

## FINAL REPORT

# 2010-2012 PG&E Direct Install for Mobile and Manufactured Homes Program (DIMMHP) and SCE Comprehensive Manufactured Home Program (CMHP) Process Evaluation Study

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## EXECUTIVE SUMMARY

This report presents the findings of a process evaluation that The Cadmus Group, Inc. (Cadmus) conducted for the 2010–2012 program cycle of Pacific Gas & Electric Company's (PG&E) Direct Install for Manufactured and Mobile Homes (DIMMH) program and Southern California Edison's (SCE) Comprehensive Manufactured Homes Program (CMHP). The research sought to provide information that can be used to enhance DIMMH/CMHP design and operation, energy savings, and customer satisfaction.

DIMMH/CMHP operates similarly across the two utilities, using the same program implementer (Synergy). It provides energy-efficiency services for both common areas and households within manufactured and mobile home communities, at no cost to the customer. The services include education, direct installation of measures, quality assurance, and referral to other utility programs. Measures vary somewhat by utility, but include efficient lighting, air conditioning tune ups and duct sealing, and low-flow showerheads and faucet aerators.

The DIMMH/CMHP process evaluation analyzed the effectiveness of program design and implementation through a review of program materials, interviews with program staff, and surveys with park operators and park residents who had participated in the program. In this summary, we report survey findings across both utilities unless otherwise noted.

### Program Performance

Based on available program tracking data, PG&E's DIMMH served approximately 7,000 mobile home park common areas and households between September 2010 and February 2012. Among these households, the measure most commonly installed was an HVAC duct test and seal (58% of households), followed by interior compact fluorescent lamp (CFL) fixtures (22% of households). Forty percent of households received some type of interior or exterior lighting measure.

SCE's CMHP served approximately 5,200 households and park common areas between January 1, 2010, and April 15, 2011. Almost all households (96%) received lighting measures. Only two other measures were installed in more than 2% of homes: AC tune-ups (6.8%); and duct testing (5.9%).

### Participation

The survey with park operators ( $N = 70$  evenly divided across the two utilities) suggested that program delivery was somewhat different in each utility territory. More than twice as many park operators in SCE's territory (50%), compared to those PG&E's territory (21%), reported they had arranged for program staff to give presentations to park residents. On the other hand, only about 11% of park operators in SCE's territory, compared with more than 25% in PG&E's territory, said they had requested help in improving common area energy efficiency.

The large majority of park operators surveyed from both utilities said the following factors were very important reasons to participate: saving energy, doing the right thing for the environment, demonstrating that their properties were well maintained, and helping their residents reduce energy costs.

When park operators rated the importance of various concerns they may have had about program participation, all ratings were under 6 on a 0-10 point scale, indicating that concerns were of only moderate importance, at the highest. Operators participating in the SCE program, when compared to PG&E participants, were significantly more concerned that residents would not save money and would be inconvenienced as a result of the program. In addition, in answer to an open-ended question about program challenges, some operators said they had some problems being sure they were eligible for certain measures.

Park residents (N = 70 evenly divided across the utilities) most often said they participated in the program to lower energy costs (44% of respondents). Other reasons to participate included getting free measures (14%); and fixing or replacing broken equipment (13%). No significant differences surfaced between the utilities regarding operator or resident motivations to participate.

## Program Satisfaction

Both participating park operators and park residents surveyed expressed strong overall satisfaction with the program, with satisfaction ratings being somewhat higher for the SCE program (92% of respondents between 8 and 10 on a 0-10 point scale) than for the PG&E program (82% of respondents between 8 and 10). (This difference is not large enough to be statistically significant.) Similarly, 100% of surveyed park residents participating in the SCE program gave a satisfaction rating of 8 or higher compared to 85% of park residents in PG&E's program. (This difference is statistically significant.)

## Educational Efforts

Seventy-nine percent of park residents who were surveyed recalled that program staff walked through their homes, providing energy saving tips and 59% recalled staff explained why installed equipment was appropriate for their home. Only about 26% recalled reading the materials and acting upon the recommendations.

Twenty-two percent (8) of PG&E residential participants responding to the survey reported having installed additional energy-efficient equipment since participating in the program. Only one of these respondents, however, credited the program with influencing their actions. Among SCE participants responding to the survey, 14% (5) installed other energy-efficient equipment since participating in the program. Four out of five said the program *did* affect their decision.

## Conclusions and Recommendations

### Overall Assessment

**Conclusion.** The DIMMH and CMHP programs have been successful. They have delivered much needed benefits to limited-income and otherwise hard-to-reach customers, and these customers have given the program high satisfaction ratings. The implementer has been responsive in addressing concerns and challenges that have arisen.

**Recommendation:** Our overall recommendation is that the program should continue and, if funds allow, be expanded to reach more of this market. Efforts should be made to determine how many parks are still need to be served and assuming the market is not saturated, efforts should

continue to ensure no significant portions of the market—geographic or socioeconomic—are being overlooked.

## Program Credibility

**Conclusion:** Many utility customers initially found the “free” measure offer of DIMMH and CMHP too good to believe. As residents usually were not familiar with the Synergy name, they had difficulty in identifying the Synergy staff’s legitimacy.

**Recommendation:** The programs should continue with and expand their co-branding efforts. Though some co-branded program material currently exists, the programs should consider expanding such co-branding to all customer-facing program materials.

## The Gatekeeper Barrier

**Conclusion.** Synergy noted mobile home park managers often were protective of park residents and would not allow Synergy’s staff to conduct door-to-door marketing.

**Recommendation.** To help overcome gatekeeper barriers, program managers and implementers should consider how to best position marketing materials and direct sales pitches with these job responsibilities that park operators identified as important:

- Saving energy
- Demonstrating the property is well-maintained
- Doing the right thing for the environment
- Reducing utility costs for park residents.

In addition, marketing and outreach messages could more effectively counter concerns among some operators that the program won’t save residents money and that they will be inconvenienced.

## Program Capacity

**Conclusion.** In 2011, Synergy had to limit its services to customers in SCE territory due to program over-subscription.

**Recommendation.** Increased program funding should be considered. Programs should continue to enroll parks on a waitlist, while advising all parties in regard to work delays resulting from availability of program funding.

## Site Inspection Process

Early in the program cycle, PG&E’s DIMMH had a 75% inspection pass rate—the second lowest rate among all PG&E programs. The inspection pass rate since has risen to over 90%. While this represents a substantial improvement, Synergy stated the inspection process with PG&E’s Central Inspection Program (CIP) has become the most complicated program feature, requiring significant staff time and resources.

**Recommendation.** The programs should continue to build on enhancements such as: adjustments to the scoring methodology; and the introduction of quality production managers to ensure quality problems have been resolved.

## **Data Tracking**

Bulk data uploads to PG&E's program data warehouse did not provide sufficient data for CIP to provide inspections..

**Recommendations.** PG&E should capitalize on the flexibility of the current system to refine the process and to verify that appropriate data are being collected and transferred. PG&E should continue to seek additional funding from the CPUC or other sources to upgrade its data warehouse and data transfer.

## INTRODUCTION

This report presents the findings of a process evaluation that The Cadmus Group, Inc. (Cadmus) conducted for the 2010–2012 program cycle of Pacific Gas & Electric Company's (PG&E) Direct Install for Manufactured and Mobile Homes (DIMMH) program and Southern California Edison's Comprehensive Manufactured Home Program (CMHP). The overall purpose of the research is to provide information to inform program design and operation. Cadmus conducted most research activities from the fall of 2011 through the spring of 2012.

In this chapter we describe the program and our evaluation approach. In subsequent chapters, we analyze the mobile home market and assess various aspects of program performance. Finally, we present conclusions and recommendations based upon our research.

Because the programs at the two utilities are similar, we will generally refer to it as DIMMH/CMHP.<sup>1</sup> As appropriate, however, we will present results separately for each utility.

### DIMMH/CMHP Program Description

DIMMH/CMHP provides energy-efficiency services to manufactured and mobile home park residents and operators at no cost to the customers. Synergy, a turnkey implementation provider, markets and delivers the program for both utilities. CMHP also offers gas measures through Southern California Gas (SCG).

Outreach typically includes direct canvassing and contact through telephone and direct mail. Synergy energy specialists make an appointment to meet with park managers to discuss the program, provide program flyers, and request permission to contact residents. They also assess the eligibility and measure needs of homes and common areas within the park and make an appointment for a second visit. A trained technician then returns to install energy efficient measures, provide energy saving tips, and refer customers to other utility programs.

