SCE, and the high turnover rate of the SCE lead has stalled this process. At the time of this report, the kiosk video content is complete and the kiosks have been manufactured. A news release will announce the

launch of the program at the Arrowhead Credit Union in Q4 2007. To date, the Kiosk program has achieved zero percent of its HEES participation goals.<sup>33</sup>

As shown in Figure 36, the Energy Efficiency Kiosk Pilot program has allocated 88 percent of expenditures to marketing, advertising, and outreach activities. Administrative costs account for 10 percent of expenditures and less than two percent has been directed to direct implementation activities. The program has employed 98 percent of its budget and is reported to be on-target.

**Figure 36: Kiosk Expenditures by Category (Q1 2006 – Q3 2007)**



## 11.2 KIOSK PROGRAM LOGIC MODEL AND PROGRAM THEORY

The following program theory for the Energy Efficiency Kiosk Pilot Program builds on the program logic model and provides additional detail on program activities, outputs, and outcomes.

### Activities

#### *Program outreach and targeted marketing*

The kiosk program will target residential customers participating in the home refinance market for home upgrades and remodels, and also lending institution management and loan officers who provide financing to these customers (the program is also available to small business owners). Program outreach will be conducted through: the California Association of Mortgage Brokers,

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<sup>33</sup> SCG Program Narrative, Q3 2007, filed with CPUC (<http://eega2006.cpuc.ca.gov/>)

other local mortgage and construction lenders, local governments, community based organizations, local media, and builder/remodeling trade groups. Participating lenders will also advertise on their websites and will distribute free informational DVDs. The program goal is to lower informational barriers so that energy efficiency is regularly considered and adopted during refinancing activities.

#### *Kiosk energy efficiency education*

Interactive energy efficiency kiosks will be loaded with program content to include: energy efficiency information, marketing messages (e.g., energy efficiency saves you money, increases home values, helps the environment) early adopter testimonials, and utility program descriptions (including demand response and renewable energy programs). The kiosk stations will also include paper rebate program applications, paper versions of the short HEES survey, and lending institution forms and procedures. The kiosks will be installed at 20 branches of Arrowhead Credit Union and East West Bank in the San Gabriel Valley, and the all kiosk information will be available in English, Spanish and Mandarin.

#### *Loan fee incentives*

Four levels of loan origination fee incentives will be developed and offered during separate periods of the pilot program, so that the optimal incentive level to drive the remodel and upgrade market can be identified. The four incentive levels will be: no incentive (kiosk information only), \$50 gift certificate, \$125 towards the origination fees, and \$250 off the origination fees.

#### *Lender training*

Lending officers will be trained on how to use the kiosk, how to process the incentive applications, and how to track program participation. Lending staff will also have other program media to distribute (e.g., DVDs, print collateral) that provides similar information to the kiosk.

#### *Program feedback and audit verification*

Customer and lender feedback surveys are designed and available. Home audit procedures are established to verify the installation of measures that kiosk users acquire through the utility programs.

## **Short Term Outcomes**

#### *Customers aware of kiosk program opportunity*

Through the outreach campaign, customers are aware of the installed kiosks and opportunity to learn about energy efficiency programs and receive additional incentives when they finance their home upgrade projects.

#### *Customers use kiosks, complete HEES surveys, and learn about energy efficiency opportunities*

Customers value the convenience of the kiosks and use them to learn about the benefits of energy efficiency and the various efficiency rebates, incentives and programs that are available to them.

Kiosk users also complete the short paper version of the HEES survey that is provided in order to identify the most effective and practical applications for their circumstances.

*Customers participate in utility rebate and incentive programs*

Kiosk users are persuaded to include energy efficient products in their upgrades and choose to enroll in utility rebate and incentive programs during refinancing. Kiosk enrollees receive loan origination fee discounts and agree to have a home audit conducted or provide evidence that the upgrades or retrofits were actually completed. New program participation by kiosk users and the associated demand/energy savings are tracked.

*Lending professionals more knowledgeable about energy efficiency and utility programs*

As a result of the program training and their experience assisting kiosk users and other bank customers, lenders develop a stronger understanding of energy efficiency and available utility programs, and perceive that customers value these too.

*Customer and lender surveys completed, measure installations verified*

Customers and lending officers provide feedback regarding the design and effectiveness of the kiosks, and the content and navigation is revised as necessary. Home energy audits are conducted to ensure that kiosk users have installed the measures they agreed to install.

## **Mid Term Outcomes**

*kWh, kW, and therm savings achieved*

Customers install the new energy efficient measures and equipment in their homes that they acquired through the kiosks. As a result of the installed measures, energy usage and costs are reduced.

*Participation grows due to positive experience and word of mouth marketing*

Kiosk users perceive and value the energy savings they have realized, and in conjunction with lending professionals, tell others of their positive experience using the conveniently located and easy-to-use kiosks. As a result, program participation continues to grow.

*Optimal loan fee incentive determined*

Program enrollment through the kiosks has been tracked over time and linked to the various loan origination fee incentives that have been offered. The most effective loan fee incentive can be determined and implemented on a permanent basis.

*Lenders promote energy efficiency to distinguish services*



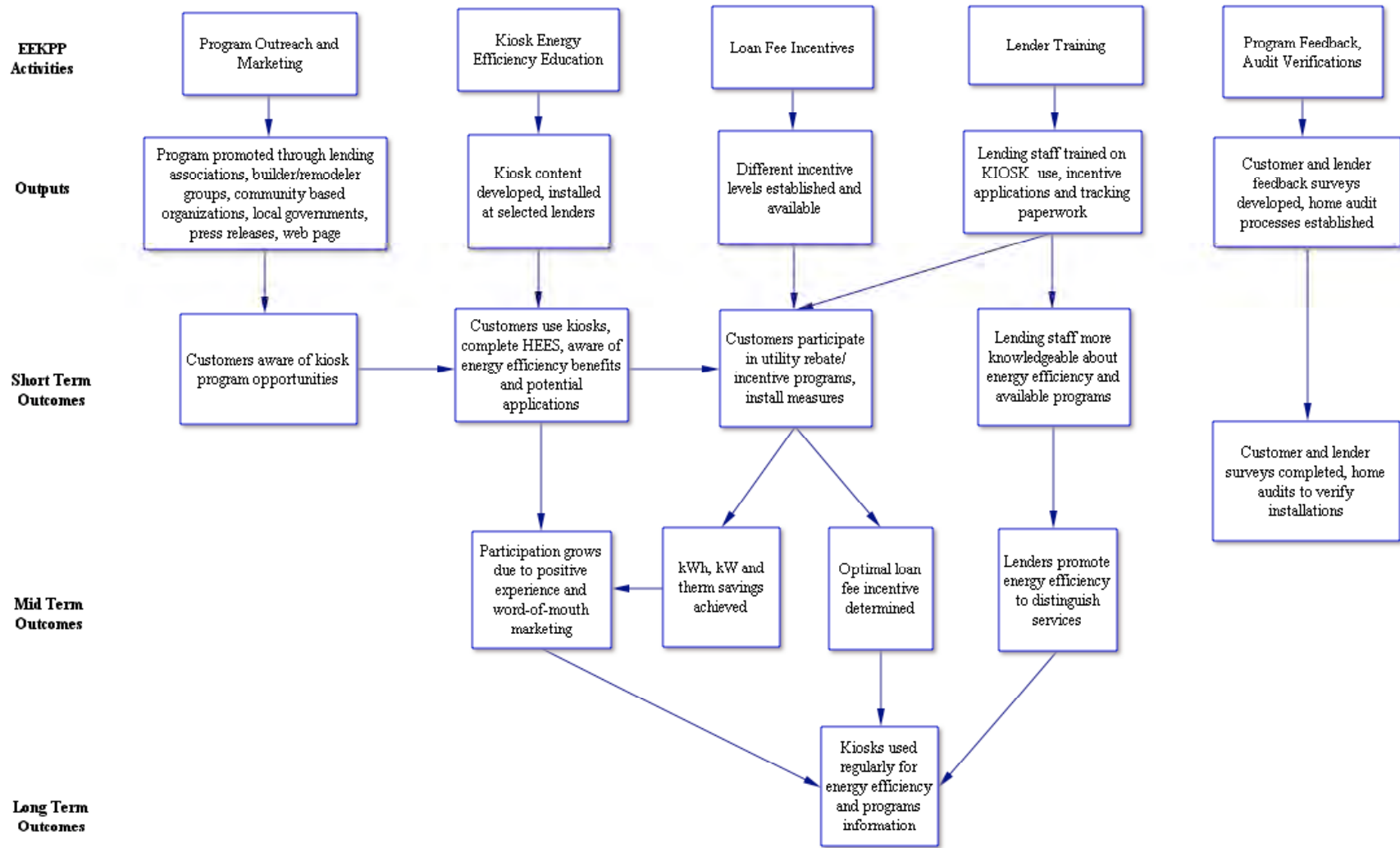
Continued use of the energy efficiency kiosks and positive customer feedback encourages lenders to actively promote energy efficiency services to better serve their customers and gain a competitive advantage.

## **Long Term Outcomes**

*Kiosks regularly used for energy efficiency and programs information*

Borrowers are inclined to consider energy efficiency options during refinancing when the information is presented in an easy-to-understand, easy-to-use way. Lending institutions and kiosks are used regularly by customers to learn about their energy efficiency options and to implement energy efficient retrofits through utility energy programs. Energy efficiency informational barriers are reduced over time

**Figure 37: Energy Efficient Kiosk Pilot Program Logic Model**



Shaded boxes indicate induced outcomes that are outside of the direct program influence

## **Kiosk Research Issues**

Based on the program theory and in-depth interviews, the following research issues were identified. These research issues are meant to direct the focus of all data collection tasks, including participant survey development, review of program documents and marketing materials, and subsequent interviews. Three researchable issues have been identified to test if the pilot program context and environment is conducive or detrimental to energy efficiency education and investment. The evaluation team was not able to address these issues because program implementation has not yet commenced, but they are listed here for future consideration and evaluation.

### **Budgetary Constraints**

Although the home finance period is a logical time to invest in energy efficiency upgrades in addition to other upgrades, are there reasons why energy efficient investments may be postponed, particularly if customers were not knowledgeable about energy efficiency prior to securing financing?

### **Timing of Information**

Although the energy efficiency and rebates information will be in close physical proximity to bank customers, will customers actually take the time to view the Kiosk content and learn about energy efficiency?

### **Competing Information**

Home financing customers often receive a large volume of information and many documents associated with their loans, and may feel stressed from “information overload.” Will these customers also seek out new information about energy efficiency and rebates?

## 12. APPENDIX: SURVEY INSTRUMENTS AND IN-DEPTH INTERVIEW GUIDES

### 12.1 HOME EFFICIENCY REBATE PROGRAM SURVEYS

#### Home Efficiency Rebate Program Participant Survey Instrument

Hello, my name is \_\_\_\_\_ and I am calling on behalf of SoCal Gas.  
May I please speak with [CONTACT NAME]?

*This is not a sales call. We are conducting a study regarding participation in the Home Rebate Program. This survey is for research purposes only and will be used to improve programs such as the HOME REBATE Program in San Diego. This research effort will take less than 15 minutes to complete. Is now a good time to conduct this very brief interview?*

Recently you participated in the Home Rebate Program, which is the [SOCAL GAS] program that offers rebates for energy efficient products. We want to talk to you briefly about your experience with this program.

Our records show that you purchased a [EQUIP1] in [MONTH] of [YEAR] and received rebates from the [SOCAL GAS]. Is this correct?

**Q2. Think back to when you purchased your new [EQUIP1], did you purchase it through a contractor as part of a new house or a remodeling project, or did you just buy it yourself directly from the store?**

1. THROUGH CONTRACTOR
2. BOUGHT MYSELF → Go To Q9

**Q3. Did your contractor tell you about this program?**

1. YES
2. NO

**Q5. Did your contractor also suggest the energy efficiency option for the [EQUIP1] you chose?**

1. YES
2. NO
3. NOT SURE / DON'T KNOW

**Q6. Had you already decided on purchasing the particular [EQUIP1] model you did purchase prior to talking with your contractor?**

1. YES
2. NO → GO TO Q7
3. NOT SURE / DON'T KNOW → GO TO Q7

**Q7. Had you already decided on purchasing the particular [EQUIP1] model you did purchase prior to becoming aware of the HOME REBATE PROGRAM?**

1. YES
2. NO
3. NOT SURE / DON'T KNOW

**IF NO to Q6 OR Q7 ASK Q8**

**Q8. What changed your mind to go with the energy efficient option for your [EQUIP1]? (Open-ended)**

**→ SKIP TO Q19**

**Q9. How did you first become aware of the HOME REBATE PROGRAM?**

1. THIS PHONE CALL/ I WAS NOT AWARE → SKIP TO Q18
2. CONTRACTOR
3. SALESPERSON → GO TO Q13
4. FRIEND / FAMILY
5. FROM OTHER ENERGY CONSERVATION PROGRAM
6. SEMINAR
7. AD/DISPLAY IN STORE
8. AD IN THE NEWSPAPER
9. AD RADIO
10. AD TV
11. AD WEB
12. OTHER, Specify: \_\_\_\_\_

**Q10. Had you already decided on purchasing the particular [EQUIP1] model you did purchase prior to becoming aware of the HOME REBATE PROGRAM?**

1. YES
2. NO
3. NOT SURE / DON'T KNOW

**Q11. Did a salesperson at the store tell you about the HOME REBATE PROGRAM?**

1. YES
2. NO → GO TO Q13
3. DK-NOT SURE → GO TO Q13

**Q12. Had you already decided on purchasing the particular [EQUIP1] model you did purchase prior to talking with the salesperson?**

1. YES
2. NO
3. NOT SURE / DON'T KNOW

**Q13. Did you notice any energy efficiency promotional materials or information on display at the store?**

1. YES
2. NO → GO TO Q18
3. NOT SURE → GO TO Q18

**Q14. How influential were the promotional materials in your decision to buy an energy efficient [EQUIP1]? Would you say...?**

1. VERY INFLUENTIAL
2. SOMEWHAT INFLUENTIAL
3. NOT VERY INFLUENTIAL
4. NOT AT ALL INFLUENTIAL

**Q15. Had you already decided on purchasing the particular [EQUIP1] model you did purchase prior to seeing the energy efficiency information display at the store?**

1. YES
2. NO
3. NOT SURE / DON'T KNOW

[If Q15, =yes skip to Q19]

**Q18. What changed your mind to go with the energy efficient option for your [EQUIP1]? (Open-ended)**

**Q19INTRO. Now I'd like you to think about your decision to select an energy efficient (EQUIP1) when you bought a new [EQUIP1].**

**I'll read a list of factors. For each, please tell me if the factor was very important, important, not very important, or not at all important to your decision to select an energy efficient [EQUIP1]?**

**Q19. Information or recommendations from the salesperson or contractor. Was this very important, important, not very important or not at all important to your decision to select an energy efficient [EQUIP1]?**

1. VERY IMPORTANT
2. IMPORTANT
3. NOT VERY IMPORTANT
4. NOT AT ALL IMPORTANT

**Q20. The cash rebate. Was this very important, important, not very important or not at all important to your decision to select an energy efficient [EQUIP1]?**

5. VERY IMPORTANT
6. IMPORTANT
7. NOT VERY IMPORTANT
8. NOT AT ALL IMPORTANT

**Q21. The money you would save from lower energy bills . Was this very important, important, not very important or not at all important to your decision to select an energy efficient [EQUIP1]?**

9. VERY IMPORTANT
10. IMPORTANT
11. NOT VERY IMPORTANT
12. NOT AT ALL IMPORTANT

**Q22. The feeling that you were doing something good for the environment. Was this very important, important, not very important or not at all important to your decision to select an energy efficient [EQUIP1]?**

- 13. VERY IMPORTANT
- 14. IMPORTANT
- 15. NOT VERY IMPORTANT
- 16. NOT AT ALL IMPORTANT

**Q23. What was the most important factor in your decision to purchase an energy efficient [EQUIP1]?**

- 1. INFORMATION/ENCOURAGEMENT FROM SALESPERSON/CONTRACTOR
- 2. CASH REBATE
- 3. LOWER ENERGY BILLS
- 4. DOING GOOD FOR THE ENVIRONMENT
- 5. Non Energy Factors such as color, style,  
OTHER, please specify: \_\_\_\_\_

**Q24INTRO. Next, I'd like you to rate your satisfaction with various aspects of the program. For each question I read, please tell me if you are very satisfied, moderately satisfied, slightly satisfied, neutral, slightly dissatisfied, moderately dissatisfied or very dissatisfied.**

**Q24. How satisfied were you with the application process? Were you...**

VERY SATISFIED

MODERATELY SATISFIED

SLIGHTLY SATISFIED

NEUTRAL

SLIGHTLY DISSATISFIED → ASK Q24a

MODERATELY DISSATISFIED → ASK Q24a

VERY DISSATISFIED → ASK Q24a

**Q24a. What would have improved your experience with the application process? (Open-ended)**

**Q25. How satisfied were you with the speed with which you received your rebate. Would you say you were...**

VERY SATISFIED

MODERATELY SATISFIED

SLIGHTLY SATISFIED

NEUTRAL

SLIGHTLY DISSATISFIED → ASK Q25a

MODERATELY DISSATISFIED → ASK Q25a

VERY DISSATISFIED. → ASK Q25a

DOES NOT APPLY/REBATE WENT DIRECTLY TO CONTRACTOR

**Q25a. What would have been a satisfying turn around time for you rebate? (Open-ended)**

**Q26. How satisfied were you with the rebate amount for [EQUIP1]? Would you say you were ...?**

1. VERY SATISFIED
2. MODERATELY SATISFIED
3. SLIGHTLY SATISFIED
4. NEUTRAL
5. SLIGHTLY DISSATISFIED → ASK Q26\_1
6. MODERATELY DISSATISFIED → ASK Q26\_1
7. VERY DISSATISFIED. → ASK Q26\_1

**Q26\_1. What would have been a satisfying amount for you rebate? (Open-ended)**

**Q28. How satisfied were with the performance of the [EQUIP1]. Would you say you were ...?**

1. VERY SATISFIED
2. MODERATELY SATISFIED
3. SLIGHTLY SATISFIED
4. NEUTRAL
5. SLIGHTLY DISSATISFIED → ASK Q28\_1
6. MODERATELY DISSATISFIED → ASK Q28\_1
7. VERY DISSATISFIED. → ASK Q28\_1

**Q28a. What would have improved your satisfaction with the performance of the equipment you installed? (Open-ended)**

**Q29. How satisfied were you with the combined energy savings from all the measures you took that received rebates. Would you say you were...?**

1. VERY SATISFIED
2. MODERATELY SATISFIED
3. SLIGHTLY SATISFIED
4. NEUTRAL
5. SLIGHTLY DISSATISFIED → ASK Q29a
6. MODERATELY DISSATISFIED → ASK Q29a
7. VERY DISSATISFIED. → ASK Q29a

**Q29a. What would have been a satisfying level of energy savings? (Open-ended)**

**Q30. Did a [SOCAL GAS] representative come to your home to inspect the equipment you bought as part of the Home Rebate Program?**

1. YES → ASK Q31
2. NO
3. Don't Remember



**Q31. How satisfied were you with the courteousness and professionalism of the inspector who came to your home? Would you say you were ...**

1. VERY SATISFIED
2. MODERATELY SATISFIED
3. SLIGHTLY SATISFIED
4. NEUTRAL
5. SLIGHTLY DISSATISFIED → ASK Q31a
6. MODERATELY DISSATISFIED → ASK Q31a
7. VERY DISSATISFIED → ASK Q31a

**Q31a. What would have been a satisfying inspection of the measures in your home? (Open-ended)**

**Q32. Overall, how satisfied were you with the rebate program for buying energy efficient products? Would you say you were...?**

1. VERY SATISFIED
2. MODERATELY SATISFIED
3. SLIGHTLY SATISFIED
4. NEUTRAL
5. SLIGHTLY DISSATISFIED → ASK Q32a
6. MODERATELY DISSATISFIED → ASK Q32a
7. VERY DISSATISFIED → ASK Q32a

**Q32a. What would have improved your overall satisfaction? (Open-ended)**

**Q33. Have you ever suggested this rebate program to someone outside of your household?**

1. YES → ASK Q33a
2. NO

**Q33a. What did you tell them about the program? (Open-ended)**

**Q34INTRO. Next we would like to know how well [SOCAL GAS] accomplished its goal of getting clear information to you on the rebate program. For each of following, please tell me if you if the information you received was extremely clear, pretty clear, not very clear or not at all clear.**

**Q34. How clear was the information you received on the fact [SOCAL GAS] offers rebates for purchasing energy efficient equipment? Would you say ...?**

1. EXTREMELY CLEAR
2. PRETTY CLEAR
3. NOT VERY CLEAR
4. NOT AT ALL CLEAR
5. DID NOT RECEIVE
6. DOES NOT APPLY

**Q35. How clear was the information you received on which makes and models qualify for rebates? Would you say ...**

1. EXTREMELY CLEAR
2. PRETTY CLEAR
3. NOT VERY CLEAR
4. NOT AT ALL CLEAR
5. DID NOT RECEIVE
6. DOES NOT APPLY

**Q36. How clear was the information you received on how to apply for the rebate?**

**Would you ...?**

1. EXTREMELY CLEAR
2. PRETTY CLEAR
3. NOT VERY CLEAR
4. NOT AT ALL CLEAR
5. DID NOT RECEIVE
6. DOES NOT APPLY

**Q37. How clear was the information you received on the energy savings you might expect from the equipment or measures you installed? Would you say ...**

1. EXTREMELY CLEAR
2. PRETTY CLEAR
3. NOT VERY CLEAR
4. NOT AT ALL CLEAR
5. DID NOT RECEIVE
6. DOES NOT APPLY

**Some people may have doubts or reservations about purchasing energy efficiency or participating in a rebate program. Prior to purchasing your equipment, can you tell me if you had any doubts or concerns about the following items?**

**Q38. Rebate application process?**

1. NO
2. YES → ASK Q38a

**Q38a. Briefly, what happened and how did you overcome this concern? (Open-ended)**

**Q39. Finding a qualified contractor to do the installation?**

1. NO
2. YES → ASK Q39a

**Q39a. Briefly, what happened and how did you overcome this concern? (Open-ended)**

**Q40. Being able to find parts or a qualified repairman to maintain equipment? (Open-ended)**

1. NO
2. YES → ASK Q40a

**Q40a. Briefly, what happened and how did you overcome this concern? (Open-ended)**

**Q41. Energy savings claims being overstated?**

1. NO
2. YES → ASK Q41a

**Q41a. Briefly, what happened and how did you overcome this concern? (Open-ended)**

**Q42. Energy savings not worth extra price?**

1. NO
2. YES → ASK Q41a

**Q42a. Briefly, what happened and how did you overcome this concern? (Open-ended)**

**Q43. Any other concerns with the program prior to participating?**

1. NO
2. YES → ASK Q41a

**Q43a. Briefly, what happened and how did you overcome this concern? (Open-ended)**

**Q44. What suggestions would you make to improve the HOME REBATE PROGRAM? (Open-ended)**

**Q45. What other programs or offerings could the utility provide to help you manage your energy use better? (Open-ended)**

**Now I'd like to ask you about other energy efficiency programs you might have participated in.**

**Q46. Have you ever had a home energy audit, where someone comes to your home and identifies areas where you can reduce your energy use? These energy audits can also be done by mail or online. Have you ever had one of these energy audits for your home?**

1. YES in person → Go To Q47
2. YES by mail → Go To Q47
3. YES online → Go To Q47
4. NO → Go To Q48
5. NOT SURE → Go To Q48

**Q47. Since having this home audit, have you had the chance to implement any of the audit's recommendations?**

1. NO
2. YES → ASK Q47a

**Q47a. What recommendations did you implement? (Open-ended)**

**Q48. In the last year, have you participated in any other energy efficiency programs where you received a rebate for purchasing an energy efficient item?**

1. NO
2. YES → ASK Q48a

**Q48a. What type of equipment did you purchase? (Open-ended)**

**Q49. Please tell me if you have ever heard of the any of the following programs:**

1. FLEX YOUR POWER
2. 20/20
3. LIGHTING EXCHANGE
4. APPLIANCE RECYCLING
5. OTHERS, specify: \_\_\_\_\_

**IF YES TO ANY OF Q49, ASK Q49a**

**Q49a. Did you participate in any of these programs?**

1. NO
2. YES → ASK Q49b

**Q49b. Which programs did you participate in?**

1. FLEX YOUR POWER
2. 20/20
3. LIGHTING EXCHANGE
4. APPLIANCE RECYCLING
5. OTHERS, specify: \_\_\_\_\_

**ASK Q50 if [EQUIP1] IS A REFRIGERATOR**

**Q50. When you purchased your new refrigerator, what did you do with your old refrigerator?**

1. DELIVERY PEOPLE TOOK IT AWAY
2. GAVE TO FAMILY MEMBER / FRIEND
3. SOLD IT
4. ARRANGED FOR RECYCLING
5. TRASH
6. CONTINUE TO USE IT
7. OTHER, please specify: \_\_\_\_\_

**Q51. Was your participation in the Home Rebate Program we've been talking about today part of a larger remodeling project for your home?**

1. YES
2. NO

**Q52. Do you recall ever visiting the [SoCal Gas]'s website for information?**

1. YES
2. NO →Go TO Q56

**Q53. What information were you looking for?**

1. LIST OF SPECIFIC ENERGY EFFICIENCY PROGRAMS
2. PROGRAM APPLICATION FORMS
3. CONTRACTORS
4. GENERAL INFORMATION ON ENERGY EFFICIENCY MEASURES
5. OTHER BILLING/SERVICE INFORMATION
6. OTHER: please specify: \_\_\_\_\_

**Q54. Overall, how satisfied were you with the [SOCAL GAS] website, would you say you were ...**

- a. VERY SATISFIED
- b. MODERATELY SATISFIED
- c. SLIGHTLY SATISFIED
- d. NEUTRAL
- e. SLIGHTLY DISSATISFIED → ASK Q55
- f. MODERATELY DISSATISFIED → ASK Q55
- g. VERY DISSATISFIED → ASK Q55

**Q55. What would have improved your satisfaction with the [SOCAL GAS] website? (Open-ended)**

**Q56. Would you like the ability to track the status of your rebate applications on-line using the utility's website?**

1. YES
2. NO
3. NOT SURE

*ENERGY SAVINGS POTENTIAL (Revised 7/13)*

**Q57. Do you think there are other opportunities to save energy in your home?**

1. YES → ASK Q58
2. NO
3. DON'T KNOW

**Q58. Which areas in your home? Probe for multiple areas. Record up to 3.**

Area 1: \_\_\_\_\_

Area 2: \_\_\_\_\_

Area 3: \_\_\_\_\_

**Let me ask you about some specific items in your home. Let me assure you that this information will be kept confidential; These questions are just being asked to get an idea of energy savings potential in the market that could be addressed by the HOME REBATE PROGRAM.**

**Q70. What equipment do you use to heat your home??**

1. FURNACE
2. WALL FURNACE
3. BOILER
4. HEAT PUMP
5. ELECTRIC BASEBOARD
6. HEATING STOVE → **SKIP TO Q74**
7. SPACE HEATER → **SKIP TO Q74**
8. CENTRAL—MY APARTMENT IS CENTRALLY HEATED, THE LANDLORD SUPPLIES → **SKIP TO Q74**
9. OTHER, specify: \_\_\_\_\_ → **SKIP TO Q74**

**Q71. How old is your heating equipment?**

1. Enter YEARS: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

888. DK

**IF Q71 = LESS THAN 5 YEARS OLD, SKIP TO Q74**

**Q72. What do you think the potential is for saving energy with new heating system in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

1. HIGH POTENTIAL
2. MEDIUM POTENTIAL
3. LOW POTENTIAL

**Q73. How many days per winter do you use your heating equipment?**

1. NOT AT ALL
2. 30 DAYS OR LESS
3. 31-90 DAYS
4. 91-120 DAYS
5. MORE THAN 120 DAYS
6. DON'T KNOW

**Q74. How old is your clothes washer?**

1. Enter YEARS: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

222. Don't have a clothes washer

888. DK

**[IF Q74 is DO NOT HAVE or LESS THAN 5 YEARS OLD Skip to Q76]**

**Q75. What do you think the potential is for saving energy with a new clothes washer? Would you say there is high potential, medium potential, or low potential for energy savings?**

1. HIGH POTENTIAL
2. MEDIUM POTENTIAL
3. LOW POTENTIAL

**Q76. How old is your dishwasher?**

1. Enter YEARS: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

222. Don't have a dishwasher

888. DK

**[IF Q76 is LESS THAN 5 YEARS OLD SKIP TO Q82]**

**Q78. What do you think the potential is for saving energy with a new dishwasher in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL

**Q82. How old is your water heater?**

1. Enter YEARS: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

222. Don't have a water heater

888. DK

**[IF Q82 is LESS THAN 5 YEARS OLD SKIP TO Q87]**

**[IF Q82 = Don't have my own water heater or less than 5 years old, SKIP TO Q87]**

**Q83. What do you think the potential is for saving energy with a new water heater in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

1. HIGH POTENTIAL
2. MEDIUM POTENTIAL

3. LOW POTENTIAL

**Q87. How about your windows, how old are the windows in your home?**

1. Enter YEARS: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

888. DK

**[If Q87 = LESS THAN 5 YEARS OLD, skip to Q89.]**

**Q88. What do you think the potential is for saving energy with new windows in your home?**

**Would you say there is high potential, medium potential, or low potential for energy savings?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL

**DEMOGRAPHIC QUESTIONS**

**Q89. Lastly I have just a few questions about your home. Do you currently own or rent?**

1. OWN                      2. RENT

**Q90. What type of home do you currently live in?**

- SINGLE-FAMILY DETACHED HOME
- CONDO
- TOWNHOUSE
- MOBILE HOME / MANUFACTURED HOME
- DUPLEX
- APARTMENT
- OTHER

**Q92. Including all adults AND children, how many people are in your household?**

Enter number: \_\_\_\_\_ 999.Ref

**Q93. When was your home originally built?**

1. ENTER YEAR: \_\_\_\_\_ (Probe: 1930 or older, 1940s, 1950s etc.)

888. DK

**Q94. Approximately how many square feet is your home?**

1. Enter SQUARE FOOTAGE #: \_\_\_\_\_ (Probe: less than 1,400sq ft, 1,400 to 2,500 sq ft, 888. DK  
2,500 to 3,500 sq ft)



**Q95. What is your age?**

1. Enter YEARS: \_\_\_\_\_ (Probe: under 25, 25 to 35, 35 to 45 etc.)

888. DK

**Q96. What is the highest level of education you have completed? High school diploma or less, Associates degree Bachelors degree, or a Graduate or professional degree?**

1. HIGH SCHOOL DIPLOMA OR LESS
2. SOME COLLEGE
3. ASSOCIATES DEGREE
4. BACHELORS DEGREE
5. GRADUATE OR PROFESSIONAL DEGREE
9. REF

**Q97. Please stop me when I read you household's annual income:**

1. LESS THAN \$20,000
2. \$20,000 TO LESS THAN \$40,000
3. \$40,000 TO LESS THAN \$60,000
4. \$60,000 TO LESS THAN \$80,000
5. \$80,000 TO LESS THAN \$100,000
6. \$100,000 TO LESS THAN \$150,000
7. MORE THAN \$150,000
9. REF

**Q98. What is your ethnicity/race?**

1. White or Caucasian
2. Hispanic/Latino/a
3. Black or African American
4. Asian
5. Native Hawaiian or Other Pacific Islander
6. American Indian or Alaska Native
7. Other [specify] \_\_\_\_\_
8. Refused

## **In-depth Interview Guide for Pool Contractors**

*Screener: Does your firm provide pool maintenance services? May I speak with the owner or supervisor? I am calling about the Pool Pump Rebate program offered by San Diego Gas and Electric. Are you familiar with this program?*

1. How did you learn about the program? **(if not aware of program, skip to Q11)**
2. Did this provide you with enough information or the type of information you needed up front? (If no, probe for how to improve)
3. Is this a good way to get information out to firms like yours – how would you recommend SDG&E keep pool service firms informed about this program?
4. Are you participating in this program this year – are you submitting rebate applications to SDG&E?
5. And did you participate in the program last year? (If firm has dropped out, probe for reasons why)
6. What made you decide to (take part in / not) this program?
7. Overall, what is your opinion of this program? (Probe for reasons why)
  - a. two-speed rebate
  - b. single speed pump rebate
  - c. timeclock
8. Are customers aware of the program?
9. Have you seen the fliers which were mailed out to customers about the program?
10. Were these effective in promoting the program? How could they be improved? **(skip to Q12)**

### **[FOR UNAWARE RESPONDENTS]**

11. This program offers: (give program description). Is this a program that you would be interested in participating in?

### **[FOR ALL]**

12. What is your opinion of the pumps which this program is promoting? (if dissatisfied, probe for better/suggestions)
13. What is your opinion of the timeclock recommendations? (if dissatisfied, probe for better/suggestions)
14. Are the incentives effective? (if dissatisfied, probe for better/suggestions)

15. Overall, what stands out as the programs top strengths and weaknesses?
16. What recommendations do you have for the program for the future?
17. How many pools do you service each year?
18. Typically, how many pumps would need replacing in the course of a year?
19. How many pools do you enter in for rebate applications ... timeclock ...?

## 12.2 MULTI-FAMILY REBATE PROGRAM SURVEYS

### Multi-family Rebate Program Participant Survey Instrument

Hello, my name is \_\_\_\_\_ and I am calling on behalf of [San Diego Gas & Electric / SoCal Gas]. May I speak with the property owner or manager?

This is not a sales call. We're conducting an evaluation of [SDG&E / SCG] multifamily rebate program. This survey is for research purposes only and your input will help [SDG&E / SCG] improve the program.

This research effort will take less than 15 minutes to complete. Is now a good time to conduct this brief interview?

The program offers rebates for the installation of qualifying energy efficient items such as interior and exterior lighting, gas boiler controllers, faucet aerators, low flow showerheads, gas water heaters, gas furnaces, etc.

#### Screening

**S1. Do you recall participating in this program and pursuing or receiving improvements for your property in the past 12 to 18 months?**

1. Yes
2. No (ASK TO SPEAK TO SOMEONE WHO WOULD BE FAMILIAR)
9. Refused (TERMINATE)

**S2. Some building owners applied for a rebate, but then learned that the equipment they purchased did not qualify for the rebate. Did you receive the rebate or did you learn that your equipment was not qualified**

1. RECEIVED REBATE (Go to Q 1.1)
2. APPLICATION REJECTED/DISQUALIFIED (CONTINUE)

#### *D. Disqualified Customers*

**D1. Do you know why the equipment you purchased did not qualify?**

1. YES → Why was that? \_\_\_\_\_
2. NO

**D2. How would you describe your expectations when you sent in your rebate application, would you say you expected your rebate would be approved, you expected it might NOT be approved, or were you not sure?**

1. WOULD BE APPROVED (Go to D3)
2. WOULD NOT BE APPROVED (*FOLLOW-UP D2a*)
3. NOT SURE (*FOLLOW-UP with D2b*)

**D2a. Why did you think your application might not be approved?**

---

**D2b. Why were you not sure?**

---

**D3. Before sending in your rebate, did you do anything to make sure your equipment would be covered by the rebate program?**

- 1 YES
- 2 NO → Go to D5

**D4. What steps did you take before sending in your rebate to make sure your equipment would be covered by the rebate program, did you [READ ALL]**

- 1 Check on-line with rebate program
- 2 Check with the contractor installing the equipment
- 3 Contact a representative from the utility company
- 4 None

**D5. Ideally, who would you contact if you need help in the future on understanding what equipment was eligible for rebates?**

---

**D6. Was there other equipment that you DID receive a rebate for installing?**

- 1 Yes [*continue with remainder of survey*]
- 2 No *Thank and terminate*

When asking (who is this directed to?) the following questions, please refer to what was accomplished in the property at (ADDRESS FOR SAMPLED PROPERTY).

**1.1. Do you recall how you first learned about this program?**

- 1 Received information about program from the utility brochure or bill stuffer
- 2 Read about program on Company Web page
- 3 Contacted by a contractor offering services
- 4 Read about program in the newspaper
- 5 Other (*PLEASE SPECIFY*) \_\_\_\_\_
- 8 Don't Know
- 9 Refused

**1.3 Which of the following features in this program were of interest to you?**

*(READ LIST; Allow multiple responses)*

- 1 Opportunity to reduce energy costs
- 2 Opportunity to receive a rebate on measures installed
- 3 Being able to upgrading the building
- 4 Being able to upgrade tenant units
- 5 Types of improvements available
- 6 (*DO NOT READ*) None of these

**1.4 Before you agreed to participate in the program, which of the following questions, if any, did you need an answer? (*Allow multiple responses*)**

- 1 What is the cost of the installation?
- 2 How much should my utility bills decrease as a result of the installation?
- 3 How do I participate?
- 4 What paperwork is required or what forms do I need to fill out?
- 5 What rebate will I receive?
- 6 How long will it take to get paid?
- 7 What quality are the lights, appliances and other equipment?

- 8 Do the contractors in the program do quality installation work?
- 9 Other (SPECIFY) \_\_\_\_\_
- 10 None

**2.1 Overall, how easy or hard was it for you to fill out the rebate application? Would you say...**

- VERY EASY
- SOMEWHAT EASY
- SOMEWHAT HARD
- VERY HARD

**2.2 At any time did you need to get help filling out the rebate application?**

- 1. YES – → Who did you get help from? \_\_\_\_\_
- 2. NO → GO TO 3.1

**2.3 And who would you like to contact if you needed help in the future on understanding how to fill out an application for a rebate?**

- 1 Utility representative
- 2 Contractor representative
- 3 Other, specify: \_\_\_\_\_

3. Measures Installed and Decision-making

The program offers energy efficiency measures for both common areas and tenant units.

*(SKIP TO Q3.8 IF NO COMMON AREA MEASURES IN SAMPLE INFO)*

**For measures installed in common areas...**

**3.1. The next set of questions is for measures you may have installed in common areas.**

**Our records indicate that you installed the following measures... (FROM DATABASE). Were any of these measures installed in common areas?**

- 1 Yes
- 2 No → Skip to 3.8

**3.2 Did you have to pay for the installation of these measures?**

- 1 Yes
- 2 No, they were offered free of charge → skip to 3.5

**3.3 Was the cost of this installation an issue that you assessed in making your decision to have measures installed in common areas?**

- 1 Yes
- 2 No → skip to 3.5

**3.4. Which of the following best characterizes the way you assessed the cost of this investment?**  
*(READLIST; ACCEPT ONE RESPONSE)*

- 1 Took into account the total cost of the installation
- 2 total cost relative to the energy savings you were told to expect
- 3 the number of years that the investment would take to pay for itself
- 4 the return on investment
- 5 Would not need to judge because cost, to me, is minimal
- 6 Other, PLEASE SPECIFY: \_\_\_\_\_

**3.5 What other factors, beside investment costs, did you consider in deciding to have this / these measures installed?** *(DO NOT READ LIST, ACCEPT ALL THAT APPLY)*

- 1 Repair, maintenance issues
- 2 Installation difficulties
- 3 Quality of product
- 4 Tenant acceptance, aesthetics
- 5 Other (SPECIFY)
- 6 None, no other factors

**3.6 Other than yourself, who was involved in this decision?** *(READ LIST, ENTER ALL THAT APPLY)*

- 1 Property owner
- 2 Property manager



- 3 Supervisor at property management company
- 4 Purchasing manager at property management company
- 7 Other (PLEASE SPECIFY) \_\_\_\_\_

**3.7 What difficulties, if any, were encountered? (RECORD VERBATIM)**

---

**(SKIP TO 4.1 IF NO TENANT AREA MEASURES IN SAMPLE INFO)**

**For measures installed in tenant areas...**

**3.8 Our records indicate that you installed the following measures in tenant-occupied spaces ... (FROM DATABASE). Is this correct?**

- 1 Yes
- 2 No → Skip to 4.1
- 8 Don't Know → Skip to 4.1
- 9 Refused → Skip to 4.1

**3.9 Did you have to pay for the installation of these measures?**

- 1 Yes (continue)
- 2 No, offered free of charge → Skip to 4.1

**3.10 Was the cost of this installation an issue that you assessed in making your decision to have measures installed in common areas?**

- 1 Yes
- 2 No → SKIP TO 3.11

**3.10A Which of the following best characterizes the way you assessed the cost of this investment?**

*(READ LIST: Allow multiple responses)*

- 1 the total cost of the installation

- 2 the total cost relative to the energy savings you were told to expect
- 3 the number of years that the investment would take to pay for itself
- 4 the return on investment
- 5 Did not need to assess because cost, to me, was minimal
- 6 Other, PLEASE SPECIFY: \_\_\_\_\_

**3.11 What other factors, beside investment costs, did you consider in deciding to have this/these measures installed? (Check all that apply)**

- 1 Repair, maintenance issues
- 2 Installation difficulties
- 3 Quality of product
- 4 Tenant acceptance, aesthetics
- 7 Other, PLEASE SPECIFY: \_\_\_\_\_
- 9 None, no other factors

**3.12 Other than yourself, who was involved in this decision? (READ LIST, ENTER ALL THAT APPLY)**

- 1 Property owner
- 2 Property manager
- 3 Supervisor at property management company
- 4 Purchasing manager at property management company
- 7 Other, PLEASE SPECIFY: \_\_\_\_\_

**3.13 What difficulties, if any, were encountered?**

\_\_\_\_\_

4. Satisfaction with Program and Measures Installed

**4.1 On a scale of 1 to 5, with 1 being “not at all satisfied” and 5 being “extremely satisfied.” How satisfied are you with the overall quality of the work completed by the contractor?**

- 5 Extremely satisfied → SKIP TO 4.2
- 4 → SKIP TO 4.2

- 3
- 2
- 1 Not at all satisfied

**4.1A Why did you select that rating?**

---

**4.2 On a scale of 1 to 5, with 1 being “not at all satisfied” and 5 being “extremely satisfied.” How satisfied are you with the performance of the equipment installed by the contractor?**

- 5 Extremely satisfied → SKIP T O 4.3
- 4 → SKIP T O 4.3
- 3
- 2
- 1 Not at all satisfied

**4.2A Why did you select that rating?**

---

**4.3 For installations in tenant units, on a scale of 1 to 5, with 1 being “not at all satisfied” and 5 being “extremely satisfied.” How satisfied are your tenants with the equipment that was installed?**

- 5 Extremely satisfied → SKIP T O 4.3B
- 4 → SKIP T O 4.3B
- 3
- 2
- 1 Not at all satisfied

**4.3A Why did you select that rating?**

---

**4.3B What do tenants like most about the work that was completed?**

---

**4.4 Overall, were your expectations from the program adequately met?**

- 1 Yes
  - 2 No, Please explain why not:
- 

**4.5 Would you recommend this program to the property manager at another facility?**

- 1 Yes
  - 2 No, Please explain why not:
- 

5. Marketing

**5.1 In the future, how would you like to receive information from the utilities about these types of programs? (READ LIST. ACCEPT UP TO 3 ANSWERS)**

- 1 Bill stuffers
- 2 Newspapers
- 3 Radio
- 4 TV
- 5 Utility website
- 6 Contractors or other vendors
- 7 Trade association
- 8 Fax
- 9 E-Mail
- 10 Direct mail
- 999 (DO NOT READ) None of these

**5.3 Please rate each of the following program features or benefits as “not at all important,” “somewhat important,” or “very important.”**

		Not at all important	Somewhat important	Very important	DK
a.	Simple/no paperwork	1	2	3	8
b.	Amount of the Energy Savings	1	2	3	8

c.	No Cost for installation/equipment	1	2	3	8
d.	Quality products	1	2	3	8
e.	Quality Installation work	1	2	3	8
f.	List of all approved-vendors in my area	1	2	3	8

6.Impacts and Recommendations for Improvement

**6.1 Are you in a position to see energy savings results from the equipment installed through the (UTILITY) MF Rebate Program?**

- 1 Yes
- 2 No → SKIP TO 6.2

**6.1A Have you seen decreases in your energy bills for the property at (SAMPLE ADDRESS)?**

- 1 Yes
- 2 No

(IF HVAC OR INSULATION IN SAMPLE, ASK; OTHERWISE SKIP TO 6.3)

**6.2 Have any tenants commented on a change in their comfort level since the HVAC or insulation measures were installed? Did they say it was ...**

- 1 More comfortable
- 2 Less Comfortable
- 3 About the same
- 4 Tenants have not commented

(IF LIGHTING IN SAMPLE, ASK; OTHERWISE SKIP TO 6.4)

**6.3 Have any tenants commented on or being able to see better or less well since the lighting measures were installed? Did they say it was ...**

- 1 Better
- 2 Less
- 3 About the same
- 4 Tenants have not commented

**6.4 Do you have any suggestions for improving this program related to the following:**

		YES	NO	What suggestions do you have for improving
A	Products offered?	1 →	2	
B	Services provided?	1 →	2	
C	Rules/ restrictions?	1 →	2	
D	Communications with you?	1 →	2	
E	Forms / paperwork?	1 →	2	
F	Other aspects of the program	1 →	2	

**6.5 Had you installed any energy efficiency improvements prior to participating in this program?**

- 1 Yes
- 2 No → **SKIP TO 6.6**

**6.5A What energy efficiency improvements had you installed? (Accept Multiple Responses)**

01	Hardwired Fluorescent Fixtures	11	Occupancy Sensors
02	Hardwired Fluorescent porch/outdoor lights	12	Photocell controls for exterior lighting
03	Screw in Compact Fluorescent Lamps (CFLs)	13	High efficiency boilers
04	Energy Star ceiling fans	14	High efficiency water heaters
05	Energy Star clothes washer	15	High efficiency air conditioners or heat pumps
06	Energy Star Dishwashers	16	Natural gas water heater or boiler controllers
07	Energy Star programmable thermostats	17	Solar water heating
08	High performance dual-paned windows	18	Solar photovoltaic (PV) panels
09	Attic or wall insulation	19	Cool roofs
10	High efficiency exit signs	20	Other, specify:

**6.6 Do you have any plans to make any energy efficiency improvements to this or other properties in the next two to three years?**

- 1 Yes
- 2 No → **SKIP TO 6.7**

**6.6A What energy efficiency improvements do you plan to install in Tenant-occupied Spaces?**

*(DO NOT READ; Accept multiple responses)*

- 01 Compact Fluorescent Lamps (CFLs)
- 02 Hardwired fluorescent fixtures
- 03 Energy Star ceiling fans
- 04 Energy Star Clothes Washers
- 05 Energy Star Dishwashers
- 06 Energy Star Programmable Thermostats
- 07 Energy Star Refrigerators
- 08 High efficiency window or through-wall air conditioners
- 09 High performance dual-paned windows
- 10 Attic or wall insulation
- 11 Other: SPECIFY \_\_\_\_\_
- 999 None in Tenant-occupied spaces

**6.6B What energy efficiency improvements do you plan to install in Common Areas?**

*(DO NOT READ; Accept multiple responses)*

- 01 Compact Fluorescent Lamps (CFLs)
- 02 Hardwired Fluorescent Indoor lighting
- 03 Hardwired Fluorescent or high efficiency outdoor lighting
- 04 Energy Star Coin-operated clothes washers
- 05 High efficiency Furnaces
- 06 High efficiency Central Boilers
- 07 High efficiency Water Heaters
- 08 High efficiency Air Conditioning

- 09 Attic or wall insulation
- 10 High efficiency exit signs
- 11 Occupancy sensors for interior lighting
- 12 Photocell controls for exterior lighting
- 13 Natural gas water heater or boiler controllers
- 14 Solar water heading
- 15 Solar photovoltaic (PV) panels
- 16 Cool roofs
- 20 Other: SPECIFY \_\_\_\_\_
- 21 None in Common Areas

**6.7 Would you be interested in incentives that encouraged replacement of Refrigerators?**

- 1 Yes
- 2 No

**6.8 Would you be interested in incentives that encouraged replacement of Coin operated clothes washers?**

- 1 Yes
- 2 No

**6.9 Do you want to see incentives put in place for any other technologies?**

- 1 Yes, please specify: \_\_\_\_\_
- 2 No

**7.1 How many apartment units are located in the building or buildings at the address we have been talking about (PROMPT. That is at: INSERT SAMPLE ADDRESS)?**

\_\_\_\_\_ (RECORD # UNITS)

888 Don't Know



**7.2 Does the building at (INSERT SAMPLE ADDRESS) have other addresses?**

- 1 Yes → What are the other street addresses for that building? \_\_\_\_\_
- 2 No

**7.3 How many stories is this building(s)**

\_\_\_\_\_ (RECORD # STORIES)

888 Don't Know

**7.4 Do you, or your firm... (READ LIST)?**

- 1 Own and manage this property?
- 2 Manage this property only?
- 3 Own this property but not manage it?
- 999 (DO NOT READ) Refused

**7.5 How many years have you been in your current position at this property?**

\_\_\_\_\_ (RECORD # YEARS)

888 Don't Know

999 Refused

**7.6 In total, how many multifamily residential properties in California do you, or your firm:**

- a. Own but do not manage? \_\_\_\_\_ (RECORD #)
- b. Own and manage? \_\_\_\_\_ (RECORD #)
- c. Manage only? \_\_\_\_\_ (RECORD #)

**7.6A How many years have you been in control of other complexes?**

\_\_\_\_\_ (RECORD # YEARS)

○ Don't Know

**Thank you very much for participating in this survey. Would you like to have (UTILITY NAME) send you information about energy efficiency programs currently available to MF Property Managers?**

- 1 Yes
- 2 No

*(IF YES, VERIFY NAME AND ADDRESS FOR MAILING.)*

# Multi-family Rebate Program Nonparticipant Survey Instrument

Hello I am \_\_\_\_\_ from SOCAL Gas. May I speak with the property owner or manager?