Synergy inputs incentive and direct-install measure data through its tracking system, uploading customer information and invoices to a swap drive or a password-protected secure server. Upon completing the measure installation, PG&E conducts inspections, selecting: “*a 10% to 15% random sample for inspection.*”

### Program Measures

Table 1 below shows the efficiency measures offered within each utility service territory.

**Table 1. DIMMH/CHMP Measures Offered at PG&E and SCE**

Measures	PG&E	SCE
<b>For Residents</b>		
Central air conditioner tune-up	X	X
Testing and sealing air ducts	X	X/SCG
Air conditioner brushless motor retrofit		X
Compact fluorescent light bulbs	X	X

<sup>1</sup> We will also use the term ‘mobile home’ to cover both mobile and manufactured homes.

Measures	PG&E	SCE
ENERGY STAR Qualified light fixtures	X	X
Water saving products	X	SCG
<b>For Common Areas</b>		
Compact fluorescent light bulbs	X	X
ENERGY STAR Qualified light fixtures	X	X
Vending machine controllers	X	X

## Program Benefits

Interviews with program and implementer managers revealed they attach these benefits to DIMMH/CMHP:

- **Increased customer comfort and safety.** Improved lighting helped customers better navigate their homes. Additionally, Synergy noted the program increased customer “*safety and security dusk to dawn [from] outdoor lighting.*”
- **Aesthetics.** The program replaced outdated fixtures with new lighting measures, improving the interior appearance of customers’ homes.
- **Cost savings.** The program provided measures to customers at no cost, enabling them to save money on their utility bills. Many participants lived on fixed incomes, and could not afford to make energy-saving upgrades without the program.
- **Education.** While on site, Synergy staff educated customers about energy conservation and energy-saving choices in their homes.
- **Cross-marketing utility programs.** CMHP provided opportunities to introduce mobile home customers to other SCE programs.

## Evaluation Approach

The DIMMH/CMHP evaluation included a review of secondary information about the program and six primary data collection activities, as shown in Table 2. Cadmus staff designed and conducted both the interviews and surveys. Data collection occurred between February and April of 2012.

**Table 2. Primary Data Collection and Sample Sizes**

Research Activity	Sample Size
1. Review of Program Marketing Materials/Database	N/A
2. Interviews with Program Managers	2
3. Interviews with Program Implementers	2
4. Survey of PG&E Participating Park Operators	35
5. Survey of SCE Participating Park Operators	35
6. Survey of PG&E Participating Park Residents	35
7. Survey of SCE Participating Park Residents	35

## **Activity 1: Review of Program Marketing Materials and Database**

The process evaluation team examined program marketing material visuals and content for adequacy, clarity, and effectiveness of messaging, and, where possible, provided comparisons with other, similar program approaches. Interviews with program stakeholders and participants also included questions about program materials. Key findings from this review are included in the body of the report, while a full analysis is provided in Appendix A.

## **Activities 2 and 3: Interview Program Managers and Implementers**

Cadmus conducted structured interviews with DIMMH/CMHP utility program managers and key implementation staff at Synergy. The interviews focused on the following topics:

- Roles and responsibilities of all program staff;
- Program processes and procedures, training opportunities, and the process of educating contractors on program goals, including the effectiveness of the incentive mechanism;
- Perceived barriers to program participation, and staff approaches for overcoming those barriers;
- Descriptions of all program services, educational processes with outputs, and expected outcomes from each activity;
- Expected savings opportunities and market effects;
- Perceived successes and future challenges;
- Data resources, databases, and tracking system processes to secure the needed data; and
- Documentation for evaluation, and key researchable issues for data collection and analysis.

Interview guides for utility program managers and program implementers are provided in Appendices B and C.

## **Activities 4 through 7: Participant Surveys**

Cadmus conducted random sample telephone surveys of two types of program participants who had participated in the program within the past 12 months:

- Park operators
- Park residents

The samples were drawn from lists provided by the utilities. The surveys had a sample size of 70 for each group, divided equally between PG&E and SCE customers. Overall, this sample size satisfies a 90% confidence level, with a +/- 10% error for each group (park operators and park residents), assuming a coefficient of variation of 0.50.

Survey questions focused on process issues, such as how participants became aware of the program, their program experiences, and participation barriers. The surveys also included questions about the participants' decision-making processes, and about the degree to which program benefits influenced their decisions to purchase a measure. Questions addressed awareness, knowledge, and attitudes related to energy efficiency.

The survey instrument for operators is provided in Appendix D and the one for residents is provided in Appendix E.

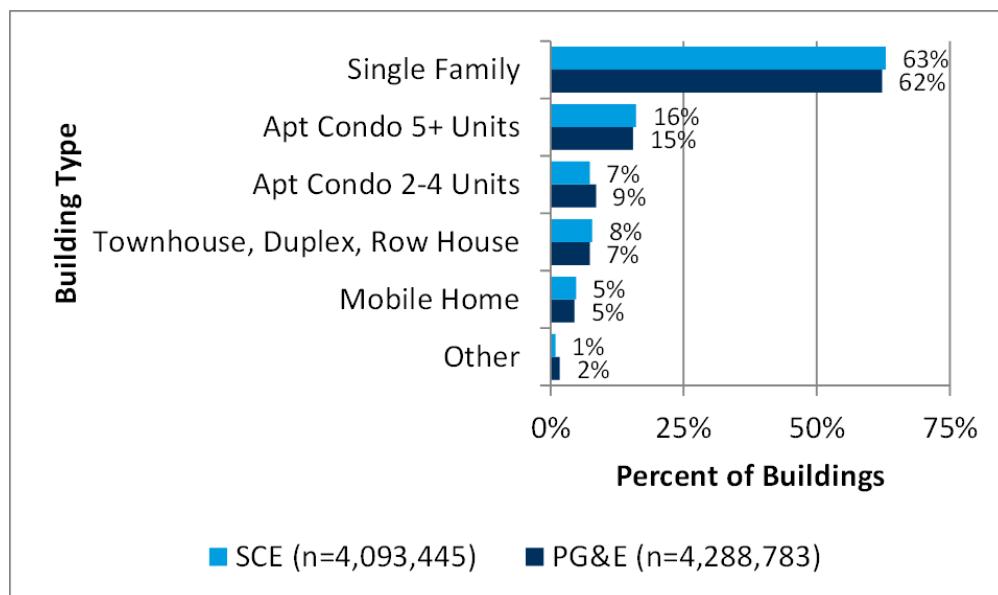
## MARKET DESCRIPTION

### Market Characteristics

This section presents key characteristics of the mobile home market based on the 2009 California Residential Appliance Saturation Survey (RASS)<sup>2</sup>, the American Community Survey (ACS)<sup>3</sup>, and Cadmus' survey of park residents.

RASS data indicated that mobile homes made up about 5% of households, with each utility serving just over 192,000 households. The same data showed the average annual consumption of a mobile home household was 6,684 kWh for PG&E customers and 5,532 kWh for SCE customers. Thus, across mobile homes the annual electric consumption totals 1,286 GWh for PG&E customers and 1,086 GWh for SCE customers. (See Figure 1.)

**Figure 1. Distribution of Residential Building Types in SCE and PG&E Service Territories**



In addition, various data sources showed that households tended to be the following:

- Small, on average, in terms of the number of occupants (2.2 for PG&E and 2.0 for SCE) and square footage (1,380 for PG&E and 1,231 for SCE).
- Owner-occupied (81% for PG&E's and 88% for SCE). Survey results showed an even higher rate of owner-occupancy (94% for PG&E and 91%), but this is likely because ownership removes the need for additional permission to install measures.

<sup>2</sup> KEMA, Inc. 2010. "2009 California Residential Appliance Saturation Study." Prepared for the California Energy Commission, CEC-200-2010-004.

<sup>3</sup> Bureau of the Census. 2009. *American Community Survey, Three-Year Data*.

- Lived in year-round (99% for PG&E and 98% for SCE).
- Responsible for their own electric bills. A notable proportion of survey respondents, however, reported their lot rental payments covered their electric bills (29% for PG&E and 49% for SCE).
- Lower income. ACS data for 2009 showed the median annual mobile home household was about \$41,000 in both utility territories compared to the median income across all utility households (\$75,000 for PG&E customers and \$73,000 for SCE's customers). Survey respondents had even lower incomes, with 60% at PG&E and 68% at SCE reporting household incomes of \$20,000 or less. Most respondents (86% at PG&E and 100% at SCE) reported incomes below 80% of the state median ( $\approx \$60,000$ ).

## Market Barriers

Despite offering measures at no cost to customers, the research with utility and implementer program managers revealed DIMMH/CMHP confronted a number of significant market barriers, as described below.

### Multiple Types and Layers of Decision Makers

To succeed, respondents emphasized that the program had to engage multiple decision makers: park owners or operators for common area measures and mobile home park residents for household measures. In addition, they said owners and operators were essential to provide overall access to the park's residents.

### Gatekeepers

Respondents also said that some mobile home park managers proved quite protective of park residents, and would not allow the implementer's staff to conduct door-to-door marketing (especially in parks with a no-canvassing policy).

### Resident Disruption

Program implementers have several methods for approaching park residents. The original program design was to deliver a presentation in the common area of a park, and recruit participants from this activity. Respondents said this resulted in relatively low participation rates, precipitating a shift to door-to-door outreach. While more effective, they said residents could still be reluctant to interrupt their current activities to listen to the implementer's appeal to participate.

### Suspicion of the Offer

Respondents reported that many potential program participants, when presented with the program offering, expressed skepticism about the program being genuine. Utility program managers indicated that "*sometimes customers don't believe [Synergy] represents [the utility] and they call the police for verification.*" The implementer noted that these parks' residents are confronted with many appeals, and that "*quite a few people ... scam [them] with fake programs.*"

## **Competition with More Urgent Life Issues**

DIMMH/CMHP residents usually own their own homes, but have limited incomes. At face value, the no-cost approach should have strong appeal to limited-income households.

Reports from the implementer, however, suggest residents often face significantly more urgent life problems that outweigh the benefits of becoming more energy efficient. Thus, in addition to suspicions about the offer, they reported it can be difficult to make efficiency a priority for residents.

## PROGRAM PERFORMANCE

This section discusses various aspects of the performance of DIMMH/CMHP, including the number of households served and measures installed, the educational impact of the program, and satisfaction with the program.

### Measures Installed

#### PG&E's Program

The DIMMH program achieved its three-year energy-savings goals within 18 months. Though the program's new energy-savings goals, set in August 2011, have doubled, the program remains on track to meet these goals.

Based on the available program tracking data, PG&E's DIMMH served approximately 7,000 households and park common areas between September 2010 and February 2012, with an HVAC duct test and seal the most commonly installed measure (58% of households), followed by interior CFL fixtures (22% of households). Forty percent of households received some type of interior or exterior lighting measure. Table 3 shows the distribution of measures installed.

**Table 3. Measures Installed by PG&E DIMMH Program**

Measure	Measures Installed	Participants Receiving	Percent Receiving
Duct Test and Seal	4,205	4,098	58.4%
Interior ENERGY STAR Hardwire Fixture, 30-36 Watts	4,889	1,512	21.6%
Interior ENERGY STAR CFL, 23 Watts	5,835	1,313	18.7%
AC Tune-up	1,249	1,222	17.4%
Exterior ENERGY STAR Hardwire Fixture, 18 Watts	1,920	1,153	16.4%
Faucet Aerators	1,030	508	7.2%
Shower Head: Low Flow	644	483	6.9%
Exterior ENERGY STAR CFL, 23 Watts	385	252	3.6%
CFL, 23-Watt Exterior Fixture (Common Area)	1,421	14	0.2%
CFL, 23-Watt Interior Fixture (Common Area)	103	4	0.1%
Mf T-5 or T-8 Interior Lamps w/ Electric Ballasts, 4 Ft 4 Lamps, Apt	3	3	0.0%

#### SCE's Program

Based on the available program tracking data, SCE's CMHP served approximately 5,200 households and park common areas between January 1, 2010, and April 15, 2011, with lighting measures installed at 96% of households. Only two other measures were installed in more than 2% of homes: AC tune-ups (6.8%) and duct testing (5.9%). Table 4 shows the distribution of measures installed.

**Table 4. Measures Installed by SCE CMHP Program**

<b>Measure</b>	<b>Measures Installed</b>	<b>Participants Receiving</b>	<b>Percent Receiving</b>
Interior Common Fixture, 36 Watts - 6	20,358	4,649	88.8%
Interior Dwelling CFL, 23 Watts - 16	10,996	4,247	81.1%
AC Diagnostic/Tune-up - 6	1,659	716	13.7%
Duct Test & Seal - 16	1,434	622	11.9%
Exterior Common CFL, 23 Watts - 6	126	79	1.5%
2-L 4 ft,T-8 Lamp Common - 16	68	68	1.3%
Interior Dwelling CFL, 14 Watts - 16	101	61	1.2%
4-L 4 ft,T-8 Lamp Common - 16	32	32	0.6%
Interior Common CFL, 23 Watts - 16	19	18	0.3%
Exterior Common Fixture, 18 Watts – 16	6	6	0.1%
LED Exit Sign – 16	6	6	0.1%
Interior Dwelling Fixture, 30 Watts - 6	1	1	0.0%
Occupancy Sensor Wall C - 6	1	1	0.0%
Vending Machine Controls - 16	1	1	0.0%

## Quality of Working Relationships

Synergy's and PG&E's relationship seems to function well. Synergy has praised the PG&E team, stating they have been supportive, encouraging, and it is “*great to have a PM that supports the program and helps find ways to keep improving.*” Program staff rated Synergy as: “*on a scale of 1 to 5 they get a 4.5.*”

Likewise, Synergy's and SCE's relationship seems to function well. SCE cited Synergy as a very good partner, handling most program aspects, and employing effective internal policies to address customer issues or complaints. SCE staff considered Synergy very responsive, providing effective overall program management.

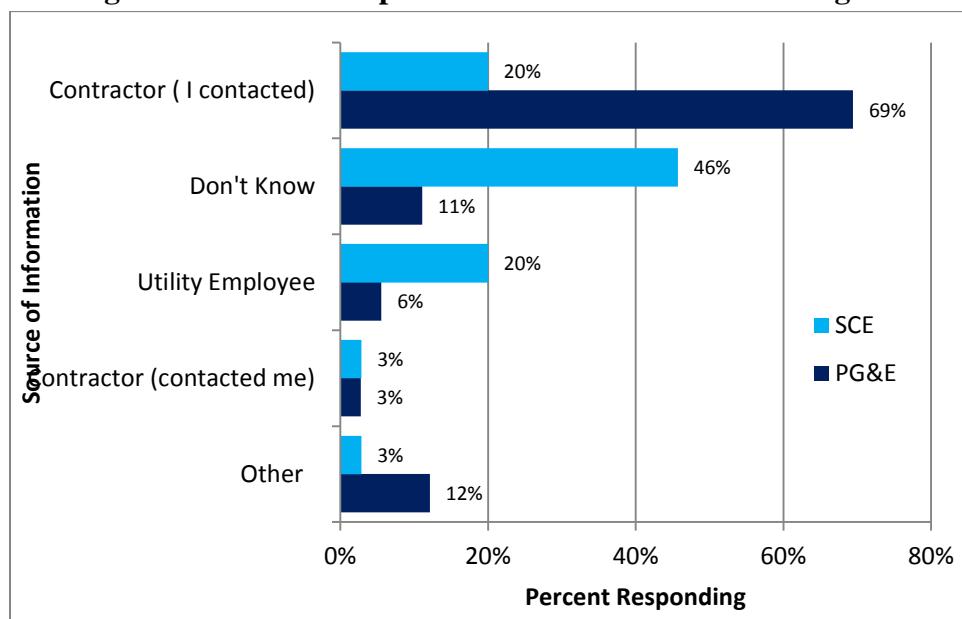
## Participation

### Park Operators

When asked how they first learned of the program, the largest percentage of park operators (45%) reported learning of it through contacting a “contractor.”<sup>4</sup> A marked difference emerges, however, between PG&E customers, who gave this response only 20% of the time, and SCE customers, who gave this response 70% of the time. The large difference in the opposite direction occurs with “don't know,” the second most common response: 11% for CMHP respondents and 46% for DIMMH respondents.