This is not a sales call. We're conducting an evaluation of the SO CAL GAS multifamily rebate program. This survey is for research purposes only and your input will help SO CAL GAS improve the program.

This research effort will take less than 15 minutes to complete. Is now a good time to conduct this brief interview?

The rebate program offered items such as outdoor lighting, indoor lighting, appliances, heating and cooling equipment, insulation, etc. Your input will help SO CAL GAS improve this program.

**S1. First, how many of the buildings that you manage have five or more units?**

\_\_\_\_\_ (ENTER # OF BUILDINGS) (IF NONE, DK OR REF – TERMINATE)

**(IF ONE BUILDING IN S1: When answering the following questions, please refer to this building.)**

**(IF MORE THAN ONE BUILDING IN S1: When answering the following questions, please refer to the building with five or more units that you most actively manage.)**

**1.1. Are you aware of the SO CAL GAS Multifamily Rebate Program which provides incentives for installing energy efficient measures in multi-family properties?**

1 Yes

2 No → GO TO 1.3

**1.1A. Do you recall how you first learned about this program? Did you... yes/no**

Received information about program from the utility brochure or bill stuffer? \_\_\_\_\_

Read about program on Company Web page \_\_\_\_\_

Contacted by a contractor offering services \_\_\_\_\_

Read about program in the newspaper \_\_\_\_\_

Other (PLEASE SPECIFY) \_\_\_\_\_

**1.3 This program offers rebates for MF(multi-family) property managers who work with contractors to install a variety of energy-savings measures, including such things as high efficiency lighting,**

**appliances, water heaters and boilers. Which of the following features would interest you in this program?**

*(READ LIST; ENTER ALL THAT APPLY)*

- 1 Opportunity to reduce energy costs
- 2 Opportunity to receive a rebate on measures installed
- 3 Being able to upgrading the building
- 4 Being able to upgrade tenant units
- 5 Types of improvements available
- 6 (DO NOT READ) None of these

**1.4. What questions would you need to have answered before you agreed to participate in a program such as this? (DO NOT READ; ENTER ALL THAT APPLY)**

- 01 What is the cost of the installation?
- 02 How much will the utility bills go down as a result of the installation?
- 03 How do I participate?
- 04 What paperwork is required or what forms do I need to fill out?
- 05 What rebate will I receive?
- 06 How long will it take to get paid?
- 07 Are the lights, appliances and other equipment good quality?
- 08 Do the contractors in the program do quality installation work?
- 09 Other (SPECIFY) \_\_\_\_\_
- 10 None

**2.1. Which of the following measures do you think you would be interested in installing in your tenant-occupied spaces? (READ LIST. ENTER ALL THAT APPLY)**

**2.3. Which of the items just mentioned would you be most likely to want to install?**

	<b>TENANT OCCUPIED SPACES</b>	<b>2.1</b>	<b>2.3 (CHOOSE ONE from 2.1)</b>
01	Hardwired Fluorescent Fixtures in tenant spaces with rebate of \$50 per fixture		
02	Hardwired Fluorescent porch lights with rebate of \$30 per fixture		

03	Screw in Fluorescent lamps with a rebate of up to \$6 per lamp		
04	Energy Star ceiling fans with a rebate of \$20 per fixture.		
05	Energy Star clothes washers with rebate of \$75 per unit		
06	Energy Star Dishwasher with rebate of \$30 per unit		
07	High performance dual-paned windows with a rebate of \$0.50 per square foot		
08	Attic or wall insulation with a rebate of \$0.15 per square foot		
09	Low-flow showerheads with a rebate of \$5.00 each		
10	Faucet aerators with a rebate of \$1.25 each		
11	(DO NOT READ) None of the above		

2.2. Which of the following measures do you think you would be interested in installing in your **common areas**? (READ LIST. ENTER ALL THAT APPLY)

2.3. Which of the items just mentioned would you be **most likely** to want to install?

	COMMON AREAS	2.2	2.3 (CHOOSE ONE from 2.1)
01	High efficiency exit signs with a rebate of \$35 per sign		
02	Screw in Fluorescent lamps with a rebate of up to \$6 per lamp		
03	Occupancy Sensors with a rebate of \$10 per sensor		
04	Photocells with a rebate of \$10 per cell		
05	High performance dual-paned windows with a rebate of \$0.50/ per square foot		
06	High efficiency boilers with rebates up to \$1,500 per unit		
07	High efficiency water heaters with rebates up to \$500 per unit		
08	High efficiency central air conditioners with rebates up to \$425 per unit		
09	Energy efficient central heat pumps with rebates up to \$500 per unit		
10	Coin operated clothes washers with rebate of \$150 per unit		

11	Natural gas water heater or boiler controllers with rebates up to \$750 or \$1500 per unit		
12	(DO NOT READ) None of the above		

**2.4. For (ITEM CHOSEN IN Q2.3) Which of the following best characterizes the way in which you would assess the cost of this investment? (READ LIST. CIRCLE ONE RESPONSE)**

- 1 Look at the total cost of the installation
- 2 Look at the total cost relative to the energy savings you were told to expect
- 3 Look at the number of years that the investment would take to pay for itself
- 4 Look at the return on investment
- 5 Would not need to judge because cost would be minimal
- 7 Other (PLEASE SPECIFY) \_\_\_\_\_

**2.5 What other factors, besides investment costs, would you consider in deciding to have this / these measures installed?**

- 1 Repair, maintenance issues
- 2 Installation difficulties
- 3 Quality of product
- 4 Tenant acceptance, aesthetics
- 7 Other (PLEASE SPECIFY) \_\_\_\_\_
- 8 None, no other factors

**2.6. Aside from yourself, who else would be involved in this decision? (READ. Mult. Resp.)**

- 1 Property owner
- 2 Property manager
- 3 Supervisor at property management company
- 4 Purchasing manager at property management company
- 7 Other (PLEASE SPECIFY) \_\_\_\_\_

**2.7. How many bids would you seek for this work?**

- 1 One bid
- 2 2 bids
- 3 3 bids
- 4 4 or more bids
- 7 Other (PLEASE SPECIFY) \_\_\_\_\_

**2.8. Would you request a list of contractors working with this program from the utility?**

- 1 Yes →ASK 2.9
- 2 No

**2.9. What difficulties, if any, might you expect to encounter?**

---

**If 2.1 and 2.2= Not Interested in any of the measures ask 2.10 & 2.11**

**2.10. What is the major reason you have not selected any of the measures I read to you earlier? Is it because...(READ LIST)?**

- 1 I am just not interested in participating in the utility program → GO TO Q2.11
- 2 I am interested in the program, but none of the measures interest me → GO TO Q2.12
- 3 I am interested in the measures but the rebates are not big enough → GO TO Q4.1

**2.11. Why are you not interested in this utility program? Is it because...?**

*(READ LIST AND ENTER ALL THAT APPLY)*

- 01 I have done all I can to save energy in my buildings
- 02 I have had bad experiences with previous utility programs
- 03 I do not see the investment of time and money as being worthwhile
- 04 I do not have time to devote to this program

- 05 My energy costs do not constitute a large enough cost to warrant concern
- 06 I have no desire to make these investments in tenant spaces
- 07 I have already installed the eligible measures
- 08 Other (PLEASE SPECIFY) \_\_\_\_\_

**2.12. Are there other energy saving measures that you would be interested in if they were offered in this program? (IF YES:) What are they?**

- 01 Yes
- 02 No → **GO TO 4.1**

**2.12a. What are they?**

- 01 Energy Star refrigerators
- 02 Energy Star window or through-wall air conditioners
- 03 Energy Star coin-operated clothes washers
- 04 Solar domestic water heaters
- 05 Photovoltaic (“PV”) panels
- 06 Cool roofs
- 07 Other (SPECIFY)
- 08 No, not interested

**4.1. Which of the following is your preferred means of getting information about these types of programs from the utilities? (READ LIST. ACCEPT UP TO 3 ANSWERS)**

- 01 Bill stuffers
- 02 Newspapers
- 03 Radio
- 04 TV
- 05 Utility website
- 06 Contractors or other vendors
- 07 Trade association

- 08 Fax
- 09 E-Mail
- 10 Direct mail
- 11 (DO NOT READ) None of these

**4.3. Please rate each of the following program features or benefits as “not at all important,” “somewhat important,” or “very important.”**

		Not at all important	Somewhat important	Very important	DK
a.	Simple/no paperwork	1	2	3	8
b.	Amount of the Energy Savings	1	2	3	8
c.	No Cost for installation/equipment	1	2	3	8
d.	Quality products	1	2	3	8
e.	Quality Installation work	1	2	3	8
f.	List of all approved-vendors in my area	1	2	3	8

**5.1. Have you installed any energy efficiency improvements recently that were outside of any utility- or State-sponsored energy efficiency program?**

- 1 Yes
- 2 No → GO TO 5.2

**5.1a. What energy efficiency improvements had you installed? What others?**

*(DO NOT READ: ACCEPT MULTIPLE RESPONSE—CONTINUE TO PROBE)*

- 01 Hardwired Fluorescent Fixtures
- 02 Hardwired Fluorescent porch/outdoor lights
- 03 Screw in Compact Fluorescent Lamps (CFLs)
- 04 Energy Star ceiling fans
- 05 Energy Star clothes washers



- 06 Energy Star Dishwashers
- 07 Energy Star programmable thermostats
- 08 High performance dual-paned windows
- 09 Attic or wall insulation
- 10 High efficiency exit signs
- 11 Occupancy Sensors
- 12 Photocell controls for exterior lighting
- 13 High efficiency boilers
- 14 High efficiency water heaters
- 15 High efficiency air conditioners or heat pumps
- 16 Natural gas water heater or boiler controllers
- 17 Solar water heating
- 18 Solar photovoltaic (PV) panels
- 19 Cool roofs

**5.2. Do you have any plans to make any energy efficiency improvements to this or other properties in the next two to three years?**

- 1 Yes
- 2 No → **GO TO Q5.3**

**5.2A. What energy efficiency improvements do you plan to install in Tenant-occupied spaces?**  
(DO NOT READ; ENTER ALL THAT APPLY)

- 01 Compact Fluorescent Lamps (CFLs)
- 02 Hardwired fluorescent fixtures
- 03 Energy Star ceiling fans
- 04 Energy Star Clothes Washers
- 05 Energy Star Dishwashers
- 06 Energy Star Programmable Thermostats
- 07 Energy Star Refrigerators

- 08 High efficiency window or through-wall air conditioners
- 09 High performance dual-paned windows
- 10 Attic or wall insulation
- 11 Other, specify: \_\_\_\_\_
- 12 None in Tenant-occupied spaces

**5.2B. What energy efficiency improvements do you plan to install in Common Areas?**

*(DO NOT READ; ENTER ALL THAT APPLY)*

- 01 Compact Fluorescent Lamps (CFLs)
- 02 Hardwired Fluorescent Indoor lighting
- 03 Hardwired Fluorescent or high efficiency outdoor lighting
- 04 Energy Star Coin-operated clothes washers
- 05 High efficiency Furnaces
- 06 High efficiency Central Boilers
- 07 High efficiency Water Heaters
- 08 High efficiency Air Conditioning
- 09 Attic or wall insulation
- 10 High efficiency exit signs
- 11 Occupancy sensors for interior lighting
- 12 Photocell controls for exterior lighting
- 13 Natural gas water heater or boiler controllers
- 14 Solar water heading
- 15 Solar photovoltaic (PV) panels
- 16 Cool roofs
- 17 Other, specify: \_\_\_\_\_
- 18 None in Common Areas
- 88 Don't Know

**5.3. Would you be interested in incentives that encouraged replacement of Refrigerators?**

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refused

**5.4. Would you be interested in incentives that encouraged replacement of Coin operated clothes washers?**

- 1 Yes
- 2 No

**6.1. How many apartment units are located in the building or buildings at the address we have been talking about (Prompt: that is at: (INSERT ADDRESS)?**

\_\_\_\_\_ (RECORD # UNITS)

88. Don't Know

**6.2. How many stories is the building(s) at that address?**

\_\_\_\_\_ (RECORD # STORIES)

88 Don't Know

**6.3. Do you, or your firm... (READ LIST)?**

- 1 Own and manage this property?
- 2 Manage this property only?
- 3 Own this property but not manage it?

**6.4. In total, how many multifamily residential properties in [Utility Service Areas] do you, or your firm:**

- 1. Own, but do not manage? \_\_\_\_\_(RECORD #)
- 2. Own and manage? \_\_\_\_\_(RECORD #)
- 3. Manage only? \_\_\_\_\_(RECORD #)

**6.5. How many years have you been in your current position at this property?**

\_\_\_\_\_ (RECORD # YEARS)

**6.5B. How many years have you been in control of other complexes?**

\_\_\_\_\_ (RECORD # YEARS)

i. Don't Know

ii.

**Thank you very much for participating in this survey. Would you like to have your utility company send you information about energy efficiency programs currently available to MF Property Managers?**

1 Yes

2 No

*(IF YES, VERIFY NAME AND ADDRESS FOR MAILING.)*

# Multi-family Rebate Program Contractor Survey Instrument

## INTRODUCTION

Hello, my name is \_\_\_\_\_ and I am working on a project with SCG to provide feedback on the Multifamily Energy Efficiency Rebate Program. Our records indicate that your firm is participating in this program and I wonder I might have a few minutes of your time to learn about your experiences with this program. Any information you provide will be strictly confidential, and will be used to improve the program in the future.

**Is this a good time to talk, or is there a better time when I can call back?**     *callback time*

**My records show you have submitted applications for projects to receive incentives under the Multifamily Energy Efficiency Rebate program. Is this correct?**

Yes

No

Don't know (ask to speak with someone who would know)

## Contractor's History with Program

**1. What type of facilities have you completed projects with under this program?**

apartment buildings  
condominium complexes  
mobile home parks  
Don't know

**1a. Approximately how many project have you completed under this program?**

**2. (If jobs completed in apartment buildings) Roughly speaking, what proportion of your projects in apartment buildings for this program were in tenant-occupied areas and what proportion would you say were in common areas?**

Tenant occupied: \_\_\_\_\_%

Common spaces \_\_\_\_\_%

**Don't know**

**3. What types of equipment did you install in the projects you have submitted to the Multifamily Rebate program?**

CFLs  
interior lighting fixtures  
exterior lighting fixtures  
Occupancy sensors or photocells

air conditioning systems or heat pumps  
 showerheads and/or aerators  
 clothes washers  
 dishwashers  
 boilers  
 storage water heaters  
 water heater controllers  
 furnaces  
 insulation  
 other \_\_\_\_\_

**4. Are you planning to continue participating in this program in 2008?**

No  
 Yes  
 Unsure [skip to Q6]

**4a. [if no] Why aren't you planning to submit any additional projects to the program?**

\_\_\_\_\_

Satisfaction with Program

**5. On a scale of 1 to 10 with 1 being "not at all satisfied" and 10 being "very satisfied", how satisfied are you with your firm's experiences in the Multifamily Energy Efficiency Rebate program this year?**

*Not satisfied* *Very satisfied*

1	2	3	4	5	6	7	8	9	10	NA
---	---	---	---	---	---	---	---	---	----	----

**6. Why did you give the program this rating?**

\_\_\_\_\_

**7. What do you see as the program's main program strengths or benefits?**

\_\_\_\_\_

**8. What would you say are its main drawbacks or weaknesses?**

\_\_\_\_\_

Notification

**9. How did your firm learn about the Multifamily Rebate Program?**

utility website

mailing from utility  
 utility ad  
 word of mouth – other contractors  
 trade association  
 client (apartment owner, HUD, etc.)  
 work on previous utility programs  
 Other (specify) \_\_\_\_\_  
 Don't know

**9a. If your firm has worked previously under this program, how long has your program been doing work under this program?**

**10. (for gas contractors and plumbers) What improvements, if any, would you suggest in the ways that firms like yours are notified about the program?** [Probe for specific trade associations, newsletters, etc.]

\_\_\_\_\_

Marketing

**11. How do the majority of your clients learn about the program?**

From our firm  
 From utility  
 Other  
 Don't know

**12. How does your firm market this program?**

\_\_\_\_\_

**13. Are there particular features or benefits that you emphasize when marketing this program?**

\_\_\_\_\_

Incentives

**15. On a scale of 1 to 10 where 1 is “not effective” and 10 is “very effective”, how effective would you say the incentives offered through the MF program are in influencing facility owners or landlords in deciding to choose higher efficiency options for multifamily properties?**

*Not effective*

*Very effective*

1	2	3	4	5	6	7	8	9	10	NA
---	---	---	---	---	---	---	---	---	----	----

(Probe for why or why not)

\_\_\_\_\_

16. Are there variations across projects types or facility types in terms of how adequate the incentives are for encouraging energy efficiency?

---

Payment Process

17. On a scale of 1 to 10 with 1 being “not at all satisfied” and 10 being “very satisfied”, how satisfied are you with the process used in the MF Rebate Program to apply for payment? Using the same scale how would you rate the application form itself? Again On a scale from 1 to 10, how would you rate the amount of time it takes for you to get paid?

*Not satisfied*

*Very satisfied*

	1	2	3	4	5	6	7	8	9	10	NA
application process											
application form											
time it takes to process payment											

18. Do you have any specific recommendations for ways this could be improved?(probe on reaction. if reservation system mentioned, probe on this. )

---

Impact on Firms’ Business

19. What effect, if any, has the Multifamily Rebate program had on the type of jobs you are doing; that is, has it affected the number of jobs you do in multifamily facilities, has it changed the proportion of jobs in which you install high efficiency measures, has it led you to diversify your business in any way?

---

20. Are there any energy efficiency upgrades that are not now covered the program that you would especially like to see included in the future?

---

[Probes: Do you currently offer this type of service/equipment to your customers? How would having this included in the program improve business for you?]

---



**21. Are there any marketing materials or other types of support that the utilities could provide that would help you achieve these projections?**

---

Suggestions

**22. Are there any other ways in which the program could be changed to better support businesses like yours in promoting energy efficient products or services?**

---

**23. Is there any way in which you would like to see SCG do additional or different marketing of the program or of the measures that are eligible for rebates?**

---

MARKET / FIRM CHARACTERIZATION

**24. What type of contracting or service business is your firm in?**

ESCO  
electrical contractor  
HVAC contractor  
plumber  
Other \_\_\_\_\_

**25. How many offices and employees do you have (in California)?**

offices \_\_\_\_\_

employees \_\_\_\_\_

**26. Do you have offices in other states as well?**

Yes  
No

**27. In a typical year, approximately how many multifamily facilities do you work on in California?**

\_\_\_\_\_

**Thank you for your time. Your assistance will help SCG in making decisions for the program's future. We appreciate your contributions and input.**

## Multi-family Rebate Program In-depth Interview Guide for Property Owners

*Screener: Hello, I am calling from Energy Market Innovations. We are working with SCG to provide them with feedback that will help them improve their energy efficiency programs for MF properties. May I please speak with the owner or property manager for this facility?*

*(Confirm) -- Are you the person who is primarily responsible for decisions related to investments in energy efficiency?*

### Familiarity with Program

1. Are you familiar with the Multifamily Energy Efficiency Rebate Program?

Y/N

[If NO: Explain the program ... then skip to Q3]

### Program Participation and Experiences

2. Have you ever participated in this program?

Y/N

2a. If YES: When did you participate in this program?

2b. If YES: What types of measures did you have installed under this program?

2c. If YES: On a scale of 1-10, with a 1 being “not at all satisfied,” and 10 being “completely satisfied,” how would you rate your experiences with this program?

2d. If score is <7, ask: “Why did you give your experience this score?”

### Market Conditions

3. How would you describe the MF market at this point? Is it a lessor’s market, or a tenant’s market?

4. What other important trends are driving the MF property management business at this time? Do these trends affect general interest in energy efficiency opportunities?

5. Obviously, a priority is to keep units rented. How do you see energy efficiency working for or against improving the competitiveness of your property?

### **Perceived Opportunities for Energy Efficiency**

6. What steps have you already taken to increase the energy efficiency within this property?

6a. Common-area improvements?

6b. Tenant-area improvements?

7. On a scale of 1-10, with 1 being “very little opportunity” and 10 being “tremendous opportunity,” how would you rate the potential for improving energy efficiency within your facility?

8. What do you feel are the major opportunities that would be worth pursuing?

8a. Common-area improvements?

8b. Tenant-area improvements?

### **Barriers**

9. What factors prevent you from addressing these opportunities at this time?

10. Do you pay electric bills or do tenants? How does this influence your interest in energy efficiency?

11. Do you have contractors that you regularly work with and would be able to address energy efficiency issues?

11a. If NO: Is finding and selecting a contractor to work with a barrier to pursuing efficiency opportunities?

12. What other drivers affect your interest in upgrading the energy efficiency of your building?

13. We understand that the quality of the installations is important. What steps could a program such as this take to ensure that you were completely satisfied with the installation?

14. Is gaining access to tenant spaces an issue that prevents upgrading the efficiency of tenant units?

### **Interest in Program**

15. Is this program something that you might be interested in learning more about?

### **Sources of Information**

16. What is the most effective way to get information to you regarding energy efficiency programs and/or opportunities?

17. Do you belong to trade associations or other professional organizations?

### **Background Information**

18. How long have you worked at this facility? Do facility managers such as yourself typically move to new properties and, if so, how frequently?

19. How large is this facility (# units)

### **Suggestions**

20. Do you have any additional suggestions for how SCG could promote energy efficiency within the MF market?

## Multi-family Rebate Program In-depth Interview Guide for Property Managers

*Screener: Hello, I am calling from Energy Market Innovations. We are working with SCG, to provide them with feedback that will help them improve their appliance recycling program. May I please speak with the owner or a manager of your company? We are conducting 15 minute in-depth telephone interviews to gain a better understanding of the appliance recycling market in and around San Diego. Any information you provide will be strictly confidential and will only be used to improve the utility's program in the future. Is now a good time to talk, or is there a better time when I can call back? [note callback time]*

1. Do you or does your company offer appliance (or just refrigerator-freezer?) recycling/ disposal/ pickup of old appliances?
2. Can you please explain the type of service you offer?
3. What do customers typically do with their old appliance they are replacing?
4. What are the possible options a customer/ individual has if they want to replace or get rid of an old appliance?
5. Are their major players who are responsible for picking up used appliances?
6. What do you do with an appliance after picking it up?
7. (If sold/ given to another party) Do you know what they do with it?
8. Do you know the ultimate destination of the appliance? (Is it refurbished, resold, sold for scrap, taken abroad to be sold, etc.)
9. Do you charge a fee or pay customers for picking up an old appliance?
10. Do customers know what you do with the appliance?
11. Why do you think customers decide to have you pickup their appliance/ what are the primary reasons?