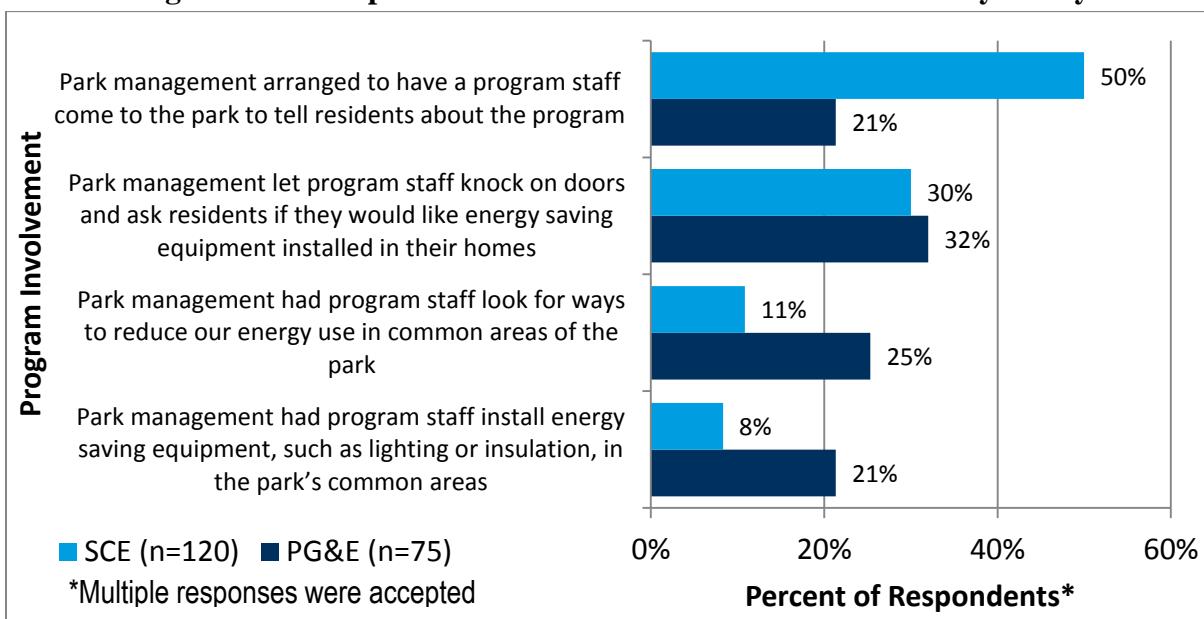
Figure 2 shows how participating park operators first learned of the program.

<sup>4</sup> The survey used the term “contractor” generically to refer to Synergy.

**Figure 2. How Park Operators First Learned of the Program**

Park operators also reported they experienced some other aspects of the program differently in the two utility areas. More than twice as many park operators in SCE's territory (50%), compared to those PG&E's territory (21%), reported they had arranged for program staff to give presentations to park residents. On the other hand, only about 8% of park operators in SCE's territory, compared with more than 21% in PG&E's territory, said they had requested help in improving common area energy efficiency.

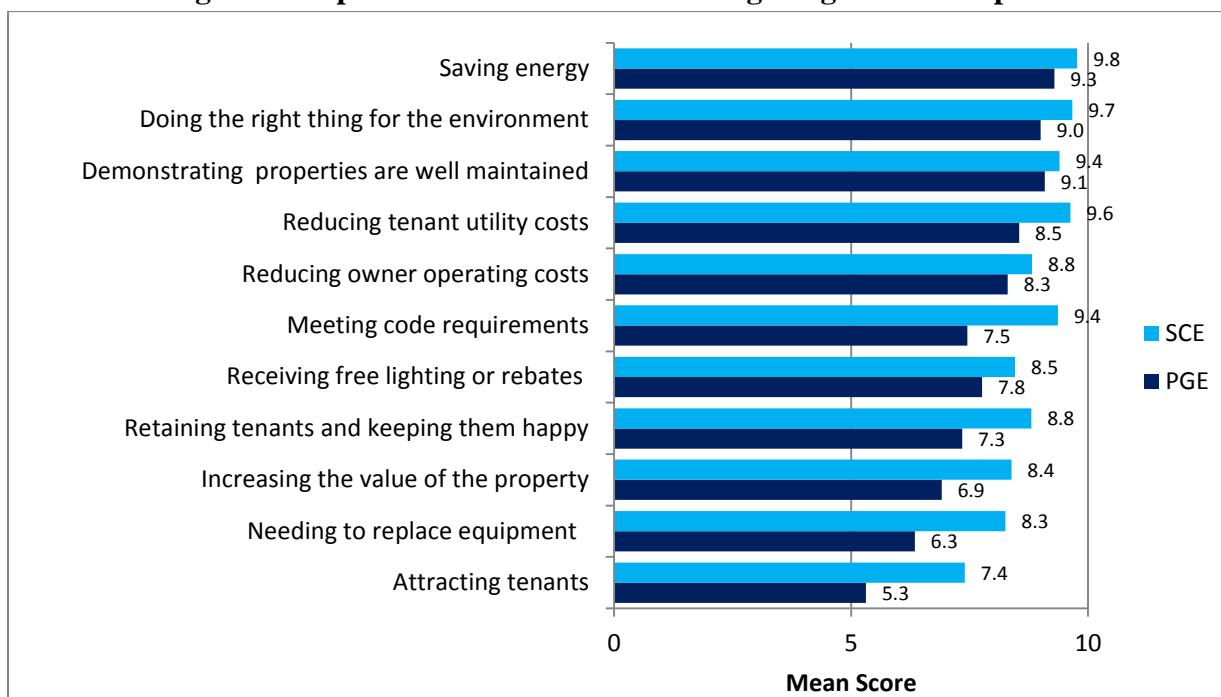
Figure 3 shows the percentage of park operators who interacted with the program in one of four ways.

**Figure 3. Park Operator Involvement with DIMMH/CMHP by Utility**

Park operators reported that several factors motivated them to participate, especially saving energy, doing the right thing for the environment, and demonstrating their properties were well maintained. Figure 4 shows the importance ratings of 11 factors motivating program participation, with a scale of 0 to 10, with 0 meaning “not at all important” and 10 meaning “extremely important.”

Operators participating in PG&E’s program rated all these factors of lower importance than those participating in SCE’s program. In some cases, differences were statistically significant and the trend is highly significant by the sign test.<sup>5</sup>

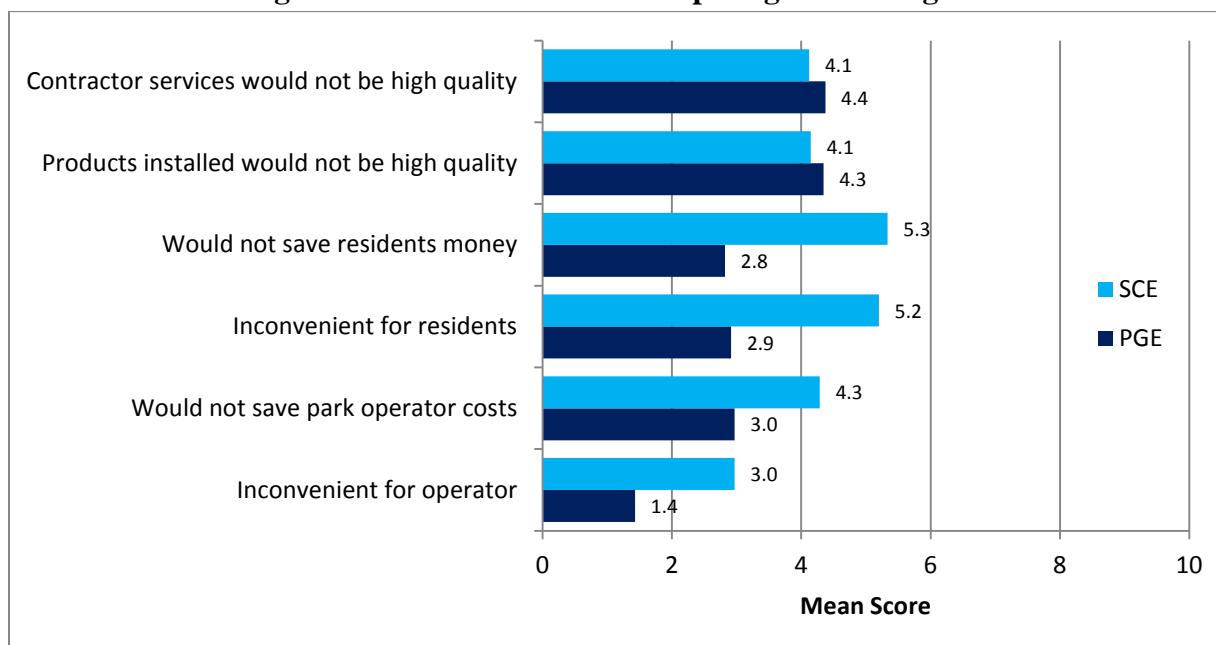
<sup>5</sup> Significant contrasts are: attracting tenants, needing to replace equipment, increasing property value, retaining tenants, and meeting code requirements. The sign test is a nonparametric test of a binomial distribution. It can be used to test the hypothesis there is no difference in two distributions. In this case, the two distributions are importance ratings of energy efficiency factors among the two utilities’ customers. If we take the individual responses as indicators of concern, the fact that SCE respondents consistently rate importance higher on 100% of items we take as indication that overall importance is higher and the differences overall are not simply due to random error.