12. How quickly are you typically able to pick up the appliance after a customer requests the service?
  
13. Does the appliance have to be working or in a certain condition when picked up?
  
14. Are there any other issues you can think of concerning appliance recycling that we have not yet discussed?

## 12.3 MOBILE HOME PROGRAM SURVEYS

### Mobile Home Program Participant Survey (Park Managers) Instrument

Hi, my name is \_\_\_ and I'm calling on behalf of Southern California Gas. May I speak to the manager of the \_\_\_\_\_ Mobile Home Park?

We are conducting research to assist So Cal Gas to better serve its customers. This brief survey will take about five minutes and I can assure you that we are not selling anything.

May I conduct this brief survey with you now?

**Q1. Do you recall working with a company called, American Synergy to bring the Comprehensive Mobile Home Program to your park community?** (Synergy provided free improvements to the homes in this mobile home park to reduce energy use?)

1. Yes

2. No → Could you give me the name and phone number of the person who did work with Synergy? \_\_\_\_\_ [get name and phone and call that person]

**Q2. How did you first hear about the Comprehensive Mobile Home Program?**

- American Synergy
- Other park managers
- Resident mentioned it to me
- Event or meeting attended by a So Cal Gas representative
- So Cal Gas website
- Made phone call to So Cal Gas
- Friend or colleague
- Equipment vendor or installer, or other professional
- Other (specify) \_\_\_\_\_
- Don't know/don't remember
- Refused

**Q3. Have you ever participated in a utility sponsored energy program?**

1. Yes

2. No

[If Q3 = yes]

**Q4. Can you recall the name of the program?** \_\_\_\_\_

**Q4a. Approximately how many years ago did you participate in that program?** \_\_\_\_\_ years

**Q5. Regarding your decision to let American Synergy offer the Comprehensive Mobile Home program, could you make that decision yourself or did you have to consult a community board, the park owners, or someone else?**

- Myself
- Community board
- Park owners
- Other, specify \_\_\_\_\_
- Don't Know
- Refused

**Q6. Park Managers agree to participate in programs for different reasons. Please tell me the reasons you agreed to participate in the Comprehensive Mobile Home program. (Do not read, check all that apply).**

- To help residents save energy or money
- Because it was free
- Because my role was simple
- Because you had a good experience with another [utility] program.
- Because the utility sponsored the program.
- To help the environment
- Other (specify)
- Don't know
- Refused

**Q7. Was there anything that raised questions or concerns about the program?**

1. Yes
2. No
3. DK

[if Q7 = Yes]

**Q8. What were your concerns? (Probe to code; check all that apply)**

- Time involved/ possible delays
- Incentives not enough
- Difficulty of participating
- Hard time getting approvals or getting everyone on board
- Confusing
  - Hard to do things a new way
  - Concern the measure might be difficult to maintain
- Concern about quality of installer
- Concern the measure won't save enough money to warrant the effort
- Concern about strangers coming into resident's homes
- Saving money on my energy bill is not important
- Concerns about damage that might be caused by workers or measures
- Other, Specify: \_\_\_\_\_
- Don't Know
- Refused

**Q9. Thinking about how well you were prepared for what would happen in your park, using a five-point scale, where 1 is not at all clear and 5 is very clear. How clear was the information you received about:**



Expectations for your role in the program \_\_\_\_\_  
 On how residents could apply to participate \_\_\_\_\_  
 On what measures would be installed \_\_\_\_\_  
 On the energy savings residents might expect from the improvements made to their homes \_\_\_\_\_  
 On how long it would take to make the improvements \_\_\_\_\_  
 That American Synergy is a contractor for the utility \_\_\_\_\_

**Q10. How satisfied were you with the following aspects of program participation? Also, on a five-point scale, where 1 is not at all satisfied and 5 is very satisfied. How satisfied were you with ...**

The way American Synergy staff treated residents \_\_\_\_\_  
 The way American Synergy staff cleaned up after working \_\_\_\_\_  
 The energy savings from the improvements \_\_\_\_\_  
 The comfort of homes since the improvements were made \_\_\_\_\_  
 Your level of involvement with the program \_\_\_\_\_  
 The program overall \_\_\_\_\_

Q10a. [If respondent is dissatisfied (a rating of "1" or "2")

**Why were you dissatisfied?**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Q11. Did American Synergy hold an "Open-House" for your park, in which they described the Comprehensive Mobile Home program to residents?**

1. Yes
2. No
3. DK

[If Q11 = Yes]

**Q11a. Did the open house clearly introduce residents to the measures that would be installed in their homes if they were to participate?** \_\_\_\_\_

**Q11b Did the open house help residents to feel more comfortable with the American Synergy technicians that install the measures?** \_\_\_\_\_

**Q11c. Approximately what percent of residents attended?** \_\_\_\_\_ %

**Q11d. In what ways [if any] could American Synergy improve its open house presentation meetings to recruit more customers to sign up for the program?**

---

**Q12. Would you say that you were closely involved, somewhat involved, or not at all involved with American Synergy as they delivered the program in your community?**

1. Closely involved GO TO Q13)
2. Somewhat involved (GO TO Q15)
3. Not at all involved

**Q13. Can you please describe your involvement in the program, beyond allowing American Synergy to hold an open-house in your park?**

**Q14. Thinking back on the things that American Synergy did to reach residents, are there any actions that seemed most effective in getting residents to participate and why?**

---

---

**Q15. Which of the following would you or the park community be able to provide to help a program like this reach residents in the future:**

- Using Mobile Home park letterhead for announcements? \_\_Y \_\_N \_\_DK
- Using closed-circuit park television station to advertise? \_\_Y \_\_N \_\_DK
- Asking residents whether they would like to sign up for the program as they came into office to pay their monthly fees? \_\_Y \_\_N \_\_DK
- Do you have any other ways? \_\_\_\_\_

**Q16. Thinking of the benefits residents obtained from the program: Do you think the program is very, somewhat, or not at all beneficial?**

- very beneficial
- somewhat beneficial
- not at all beneficial
- DK

**Q17. How would you describe the reputation that American Synergy has among Mobile Home Park communities? (read list)**

- Very good
- Somewhat good
- Not at all good
- DK

**Q18. Do you think that residents would be more, less or just as likely to participate in a program like this if they knew that SO CAL GAS were the sponsor of the program?**

- more likely
- less likely
- just as likely
- DK

**Q19. How many years have you been manager at this park? \_\_\_\_\_ (years)**

**Q20. How many homes are in your park? \_\_\_\_\_**

**Q21. How old is the park? \_\_\_\_\_**

**And those were all the questions I have, thank you very much for your time and help.**

## Mobile Home Program Nonparticipant Survey (Park Managers) Instrument

Hi, my name is \_\_\_ and I'm calling on behalf of Southern California Gas. May I speak to the manager of the \_\_\_\_\_ Mobile Home Park?

We are conducting research to assist So Cal Gas to better serve its customers. This brief survey will take about 5 minutes and I can assure you that we are not selling anything.

May I conduct this brief survey with you now?

### Have you ever heard of American Synergy or the Comprehensive Mobile Home Program?

1. Yes
2. No

[If Q1 = Yes]

### How did you hear of American Synergy or the Comprehensive Mobile Home Program?

- Synergy
- Other park managers
- Resident mentioned it to me
- Event or meeting attended by a So Cal Gas representative
- So Cal Gas website
- Made phone call to So Cal Gas
- Friend or colleague
- Equipment vendor or installer, or other professional
- Other (specify)
- Don't know/don't remember
- Refused

### Q3 Have you ever participated in a utility sponsored energy program?

1. Yes
2. No

[If Q3 = yes]

Q3a. Can you recall the name of the program? \_\_\_\_\_

Q3b. Approximately how many years ago did you participate in that program? \_\_\_\_\_ (years)

The Comprehensive Mobile Home Program offers free energy efficiency improvements to mobile homes. The program obtains permission from the park management to offer the program to residents and then makes

improvements to the Air Conditioning and other energy systems for homes who sign up for the services. The service of a home takes about 1 – 2 hours.

**Q4. If a program such as described were offered to your park, would you be able to make a decision yourself to allow the program to be offered in your park, or would you have to consult a community board, the park owners, or someone else?**

Myself  
Community board  
Park owners  
Other, specify  
Don't Know  
Refused

**Q5. Which of the following would you or the park community be able to provide to help a program such as I described reach residents in the future:**

- Using Mobile Home park letterhead for announcements? \_\_Y \_\_N \_\_DK
- Using closed-circuit park television station to advertise? \_\_Y \_\_N \_\_DK
- Asking residents whether they would like to sign up for the program as they came into office to pay their monthly fees? \_\_Y \_\_N \_\_DK
- Do you have any other ways? \_\_\_\_\_

**Q6. Do you have any concerns about participating in a program such as the one described above?**

1. Yes
2. No
3. DK

[If Q6 = Yes]

**Q6a. What are your concerns?** (Probe to code; check all that apply)

Time involved/ possible delays  
Incentives not enough  
Difficulty of participating  
Hard time getting approvals or getting everyone on board  
Confusing  
Hard to do things a new way  
Concern the measure might be difficult to maintain  
Concern about quality of installer  
Concern the measure won't save enough money to warrant the effort  
Concern about strangers coming into resident's homes  
Saving money on my energy bill is not important  
Concerns about damage that might be caused by workers or measures  
Other, Specify: \_\_\_\_\_  
Don't Know  
Refused

**Q7. Do you think that residents would be more likely or less likely to participate in a program like this if they knew that SO CAL GAS were the sponsor of the program?**

more likely  
less likely  
no effect  
DK

**Q8. Programs such as these find it difficult to get all of the residents to participate. If you were compensated for your time, would you be very willing, somewhat willing or not at all willing to assist in the recruitment of residents for this program?**

Very willing  
Somewhat willing  
Not at all willing

**Q9. If a reward system were established that offered prizes based on the level of participation of your park in the program, what would be the best way to structure that reward. (read list)**

Offer my staff the prizes  
Establish prizes that could be given to the park in common  
Provide a small monetary prize for each participant  
Or some other way \_\_\_\_\_

**Q10. How many years have you been manager at this park? \_\_\_\_\_ (years)**

**Q11. How many homes are in your park? \_\_\_\_\_**

**Q12. How old is the park \_\_\_\_\_**

**And those were all the questions I have, thank you very much for your time and help.**

## Mobile Home Program In-depth Interview Guide (American Synergy Technicians)

1. Do you find that you have the training that you need to complete all of the installed measures?
2. Are there any specific challenges which you have encountered?
3. Do you have the training that you need to market the program to potential participants?
4. How satisfied are you overall with your experience with the program?
5. What role do technicians play in program delivery? [Probe: Can they describe how the technicians approached customers, scheduled work, and resolved issues?]
6. In what ways are technicians involved in marketing (Do they sign up additional participants during installation)?

[Probe: If yes, can they describe what techniques were used by technicians to sign up additional participants?]

## 12.4 HOME ENERGY EFFICIENCY SURVEY PROGRAM SURVEYS

### Home Energy Efficiency Survey Participant Survey (On-line) Instrument

#### E-mail sent out to solicit participation

Tell us your opinion

You've recently completed The Gas Company's Home Energy and Water Efficiency Survey. Based on your responses, you received a personalized report showing what you can do to save energy in your home. We hope that you found the report informative and helpful with your efforts to make your home more energy efficient.

We'd like your opinion and impression of the Home Energy and Water Efficiency Survey. Please tell us your thoughts by completing this brief online survey. Your feedback will help us improve the energy efficiency programs we offer to help customers save energy, money and help the environment.

Take the survey now.

(By clicking on this link you will go to an independent survey website. Your information will remain private and will not be shared with anyone. Visit the [socialgas.com](http://socialgas.com) privacy policy for details.) Your responses will be kept confidential.

*Welcome. Thank you for giving us a few minutes of your time to tell us about your experience in taking The Gas Company HOME ENERGY AND WATER EFFICIENCY SURVEY. Your feedback will help us improve the energy efficiency programs we offer to help customers save energy, money, and help the environment.*

*This survey has 4 parts: Process questions, Recommendations questions, Satisfaction questions, and Demographics questions.*

*The survey should only take about 5-10 minutes to complete.*

**1. Please provide your e-mail address (the one through which you received this survey link). Your e-mail address will be kept confidential. It is only used to confirm that you have completed this survey so we do not send you a reminder e-mail. You will not be contacted again for this survey.**

E-mail:

**2. How did you first learn about the Home Energy and Water Efficiency Survey? (Check one)**

E-MAIL

BILL INSERT

OTHER FLYER OR BROCHURE

CONTRACTOR



THE GAS COMPANY WEBSITE

COMMUNITY EVENT

SCE WEBSITE

UTILITY REPRESENTATIVE

NEWSLETTER

OTHER (please specify)

**3. Prior to taking the Home Energy and Water Efficiency Survey, how knowledgeable did you feel about OPPORTUNITIES FOR IMPROVING the energy efficiency of your home? (Check one)**

VERY KNOWLEDGEABLE

SOMEWHAT KNOWLEDGEABLE

NOT VERY KNOWLEDGEABLE

**4. Prior to taking the Home Energy and Water Efficiency Survey, how Knowledgeable did you feel about ENERGY EFFICIENCY PROGRAM OFFERINGS that are available for your home? (Check one)**

VERY KNOWLEDGEABLE

SOMEWHAT KNOWLEDGEABLE

NOT VERY KNOWLEDGEABLE

**5. Which of the following were reasons that you completed the Home Energy and Water Efficiency Survey? (Check all that apply)**

WANTED TO SAVE ENERGY / REDUCE BILL

FRIEND / FAMILY MEMBER RECOMMENDED IT

CONCERN ABOUT THE ENVIRONMENT

WANTED INFORMATION ON ENERGY EFFICIENCY PROGRAMS I COULD PARTICIPATE IN

WANTED THE FREE ENERGY-EFFICIENCY STARTER KIT (1 showerhead/3 aerators)

OTHER (please specify)

**6. How long did it take you to complete the Home Energy and Water Efficiency Survey? (Check one)**

LESS THAN 5 MINUTES

5 TO 10 MINUTES

10 TO 15 MINUTES

15 TO 20 MINUTES

MORE THAN 20 MINUTES

**7. Did you take the standard length ENERGY 15 survey or the abbreviated ENERGY 5 survey? (Check one)**

ENERGY 15 (STANDARD LENGTH)

ENERGY 5 (ABBREVIATED LENGTH)

DON'T KNOW

**8. Did you receive a free Energy-Efficiency Starter Kit (1 showerhead/3 aerators) as a result of completing the survey? (Check one)**

YES

NO

**9. Please indicate below which of the items from the Energy-Efficiency Starter Kit (if any) that you have installed: (Check all that apply)**

INSTALLED 1 KITCHEN FAUCET AERATOR

INSTALLED 1 BATHROOM FAUCET AERATOR

INSTALLED 2 BATHROOM FAUCET AERATORS

HAVE NOT INSTALLED ANY OF THE ITEMS

*Now, this part of the survey will ask you about the energy efficiency measures that the Home Energy and Water Efficiency Survey recommended for your home.*

**10. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your home's INSULATION? (Check one)**

YES

NO

DON'T KNOW

**11. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for your home INSULATION.**

**What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey?**

**(Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

INSTALL CEILING INSULATION

INSTALL FLOOR INSULATION

INSTALL WALL INSULATION

WEATHERIZE DOORS

WEATHERIZE WINDOWS

INSTALL STORM DOORS

INSTALL STORM WINDOWS

CLOSE FIREPLACE DAMPERS

NONE

OTHER (please specify)

**12. Please check any INSULATION measures you were doing BEFORE you took the Home Energy Efficiency Survey: (Check all that apply)**

INSTALL CEILING INSULATION

INSTALL FLOOR INSULATION

INSTALL WALL INSULATION

WEATHERIZE DOORS

WEATHERIZE WINDOWS

INSTALL STORM DOORS

INSTALL STORM WINDOWS

CLOSE FIREPLACE DAMPERS

NONE

**13. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your AIR CONDITIONING?**

**(Check one)**

YES

NO

DON'T KNOW

**14. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for your AIR CONDITIONING.**

**What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey? (Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

SET THERMOSTAT AT 78 DEGREES OR HIGHER

ADD REFLECTIVE COATING/SOLAR SCREENING ON WINDOWS

INSTALL VENTS IN ATTIC

TURN OFF AIR CONDITIONER WHEN AWAY FOR EXTENDED PERIODS

REDUCE USE OF HEAT GENERATING APPLIANCES DURING THE DAY

CLEAN/REPLACE DIRTY FILTERS

USE OUTSIDE AIR FOR COOLING WHEN POSSIBLE

SHADE WINDOW AREAS FROM DIRECT SUNLIGHT

USE PORTABLE OR WHOLE HOUSE FANS WHEN POSSIBLE

NONE

OTHER (please specify)

**15. Please check any AIR CONDITIONING measures you were doing BEFORE you took the Home Energy Efficiency Survey. (Check all that apply)**

SET THERMOSTAT AT 78 DEGREES OR HIGHER

ADD REFLECTIVE COATING/SOLAR SCREENING ON WINDOWS

INSTALL VENTS IN ATTIC

TURN OFF AIR CONDITIONER WHEN AWAY FOR EXTENDED PERIODS

REDUCE USE OF HEAT GENERATING APPLIANCES DURING THE DAY

CLEAN/REPLACE DIRTY FILTERS

USE OUTSIDE AIR FOR COOLING WHEN POSSIBLE

SHADE WINDOW AREAS FROM DIRECT SUNLIGHT

USE PORTABLE OR WHOLE HOUSE FANS WHEN POSSIBLE

NONE

**16. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your home's FURNACE or SPACE HEATING?**

**(Check one)**

YES

NO

DON'T KNOW

**17. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for your FURNACE or SPACE HEATING.**

**What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey? (Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

SET THERMOSTAT AT 68 DEGREES OR LOWER AT DAY

SET THERMOSTAT AT 58 DEGREES OR LOWER AT NIGHT

INSTALL PROGRAMMABLE THERMOSTAT

TURN HEAT OFF/DOWN WHEN AWAY FOR EXTENDED PERIODS

CLOSE WINDOWS

INSULATE DUCTS

LIMIT PORTABLE ELECTRIC HEATER USE (BATHROOM AND OTHER PORTABLE SPACE HEATERS)

CLEAN/REPLACE DIRTY FILTERS

NONE

OTHER (please specify)

**18. Please check any FURNACE OR SPACE HEATING measures you were doing BEFORE you took the Home Energy Efficiency Survey: (Check all that apply)**

SET THERMOSTAT AT 68 DEGREES OR LOWER AT DAY

SET THERMOSTAT AT 58 DEGREES OR LOWER AT NIGHT

INSTALL PROGRAMMABLE THERMOSTAT

TURN HEAT OFF/DOWN WHEN AWAY FOR EXTENDED PERIODS

CLOSE WINDOWS

INSULATE DUCTS

LIMIT PORTABLE ELECTRIC HEATER USE (BATHROOM AND OTHER PORTABLE SPACE HEATERS)

CLEAN/REPLACE DIRTY FILTERS

NONE

**19. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your home's AIR DISTRIBUTION (DUCT) SYSTEM? (Check one)**

YES

NO

DON'T KNOW

**20. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for your AIR DISTRIBUTION (DUCT) SYSTEM. What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey? (Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

TEST DUCTS FOR LEAKAGE

SEAL DUCTS

TEST HOME FOR CARBON MONOXIDE

NONE

OTHER (please specify)

**21. Please check any AIR DISTRIBUTION (DUCT) SYSTEM measures you were doing BEFORE you took the Home Energy Efficiency Survey: (Check all that apply)**

TEST DUCTS FOR LEAKAGE

SEAL DUCTS

TEST HOME FOR CARBON MONOXIDE

NONE

**22. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your home's WATER HEATER?**

(Check one)

YES

NO

DON'T KNOW

**23. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for your WATER HEATER. What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey? (Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

WRAP WATER HEATER

TURN DOWN THERMOSTAT TO 120 DEGREES OR LOWER

INSULATE HOT WATER PIPES

INSTALL LOW FLOW SHOWERHEADS

INSTALL AERATORS

INSTALL WATER HEATER TIMER

REPAIR LEAKY FAUCETS AND PIPES

TURN HEAT OFF/DOWN WHEN AWAY FOR EXTENDED PERIODS

NONE

OTHER (please specify)

**24. Please check any WATER HEATER measures you were doing BEFORE you took the Home Energy Efficiency Survey: (Check all that apply)**

WRAP WATER HEATER

TURN DOWN THERMOSTAT TO 120 DEGREES OR LOWER

INSULATE HOT WATER PIPES

INSTALL LOW FLOW SHOWERHEADS

INSTALL AERATORS

INSTALL WATER HEATER TIMER

REPAIR LEAKY FAUCETS AND PIPES

TURN HEAT OFF/DOWN WHEN AWAY FOR EXTENDED PERIODS

NONE

**25. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your home's POOL / SPA? (Check one)**

YES

NO

DON'T KNOW

**26. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for your POOL / SPA. What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey? (Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

OPERATING POOL EQUIP DURING COOL TIMES OF DAY/EVENING (BEFORE 12 PM OR AFTER 6 PM)

MINIMIZE OPERATING TIME OF PUMP AND POOL SWEEP

KEEP FILTERS AND STRAINERS CLEAN

COVER WHEN NOT IN USE

NONE

OTHER (please specify)

**27. Please check any POOL/SPA measures you were doing BEFORE you took the Home Energy Efficiency Survey:**

**(Check all that apply)**

OPERATING POOL EQUIP DURING COOL TIMES OF DAY/EVENING (BEFORE 12 PM OR AFTER 6 PM)

MINIMIZE OPERATING TIME OF PUMP AND POOL SWEEP

KEEP FILTERS AND STRAINERS CLEAN

COVER WHEN NOT IN USE



NONE

**28. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your home's DISHWASHER? (Check one)**

YES

NO

DON'T KNOW

**29. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for your DISHWASHER. What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey?**

**(Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

TURN OFF DURING DRY CYCLE

OPERATE DURING COOL TIMES OF DAY/EVENING

WASH FULL LOADS

NONE

OTHER (please specify)

**30. Please check any DISHWASHER measures you were doing BEFORE you took the Home Energy Efficiency Survey: (Check all that apply)**

TURN OFF DURING DRY CYCLE

OPERATE DURING COOL TIMES OF DAY/EVENING

WASH FULL LOADS

NONE

**31. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your home's CLOTHES WASHER? (Check one)**

YES

NO

DON'T KNOW

**32. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for your CLOTHES WASHER. What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey? (Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

WASH FULL LOADS

DRY FULL AND CONSECUTIVE LOADS

OPERATE DURING COOL TIMES OF DAY/EVENING

CHECK VENT/FILTER REGULARLY

VENT EXHAUST TO OUTSIDE

EMPTY LINT FILTER BETWEEN LOADS

USE COOL/WARM WATER INSTEAD OF HOT WHEN POSSIBLE

NONE

OTHER (please specify)

**33. Please check any CLOTHES WASHER measures you were doing BEFORE you took the Home Energy Efficiency Survey: (Check all that apply)**

WASH FULL LOADS

DRY FULL AND CONSECUTIVE LOADS

OPERATE DURING COOL TIMES OF DAY/EVENING

CHECK VENT/FILTER REGULARLY

VENT EXHAUST TO OUTSIDE

EMPTY LINT FILTER BETWEEN LOADS

USE COOL/WARM WATER INSTEAD OF HOT WHEN POSSIBLE

NONE

**34. Did your Home Energy and Water Efficiency Survey results include any recommendations to change your home's LIGHTING? (Check one)**

YES

NO

DON'T KNOW

**35. Below is a possible list of recommendations that came out of the Home Energy and Water Efficiency Survey for LIGHTING. What have you DONE as a RESULT of the Home Energy and Water Efficiency Survey? (Please DO NOT mark energy efficiency measures you adopted BEFORE taking the Survey) (Check all that apply)**

REPLACE INCANDESCENT LIGHT BULBS WITH COMPACT FLUORESCENT LIGHTING (CFLS)

INSTALL TIMERS/PHOTOCELLS ON SECURITY LIGHTING

TURN OFF UNNECESSARY/DECORATIVE LIGHTING

NONE

OTHER (please specify)

**36. Please check any LIGHTING measures you were doing BEFORE you took the Home Energy Efficiency Survey: (Check all that apply)**

REPLACE INCANDESCENT LIGHT BULBS WITH COMPACT FLUORESCENT LIGHTING (CFLS)

INSTALL TIMERS/PHOTOCELLS ON SECURITY LIGHTING

TURN OFF UNNECESSARY/DECORATIVE LIGHTING

NONE

**37. Your Home Energy and Water Efficiency Survey report provided phone numbers to call and websites to visit that link the recommendations directly to other energy efficiency programs, products, and rebates.**

**AS A RESULT OF TAKING the Home Energy and Water Efficiency Survey, did you: Visit a utility website to get additional info on energy efficiency programs?**

**(Check one)**

YES

NO

DON'T KNOW

**38. AS A RESULT OF TAKING the Home Energy and Water Efficiency Survey, did you: Call the utility to get additional info on energy efficiency programs? (Check one)**

YES

NO

DON'T KNOW

**39. AS A RESULT OF TAKING the Home Energy and Water Efficiency Survey, did you: Call a contractor to find out more about installing energy efficiency equipment? (Check one)**

YES

NO

DON'T KNOW

**40. AS A RESULT OF TAKING the Home Energy and Water Efficiency Survey, did you: Participate in any of these programs? (Check all that apply)**

THE GAS COMPANY - REBATE PROGRAM

THE GAS COMPANY - HOME ENERGY UPGRADE FINANCE PROGRAM

SCE - REBATE PROGRAM

SCE - SUMMER DISCOUNT PLAN (AIR CONDITIONING CYCLING)

SCE - REFRIGERATOR/FREEZER RECYCLING PROGRAM

GSW OR LADWP - WATER UTILITY REBATE PROGRAM

I RECEIVED A REBATE BUT DON'T REMEMBER THE PROGRAM NAME

DID NOT PARTICIPATE IN ANY PROGRAM

OTHER PROGRAM (please specify)

**41. What equipment did you purchase through this(these) program(s)? (Check all that apply)**

LIGHTING

INSULATION

WINDOWS

AIR CONDITIONER

FURNACE

CLOTHES WASHER

REFRIGERATOR

DISHWASHER

WATER HEATER

**42. Did the program(s) provide you with a rebate to offset the cost of your equipment purchase(s)? (Note: Rebate may have been subtracted from your price at the time of purchase OR you may have received a rebate check in the mail.) (Check one)**

YES

NO

DON'T KNOW

**43. Please indicate those equipment options where you received a rebate. (Check all that apply)**

LIGHTING

INSULATION

WINDOWS

AIR CONDITIONER

FURNACE

CLOTHES WASHER

REFRIGERATOR

DISHWASHER

WATER HEATER

OTHER (please specify)

**44. Are you a customer of SOUTHERN CALIFORNIA EDISON (electric utility) OR THE GOLDEN STATE WATER COMPANY (water utility)?**

YES

NO

DON'T KNOW

**45. The Survey allowed you to type in your electric utility and your water utility ACCOUNT NUMBERS so it could more accurately analyze your energy and water usage. Please indicate which account numbers, if any, that you TYPED IN (Note: For SCE or GSW customers only). (Check all that apply)**

SOUTHERN CALIFORNIA EDISON (ELECTRIC POWER) ACCOUNT NUMBER

GOLDEN STATE WATER COMPANY (WATER) ACCOUNT NUMBER

DON'T KNOW

NONE

NOT APPLICABLE - NOT A CUSTOMER OF SCE

NOT APPLICABLE - NOT A CUSTOMER OF GSW

**47. How INFLUENTIAL was this information on your decision to implement the Home Energy and Water Efficiency Survey recommendations? (Check one)**

VERY INFLUENTIAL

SOMEWHAT INFLUENTIAL

NOT VERY INFLUENTIAL

NOT AT ALL INFLUENTIAL

**48. The Home Energy and Water Efficiency Survey report also COMPARED your annual energy and water consumption with the REGIONAL AVERAGE. How USEFUL was this comparison? (Check one)**

VERY USEFUL

SOMEWHAT USEFUL

NOT VERY USEFUL

NOT AT ALL USEFUL

DON'T KNOW

*This part of the survey asks about your satisfaction with the Home Energy and Water Efficiency Survey program.*

**49. How easy was it to complete the Home Energy and Water Efficiency Survey, was it: (Check one)**

VERY EASY

SOMEWHAT EASY

SOMEWHAT DIFFICULT

**50. Please indicate your level of satisfaction with the following: (VERY SATISFIED, MODERATELY SATISFIED, SLIGHTLY SATISFIED, NEUTRAL, SLIGHTLY DISSATISFIED, MODERATELY DISSATISFIED, VERY DISSATISFIED)**

- A) The AMOUNT OF TIME it took to complete the survey?
- B) The CLARITY of the recommendations provided by the survey?
- C) The USEFULNESS of the recommendations provided?
- D) The INFORMATION provided on other energy efficiency programs?
- E) OVERALL satisfaction with the Home Energy and Water Efficiency Survey?

**51. If you could change one thing about the Home Energy and Water Efficiency Survey, what would that be? (Open-end)**

**52. What was the most difficult thing about completing the Home Energy Efficiency Survey? (Open-end)**

**53. Have you recommended the Home Energy and Water Efficiency Survey to others? (Check one)**

YES

NO

*Almost done! Now, just a couple demographic questions...This final part of the survey asks about general demographic information.*

**54. Do you currently own or rent your home? (Check one)**

RENT

OWN

**55. What type of home do you currently live in? (Check one)**

SINGLE-FAMILY DETACHED HOME

CONDO

TOWNHOUSE

MOBILE HOME / MANUFACTURED HOME

DUPLEX

APARTMENT

Other (please specify)

**56. Including all adults AND children, how many people are in your household? (Insert a numerical answer)**

Enter number of people:

**57. Please indicate your age category: (Check one)**

UNDER 25 YEARS

25 TO 34 YEARS

35 TO 44 YEARS

45 TO 54 YEARS

55 TO 59 YEARS

60 TO 64 YEARS

65 YEARS OR OLDER

**58. What is the highest level of education you have completed? (Check one)**

HIGH SCHOOL DIPLOMA OR LESS

SOME COLLEGE

ASSOCIATES DEGREE

BACHELORS DEGREE

GRADUATE OR PROFESSIONAL DEGREE

**59. To help us understand how this program affects different types of families, we ask one income question:**

**Please indicate the category that best describes your total annual household income: (Check one)**

\$20,000 TO \$40,000

\$40,001 TO \$60,000

\$60,001 TO \$80,000

\$80,001 TO \$100,000

\$100,001 TO \$150,000



MORE THAN \$150,000

**60. What other programs or offerings could the utility provide to help you manage your energy use better?  
(Open-end)**

## 12.5 CLEO PROGRAM SURVEYS

### CLEO Participant Survey (English Language) Instrument

*Hello, my name is \_\_\_\_\_ and I am calling on behalf of The Southern California Gas Company. We are conducting a study with Gas Company customers who participated in the CLEO Energy Savings Project (Customer Language Efficiency Outreach) to learn how well this program is working and how it could be changed to better serve customers. Please be assured that I am not selling anything.*

*May I please speak with [CONTACT NAME]?*

*Our records show that you participated in an energy efficiency training class in your own language or visited an energy efficiency booth at a community event. Is this correct? Yes/No (if no terminate)*

*The survey will take less than 15 minutes.*

*I'm going to ask you a few questions about your experience participating in the CLEO program. Let me assure you that any information you give me will be kept confidential.*

**Q1. How did you hear about opportunities to learn about Gas Company programs in your own language? Did you get information from...? (READ ALL: Check ALL that apply)**

NEWSPAPER ADVERTISING ARTICLE

RADIO ADVERTISING

TV ADVERTISING

BROCHURE

COMMUNITY CULTURAL ORGANIZATION, specify: \_\_\_\_\_

FROM FRIEND OR FAMILY MEMBER

FAITH BASED ORGANIZATION PRESENTATION

ADULT DAYCARE PRESENTATION

SENIOR CITIZEN CENTER

OTHER COMMUNITY ORGANIZATION, specify: \_\_\_\_\_

DISPLAY IN STORE

ON INTERNET

OTHER specify: \_\_\_\_\_

88. Don't Know

**Q2. Up until now, did you know that the Gas Company offers rebates for residential customers that install energy efficient equipment such as gas furnaces, high efficiency dishwashers and insulation?**

YES

NO

88. Don't Know

**Q3. Now I'd like to ask you about some of the activities conducted by the CLEO Program to help households save energy. The first are energy efficiency information booths. These are booths at events in your community where Gas Company customers can receive information about energy efficiency, take short surveys about their home energy use, and enter contests to receive prizes.**

**Were you aware of the Energy Efficiency Information Booths before you attended the community event?**

YES

NO → GO TO Q5

88. Don't Know → GO TO Q5

**Q4. How did you become aware of the energy efficiency booth? (DO NOT READ. Accept multiple responses)**

JUST SAW IT AT EVENT

ADVERTISED AT COMMUNITY EVENT

BROCHURES

RADIO ADVERTISING

TV ADVERTISING

NEWSPAPER ADVERTISING

CLEO Staff told me

AD/DISPLAY IN STORE

WEB ADVERTISING

FAITH BASED ORGANIZATION PRESENTATION

ADULT DAYCARE PRESENTATION

SENIOR CITIZEN CENTER

COMMUNITY CULTURAL ORGANIZATION

OTHER COMMUNITY ORGANIZATION

FROM FRIEND OR FAMILY MEMBER

OTHER specify \_\_\_\_\_

88. Don't Know

**Q5. Did you choose to visit any of the energy efficiency information booths?**

YES → GO TO Q7

NO

88. Don't Know

**Q6. Why did you decide not to visit the booths?**

DID NOT SEE ANY STAFF THERE

NOT INTERESTED IN INFORMATION

WAS A LONG LINE

DID NOT HAVE TIME

HAD ATTENDED AN ENERGY CLASS or seminar

ALREADY KNEW ABOUT ENERGY EFFICIENCY

OTHER, SPECIFY: \_\_\_\_\_

88. Don't Know

**ALL GO TO Q11**

**Q7. Which of the following were reasons you visited the energy efficiency booth?**

*(READ ALL. Allow multiple responses.)*

TO LEARN ABOUT WAYS TO SAVE ENERGY

TO LEARN ABOUT GAS COMPANY PROGRAMS

BECAUSE FRIENDS/FAMILY WERE  
SOMEONE RECOMMENDED IT TO ME  
TO GET FREE PRIZES OR EQUIPMENT  
WAS CURIOUS

OTHER, specify: \_\_\_\_\_

88. Don't Know

**Q8. Did you review or take home any of the energy efficiency information available at the booth?**

YES

NO → GO TO Q11

88. Don't Know → GO TO Q11

**Q9. Was the information about energy efficiency benefits and strategies useful to you? Would you say it was....?**

EXTREMELY USEFUL

VERY USEFUL

PRETTY USEFUL

SLIGHTLY USEFUL

NOT AT ALL USEFUL

88. Don't Know

**Q10. Did the information help you understand how to use the utility rebate programs?**

YES

NO

88. Don't Know

**Q11. Another activity sponsored by the CLEO Program is free energy efficiency training classes. These are classes that take place at schools, religious organizations and community centers that cover topics such as energy saving benefits and strategies and available Gas Company programs. Were you aware of the energy efficiency training classes?**

YES

NO → GO TO Q20

88. Don't Know → GO TO Q20

**Q12. How did you become aware of the energy efficiency class? (INTERVIEWER: DO NOT READ. Multiple responses)**

ENERGY BOOTH AT COMMUNITY EVENT

BROCHURE

RADIO ADVERTISING

TV ADVERTISING

NEWSPAPER ADVERTISING

CLEO Staff told me

AD/DISPLAY IN STORE

WEB ADVERTISING

FAITH BASED ORGANIZATION PRESENTATION

ADULT DAYCARE PRESENTATION

SENIOR CITIZEN CENTER  
COMMUNITY CULTURAL ORGANIZATION  
OTHER COMMUNITY ORGANIZATION  
FROM FRIEND OR FAMILY MEMBER  
NOTICE IN MY APARTMENT BUILDING  
FROM APARTMENT BUILDING MANAGER  
OTHER specify: \_\_\_\_\_

88. Don't Know

**Q13. Did you attend an energy efficiency training class?**

YES → GO TO Q15

NO

88. Don't Know

**Q14. Why did you decide not to attend a class?** [*Do Not Read. Multiple responses*]

WAS NOT AWARE OF CLASS  
NOT INTERESTED IN INFORMATION  
AM TOO BUSY/NO TIME  
PREFERRED CLASS WAS FULL  
HAD NO TRANSPORTATION  
OFFERRED AT BAD TIME FOR ME  
NOT CONVENIENT  
ALREADY KNEW ABOUT ENERGY EFFICIENCY  
ATTENDED COMMUNITY BOOTH INSTEAD  
OTHER SPECIFY: \_\_\_\_\_

88. Don't Know

**ALL GO TO Q20**

**Q15. Which of the following were reasons you attended the energy efficiency class?**

[*Allow multiple responses*]

TO LEARN ABOUT WAYS TO SAVE ENERGY  
TO LEARN ABOUT GAS COMPANY PROGRAMS  
BECAUSE FRIENDS/FAMILY WERE  
SOMEONE RECOMMENDED IT TO ME  
TO GET FREE PRIZES OR EQUIPMENT  
WAS CURIOUS  
OTHER specify: \_\_\_\_\_

88. Don't Know

**Q16. Was the information in the class about energy efficiency benefits and strategies useful to you? Would you say it was....**

- EXTREMELY USEFUL
- VERY USEFUL
- PRETTY USEFUL
- SLIGHTLY USEFUL
- NOT AT ALL USEFUL
- 88. Don't Know

**Q17. Did the class help you understand how to use the utility rebate programs?**

- YES
- NO
- 88. Don't Know

**Q18. Is there anything about the class you would change? [DO NOT READ/ multiple responses]**

- 1. NO
- 2. OFFER ON A DIFFERENT DAY OF WEEK [*Get DETAILS*]  
\_\_\_\_\_
- 3. OFFER AT A DIFFERENT TIME [*Get DETAILS*]  
\_\_\_\_\_
- 4. OFFER AT DIFFERENT LOCATION [*Get DETAILS*]  
\_\_\_\_\_
- 5. INFORMATION TOO DETAILED
- 6. INFORMATION NOT DETAILED ENOUGH [*Get DETAILS*]  
\_\_\_\_\_
- 7. IS TOO SHORT
- 8. IS TOO LONG
- 9. IS TOO CROWDED
- 10. NEED MORE KNOWLEDGEABLE TRAINER
- 11. OTHER specify: \_\_\_\_\_
- 88. Don't Know

**Q19. Did you recommend the class to others?**

YES

NO

88. Don't Know

**Q20. The CLEO program also provided opportunities to complete Home Energy Efficiency Surveys, where you answer questions about your home gas, electricity and water use, and then receive recommendations on how to improve your home's energy efficiency.**

**Did you complete a home energy efficiency survey?**

YES

NO

→GO TO Q26

88. Don't Know

→GO TO Q26

**Q21. How did you complete the survey? Did you fill out a form in-person, on a computer, answer questions over the phone, or mail in a survey form?**

IN PERSON AT A BOOTH OR CLASS

COMPUTER ON-LINE SURVEY

BY PHONE

MAIL RETURN FORM

88. Don't Know

**Q22. Overall, how easy or hard was it for you to take the energy survey? Would you say it was...**

VERY EASY

SOMEWHAT EASY

SOMEWHAT HARD

VERY HARD

88. Don't Know

**Q23. Which of the following were reasons you took the energy survey? (Read all)**

TO BETTER UNDERSTAND MY HOME ENERGY USE

TO LEARN ABOUT ENERGY SAVING OPPORTUNITIES FOR MY HOME

FRIENDS/FAMILY RECOMMENDED IT

TO GET FREE PRIZES OR EQUIPMENT

WAS CURIOUS

OTHER, specify: \_\_\_\_\_

88. Don't Know

**Q24. How useful was the survey for improving your understanding of energy saving opportunities in your home? Was it...**

EXTREMELY USEFUL

VERY USEFUL

PRETTY USEFUL

SLIGHTLY USEFUL

NOT AT ALL USEFUL

HAVE NOT RECEIVED SURVEY REPORT YET  
88. Don't Know

**Q25. Have you recommended the energy survey to others?**

YES  
NO  
88. Don't Know

**Q26. Did you receive free porch compact fluorescent lights, or CFLs, as a result of participating in the CLEO program? [If they do not know what this is say: CFLs are small fluorescent bulbs that fit in regular light sockets. CFLs look different than standard bulbs. They are often made out of thin tubes of glass bent into spirals, or they could be globe shaped, or look like a flood light.]**

YES  
NO → GO TO Q31  
88. Don't Know → GO TO Q31

**Q27. Did you install the porch lights?**

YES → GO TO Q29  
NO  
88. Don't Know

**Q28. Why not?**

DIDN'T LIKE THEM  
DIDN'T FIT RIGHT  
DIDN'T KNOW HOW TO INSTALL  
NO SPECIFIC REASON  
OTHER, specify: \_\_\_\_\_  
88. Don't Know

**Q29. Have you told any friends, family or neighbors about the free porch compact fluorescent lights?**

YES  
NO → GO TO Q31  
88. Don't Know → GO TO Q31

**Q30. What did you tell them?**

---

**Q31. Now I'm going to ask you a few questions about your energy use behaviors and equipment. Did you change anything about the way you use energy at home after participating in the CLEO program? (DO NOT READ *accept multiple responses*)**

TURN OFF LIGHTS MORE  
REDUCE LIGHTING USE  
RAISE THERMOSTAT SETTING FOR COOLING  
LOWER THERMOSTAT SETTING FOR HEAT  
HAVE HEATING SYSTEM TUNED



LOWER DHW TEMPERATURE  
DON'T HEAT/COOL UNUSED ROOMS  
SHADE WINDOWS TO KEEP HOUSE COOL  
TURN ON REFRIGERATOR ENERGY SAVER SWITCH  
KEEP REFRIGERATOR FULL  
WASH WITH COLD WATER  
ALWAYS WASH WITH FULL LOAD  
ALWAYS DRY WITH FULL LOAD  
DRY CLOTHES ON LINE OR RACK  
THAW FOOD BEFORE COOKING  
USE THE MICROWAVE WHENEVER POSSIBLE  
COVER POTS WITH LIDS WHEN HEATING  
TURN DOWN BURNER WHEN BOILING POINT IS REACHED  
TURNED OFF WATERBED HEATER  
OTHER specify: \_\_\_\_\_  
88. Don't Know

**Q32. Did you install any of the following energy efficient equipment after participating in this program?**  
(Read ALL, accept multiple responses)

COMPACT FLOURESCENT OR T-8 LIGHTING  
LOW FLOW SHOWERHEADS  
WATER FAUCET AERATORS  
MORE WALL INSULATION  
MORE ATTIC INSULATION  
WHOLE HOUSE FAN  
EFFICIENT CENTRAL AIR CONDITIONER  
EFFICIENT WINDOW UNIT AIR CONDITIONER  
HIGH EFFICIENCY GAS FURNACE  
EFFICIENT CLOTHES WASHER  
EFFICIENT CLOTHES DRYER  
EFFICIENT DISHWASHER  
EFFICIENT REFRIGERATOR  
EFFICIENT WATER HEATER  
EFFICIENT WINDOWS  
OTHER (Specify: ) \_\_\_\_\_  
88. Don't Know

**Q33. How satisfied are you with the energy savings from your new efficient equipment? Would you say are...**[Read ALL]

EXTREMELY SATISFIED?  
VERY SATISFIED?  
SOMEWHAT SATISFIED?  
NOT VERY SATISFIED?  
NOT AT ALL SATISFIED?  
88. Don't Know

**Q34. Now I'm going to ask you some questions about your experiences applying for Gas Company rebates for energy efficient appliances and equipment.**

**Before you participated in the CLEO program, had you received any rebates from the Gas Company?**

YES → GO TO Q36

NO

88. Don't Know

**Q35. Why not?** [*Do Not Read, accept multiple responses*]

WAS NOT AWARE THAT REBATES EXISTED  
DID NOT TRY TO APPLY  
LANGUAGE BARRIERS WITH APPLICATION PROCESS  
DIDN'T UNDERSTAND REBATE PROGRAM/APPLICATIONS  
DID NOT WANT/NEED ENERGY EFFICIENT EQUIPMENT  
APPLICATION IS VERY LONG/HAS TOO MANY QUESTIONS  
TOO MUCH HASSLE TO GET REBATES  
EFFICIENT EQUIPMENT IS TOO EXPENSIVE  
THE REBATES ARE TOO LOW

OTHER, specify: \_\_\_\_\_

88. Don't Know → GO TO Q44

**Q36. What equipment did you receive rebates for?** [*Do not read, accept multiple responses*]

HIGH EFFICIENCY GAS FURNACE  
LOW FLOW SHOWERHEADS  
WATER FAUCET AERATORS  
WALL INSULATION  
ATTIC INSULATION  
EFFICIENT CLOTHES WASHER  
EFFICIENT DISHWASHER  
EFFICIENT WATER HEATER  
PIPE WRAP

OTHER, specify: \_\_\_\_\_

88. Don't Know

**Q37. Did you take a Gas Company rebate application home with you from an energy efficiency training class or information booth?**

YES → GO TO Q41

NO

88. Don't Know

**Q38. Were applications available for you to take home?**

YES → GO TO Q41

NO

88. Don't Know

**Q39. Why didn't you take an application?** [Do Not Read. Multiple Responses]

APPLICATION WAS NOT IN MY LANGUAGE  
DID NOT UNDERSTAND APPLICATION  
NO IMMEDIATE NEED FOR EFFICIENT EQUIPMENT OR REBATE  
APPLICATION IS VERY LONG/HAS TOO MANY QUESTIONS  
TOO MUCH HASSLE TO GET REBATES  
EFFICIENT EQUIPMENT IS TOO EXPENSIVE  
REBATES ARE TOO LOW  
ALREADY HAD TOO MANY PROGRAM MATERIALS  
CAN GET FROM WEBSITE  
Other Specify: \_\_\_\_\_

**Q40. Would you have taken a rebate application if it had been available in your language?**

YES  
NO

88. Don't Know → GO TO Q44

**Q41. Did you complete and mail the application?**

YES → GO TO Q43  
NO

88. Don't Know

**Q42. Why not?** [Do Not Read, accept multiple responses]

APPLICATION WAS NOT IN MY LANGUAGE  
DID NOT PURCHASE EFFICIENT EQUIPMENT  
DID NOT UNDERSTAND APPLICATION  
APPLICATION IS VERY LONG/HAS TOO MANY QUESTIONS  
TOO MUCH HASSLE TO GET REBATES  
EFFICIENT EQUIPMENT IS TOO EXPENSIVE  
REBATES ARE TOO LOW  
Other specify: \_\_\_\_\_  
88. Don't Know → GO TO Q44

**Q43. What equipment did you receive rebates for?** (Do not read, accept multiple responses)

HIGH EFFICIENCY GAS FURNACE  
LOW FLOW SHOWERHEADS  
WATER FAUCET AERATORS  
WALL INSULATION  
ATTIC INSULATION  
EFFICIENT CLOTHES WASHER  
EFFICIENT DISHWASHER  
EFFICIENT WATER HEATER  
PIPE WRAP  
OTHER Specify: \_\_\_\_\_

**Q44. Do you have access to the Internet?**

YES  
NO → GO TO Q50  
88. Don't Know → GO TO Q50

**Q45. Have you tried to use the Gas Company website to get an application for energy efficiency rebates?**

YES  
NO → GO TO Q50  
88. Don't Know → GO TO Q50

**Q46. Were you able to apply for the rebates you wanted using the website?**

YES → GO TO Q50  
NO  
88. Don't Know

**Q47. Did language barriers prevent you from applying for rebates?**

YES  
NO  
88. Don't Know

**Q48. Would you like the ability to track the status of your rebate applications on-line using the utility's website?**

YES  
NO  
88. Don't Know

**Q49. Overall, how satisfied were you with the information on the Gas Company website? Would you say were....**

EXTREMELY SATISFIED?  
VERY SATISFIED?  
SOMEWHAT SATISFIED?  
NOT VERY SATISFIED?  
NOT AT ALL SATISFIED?  
88. Don't Know

**Q50. The CLEO program also provides free phone assistance to help answer your questions about energy efficiency and available rebate programs.**

**Did you use the program phone line to get additional information about energy efficiency or available rebate programs?**

YES

NO → GO TO Q54

88. Don't Know → GO TO Q54

**Q51. How helpful was the phone line? Would you say it was....**

EXTREMELY HELPFUL

VERY HELPFUL

PRETTY HELPFUL

SLIGHTLY HELPFUL

NOT AT ALL HELPFUL

88. Don't Know

**Q52. Did you call the phone line to get help applying for a rebate?**

YES

NO → GO TO Q54

88. Don't Know → GO TO Q54

**Q53. Did you get the help you needed?**

YES

NO

88. Don't Know

**Q54. How would you describe your overall satisfaction with the CLEO Program? Would you say were...**

EXTREMELY SATISFIED?