**Figure 4. Importance of Factors Motivating Program Participation**

Among park operators arranging for program representatives to conduct demonstrations at their parks (46% PG&E respondents, and 89% SCE respondents), only 6% said they encountered challenges in holding the presentation. The open-ended responses indicated the challenges were related to uncertainty about the eligibility of particular measures. In PG&E's territory, only 19% (3 of 16) of the park operators arranging for presentations attended the presentation personally. In SCE's territory, 55% (17 of 31) attended. Among those attending from both utility territories, all but one rated the presentation an 8 to 10 on a 11-point scale, with 0 meaning "not at all helpful" and 10 meaning "extremely helpful." (One PG&E attendant rated the presentation a 7.)

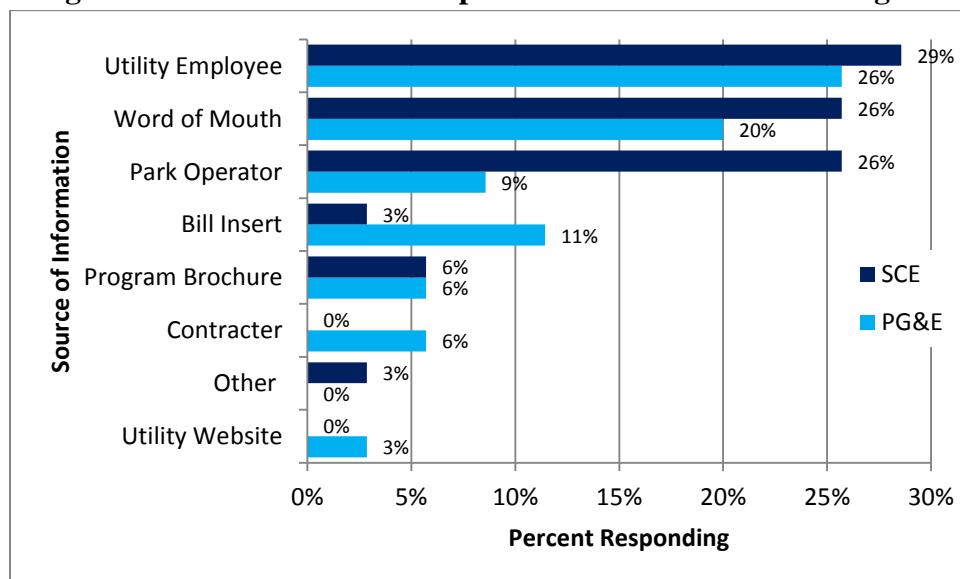
Among park operators arranging for program representatives to review energy-saving opportunities in common areas (66% PG&E respondents, and 69% SCE respondents), only 11% said they encountered challenges related to equipment installation. The few reported challenges related to being unable to determine whether the park qualified and to the timeliness of the work conducted. In both territories, according to our survey findings, about 38% of operators accompanied the program representative when reviewing property common areas for savings opportunities. Among those attending, most found the representatives' review helpful, though two from each utility rated the review 5 or lower on a 10-point scale, with 0 meaning "not at all helpful" and 10 meaning "extremely helpful."

Surveys of park operators also addressed their concerns regarding program participation. Figure 5 shows the concern ratings of six factors related to program participation, on a scale of 0 to 10, with 0 meaning "not at all concerned" and 10 meaning "extremely concerned." Operators rated all concerns as having fairly low importance (on average, most were below 4 and all were below 6). However in two instances park operators in SCE's territory showed significantly more concern than those in PG&E's territory: that residents would not save money and would be inconvenienced by the services provided.

**Figure 5. Concerns about Participating in the Program**

## Park Residents

Figure 6 shows how resident participants learned of the program through various channels. Of the residents participating in our survey, the largest percentage (26% PG&E; 26% SCE) reported they first learned of the program through a utility employee. The next most common response was through word of mouth (20% PG&E; 26% SCE).

**Figure 6. How Resident Participants First Learned of the Program**

Though differences between utilities, for the most part, were small, only 9% of PG&E respondents learned of the program through park operators, while 26% of SCE respondents learned of the program in this way. This is not a statistically significant difference, given the small sample size, but it may suggest that the level of park operators' involvement differed between the two service territories.

The survey results indicated approximately 40% of resident participants enrolled in the program when program staff knocked on their doors, with a similar percentage in both territories. Another 25% reported they enrolled by calling a toll-free number. Consistent with other findings, only about 7% of resident participants enrolled when attending a presentation in the common area of their mobile home park.

Residents rated lowering energy costs as the most important reason to participate (44%). Other reasons cited included getting free measures (14%) and being able to fix or replace broken equipment (13%). These responses showed no significant difference between utilities.

## Satisfaction

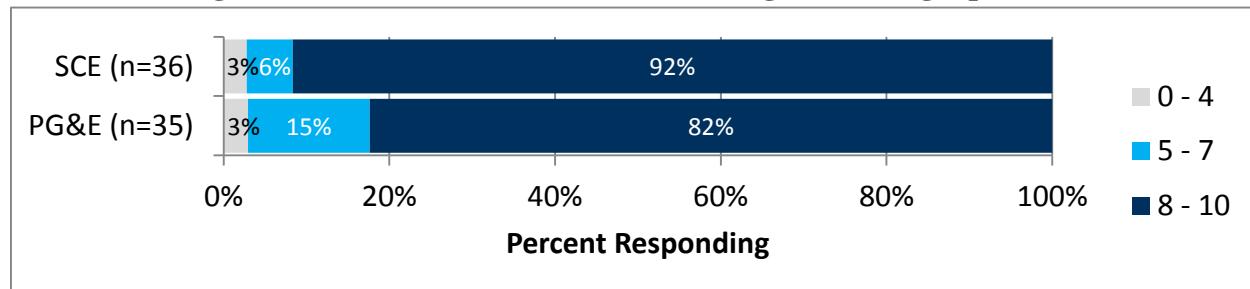
Program implementers reported through our interviews with them that their own surveys with customers showed a 97.5% satisfaction rate and said that customers expressed gratitude for the program. They also reported receiving thank-you notes and calls from customers about their satisfaction with program technicians.

According to our evaluation surveys, participating park operators and residents also gave the program high satisfaction ratings (see details in the next sections).

## Park Operators

The large majority (92%) of park operator respondents who participated in the SCE program rated their satisfaction with the program between 8 and 10 on an 11-point scale (0–10). In PG&E's territory, the percentage was lower, at 82%. One respondent from each utility's program expressed dissatisfaction with the program. This resulted in a mean satisfaction score of 9.1 for SCE and 8.7 for PG&E. Figure 7 shows the distribution of responses.

**Figure 7. Overall Satisfaction with the Program among Operators**



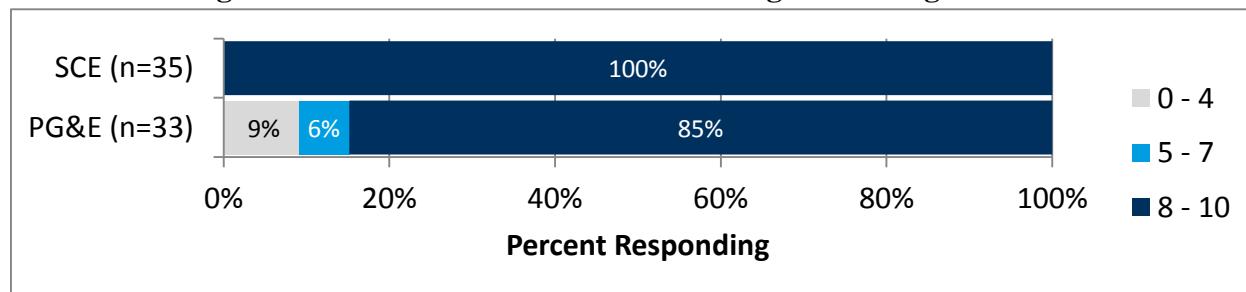
Operators also gave high satisfaction ratings for more specific elements in the program using the same 11-point scale.

- SCE participants rated work conducted in common areas through the program a mean satisfaction score of 9.4 (13) and PG&E participants rated this work at 9.0 by (11).
- SCE participant satisfaction with the performance of equipment installed was 9.6 (14) and 8.6 among PG&E participants (12).
- Among park operators reporting interaction with program staff (PG&E=14; SCE=25), satisfaction with the helpfulness of program staff rated an average score of 9.5 among SCE participants and 9.7 among PG&E participants.