VERY SATISFIED?

SOMEWHAT SATISFIED?

NOT VERY SATISFIED?

NOT AT ALL SATISFIED?

88. Don't Know

**Q55. What other programs or offerings could the utility provide to help you manage your energy use better?**

RECORD VERBATIM:

---

**Q56. When you purchase/replace home energy appliances or equipment in the future, will you select energy efficient equipment?**

- YES → GO TO Q58
- PROBABLY → GO TO Q58
- NO
- 88. Don't Know

**Q57. Why not?**

- TOO EXPENSIVE/NOT WORTH IT
- NOT SURE WHAT TO SELECT
- NOT SURE WHERE TO GET IT
- OTHER, Specify: \_\_\_\_\_
- 88. Don't Know

**Q58. Do you think you will apply for Gas Company rebates in the next year?**

- YES
- PROBABLY
- NO → GO TO Q60
- 88. Don't Know → GO TO Q60

**Q59. For what equipment do you expect to apply for rebates?**

[DO NOT READ, *accept multiple responses*]

- HIGH EFFICIENCY GAS FURNACE
- LOW FLOW SHOWERHEADS
- WATER FAUCET AERATORS
- WALL INSULATION
- ATTIC INSULATION
- EFFICIENT CLOTHES WASHER
- EFFICIENT DISHWASHER
- EFFICIENT WATER HEATER
- PIPE WRAP
- OTHER, specify: \_\_\_\_\_
- 88. Don't Know → GO TO Q61

**Q60. Why won't you apply for any rebates? [DO NOT READ, *accept multiple responses*]**

- LANGUAGE BARRIERS
- DON'T UNDERSTAND REBATE PROGRAM
- APPLICATION IS VERY LONG/HAS TOO MANY QUESTIONS
- TOO MUCH HASSLE
- THE EQUIPMENT IS TOO EXPENSIVE
- THE REBATES ARE TOO LOW

OTHER, specify: \_\_\_\_\_  
88. Don't Know

**Q61. Do you think there are other opportunities to save energy in your home?**

YES  
NO → GO TO Q63INT  
88. Don't Know → GO TO Q63INT

**Q62. Where in your home?** [Probe for multiple areas, record up to 3]

Area 1: \_\_\_\_\_

Area 2: \_\_\_\_\_

Area 3: \_\_\_\_\_

**Q63INT. Let me ask you about some specific items in your home. Let me assure you that this information will be kept confidential; These questions are just being asked to get an idea of energy savings potential in the market that could be addressed by the RESIDENTIAL REBATE PROGRAM.**

**Q63. Do you own an in-ground swimming pool?**

YES  
PART OF A MULTI-FAMILY COMPLEX → GO TO Q67  
NO → GO TO Q67  
88. Don't Know → GO TO Q67

**Q64. What kind of pool pump do you have?** (READ ALL)

SINGLE-SPEED PUMP  
TWO SPEED PUMP → GO TO Q67  
VARIABLE SPEED PUMP → GO TO Q67  
DON'T HAVE A POOL PUMP → GO TO Q67  
88. Don't Know

**Q65. How old is the pool pump?**

ENTER YEARS: \_\_\_\_\_

88. Don't Know

**Q66. What are the reasons you have not replaced your single speed pool pump?**

[DO NOT READ, *accept multiple responses*]

- IT WORKS FINE
- I DO NOT USE MY POOL MUCH
- I CANNOT AFFORD TO BUY NEW UNIT
- MY SERVICE PERSON DOES NOT RECOMMEND IT
- OTHER,Specify: \_\_\_\_\_
- 88. Don't Know

**Q67. What equipment do you use to cool your home?**

[*Read if necessary. Accept multiple responses*]

- CENTRAL AIR CONDITIONING
- HEAT PUMP → GO TO Q72
- ROOM AIR CONDITIONERS
- EVAPORATIVE COOLER
- WHOLE HOUSE FAN → GO TO Q72
- ROOM FANS → GO TO Q72
- NONE → GO TO Q72
- 88. Don't Know → GO TO Q72

**Q68. How old is your AC unit?**

Enter YEARS: \_\_\_\_\_ [*probe for range if necessary*]

**IF Answer is LESS THAN 5 Years, GO TO Q72**

**Q69. Would you be willing to have your air conditioner cycled on and off every 30 minutes to save energy if you received an incentive payment from your utility?**

- YES
- NO
- 88. Don't Know

**Q70. What do you think the potential is for saving energy with new a new air conditioner in your home? Would you say there is a...**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know



**Q71. How many days per summer do you use your air conditioning equipment ...**

- NOT AT ALL
- 30 DAYS OR LESS
- 31-90 DAYS
- 91-120 DAYS
- MORE THAN 120 DAYS
- 88. Don't Know

**Q72. What equipment do you use to heat your home?**

[INTERVIEWER: *OK TO READ, accept multiple responses*]

- FURNACE
- WALL FURNACE
- BOILER
- HEAT PUMP
- ELECTRIC BASEBOARD
- HEATING STOVE → GO TO Q76
- SPACE HEATER → GO TO Q76
- CENTRAL—MY APARTMENT IS CENTRALLY HEATED → GO TO Q76
- THE LANDLORD SUPPLIES
  
- OTHER, Specify: \_\_\_\_\_ → GO TO Q76
- 88. Don't Know → GO TO Q76

**Q73. How old is your heating equipment**

Enter YEARS: \_\_\_\_\_ [*probe for range if necessary*]

**IF Answer is LESS THAN 5 years, GO TO Q76**

**Q74. What do you think the potential is for saving energy with new furnace/wall heater in your home? Would you say there is ...**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q75. How many days per winter do you use your heating equipment?**

- NOT AT ALL
- 30 DAYS OR LESS
- 31-90 DAYS
- 91-120 DAYS
- MORE THAN 120 DAYS

DON'T KNOW

88. Don't Know

**Q76. How old is your clothes washer?**

Enter YEARS: \_\_\_\_\_ [*probe for range if necessary*]

555. We don't have a clothes washer

**IF Answer is LESS THAN 5 years, GO TO Q78**

**Q77. What do you think the potential is for saving energy with a new clothes washer?**

**Would you say there is ... ?**

HIGH POTENTIAL

MEDIUM POTENTIAL

LOW POTENTIAL

88. Don't Know

**Q78. How old is your dishwasher?**

ENTER YEARS: \_\_\_\_\_ [*probe for range if necessary*]

555. I do not have a dishwasher

**IF Answer is LESS THAN 5 years, GO TO Q80**

**Q79. What do you think the potential is for saving energy with a new dishwasher in your home? Would you say there is ...?**

HIGH POTENTIAL

MEDIUM POTENTIAL

LOW POTENTIAL

88. Don't Know

**Q80. How many refrigerators ?**

Enter number: \_\_\_\_\_ 888. DK

**Q81. How many freezers do you have?**

Enter number: \_\_\_\_\_ 888. DK

**Q82. How old is your Main refrigerator?**

Enter years: \_\_\_\_\_ [probe for range if necessary]

**IF Answer is LESS THAN 5 years, GO TO Q84**

**Q83. What do you think the potential is for saving energy with a new refrigerator in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q84. How old is your water heater?**

Enter years: \_\_\_\_\_ [probe for range if necessary]

555. I do not have my own water heater

**IF Answer is LESS THAN 5 years, GO TO Q86**

**Q85. What do you think the potential is for saving energy with a new water heater in your home? Would you say there is ...**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q86. How many Compact Fluorescent lightbulbs, or CFLs, do you have installed in your home? (CFLs are small fluorescent bulbs that fit in regular light sockets. CFLs look different than standard bulbs. They are often made out of thin tubes of glass bent into spirals, or they could be globe shaped, or look like a flood light.)**

Enter Number: \_\_\_\_\_

88. Don't Know

**Q87. How many lights do you still have in your home that use standard incandescent bulbs, and that are on more than 2 hours per day?**

Enter Number: \_\_\_\_\_ 88. Don't Know

**Q88. What is the reason that you have not replaced these incandescent lamps with the Compact Fluorescent Lamps?** [INTERVIEWER: *Do Not Read, accept multiple responses*]

DON'T FIT  
LAMPS COST TOO MUCH  
POOR LIGHT QUALITY  
NOT ENOUGH LIGHT  
KEEP BURNING OUT  
LAMPS ARE ON DIMMER  
NEVER OCCURRED TO ME  
NO SPECIFIC REASON  
88. Don't Know

**Q89. How about your windows, how old are the windows in your home?**

Enter YEARS: \_\_\_\_\_ [*probe for range if necessary*]

**IF Answer is LESS THAN 5 years, GO TO Q91**

**Q90. What do you think the potential is for saving energy with new windows in your home?**

**Would you say there is ...**

HIGH POTENTIAL  
MEDIUM POTENTIAL  
LOW POTENTIAL  
88. Don't Know

**Q91. Lastly I have just a few questions about your home. Do you currently own or rent?**

OWN  
RENT  
88. Don't Know

**Q92. What type of home do you currently live in?**

SINGLE-FAMILY DETACHED HOME  
CONDO  
TOWNHOUSE  
MOBILE HOME / MANUFACTURED HOME  
DUPLEX  
APARTMENT  
OTHER, specify: \_\_\_\_\_  
88. Don't Know

**Q93. Including all adults AND children, how many people are in your household?**

Number of people in household: \_\_\_\_\_

**Q94. When was your home originally built?**

ENTER YEAR: \_\_\_\_\_ [*probe for range if necessary: 1930s, 1940s, 1950s etc.*]

**Q95. Approximately how many square feet is your home?**

SQUARE FOOTAGE #: \_\_\_\_\_ [*probe for range if necessary*]

**Q96. What is your age? Are you say**

- UNDER 25 YEARS
- 25 THROUGH 34 YEARS
- 35 THROUGH 44 YEARS
- 45 THROUGH 54 YEARS
- 55 THROUGH 59 YEARS
- 60 THROUGH 64 YEARS
- 65 YEARS OR OLDER

99. REF

**Q97. What is the highest level of education you have completed? [INTERVIEWER: READ LIST]**

- 6. HIGH SCHOOL DIPLOMA OR LESS
- 7. SOME COLLEGE
- 8. ASSOCIATES DEGREE
- 9. BACHELORS DEGREE
- 10. GRADUATE OR PROFESSIONAL DEGREE
- 99. REF

**Q98. Please stop me when I read you household's annual income [READ LIST]**

- 8. LESS THAN \$20,000
- 9. \$20,000 TO LESS THAN \$40,000
- 10. \$40,000 TO LESS THAN \$60,000
- 11. \$60,000 TO LESS THAN \$80,000
- 12. \$80,000 TO LESS THAN \$100,000
- 13. \$100,000 TO LESS THAN \$150,000
- 14. MORE THAN \$150,000
- 99. REF

**Q99. What is your ethnicity/race?**

9. White or Caucasian
10. Black or African American
11. Asian
12. Latino/Hispanic
13. Native Hawaiian or Other Pacific Islander
14. American Indian or Alaska Native
15. Other [specify] \_\_\_\_\_
99. Refused

**Those are all the questions I have for you. Thank you very much for your help in this important study.**

**Q100. Interviewer: RECORD gender**

1. Male
2. Female

## 12.6 PACE PROGRAM SURVEYS

### PACE Participant Survey (English Language Version) Instrument

Hello, my name is \_\_\_\_\_. I am calling on behalf of The Southern California Gas Company. We are conducting a study with Gas Company customers who participated in the PACE Energy Savings Project (PACE) to learn how well this program is working and how it could be changed to better serve customers. I can assure you that we are not selling anything.

May I please speak with [CONTACT NAME]?

Our records show that you participated in an energy efficiency training class in your own language or visited an energy efficiency booth at a community event. Is this correct? (Y / N)

The survey will take less than 15 minutes. Can we start now?

That's great. Now I'm going to ask you a few questions about your experience participating in the PACE program. Let me assure you that any information you give me will be kept confidential.

**Q1. How did you hear about opportunities to learn about Gas Company programs in your own language? Did you get information from...? (READ ALL: Check ALL that apply)**

NEWSPAPER ADVERTISING ARTICLE

RADIO ADVERTISING

TV ADVERTISING

BROCHURE

COMMUNITY CULTURAL ORGANIZATION, specify: \_\_\_\_\_

FROM FRIEND OR FAMILY MEMBER

FAITH BASED ORGANIZATION PRESENTATION

ADULT DAYCARE PRESENTATION

SENIOR CITIZEN CENTER

OTHER COMMUNITY ORGANIZATION, specify: \_\_\_\_\_

DISPLAY IN STORE

ON INTERNET

OTHER specify: \_\_\_\_\_

88. Don't Know

**Q2. Up until now, did you know that the Gas Company offers rebates for residential customers that install energy efficient equipment such as gas furnaces, high efficiency dishwashers and insulation?**

YES

NO

88. Don't Know

**Q3. Now I'd like to ask you about some of the activities conducted by the PACE Program to help households save energy. The first are energy efficiency information booths. These are booths at events in your community where Gas Company customers can receive information about energy efficiency, take short surveys about their home energy use, and enter contests to receive prizes.**

**Were you aware of the Energy Efficiency Information Booths before you attended the community event?**

YES

NO → GO TO Q5

88. Don't Know → GO TO Q5

**Q4. How did you become aware of the energy efficiency booth?**

*(Do Not Read. Accept multiple responses)*

JUST SAW IT AT EVENT  
ADVERTISED AT COMMUNITY EVENT  
BROCHURES  
RADIO ADVERTISING  
TV ADVERTISING  
NEWSPAPER ADVERTISING  
PACE Staff told me  
AD/DISPLAY IN STORE  
WEB ADVERTISING  
FAITH BASED ORGANIZATION PRESENTATION  
ADULT DAYCARE PRESENTATION  
SENIOR CITIZEN CENTER  
COMMUNITY CULTURAL ORGANIZATION  
OTHER COMMUNITY ORGANIZATION  
FROM FRIEND OR FAMILY MEMBER  
OTHER Specify \_\_\_\_\_

**Q5. Did you choose to visit any of the energy efficiency information booths?**

YES → GO TO Q7

NO

88. Don't Know

**Q6. Why did you decide not to visit the booths?**

DID NOT SEE ANY STAFF THERE  
NOT INTERESTED IN INFORMATION  
WAS A LONG LINE  
DID NOT HAVE TIME  
HAD ATTENDED AN ENERGY CLASS or seminar  
ALREADY KNEW ABOUT ENERGY EFFICIENCY  
OTHER, SPECIFY: \_\_\_\_\_  
88. Don't Know

**ALL GO TO Q11**

**Q7. Which of the following were reasons you visited the energy efficiency booth?**

*(Read all. Allow multiple responses.)*



TO LEARN ABOUT WAYS TO SAVE ENERGY  
TO LEARN ABOUT GAS COMPANY PROGRAMS  
BECAUSE FRIENDS/FAMILY WERE  
SOMEONE RECOMMENDED IT TO ME  
TO GET FREE PRIZES OR EQUIPMENT  
WAS CURIOUS  
OTHER, specify: \_\_\_\_\_  
88. Don't Know

**Q8. Did you review or take home any of the energy efficiency information available at the booth?**

YES  
NO → GO TO Q11  
88. Don't Know → GO TO Q11

**Q9. Was the information about energy efficiency benefits and strategies useful to you? Would you say it was....?**

EXTREMELY USEFUL  
VERY USEFUL  
PRETTY USEFUL  
SLIGHTLY USEFUL  
NOT AT ALL USEFUL  
88. Don't Know

**Q10. Did the information help you understand how to use the utility rebate programs?**

YES  
NO  
88. Don't Know

**Q11. Another activity sponsored by the PACE Program is free energy efficiency training classes. These take place at PACE's Headstart building, Business Development Center, residential building meetings and community centers that cover topics such as energy saving benefits and strategies and available Gas Company programs.**

**Were you aware of the energy efficiency training classes?**

YES  
NO → GO TO Q20  
88. Don't Know → GO TO Q20

**Q12. How did you become aware of the energy efficiency class?**

(INTERVIEWER: *DO NOT READ. Multiple responses*)

ENERGY BOOTH AT COMMUNITY EVENT  
BROCHURE  
RADIO ADVERTISING  
TV ADVERTISING  
NEWSPAPER ADVERTISING  
Pace Staff told me  
AD/DISPLAY IN STORE  
WEB ADVERTISING  
FAITH BASED ORGANIZATION PRESENTATION  
ADULT DAYCARE PRESENTATION  
SENIOR CITIZEN CENTER  
COMMUNITY CULTURAL ORGANIZATION  
OTHER COMMUNITY ORGANIZATION  
FROM FRIEND OR FAMILY MEMBER  
NOTICE IN MY APARTMENT BUILDING  
FROM APARTMENT BUILDING MANAGER  
OTHER specify: \_\_\_\_\_

88. Don't Know

**Q13. Did you attend an energy efficiency training class?**

YES → GO TO Q15  
NO

88. Don't Know

**Q14. Why did you decide not to attend a class?**

[INTERVIEWER: *Do Not Read. Multiple responses*]

WAS NOT AWARE OF CLASS  
NOT INTERESTED IN INFORMATION  
AM TOO BUSY/NO TIME  
PREFERRED CLASS WAS FULL  
HAD NO TRANSPORTATION  
OFFERED AT BAD TIME FOR ME  
NOT CONVENIENT  
ALREADY KNEW ABOUT ENERGY EFFICIENCY  
ATTENDED COMMUNITY BOOTH INSTEAD  
OTHER specify: \_\_\_\_\_

88. Don't Know

**ALL GO TO Q20**

**Q15. Which of the following were reasons you attended the energy efficiency class?**

[*Allow multiple responses*]

TO LEARN ABOUT WAYS TO SAVE ENERGY  
TO LEARN ABOUT GAS COMPANY PROGRAMS

BECAUSE FRIENDS/FAMILY WERE  
SOMEONE RECOMMENDED IT TO ME  
TO GET FREE PRIZES OR EQUIPMENT  
WAS CURIOUS

OTHER specify: \_\_\_\_\_

88. Don't Know

**Q16. Was the information in the class about energy efficiency benefits and strategies useful to you? Would you say it was....**

EXTREMELY USEFUL  
VERY USEFUL  
PRETTY USEFUL  
SLIGHTLY USEFUL  
NOT AT ALL USEFUL

88. Don't Know

**Q17. Did the class help you understand how to use the utility rebate programs?**

YES

NO

88. Don't Know

**Q18. Is there anything about the class you would change?** [INTERVIEWER: *DO NOT READ* accept multiple responses]

NO

OFFER ON A DIFFERENT DAY OF WEEK specify: \_\_\_\_\_

OFFER AT A DIFFERENT TIME specify: \_\_\_\_\_

OFFER AT DIFFERENT LOCATION specify: \_\_\_\_\_

INFORMATION TOO DETAILED

INFORMATION NOT DETAILED ENOUGH specify: \_\_\_\_\_

IS TOO SHORT

IS TOO LONG

IS TOO CROWDED

NEED MORE KNOWLEDGEABLE TRAINER

OTHER specify: \_\_\_\_\_

88. Don't Know

**Q19. Did you recommend the class to others?**

YES

NO

88. Don't Know

**Q20. The PACE program also provided opportunities to complete Home Energy Efficiency Surveys, where you answer questions about your home gas, electricity and water use, and then receive recommendations on how to improve your home's energy efficiency.**

**Did you complete a home energy efficiency survey?**

YES  
NO → GO TO Q26  
88. Don't Know → GO TO Q26

**Q21. How did you complete the survey? Did you fill out a form in-person, on a computer, answer questions over the phone, or mail in a survey form?**

IN PERSON AT A BOOTH OR CLASS  
COMPUTER ON-LINE SURVEY  
BY PHONE  
MAIL RETURN FORM  
88. Don't Know

**Q22. Overall, how easy or hard was it for you to take the energy survey? Would you say it was very easy, somewhat easy, somewhat hard or very hard?**

VERY EASY  
SOMEWHAT EASY  
SOMEWHAT HARD  
VERY HARD  
88. Don't Know

**Q23. Which of the following were reasons you took the energy survey? (Read all)**

TO BETTER UNDERSTAND MY HOME ENERGY USE  
TO LEARN ABOUT ENERGY SAVING OPPORTUNITIES FOR MY HOME  
FRIENDS/FAMILY RECOMMENDED IT  
TO GET FREE PRIZES OR EQUIPMENT  
WAS CURIOUS  
OTHER, specify: \_\_\_\_\_  
88. Don't Know

**Q24. How useful was the survey for improving your understanding of energy saving opportunities in your home? Was it...**

EXTREMELY USEFUL  
VERY USEFUL  
PRETTY USEFUL  
SLIGHTLY USEFUL  
NOT AT ALL USEFUL  
HAVE NOT RECEIVED SURVEY REPORT YET  
88. Don't Know

**Q25. Have you recommended the energy survey to others?**

1. YES

2.NO

88. Don't Know

**Q26. Now I'm going to ask you a few questions about your energy use behaviors and equipment. Did you change anything about the way you use energy at home after participating in the PACE program? (Do not read. MULTIPLE RESPONSE)**

TURN OFF LIGHTS MORE  
REDUCE LIGHTING USE  
RAISE THERMOSTAT SETTING FOR COOLING  
LOWER THERMOSTAT SETTING FOR HEAT  
HAVE HEATING SYSTEM TUNED  
LOWER DHW TEMPERATURE  
DON'T HEAT/COOL UNUSED ROOMS  
SHADE WINDOWS TO KEEP HOUSE COOL  
TURN ON REFRIGERATOR ENERGY SAVER SWITCH  
KEEP REFRIGERATOR FULL  
WASH WITH COLD WATER  
ALWAYS WASH WITH FULL LOAD  
ALWAYS DRY WITH FULL LOAD  
DRY CLOTHES ON LINE OR RACK  
THAW FOOD BEFORE COOKING  
USE THE MICROWAVE WHENEVER POSSIBLE  
COVER POTS WITH LIDS WHEN HEATING  
TURN DOWN BURNER WHEN BOILING POINT IS REACHED  
TURNED OFF WATERBED HEATER

OTHER specify: \_\_\_\_\_  
88. Don't Know

**Q27. Did you install any of the following energy efficient equipment after participating in this program? [READ ALL. MULTIPLE RESPONSE]**

COMPACT FLOURESCENT OR T-8 LIGHTING  
LOW FLOW SHOWERHEADS  
WATER FAUCET AERATORS  
MORE WALL INSULATION  
MORE ATTIC INSULATION  
WHOLE HOUSE FAN  
EFFICIENT CENTRAL AIR CONDITIONER  
EFFICIENT WINDOW UNIT AIR CONDITIONER  
HIGH EFFICIENCY GAS FURNACE  
EFFICIENT CLOTHES WASHER  
EFFICIENT CLOTHES DRYER  
EFFICIENT DISHWASHER  
EFFICIENT REFRIGERATOR  
EFFICIENT WATER HEATER  
EFFICIENT WINDOWS

OTHER, specify: \_\_\_\_\_  
88. Don't Know

**Q28. How satisfied are you with the energy savings from your new efficient equipment? Would you say are....**

EXTREMELY SATISFIED  
VERY SATISFIED  
SOMEWHAT SATISFIED  
NOT VERY SATISFIED  
NOT AT ALL SATISFIED

88. Don't Know

**Q29. Now I'm going to ask you some questions about your experiences applying for Gas Company rebates for energy efficient appliances and equipment.**

**Before you participated in the PACE program, had you received any rebates from the Gas Company?**

YES → GO TO Q31

NO

88. Don't Know

**Q30. Why not?** [INTERVIEWER: *Do Not Read, accept multiple responses*]

WAS NOT AWARE THAT REBATES EXISTED  
DID NOT TRY TO APPLY  
LANGUAGE BARRIERS WITH APPLICATION PROCESS  
DIDN'T UNDERSTAND REBATE PROGRAM/APPLICATIONS  
DID NOT WANT/NEED ENERGY EFFICIENT EQUIPMENT  
APPLICATION IS VERY LONG/HAS TOO MANY QUESTIONS  
TOO MUCH HASSLE TO GET REBATES  
EFFICIENT EQUIPMENT IS TOO EXPENSIVE  
THE REBATES ARE TOO LOW

OTHER, specify: \_\_\_\_\_

88. Don't Know → GO TO Q39

**All GO TO Q32**

**Q31. What equipment did you receive rebates for?** [*Do not read, accept multiple responses*]

HIGH EFFICIENCY GAS FURNACE  
LOW FLOW SHOWERHEADS  
WATER FAUCET AERATORS  
WALL INSULATION  
ATTIC INSULATION  
EFFICIENT CLOTHES WASHER  
EFFICIENT DISHWASHER  
EFFICIENT WATER HEATER  
PIPE WRAP

OTHER, specify: \_\_\_\_\_

88. Don't Know

**Q32. Did you take a Gas Company rebate application home with you from an energy efficiency training class or information booth?**

- YES → GO TO Q36
- NO
- 88. Don't Know

**Q33. Were applications available for you to take home?**

- YES → GO TO Q36
- NO
- 88. Don't Know

**Q34. Why didn't you take an application?** *[Do Not Read. Multiple Responses]*

- APPLICATION WAS NOT IN MY LANGUAGE
- DID NOT UNDERSTAND APPLICATION
- NO IMMEDIATE NEED FOR EFFICIENT EQUIPMENT OR REBATE
- APPLICATION IS VERY LONG/HAS TOO MANY QUESTIONS
- TOO MUCH HASSLE TO GET REBATES
- EFFICIENT EQUIPMENT IS TOO EXPENSIVE
- REBATES ARE TOO LOW
- ALREADY HAD TOO MANY PROGRAM MATERIALS
- CAN GET FROM WEBSITE
- Other Specify: \_\_\_\_\_
- 88. Don't Know

**Q35. Would you have taken a rebate application if it had been available in your language?**

- YES
- NO
- 88. Don't Know → ALL GO TO Q39

**Q36. Did you complete and mail the application?**

- YES → GO TO Q38
- NO
- 88. Don't Know

**Q37. Why not?** *[Do Not Read, accept multiple responses]*

- APPLICATION WAS NOT IN MY LANGUAGE
- DID NOT PURCHASE EFFICIENT EQUIPMENT
- DID NOT UNDERSTAND APPLICATION
- APPLICATION IS VERY LONG/HAS TOO MANY QUESTIONS

TOO MUCH HASSLE TO GET REBATES  
EFFICIENT EQUIPMENT IS TOO EXPENSIVE  
REBATES ARE TOO LOW

Other, specify: \_\_\_\_\_

88. Don't Know

**ALL GO TO Q39**

**Q38. What equipment did you receive rebates for? (Do not read, accept multiple responses)**

HIGH EFFICIENCY GAS FURNACE

LOW FLOW SHOWERHEADS

WATER FAUCET AERATORS

WALL INSULATION

ATTIC INSULATION

EFFICIENT CLOTHES WASHER

EFFICIENT DISHWASHER

EFFICIENT WATER HEATER

PIPE WRAP

OTHER Specify: \_\_\_\_\_

88. Don't Know

**Q39. Do you have access to the Internet?**

YES

NO → GO TO Q45

88. Don't Know → GO TO Q45

**Q40. Have you tried to use the Gas Company website to get an application for energy efficiency rebates?**

YES

NO → GO TO Q45

88. Don't Know → GO TO Q45

**Q41. Were you able to apply for the rebates you wanted using the website?**

YES → GO TO Q43

NO

88. Don't Know

**Q42. Did language barriers prevent you from applying for rebates?**

YES

NO

88. Don't Know



**Q43. Would you like the ability to track the status of your rebate applications on-line using the Gas Company website?**

YES  
NO  
88. Don't Know

**Q44. Overall, how satisfied were you with the information on the Gas Company website? Would you say were....**

EXTREMELY SATISFIED  
VERY SATISFIED  
SOMEWHAT SATISFIED  
NOT VERY SATISFIED  
NOT AT ALL SATISFIED  
88. Don't Know

**Q45. The PACE program also provides free phone assistance to help answer your questions about energy efficiency and available rebate programs.**

**Did you use the program phone line to get additional information about energy efficiency or available rebate programs?**

YES  
NO → GO TO Q49  
88. Don't Know → GO TO Q49

**Q46. How helpful was the phone line? Would you say it was....**

EXTREMELY HELPFUL  
VERY HELPFUL  
PRETTY HELPFUL  
SLIGHTLY HELPFUL  
NOT AT ALL HELPFUL  
88. Don't Know

**Q47. Did you call the phone line to get help applying for a rebate?**

YES  
NO → GO TO Q49  
88. Don't Know → GO TO Q49

**Q48. Did you get the help you needed?**

YES  
NO  
88. Don't Know

**Q49. How would you describe your overall satisfaction with the PACE Program? Would you say were...**

EXTREMELY SATISFIED  
VERY SATISFIED  
SOMEWHAT SATISFIED  
NOT VERY SATISFIED  
NOT AT ALL SATISFIED  
NOT SURE/DON'T KNOW  
88. Don't Know

**Q50. What other programs or offerings could the utility provide to help you manage your energy use better?**  
RECORD VERBATIM: \_\_\_\_\_

\_\_\_\_\_

**Q51. When you purchase/replace home energy appliances or equipment in the future, will you select energy efficient equipment?**

YES → GO TO Q53  
PROBABLY → GO TO Q53  
NO  
88. Don't Know

**Q52. Why not?**

TOO EXPENSIVE/NOT WORTH IT  
NOT SURE WHAT TO SELECT  
NOT SURE WHERE TO GET IT  
OTHER, Specify: \_\_\_\_\_  
88. Don't Know

**Q53. Do you think you will apply for Gas Company rebates in the next year?**

YES  
PROBABLY  
NO → GO TO Q55  
88. Don't Know → GO TO Q55

**Q54. For what equipment do you expect to apply for rebates?**

[INTERVIEWER: *Do not read, accept multiple responses*]

HIGH EFFICIENCY GAS FURNACE  
LOW FLOW SHOWERHEADS  
WATER FAUCET AERATORS  
WALL INSULATION  
ATTIC INSULATION  
EFFICIENT CLOTHES WASHER  
EFFICIENT DISHWASHER  
EFFICIENT WATER HEATER  
PIPE WRAP

OTHER, specify: \_\_\_\_\_

88. Don't Know → GO TO Q56

**Q55. Why won't you apply for any rebates?** [*Do Not Read, accept multiple responses*]

LANGUAGE BARRIERS  
DON'T UNDERSTAND REBATE PROGRAM  
APPLICATION IS VERY LONG/HAS TOO MANY QUESTIONS  
TOO MUCH HASSLE  
THE EQUIPMENT IS TOO EXPENSIVE  
THE REBATES ARE TOO LOW

OTHER, specify: \_\_\_\_\_

88. Don't Know

**Q56. Do you think there are other opportunities to save energy in your home?**

YES

NO

→ GO TO Q58

88. Don't Know → GO TO Q58

**Q57. Where in your home?** [INTERVIEWER: Probe for multiple areas, record up to 3]

1. Area 1: \_\_\_\_\_

2. Area 2: \_\_\_\_\_

3. Area 3: \_\_\_\_\_

**Q58. Now I would like to ask you about some specific items in your home. Let me assure you that this information will be kept confidential; These questions are just being asked to get an idea of energy savings potential in the market that could be addressed by the RESIDENTIAL REBATE PROGRAM.**

**Do you own an in-ground swimming pool?**

YES  
PART OF A MULTI-FAMILY COMPLEX → GO TO Q62  
NO → GO TO Q62  
88. Don't Know → GO TO Q62

**Q59. What kind of pool pump do you have? (READ ALL)**

SINGLE-SPEED PUMP  
TWO SPEED PUMP → GO TO Q62  
VARIABLE SPEED PUMP → GO TO Q62  
DON'T HAVE A POOL PUMP → GO TO Q62  
88. Don't Know

**Q60. How old is the pool pump?**

ENTER YEARS: \_\_\_\_\_  
88. Don't Know

**Q61. What are the reasons you have not replaced your single speed pool pump? [Do Not Read, accept multiple responses]**

IT WORKS FINE  
I DO NOT USE MY POOL MUCH  
I CANNOT AFFORD TO BUY NEW UNIT  
MY SERVICE PERSON DOES NOT RECOMMEND IT  
OTHER, Specify: \_\_\_\_\_  
88. Don't Know

**Q62. What equipment do you use to cool your home?**

[INTERVIEWER: Read if necessary. Accept multiple responses]

CENTRAL AIR CONDITIONING  
HEAT PUMP → GO TO Q67  
ROOM AIR CONDITIONERS  
EVAPORATIVE COOLER  
WHOLE HOUSE FAN → GO TO Q67  
ROOM FANS → GO TO Q67  
NONE → GO TO Q67  
88. Don't Know → GO TO Q67

**Q63. How old is your AC unit? Would you say ...?**

1. Enter YEARS: \_\_\_\_\_ [If respondent doesn't know, probe for response]

**IF Answer is LESS THAN 5 Years, THEN GO TO Q67**

**Q64. Would you be willing to have your air conditioner cycled on and off every 30 minutes to save energy if you received an incentive payment from your utility?**

- YES
- NO
- 88. Don't Know

**Q65. What do you think the potential is for saving energy with new a new air conditioner in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q66. How many days per summer do you use your air conditioning equipment ...**

- NOT AT ALL
- 30 DAYS OR LESS
- 31-90 DAYS
- 91-120 DAYS
- MORE THAN 120 DAYS
- 88. Don't Know

**Q67. What equipment do you use to heat your home?**

[INTERVIEWER: *READ, accept multiple responses*]

- FURNACE
- WALL FURNACE
- BOILER
- HEAT PUMP
- ELECTRIC BASEBOARD
- HEATING STOVE → GO TO Q71
- SPACE HEATER → GO TO Q71
- CENTRAL—MY APARTMENT IS CENTRALLY HEATED THE LANDLORD SUPPLIES → GO TO Q71
- OTHER, Specify: \_\_\_\_\_ → GO TO Q71
- 88. Don't Know → GO TO Q71

**Q68. How old is your heating equipment?**

1. Enter YEARS: \_\_\_\_\_ [*PROBE for response*]: 0-2 YEARS, 2-5 YEARS, 5-10 YEARS, MORE THAN 10 YEARS]

**IF Answer is LESS THAN 5 years, GO TO Q71**

**Q69. What do you think the potential is for saving energy with new furnace/wall heater in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q70. How many days per winter do you use your heating equipment?**

- NOT AT ALL
- 30 DAYS OR LESS
- 31-90 DAYS
- 91-120 DAYS
- MORE THAN 120 DAYS
- DON'T KNOW
- 88. Don't Know

**Q71. How old is your clothes washer? Would you say...**

1. Enter YEARS: \_\_\_\_\_ [*PROBE for response*]: 0-2 YEARS, 2-5 YEARS, 5-10 YEARS, MORE THAN 10 YEARS]
2. We don't have a clothes washer

**IF Answer is LESS THAN 5 years, GO TO Q73**

**Q72. What do you think the potential is for saving energy with a new clothes washer?**

**Would you say there is ... ?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q73. How old is your dishwasher? Would you say...**

1. Enter YEARS: \_\_\_\_\_ [*PROBE for response*]: 0-2 YEARS, 2-5 YEARS, 5-10 YEARS, MORE THAN 10 YEARS]
2. I do not have a dishwasher

**IF Answer is LESS THAN 5 years, GO TO Q75**

**Q74. What do you think the potential is for saving energy with a new dishwasher in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q75. How many refrigerators do you have in your home?**

1. Enter number: \_\_\_\_\_

888. DK

**Q75a. How many freezers do you have in your home?**

1. Enter number: \_\_\_\_\_

888. DK

**Q76. How old is your Main refrigerator? Would you say...**

1. Enter YEARS: \_\_\_\_\_ [*PROBE for response*]: 0-2 YEARS, 2-5 YEARS, 5-10 YEARS, MORE THAN 10 YEARS]

**IF Answer is LESS THAN 5 years, GO TO Q78**

**Q77. What do you think the potential is for saving energy with a new refrigerator in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q78. How old is your water heater? Would you say...**

1. Enter YEARS: \_\_\_\_\_ [*PROBE for response*]: 0-2 YEARS, 2-5 YEARS, 5-10 YEARS, MORE THAN 10 YEARS]

2. I do not have my own water heater

**IF Answer is LESS THAN 5 years, GO TO Q80**

**Q79. What do you think the potential is for saving energy with a new water heater in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

HIGH POTENTIAL  
MEDIUM POTENTIAL  
LOW POTENTIAL  
88. Don't Know

99. Refused

**Q80. How many Compact Fluorescent lightbulbs, or CFLs, do you have installed in your home? CFLs are small fluorescent bulbs that fit in regular light sockets. CFLs look different than standard bulbs. They are often made out of thin tubes of glass bent into spirals, or they could be globe shaped, or look like a flood light.**

1. Enter Number: \_\_\_\_\_

88. Don't Know

99. Refused

**Q81. How many lights do you still have in your home that use standard incandescent bulbs, and that are on more than 2 hours per day?**

1. Enter Number: \_\_\_\_\_ (if R says NO, Go to Q83)

88. Don't Know

99. Refused

**Q82. What is the reason that you have not replaced these incandescent lamps with the Compact Fluorescent Lamps? [INTERVIEWER: Do Not Read, accept multiple responses]**

DON'T FIT  
LAMPS COST TOO MUCH  
POOR LIGHT QUALITY  
NOT ENOUGH LIGHT  
KEEP BURNING OUT  
LAMPS ARE ON DIMMER  
NEVER OCCURRED TO ME  
NO SPECIFIC REASON

88. Don't Know

99. Refused

**Q83. How about your windows, how old are the windows in your home?**



1. Enter YEARS: \_\_\_\_\_ [PROBE for response]: 0-5 YEARS, 5-10 YEARS, 10-20 YEARS, MORE THAN 20 YEARS]

**IF Answer is LESS THAN 5 years, GO TO Q85**

**Q84. What do you think the potential is for saving energy with new windows in your home? Would you say there is a...?**

- HIGH POTENTIAL
- MEDIUM POTENTIAL
- LOW POTENTIAL
- 88. Don't Know

**Q85. Lastly, I have just a few questions about your home. Do you currently own or rent?**

- OWN
- RENT
- 88. Don't Know

**Q86. What type of home do you currently live in?**

- SINGLE-FAMILY DETACHED HOME
- CONDO
- TOWNHOUSE
- MOBILE HOME / MANUFACTURED HOME
- DUPLEX
- APARTMENT
- OTHER, specify: \_\_\_\_\_

**Q87. Including all adults AND children, how many people are in your household?**

Number of person in household \_\_\_\_\_

**Q88. When was your home originally built?**

1. ENTER YEAR: \_\_\_\_\_ [Probe: in the 1930s, 40s, 50s, etc.]

**Q89. Approximately how many square feet is your home?**

1. Enter SQUARE FOOTAGE #: \_\_\_\_\_ [Probe: less than 1,400 sq ft, 1,400 to 2,500 sq ft, 2,500 to 3,500 sq ft, 3,500 to 5,000 sq ft, more than 5,000 sq ft]

**Q90. What is your age?**

1. Enter AGE: \_\_\_\_\_ [*PROBE*: UNDER 25, between 25 and 34, 45 and 54, 55 and 59, 60 to 64 or 65 YEARS and older]

**Q91. What is the highest level of education you have completed?** [INTERVIEWER: READ LIST]

- 11. HIGH SCHOOL DIPLOMA OR LESS
- 12. SOME COLLEGE
- 13. ASSOCIATES DEGREE
- 14. BACHELORS DEGREE
- 15. GRADUATE OR PROFESSIONAL DEGREE
- 99. REF

**Q92. Please stop me when I read you household's annual income ....** [READ LIST]

- 15. LESS THAN \$20,000
- 16. \$20,000 TO LESS THAN \$40,000
- 17. \$40,000 TO LESS THAN \$60,000
- 18. \$60,000 TO LESS THAN \$80,000
- 19. \$80,000 TO LESS THAN \$100,000
- 20. \$100,000 TO LESS THAN \$150,000
- 21. MORE THAN \$150,000
- 99. REF

**Q93. What best describes your ethnicity/race?**

- 16. White or Caucasian
- 17. Black or African American
- 18. Asian
- 19. Latino/Hispanic
- 20. Native Hawaiian or Other Pacific Islander
- 21. American Indian or Alaska Native
- 22. Other [specify] \_\_\_\_\_
- 99. Refused

**Those are all the question I have for you, thank you so very much for your time and help in this important study. Bye.**

**Q94. Interviewer: RECORD gender**

- 1. Male 2. Female

## 12.7 DESIGNED FOR COMFORT SURVEYS

### Designed for Comfort In-Depth Interview Guide (Owners/Managers)

*Introduction.* Purpose of interview. Assurances of confidentiality (comments will not be tied to individuals. Approximate length of interview.

#### Owner/Agency Information

1. First I would like to get some background information about your organization and its involvement with affordable multifamily housing.
2. How many different multifamily housing complexes does your organization operate in California? How many units do those represent?
3. How many of those housing complexes are considered affordable housing?
4. How many of those are served by Southern California Gas?

#### Sources/Levels of Program Awareness, Drivers of Program Participation

5. When and how did you first hear about the Designed for Comfort program? What were you told about the program?
6. What motivated you to participate in this program? What concerns or reservations did you have about participating, and how were those overcome?
7. Have you participated in a similar program in other utility territories in previous years? In Southern California Gas Territory? When and where?
8. Prior to your participation in the 2006-2007 DFC program, were you provided with information about how the program works overall and what it is designed to accomplish? What information?
9. Have you used the Designed for Comfort website? If so, for what purpose?

10. (IF USED WEBSITE) Using a one to five scale where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with the Designed for Comfort website? Why do you say that?
11. Using the same one to five scale, where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with the DFC program information you received overall? Why do you say that?

### **Involvement and Satisfaction with the DFC Program**

12. How did you select the HERS rater for your project? Was your selection based on a recommendation from the program staff or did you choose from a list? On a previous relationship you had with the rater? Or did other considerations (e.g., proximity to your site) come into play?
13. Please describe your recollection of the process by which the inspection and energy assessment of your building were conducted through the DFC program. For each step, please tell me about how long it took and what problems/issues, if any, you encountered.

### **The process for initial inspection and collection of baseline information**

14. Were you on site when the HERS rater conducted the inspection? What was your perception of the inspection process?
15. The inspector’s or energy consultant’s recommendations as to energy efficiency measures (Were the recommendations presented in a report? Did the inspector or energy consultant go over the report with you. What did you think about the results and recommendations?)
16. Were there measures recommended by the energy consultant that you rejected? If yes, why did you reject those?
17. Who installed the energy-efficient equipment? Did you have any difficulty obtaining this equipment or a contractor that could install it?
18. To the best of your knowledge were all the energy efficiency measures installed correctly? If not, what problems were encountered?
19. Once the equipment was installed, did anyone stop by your property to verify that the equipment had been installed? [If yes] who performed this inspection? What did this inspection involve?
20. Have the energy efficiency measures you installed produced the level of energy savings that you were expecting? IF NOT, please explain.

21. Using a scale from 1 to 5, where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied were you with the process for assessing the energy efficiency of your property? Why do you say that?
22. Were you involved in filling out any of the paperwork needed for receiving the financial incentives from the Designed for Comfort program? What paperwork do you recall?
23. Using a scale from 1 to 5, where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with the DfC program’s paperwork requirements? Why do you say that?
24. How often and what points in the process did you interact or communicate with the staff of the Designed for Comfort program? Would you say those communications were effective? Any suggestions for improvement?
25. Using a scale of one to five where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with the Designed for Comfort program staff? Why do you say that?
26. Did you or the DFC staff conduct a training session for tenants regarding the energy efficiency measures installed in their units? How satisfied were you with the effectiveness of the training session, using a scale from 1 to 5, where 1 means “Not at all satisfied” and 5 means “Completely satisfied.” How could the tenant training have been improved?
27. What opinions, if any, have your tenants expressed about the energy efficiency measures that were installed?
28. What logistical challenges, if any, did you encounter when participating in the Designed for Comfort program?
29. Have you received a rebate payment from the DfC program for the energy-efficient equipment that you installed? If so, how soon after the inspection did you receive a payment? Do you think that the payment was sent in a timely manner?
30. Using a scale of 1 to 5 where 5 means very likely and 1 means not very likely, what is the likelihood you would have implemented these energy efficiency measures if the DfC incentives had not been available?

31. Approximately what percentage of the cost of installing the recommended energy efficiency measures was covered by incentives from Southern California Gas and/or SCE?
32. Were you satisfied with the amount of rebates or financial incentives you received from the DfC program? Why or why not?
33. Would you recommend the DfC program to another owner of affordable multifamily housing? Why do you say that?
34. Using a scale where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with the DfC program as a whole? Why do you say that?
35. Do you have any final comments or suggestions for improvement to the DfC program?

Those are all the questions I have. Thank you for your time.

## **Designed for Comfort In-Depth Interview Guide (HERS Raters and Energy Consultants)**

*Introduction.* Purpose of interview. Assurances of confidentiality (comments will not be tied to individuals. Approximate length of interview.

### **Rater/Consultant Information**

First I would like to get some background information about your company.

1. Tell me about your business. What kind of work do you typically do? What kind of customers or market segments do you normal serve?
2. How many years have you been in business?
3. How many employees do you have?
4. About what percent of your company revenues come from the inspection and rating of multifamily properties? And what percentage of those inspections/ratings are for the Designed for Comfort Program?

### **Sources/Levels of Program Awareness, Drivers of Program Participation**

5. When and how did you first hear about the Designed for Comfort program? What were you told about the program?
6. What motivated you to participate in this program? [If not already mentioned]
7. Did you participate in a similar program in other utility territories in previous years? In Southern California Gas Territory? When and where.
8. About how many multifamily projects did you rate or model for other programs prior to your 2006 participation with the Designed for Comfort Program? How many of those were for other programs?
9. Prior to your participation in the 2006-2007 DFC program, were you provided with information about how the program works overall and what it is designed to accomplish? What information?

10. Using a scale where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with this DFC program information? Why do you say that?

### **Involvement and Satisfaction with the DFC Program**

11. How did you get involved with the specific 06-07 DFC projects that you have worked on? Did Heschong Mahone Group (HMG) send a list of possible HERS raters to the owner/developer and they picked your name? Was it based on an HMG recommendation? On a previous relationship you had with the owner/manager? Or did other considerations (e.g., proximity to building site) come into play?
12. Describe the typical process for conducting an inspection and energy assessment of a multifamily building that received rebates through the DFC program. Please note any significant variations from this typical process. For each step, please tell me about how long it typically takes and what problems/issues, if any, you have encountered.

### **Process for initial inspection and collection of baseline information**

13. What tools or packages do you use?
14. Did you choose one tool over another? Why?
15. Energy Consultants: Process for analyzing and modeling energy usage for base case and alternative installed measures (What tools or packages do you use? Did you choose one tool over another? Why?)

### **Process for making recommendations as to energy efficiency measures to the building owner**

16. Are the recommendations presented in a report? Do you go over the report with the owner or manager.

### **Process for post-installation inspection and final calculation of energy savings**

17. What measures are owners most likely to accept? Reject? Do they offer reasons for their choices?

### **Process for training and education**

18. Have you been involved in training tenants, owners, agencies?



## General

19. How often and what points in the process did you interact or communicate with the staff of the Designed for Comfort program? Would you say those communications were effective? Any suggestions for improvement?
20. Using a scale of one to five where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with the Designed for Comfort program staff? Why do you say that?
21. Did you have any involvement with the installation of the recommended energy efficient equipment or measures – in terms of recommending an installation contractor or facilitating the acquisition of the equipment?
22. What logistical challenges, if any, did you encounter when carrying out your duties with the Designed for Comfort program?
23. What are the advantages of the approach that you are using to calculate the energy savings? What are the disadvantages?
24. Were you involved in filling out any of the paperwork needed for receiving the financial incentives from the DfC program? What paperwork do you recall?
25. Using a scale where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with the DFC program’s paperwork requirements? Why do you say that?
26. You were scheduled to receive incentive payments from the DFC program for your duties as a HERS rater and/or energy consultant. Were all these payments received in a timely manner?
27. Are you satisfied with the amount of the financial incentives you received from the DFC program? Why or why not?
28. Would you recommend the DFC program to another HERS rater or energy consultant? Why do you say that?