## Park Residents

One-hundred percent of residents participating in the SCE program who were surveyed as part of this research rated their overall satisfaction with the program between 8 and 10 on an 11-point scale (0–10). Eighty-five percent of PG&E resident respondents rated their satisfaction between 8 and 10. Three of PG&E's resident participants expressed dissatisfaction with the program. This resulted in a mean satisfaction score of 8.8 for PG&E and 9.7 for SCE. Figure 8 shows the distribution of responses.

**Figure 8. Overall Satisfaction with the Program among Residents**



Different program aspects elicited similarly high satisfaction ratings. For instance, SCE participants rated their satisfaction with work performed through the program as 9.2 on average, while PG&E participants gave an average rating of 8.8. Similarly, SCE participants rated equipment performance as 9.4 and PG&E participants rated it as 8.7. Finally, they rated professionalism and knowledge of the program staff highly: 9.5 among SCE participants and 9.0 among PG&E participants.

Ninety-four percent of resident survey respondents—the same percentage from each utility—said they would recommend the program to a friend or family member.

## Effects of Educational Efforts

### Recall of Park Residents

Seventy-nine percent (55 of 70) of park resident survey respondents reported program staff had walked through their home, providing energy saving tips. Fifty-nine percent (41 of 70) of respondents recalled program staff explaining why installed equipment was appropriate for their homes. There were no meaningful differences between utilities.

After the home inspection, program implementers were to leave behind written materials, which included tips on how to save energy in a home. When asked about these activities, results showed the following:

- More SCE participants than PG&E participants recalled brochures and materials (69% vs. 49%).
- Of those recalling receipt of materials, 91% of SCE respondents (22 of 24) and 71% of PG&E respondents (12 of 17) reported having read them.
- Of respondents who had read the materials, about 50% (SCE: 12 of 22; PG&E: 6 of 12;) reported acting upon the recommendations.
- Consequently, of 70 total respondents, about 26% (18) recalled reading the materials and acting upon the recommendations.

About 60% (41 of 70) of respondents to the park resident survey said their awareness of energy efficiency increased due to program participation.

## **Spillover Among Park Residents**

Among SCE resident participants responding to the survey, 14% (5) reported they installed other energy-efficiency equipment since program participation. Equipment included installing energy-efficient light bulbs, purchasing appliances and a window air conditioner, and, for one respondent, a new front door. Among these respondents, four of five said the program had an effect on their decisions.

Twenty-two percent (8) of PG&E resident participants responding to the survey reported they installed additional energy-efficiency equipment since participating in the program. This equipment included: refrigerators, washers and dryers, CFLs, and light-emitting diode (LED) lighting. Only one of these respondents, however, credited the program with influencing their actions.

Two PG&E respondents and three SCE respondents had participated in other energy-efficiency programs after participating in DIMMH or CMHP. Respondents from both utilities reported participating in the energy survey, the low-income program, and CARE rate.

## **Addressing Past Problems**

Both program managers and program implementers identified a set of problems that had been identified in previous evaluations and which were addressed in the current program.

## **Geographic Distribution of Participants**

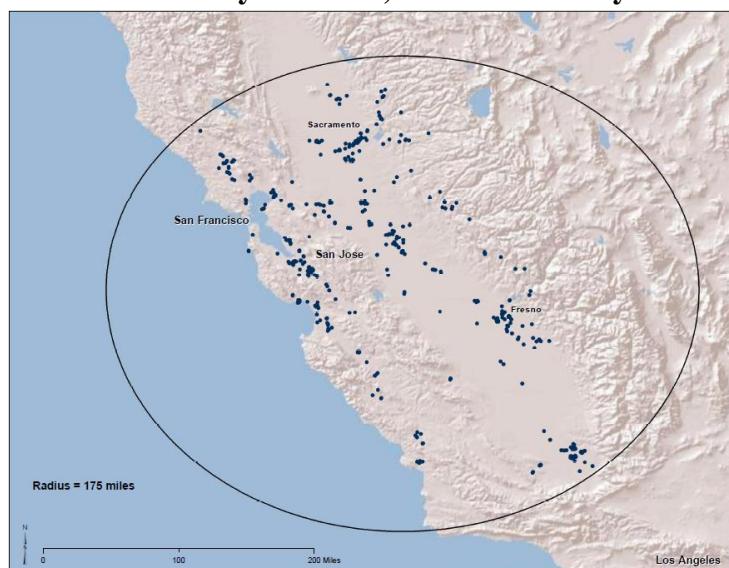
Prior to the current program cycle, the geographic distribution of participating parks had been too limited, excluding customers who might benefit from the program. In SCE's territory, a majority of parks recruited into the program were in the coastal region. Aside from limiting access to the program, savings opportunities in this region are actually lower because the temperatures are cooler. In PG&E's territory, the implementer addressed this issue by trying to

recruit parks distributed more widely across the utility service areas. Synergy particularly targeted parks in hotter climate zones, where the program could achieve greater savings.

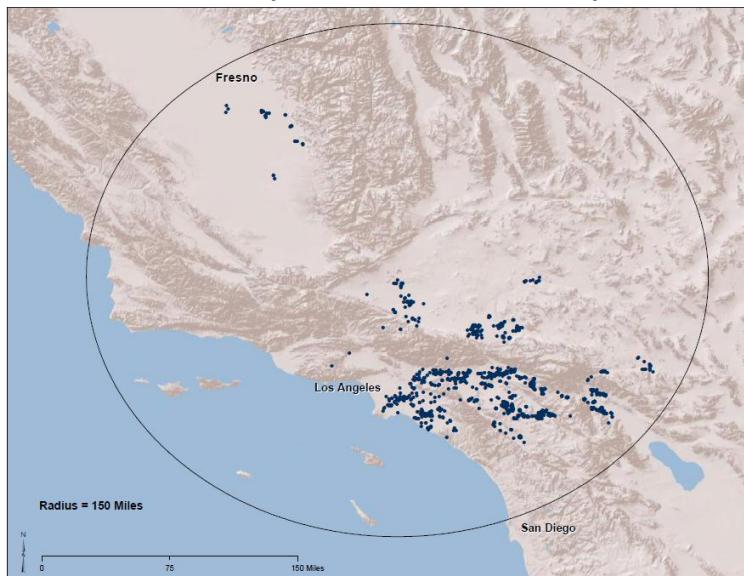
#### As shown by the maps in

Figure 9 and Figure 10, this effort largely succeeded. SCE's participating parks extended well inland from the coast, including sites in the Mohave Desert and Riverside County. Participating parks in PG&E's territory became well distributed across the southern San Joaquin, Salinas, and Santa Clara valleys. The northernmost region of PG&E's territory appears not to be served by the program, though the evaluation does not have independent information about saturations of mobile home parks in this region.

**Figure 9. Geographic Distribution of Mobile Home Parks Served by DIMMH, PG&E Territory**



**Figure 10. Geographic Distribution of Mobile Home Parks Served by CMHP, SCE Territory**



## Marketing Consistency

The implementer raised communications with potential participants as an issue. Sometimes, residents did not believe Synergy worked with the utilities. Significant skepticism about the program offer emerged, largely because the measures were offered at no cost to customers. The Synergy brand and logo was unfamiliar to utility customers.

The implementer believed that clear indications of the relationship between Synergy and the utilities would greatly allay such skepticism. To address this, SCE developed co-branded marketing materials. PG&E also worked closely with Synergy to develop new material for the program. These materials have been effective: residents generally express an understanding of the relationship between Synergy and the utility. The implementer said this cobranding “*opened a lot of doors.*” Figure 11 shows co-branding on the brochure Synergy uses to provide energy-saving tips to DIMMH participants.

**Figure 11. Co-Branding of DIMMH Brochure**

**Family Electric Rate Assistance - FERA**  
 The FERA Program offers a discounted rate on the monthly bill to income qualified customers that exceed their baseline usage by 31%-100%. To qualify, there must be a minimum of 3 or more permanent residents in the household and the total household income must fall within the program guidelines.

**Flex Your Power**  
 Flex Your Power is California's statewide energy efficiency marketing & outreach campaign. Initiated in 2001, Flex Your Power is a partnership of California's utilities, residents, businesses, institutions, government agencies & nonprofit organizations working to save energy. Visit Flex Your Power at [www.fypower.org](http://www.fypower.org) to find information on rebates & incentives, to locate stores near you that sell energy saving products, and to learn how to save money & energy everyday. Flex Your Power is funded by the ratepayers under the auspices of the California Public Utilities Commission.