29. Using a scale where 1 means “Not at all satisfied” and 5 means “Completely satisfied,” how satisfied have you been with the DFC program as a whole? Why do you say that?

30. Do you have any final comments or suggestions for improvement to the DfC program?

Those are all the questions I have. Thank you for your time.

## 12.8 GENERAL POPULATION SURVEY

### INTRO 1

*Hello, my name is \_\_\_\_ and I am calling on behalf of <<show UTILITY>>. We are conducting a brief study to learn more about residential energy use and your household was randomly chosen from <<show utility>> customer base.*

*<<show UTILITY>> and other companies have created programs to help households keep energy costs down and reduce the overall amount of energy they use. We would like to ask you about your awareness of these programs, and any experience you might have had with these programs.*

### INTRO2

*Are you the person who is most knowledgeable about energy use and energy savings practices in your household?*

1. Yes (skip to S1)
2. No
9. REF (skip to TERM1)

### INTRO3

*May I speak to the person who is most knowledgeable about energy use in your household?*

1. Person coming to phone (skip to INTRO4)
2. No, refusal (skip to TERM1)

### INTRO4

*Hello, my name is \_\_\_\_ and I am calling on behalf of <<show UTILITY>>. We are conducting a brief study to learn more about residential energy use and your household was randomly chosen from <<show utility>> customer base.*

*<<show UTILITY>> and other companies have created programs to help households keep energy costs down and reduce the overall amount of energy they use. We would like to ask you about your awareness of these programs, and any experience you might have had with these programs.*

*Are you the person who is most knowledgeable about energy use and energy savings practices in your household?*

1. Yes (skip to S1)
2. No (ask for knowledgeable respondent)
9. REF (skip to TERM1)

**S1. Great, thank you. May I start now?**

**I would like to start with a few questions about your home. Do you currently own or rent?**

1. Own

- 2. Rent
- 9. REF

**S2. What type of home do you currently live in?**

- 1. Single Family Detached Home
- 2. Condo
- 3. Townhouse
- 4. Mobile Home / Manufactured Home
- 5. Duplex
- 6. Apartment
- 7. Other, specify: \_\_\_\_\_
- 9. REF

**A1. Which of the following best describes your approach to using energy in your home:**

- 1. I do very little to save energy
- 2. I sometimes try to save energy, or
- 3. I always try to save energy in my home
- 8. DK
- 9. REF

If A1 =1 skip to A3

**A2. How successful do you think you have been in reducing energy use in your home? Have you been:**

- 1. Very successful
- 2. Somewhat successful
- 3. Not very successful

**A3. How do you decide what products are energy efficient? (DO NOT READ /Multiple Choice)**

- 1. Energy Star Logo
- 2. Energy Guide Label on Products
- 3. Utility recommendation
- 4. Word of mouth
- 5. Consumer reports
- 6. Rely on contractor recommendations
- 7. Rely on retail salesperson recommendations
- 8. Other (specify) \_\_\_\_\_
- 88. DK

**Q1. Since January 2006, have you purchased any of the following:  
[Record “yes” or “no” for each option]**

- a) Refrigerator yes/no
- b) Clothes washer yes/no

c) Dishwasher	yes/no
d) New pool pump	yes/no
e) Central air conditioner or heat pump	yes/no
f) Room/window air conditioner	yes/no
g) Evaporative Cooler	yes/no
h) Water Heater (storage, tankless, central, boiler)	yes/no
i) Furnace	yes/no
j) Insulation (Attic/wall)	yes/no
k) Windows	yes/no
l) Compact Fluorescent light bulb (CFL)	yes/no

[INTERVIEWER: CFLs are small fluorescent bulbs that fit in regular light bulb sockets. CFLs look different than standard bulbs. They are often made out of thin tubes of glass bent into spirals, or they could be globe shaped, or look like a floodlight.]

\*\*\*\*\*

IF "Yes" TO ANYTHING IN Q1 AND S2 NOT EQUAL 6, THEN SF = 1

IF "Yes" TO ANYTHING IN Q1 AND S2 = 6, THEN MF = 1

IF "Yes" TO CFL IN Q1, THEN CFL = 1

IF "No" TO ALL IN Q1, THEN GP = 1

If CFL = 1 skip to Q9

If GP = 1 skip to Q17

\*\*\*\*\*

**Q2. (Q2a through k) Which of the following statements best describes the role of energy efficiency in your selection of a new [insert Q1a through k if answer = yes] max 3 answers]**

1. I did not consider an energy-efficient model
2. I considered an energy-efficient model but did not end up buying it
3. I chose an energy-efficient model

- 4. I bought a model that is energy-efficient, but I chose it for other reasons
- 5. I bought a model that is energy-efficient, but it did not qualify for a rebate
- 8. DK
- 9. REF

If any responses in Q2a through k > 1 skip to Q4

**Q3. Why didn't you buy an energy-efficient model?**

- 1. I did not know that an energy-efficient model existed
- 2. I could not afford the energy efficient model
- 3. Installation or maintenance issues involved with an energy –efficient model
- 4. Other (specify \_\_\_\_\_)
- 8. DK
- 9. REF

**Q4. Were you aware of any energy efficiency programs that offered a rebate for an energy-efficient model?**

- 1. Yes
- 2. No
- 8. DK
- 9. REF

If Q4 > 1 skip to Q9

**Q5. Did you participate in an energy conservation program where you got a rebate for purchase?**

- 1. Yes
- 2. No
- 8. DK
- 9. REF

If Q5 >1 skip to Q7

**Q6. Who sponsored this rebate program?**

1. SDG&E
2. Southern California Gas Company
3. Edison/SCE
4. LADWP
5. My water utility
6. My local electric utility
7. Other (specify)\_\_\_\_\_
8. DK/Don't remember

All skip to Q8

**Q7. Why didn't you participate in the program? [DO NOT READ]**

1. I didn't have the rebate information
2. I didn't understand the application
3. The program requirements are too restrictive
4. The rebate was not worth the hassle
5. Too much hassle
7. Other (specify)\_\_\_\_\_
8. DK/Don't remember

IF CFL ne 1 All skip to Q17

**Q8. Do you recall the name of the program you participated in? [DO NOT READ]**

1. Flex your power
2. 20/20

3. Lighting Exchange
4. Appliance Recycling
5. Other (specify)\_\_\_\_\_ Had to change this to allow for insert in Q23
8. DK/Don't remember

Insert before I: statement of Q9:

If CFL=1, continue. Else, skip to Q17

**Q9. Did you purchase your CFLs in California?**

1. Yes
2. No
8. DK
9. REF

**Q10. Did the CFLs you purchased indicate on the label that they had a discounted or promotional price from SDG&E or another California utility?**

1. Yes
2. No
8. DK
9. REF

**Q11. What sizes of CFLs did you purchase? [Read, multiple choice]**

1. 13 Watt – 40 Watt equivalent
2. 15 Watt – 60 Watt equivalent
3. 20-23 Watt – 75 Watt equivalent
4. 25-29 Watt – 100 Watt equivalent
5. 38-42 Watt – 150 Watt equivalent
6. 55 Watt – 200-300 Watt equivalent
7. DK/Don't remember



**Q12. What are the reasons you purchased CFLs instead of standard incandescent bulbs?**  
[Do Not Read! Multiple responses allowed]

1. Because of the discount or rebate
2. To save energy
3. Longer bulb life
4. To save money on my utility bill
5. To lessen my impact on the environment
6. Because of global warming
7. Other (SPECIFY \_\_\_\_\_)
8. DK/Don't remember

**Q13. Did you buy singly packaged CFLs or CFLs in multi-packs or both?**

1. Single
2. Multi-Packs
3. Both
8. DK/Don't remember

IF Q13 = 1 or 8 skip to Q17

**Q14. How many bulbs were in the multi-packs?**

1. Two
2. Four
3. Eight
4. Other (SPECIFY \_\_\_\_\_)
8. DK/Don't remember

**Q15. Did you install all of the CFLs you purchased?**

1. Yes
2. No

8. DK

9. REF

IF Q15 = 2 skip to Q16 ELSE SKIP to Q17

**Q16. How many bulbs did you put into storage?**

Enter number \_\_\_\_

**Q17. Now I'd like to ask you about other energy efficiency programs you might have participated in. Have you ever had a home energy audit, where someone comes to your home and identifies areas where you can reduce your energy use? These energy audits can also be done by mail or online.**

**Have you ever had one of these energy audits for your home?**

1. Yes, in-person home audit (Go To Q18)

2. Yes, audit by mail (Go To Q18)

3. Yes, audit online (Go To Q18)

4. No/Not sure/DK/refused (Go to Q19)

**Q18. Since having this home audit, have you had the chance to implement any of the audit's recommendations?**

1. Yes

2. No

8. DK/don't remember

If Q18 > 1 skip to Q19

**Q18a. What changes did you implement?**

Enter verbatim \_\_\_\_\_

If Q17 = 3 skip to Q20

**Q19. How likely would you be to complete a free home energy audit on the Internet if sponsored by SDG&E/SCG? Would you say...**

1. Very likely
2. Somewhat likely
3. Somewhat unlikely
4. Very unlikely
8. DK

If Q19 = 2 or 3 skip to Q20

**Q19a. Why do you say that?**

Enter verbatim \_\_\_\_\_

**Q20. In the last year, do you recall receiving any communication from SDG&E/SCG on energy efficiency programs?**

1. Yes
2. No
8. DK/don't remember

**Q21. Do you recall hearing any TV ads regarding any of the energy efficiency programs?**

1. Yes
2. No
8. DK/don't remember

IF Q21 >1 skip to Q23

**Q22. What was the message of that TV ad?**

Enter verbatim \_\_\_\_\_

**Q23. Please tell me if you have ever heard of the any of the following programs [READ LIST]:  
[DO NOT READ PROGRAM IF ALREADY MENTIONED IN Q8]**

1. Flex your power

2. 20/20
3. Lighting Exchange
4. Appliance Recycling
5. None
6. If <utility = SoCalGas> show: Energy Efficiency Kit

**Q24. What comes to mind FIRST when you think about <insert utility> programs to help residential customers save energy? [DO NOT READ - Single choice]**

1. Saving energy
2. Saving money on the utility bill
3. Protecting the environment
4. Unaware that utility offered energy conservation programs
5. Don't associate utility with energy conservation
6. Other (specify) \_\_\_\_\_

**Q25. Do you recall ever visiting the [insert utility]'s website for information?**

1. Yes
2. No
3. DK/Don't remember

If Q25> 1 skip to Q29

**Q26. What information were you looking for? [DO NOT READ – multiple choice]**

1. List of specific energy efficiency programs
2. Program application forms
3. Contractors
4. General information on energy efficiency measures
5. Other billing/service information
6. Other (specify) \_\_\_\_\_

**Q27. Overall, how satisfied were you with the [insert utility] website, would you say you were...**

1. Very satisfied
2. Moderately satisfied
3. Somewhat satisfied
4. Neither satisfied nor dissatisfied (changed the label a tiny bit – is that OK?)
5. Somewhat dissatisfied
6. Moderately dissatisfied
7. Very dissatisfied

If Q27 <= 5 skip to Q29

**Q28. What would have improved your satisfaction with the [insert utility] website?**

Enter verbatim \_\_\_\_\_

**Q29. What other programs or offerings could the utility provide to help you manage your energy use better?**

Enter verbatim \_\_\_\_\_

If Q4 > 1 or If Q5 > 1 skip to Q37

If CFL = 1 or GP = 1 skip to Q37

**Q30. Prior to purchasing energy efficiency equipment or participating in a rebate program, did you have any doubts or concerns about the following items?**

**How about the rebate application process? Any doubts or concerns?**

1. Yes
2. No
3. DK/Don't remember

If Q30>1 skip to Q31

**Q30a. Briefly, how did you overcome this concern?**

Enter verbatim \_\_\_\_\_

**Q31. Did you have any doubts or concerns finding a qualified contractor to do the installation?**

1. Yes
2. No
3. DK/Don't remember

If Q31>1 skip to Q32

**Q31a. Briefly, how did you overcome this concern?**

Enter verbatim \_\_\_\_\_

**Q32. Did you have any doubts or concerns being able to find parts or a qualified repairman to maintain equipment?**

1. Yes
2. No
3. DK/Don't remember

If Q32>1 skip to Q33

**Q32a. How did you overcome this concern or doubt?**

Enter verbatim \_\_\_\_\_

**Q33. [Did you have any doubts or concerns about] energy savings claims being overstated?**

1. Yes
2. No
3. DK/Don't remember

If Q33>1 skip to Q34

**Q33a. How did you overcome this concern or doubt?**

Enter verbatim\_\_\_\_\_

**Q34. Energy savings not worth extra price?**

1. Yes
2. No
3. DK/Don't remember

If Q34>1 skip to Q35

**Q34a. How did you overcome this concern or doubt?**

Enter verbatim\_\_\_\_\_

**Q35. Is there anything else you had doubts or concerns with:**

Enter verbatim\_\_\_\_\_

**Q36.—**

**Q37. Now, I'd like to ask how you would rate <<insert utility>> overall on a scale of 1 to 7, where 1 means very unfavorable and 7 means very favorable. The more favorable you generally feel toward <<insert utility>> the higher the number you would give.**

8. DK/Refused

\_\_\_\_\_ (accept number between 1 and 8)

**Q38. Using the same scale of 1 to 7, where 1 means very unfavorable and 7 means very favorable, how would you rate <<insert utility>> on the following:**

**Q38A. Providing new products and services**

8. DK/Refused

\_\_\_\_\_ (accept number between 1 and 8)

**Q38B. Actively promoting energy-efficiency programs**

8. DK/Refused

\_\_\_\_\_ (accept number between 1 and 8)

**Q38C. Providing information about ways to save energy in your home**

8. DK/Refused

\_\_\_\_\_ (accept number between 1 and 8)

**Q39. How trustworthy is <<insert utility>> as a source of information about saving energy in your home? Would you say...**

1. Very trustworthy
2. Somewhat trustworthy
3. Neither trustworthy nor untrustworthy
4. Somewhat untrustworthy
5. Very untrustworthy
8. DK/Refused

**Q40. Your utility is planning for a program that will help save energy and water by promoting more efficient shower technologies. In order to plan for this program, we need to collect information on how families use their showers.**

**How many showers do you have in your house that are used on a regular basis?**

Enter number \_\_\_\_\_

888. DK/REF

If Q40 = 0 skip to Q57



**Q41. Of these showers, how many have a 3-way valve (where hot and cold water are controlled with one faucet) and how many have separate faucets for hot and cold water?**

a) \_\_\_\_\_ # with 3-way valves

b) \_\_\_\_\_ # with separate hot and cold water faucets

888. DK/REF

**Q42. How many showers are taken in your household each day?**

Enter number \_\_\_\_\_

888. DK/REF

If Q42=888 skip to Q45

**Q43. Of the <<insert Q42>> showers taken per day, how many are taken within 30 minutes of each other?**

Enter number \_\_\_\_\_

888. DK/REF

**Q44. Of the <<insert Q42>> showers taken per day, how many are taken more than 30 minutes from the last shower taken?**

Enter number \_\_\_\_\_

888. DK/REF

**Q45. Of all the family members in the house, how many wait for the water to warm up before entering the shower?**

Enter number \_\_\_\_\_

888. DK/REF

If Q45=0 skip to Q57

**Q46. How long do these family members wait on average before entering the shower? [READ CATEGORIES]**

1. 30 seconds or less

2. 30 to 60 seconds

3. More than 1 minute
4. More than 2 minutes
5. More than 5 minutes
8. DK/REF

**Q57. Overall, do you think there are other opportunities to save energy in your home?**

1. Yes
2. No
3. DK/Don't remember

If Q57 >1 skip to Q59

**Q58. In which areas of your home do you think you could save energy?**

[Probe for multiple areas. Record up to 3]

Area 1:

---

Area 2:

---

Area 3:

---

**Q59. I would like to ask you about some specific items in your home. Please let me assure you that this information will be kept confidential; these questions are being asked to gage the energy savings potential in the market that could be addressed by an energy efficiency program sponsored by your utility.**

**Do you own an in-ground swimming pool?**

[spa or above ground pool = NO]

1. Yes
2. No
3. Part of a multi-family complex

If Q59 > 1 skip to Q65

**Q60. What kind of pool pump do you have? [Read All]**

1. Single-speed pump
2. Two speed pump
3. Variable speed pump
4. Don't have a pool pump
8. DK

**Q61. How old is the pool pump?**

1. enter number of years
888. DK

If Q60 >1 skip to Q65

**Q62. Are you aware of the rebates that SDG&E offers to replace single speed pool pumps?**

1. Yes
2. No
8. DK

If Q62 > 1 skip to Q65

**Q63. How did you hear about the rebate?**

1. Pool service person
2. Word of mouth
3. From utility website
4. From utility mailing
5. From store promotion
6. Other (specify) \_\_\_\_\_
8. DK

**Q64. What are the reasons you have not replaced your pool pump? [ACCEPT MULTIPLE ANSWERS]**

1. It works fine
2. I do not use my pool much
3. I cannot afford to buy new unit
4. My service person does not recommend it
5. Other (specify) \_\_\_\_\_
8. DK

**Q65. What equipment do you use to cool your home? [ACCEPT MULTIPLE ANSWERS]**

1. Central air conditioning

- 2. Heat pump → SKIP TO Q70
- 3. Room air conditioners
- 4. Evaporate cooler
- 5. Whole house fan → SKIP TO Q70
- 6. Room fans → SKIP TO Q70
- 7. None → SKIP TO Q70
- 8. DK → SKIP TO Q70

IF Q65 = 2 skip to Q70

IF Q65 >4 skip to Q70

**Q66. How old is your AC?**

1. Enter YEARS: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

888. DK

IF Q66 < 5 YEARS OLD skip to Q70

IF utility = SoCalGas skip to Q68

**Q67. SDG&E offers a program that helps save energy by having air conditioners ‘cycle’ on and off every 30 minutes during very hot days. Would you be willing to have your air conditioner cycled if you received an incentive payment from your utility?**

- 1. Yes
- 2. No
- 8. DK/not sure

**Q68. What do you think the potential is for saving energy with a new air conditioner in your home? Would you say there...**

- 1. High potential
- 2. Medium potential
- 3. Low potential
- 8. DK

**Q69. How many days per year do you use your air conditioning equipment?**

- 1. Not at all
- 2. 30 days or less

3. 31-90 days
4. 91-120 days
5. More than 120 days
8. DK

**Q70. What equipment do you use to heat your home? [Multiple response]**

1. Furnace
2. Wall furnace
3. Boiler
4. Heat pump
5. Electric baseboard
6. Heating stove → SKIP TO Q74
7. Space heater → SKIP TO Q74
8. Central – apartment is centrally heated / landlord supplied → SKIP TO Q74
9. Other (specify) \_\_\_\_\_ → SKIP TO Q74
77. None

**88. DK**

IF Q70 > 5 skip to Q74

**Q71. How old is your heating equipment?**

1. Enter years: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

888. DK

IF Q71 < 5 YEARS OLD skip to Q74

**Q72. What do you think the potential is for saving energy with new heating system in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

1. High potential
2. Medium potential
3. Low potential
8. DK

**Q73. How many days per year do you use your heating equipment?**

1. Not at all
2. 30 days or less
3. 31-90 days

4. 91-120 days
5. More than 120 days
8. DK

**Q74. How old is your clothes washer?**

1. Enter years: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

222. Don't have a clothes washer

888. DK

If Q74 > 200 skip to Q76

If Q74 < 5 skip to Q76

**Q75. What do you think the potential is for saving energy with a new clothes washer? Would you say there is high potential, medium potential, or low potential for energy savings?**

1. High potential
2. Medium potential
3. Low potential
8. DK

**Q76. How old is your dishwasher?**

1. Enter years: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

222. Don't have a dishwasher

888. DK

If Q76 > 200 skip to Q78a

If Q76 < 5 skip to Q78a

**Q77. What do you think the potential is for saving energy with a new dishwasher in your home? Would you say there is high potential, medium potential, or low potential for energy savings?**

1. High potential
2. Medium potential
3. Low potential
8. DK

**Q78a. How many refrigerators do you have in your home?**

1. Record # of refrigerators: \_\_\_\_\_

**Q78b. How many freezers do you have in your home?**

1. Record # of freezers: \_\_\_\_\_

**Q79. How old is your Main refrigerator?**

1. Enter years: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

888. DK

If Q79 < 5 YEARS OLD SKIP TO Q84

**Q80. What do you think the potential is for saving energy with a new refrigerator in your home?  
Would you say there is high potential, medium potential, or low potential for energy savings?**

1. High potential
2. Medium potential
3. Low potential
8. DK

If utility = SoCalGas skip to Q84

**Q81. Are you aware of the Refrigerator Recycling Program?**

1. Yes
2. No
8. DK/not sure

If Q81 >1 skip to Q84

**Q82. Have you participated?**

1. Yes
2. No
8. DK/not sure

If Q82 = 1 or 8 skip to Q84

**Q83. Why have you not participated?**

Enter verbatim \_\_\_\_\_

**Q84. How old is your water heater?**

1. Enter years: \_\_\_\_\_ (Probe in ranges; 0-2 years, 2-5 years etc.)

222. Don't have a water heater

888. DK

If Q84 > 200 skip to Q86

If Q84 < 5 skip to Q86

**Q85. What do you think the potential is for saving energy with a new water heater in your home?  
Would you say there is high potential, medium potential, or low potential for energy savings?**

1. High potential
2. Medium potential
3. Low potential
8. DK

**Q86. How many Compact Fluorescent Lightbulbs, or CFLs, do you have installed in your home?**

[CFLs are small fluorescent bulbs that fit in regular light sockets. CFLs look different than standard bulbs. They are often made out of thin tubes of glass bent into spirals, or they could be globe shaped, or look like a floodlight.]

Enter number \_\_\_\_\_

888. DK/REF



**Q87. How many lights do you still have in your home that use standard incandescent bulbs, and that are on more than 2 hours per day?**

Enter number \_\_\_\_\_

888. DK/REF

If Q87 <1 skip to Q89

**Q88. What is the reason that you have not replaced these incandescent lamps with the Compact Fluorescent Lamps? (Check all that apply)**

1. Don't fit
2. Lamps cost too much
3. Poor light quality
4. Not enough light
5. Keep burning out
6. Lamps are on dimmer
7. Never occurred to me
8. No special reason/DK

**Q89. Finally, I have just a few questions about your household. Including all adults AND children, how many people are in your household?**

Enter number: \_\_\_\_\_

999. Ref

**Q90. In which year was your home originally built?**

1. Enter year \_\_\_\_\_ (Probe: 1930 or older, 1940s, 1950s etc.)

888. DK

**Q91. Approximately how many square feet is your home?**

1. Enter square footage#: \_\_\_\_\_

888. DK

(Probe: less than 1,400sq ft, 1,400 to 2,500 sq ft, 2,500 to 3,500 sq ft)

**Q92. What is your age?**

1. Enter years: \_\_\_\_\_ (Probe: under 25, 25 to 35, 35 to 45 etc.)

888. DK

**Q93. What is the highest level of education you have completed?**

1. High school diploma or less
2. Some college
3. Associates degree
4. Bachelors degree
5. Graduate or professional degree
9. REF

**Q94. Please stop me when I read you household's annual income:**

1. Less than \$20,000
2. \$20,000 to less than \$40,000
3. \$40,000 to less than \$60,000
4. \$60,000 to less than \$80,000
5. \$80,000 to less than \$100,000
6. \$100,000 to less than \$150,000
7. More than \$150,000
9. REF

**Q95. What best describes your ethnicity or race?**

1. White or Caucasian
2. Hispanic/Latino/a
3. Black or African American
4. Asian
5. Native Hawaiian or Other Pacific Islander
6. American Indian or Alaska Native
7. Other [specify] \_\_\_\_\_
8. Refused

TERM1

**Thank you for your time**

TERM2

**Those were all the questions I have for you; on behalf of <<show utility>> I would like to thank you very much for taking the time to help us out with our study. Have a great day.**

COMPLETE