**Rebates and Other Programs**  
 For more information on rebate offers and other PGE assistance programs, go to [www.pge.com](http://www.pge.com)



**Synergy COMPANIES®**  
 Central Valley Office  
 4535 N. Bendel Avenue, Suite 105  
 Fresno, CA 93722

**Synergy COMPANIES®**  
 Livermore Valley Office  
 2021 Las Postas Court, Suite 121  
 Livermore, CA 94551

For Questions call:

**800-439-9610**  
 Extension 130  
[www.synergycompanies.org](http://www.synergycompanies.org)

**PGE** Pacific Gas and Electric Company®

California consumers are not obligated to purchase any full-fee service or other services offered by this program. This program is funded by California utility customers and administered by PG&E under the auspices of the California Public Utilities Commission (CPUC). This program is available on a first-come, first-served basis until allocated funds are depleted. This program may be modified or terminated without notice.



## ENERGY SAVING TIPS AND RESOURCES FOR MOBILE HOMES

**800-439-9610**  
 Extension 130  
[www.synergycompanies.org](http://www.synergycompanies.org)

Figure 12 shows co-branding on the brochure Synergy uses to provide energy-saving tips to CMHP participants.

**Figure 12. Co-Branding of CMHP Brochure**

**Family Electric Rate Assistance - FERA**  
 The FERA Program offers a discounted rate on the monthly bill to income qualified customers that exceed their baseline usage by 31%-100%. To qualify, there must be a minimum of 3 or more permanent residents in the household and the total household income must fall within the program guidelines. Call 1-800-798-5723 if you have any questions.

**Refrigerator/Freezer Recycling Program**  
 Typically, an older refrigerator or freezer uses twice as much electricity as a newer model. Though a new refrigerator or freezer is a significant expense, it will lead to substantial savings on your electric bill. California law prohibits dumping your refrigerator or freezer in landfills. Southern California Edison (SCE) will pick up your old refrigerator or freezer for you and they'll even give you \$35 for a refrigerator or \$50 for a freezer. Many companies charge a fee to dispose of your old refrigerator or freezer. SCE will pick it up for FREE! Call 1-800-234-9722 or visit [www.sce.com/pickup](http://www.sce.com/pickup) to schedule an appointment.

**Energy Management Assistance (EMA) Program**  
 The Energy Management Assistance (EMA) program helps income-qualified households conserve energy and reduce their electricity costs. SCE pays all the costs of purchasing and installing energy-efficient appliances and equipment, which are free to eligible customers. To apply for the Energy Management Assistance program, or for further information, call 1-800-736-4777. Visit [www.sce.com](http://www.sce.com) for more information.

**Flex Your Power**  
 Flex Your Power is California's statewide energy efficiency marketing & outreach campaign. Initiated in 2001, Flex Your Power is a partnership of California's utilities, residents, businesses, institutions,

government agencies & nonprofit organizations working to save energy. Visit Flex Your Power at [www.fypower.org](http://www.fypower.org) to find information on rebates & incentives, to locate stores near you that sell energy saving products, and to learn how to save money & energy everyday. Flex Your Power is funded by the ratepayers under the auspices of the California Public Utilities Commission.

**Rebates and Other Programs**  
 For more information on rebate offers and other SCE assistance programs, call 1-800-736-4777 or go to [www.sce.com](http://www.sce.com)



**SYNERGY COMPANIES**  
 ENERGY MANAGEMENT DIVISION

TIPS AND RESOURCES  
 FOR MOBILE HOME PARKS

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This program is funded by California utility customers and administered by Southern California Edison under the auspices of the California Public Utilities Commission. Program is effective until December 31, 2009, or until funding is exhausted, whichever occurs first. Program is subject to change without notice. Questions call SCE at 800-736-4777.

FIND OUT HOW YOU CAN SAVE MONEY ON YOUR UTILITY BILLS

## Quality Control

In the past, Synergy was notified when quality control inspections identified problems. Utility personnel conducted these inspections as “ride-alongs,” meaning the inspector accompanied the implementer. Synergy would fix identified errors concurrently with the inspection. In this case, an error was not recorded, which skewed the final tracking data about the error rate.

To resolve such incidents, the utilities now use internal quality assurance (QA) teams to verify correct installations of program measures independently of the implementation teams, and, as stated by SCE, to “*provide a truer look at quality.*” Synergy reported working closely with QA staff to identify key inspection points and ways to address potential issues.

## Low Inspection Pass Rates

According to program staff, PG&E’s DIMMH sites had a 75% inspection pass rate, the second-lowest rate of all PG&E programs. To resolve this, the scoring metrics were adjusted. Previously, if a single measure failed, all site measures were considered a failure. This inflated failure rates across measures. Accounting has now shifted to a measure-by-measure basis.

Further, an internal QA/QC position was created at Synergy (a quality production manager) to avoid quality faults in advance of the independent inspection process. DIMMH now achieves a pass rate better than 90%, according to interview findings.

## Data Tracking

At the time of Cadmus’ interviews, SCE was developing an automated process to integrate Synergy’s database with the CRM system, thus streamlining the data entry process and speeding up record processing and rebate payments. The process sought to address data accuracy issues; as described by Synergy: “[We] were on a paper based system before and there used to be data entry errors.” Follow-up interviews suggested process worked well. Synergy reported: “The difference was night and day.”

In PG&E’s territory, a similar automated process has been in development. During the evaluation, the bulk upload system still did not function well enough to provide the QA/QC team with adequate information for conducting inspections; so a spreadsheet-based work-around was implemented.

## PROGRAM CONCLUSIONS AND RECOMMENDATIONS

### Overall

**Conclusion.** Overall, the DIMMH/CMHP program has been successful. It has delivered much needed benefits to limited-income and otherwise hard-to-reach customers, giving high levels of satisfaction to program participants. In addition, significant savings opportunities remain.

Where challenges have arisen, the implementer has been responsive in attempting to address them. Key challenges remain, particularly customer resistance and limits on program capacity, but these challenges can be overcome.

**Recommendation.** The program should continue and, if funds allow, be expanded to reach more of this market. Efforts should continue to ensure there are no significant portions of the market—geographic or socioeconomic—that are being overlooked.

### Program Credibility

**Conclusion.** The mobile home population (limited income, often elderly) had often been the target of various scams. This makes potential program participants wary of free offers like those offered through DIMMH/CMHP that seem too good to be true. In addition, residents often do not know the Synergy name, and thus wonder if it is legitimate.

The original delivery model, where a group presentation preceded the offer, helped to legitimize the program but few residents attended. As a result, Synergy adopted a door-to-door approach to resident outreach, heightening the need for easily identifiable signs of legitimacy. Utility logos have proven to be an effective sign of legitimacy.

**Recommendations.** Cadmus recommends the programs continue with and expand their co-branding efforts. As previously discussed, some program material has become co-branded now. The programs should consider expanding co-branding to all customer-facing program materials. Aligning the implementer with the utilities can mitigate the credibility barriers, as participants will likely recognize the SCE and PG&E branding.

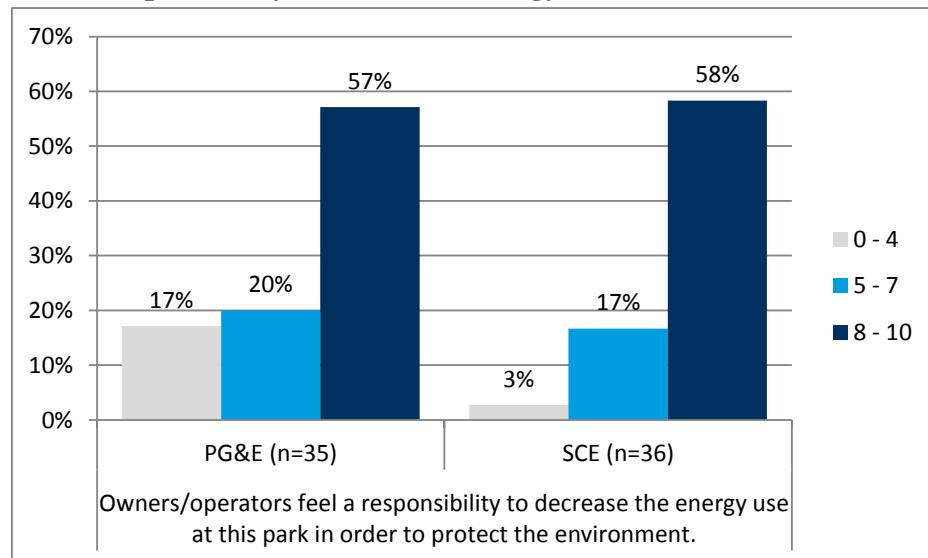
Further, building program credibility requires the implementer to maintain high resident satisfaction levels in the overall program through its program outreach activities. Ninety-four percent of park residents who were surveyed would recommend the program to a friend or family member. Maintaining high satisfaction, publicizing satisfaction ratings, and building word of mouth within each community and across communities, if possible, would all be useful efforts.

### Gatekeeper Barriers

**Conclusion:** Synergy noted mobile home park managers often were protective of park residents, and would not allow Synergy's staff to conduct door-to-door marketing. Synergy staff stated: "It can be difficult to get participation, especially in a park that does not allow canvassing."

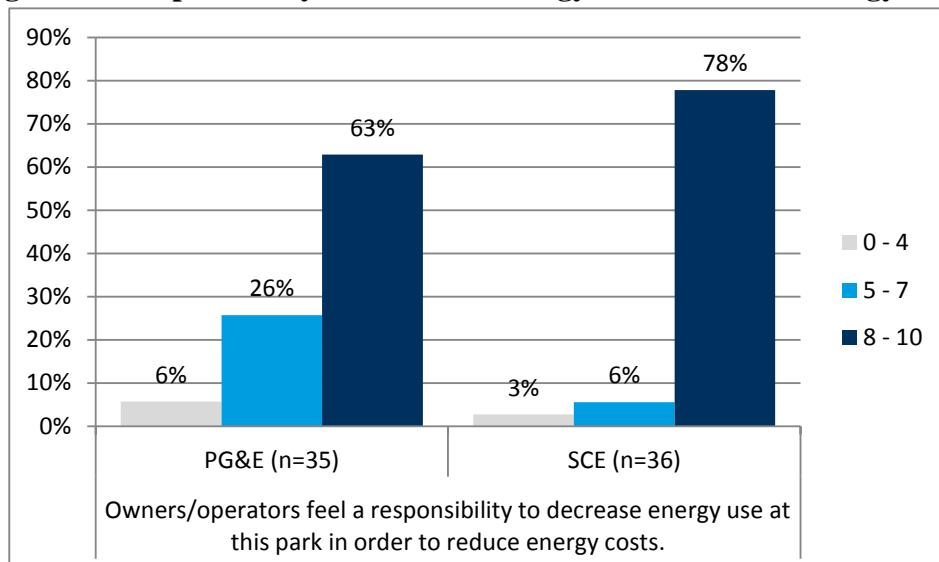
**Recommendations.** Engaging the operator's sense of responsibility toward park residents and the environment is likely to help overcome the gatekeeper barrier. Nearly 60% of respondents from both utilities agreed very strongly with the statement that park operators feel a responsibility to decrease energy use to protect the environment. Figure 13 shows the distribution of these responses.

**Figure 13. Responsibility to Decrease Energy Use to Protect the Environment**



Survey respondents considered reducing costs an even more important responsibility, with 63% of PG&E-territory operators and 78% of SCE-territory operators agreeing very strongly that it is considered a responsibility. Figure 14 shows the distribution of responses.

**Figure 14. Responsibility to Decrease Energy Use to Reduce Energy Costs**



The program should ensure its marketing materials and program “sales pitches” emphasize the following four motivators that 80% of operator survey respondents identified as very important:

- Saving energy;
- Demonstrating a well-maintained property;
- Doing the right thing for the environment; and
- Reducing resident utility costs.

Further, tailoring marketing and outreach messages should be considered to address operator concerns. In general, such concerns remain rather muted. Nevertheless, they should not be ignored. Figure 15 shows the top three concerns among PG&E park operators responding to the survey. A greater concern relates to the quality of services provided by the implementer. A similar, though not as strong, concern emerged regarding the equipment installed by the implementer being of sufficiently high quality. A smaller number of operators expressed concerns about inconveniencing residents.

**Figure 15. Primary Concern About Program Participation Among PG&E Park Operators**

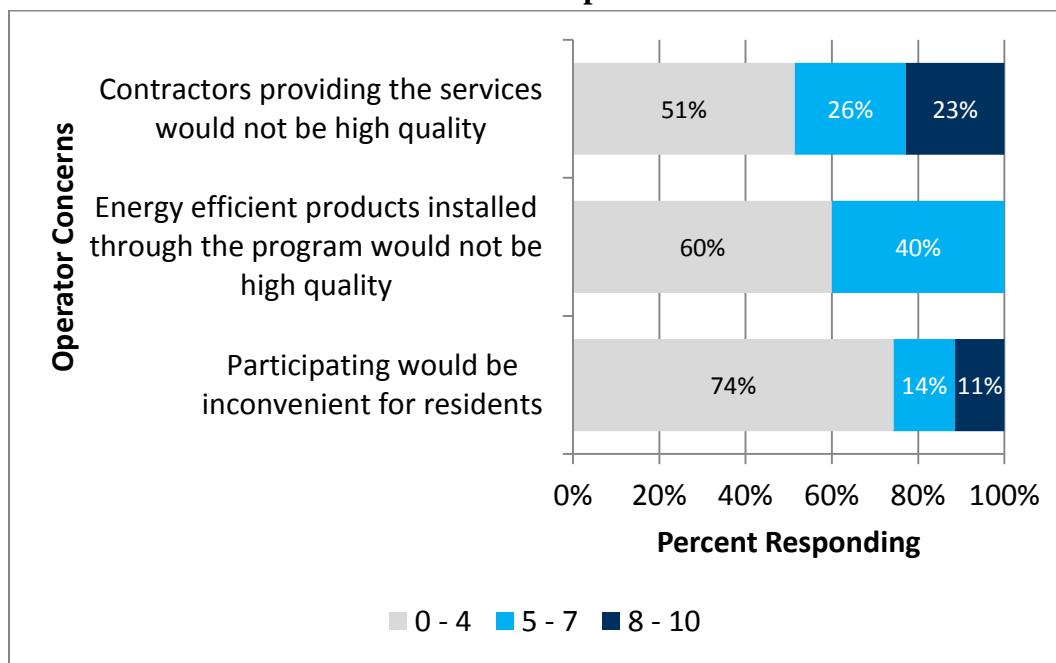
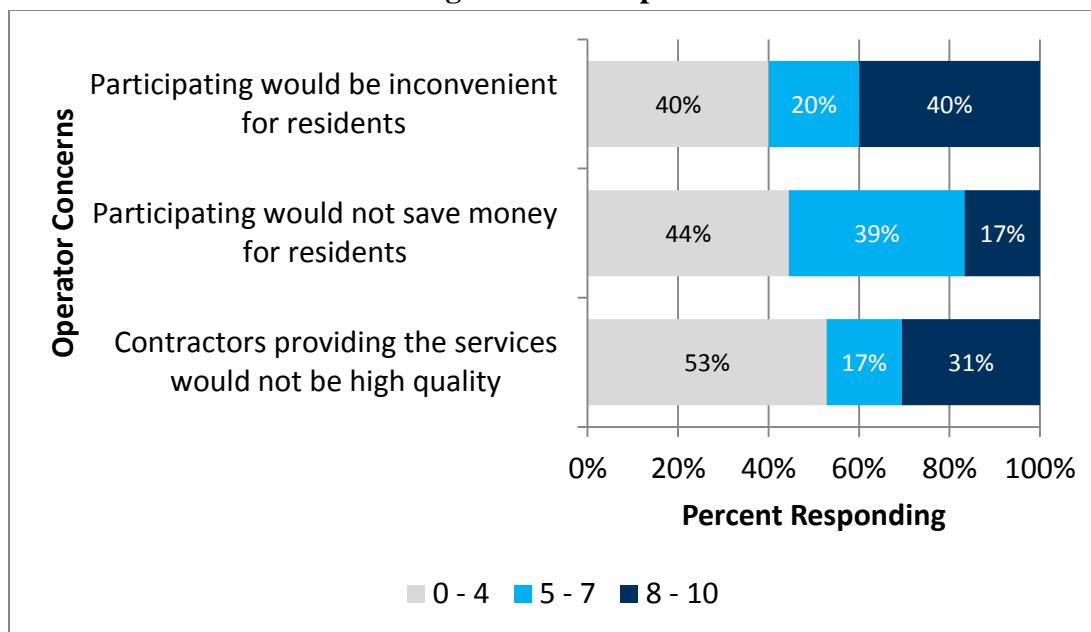


Figure 16 shows the top concerns among SCE park operators responding to the survey. Though similar to PG&E concerns, these include concerns that residents would not see significant savings from participation.

**Figure 16. Primary Concern About Program Participation Among SCE Park Operators**



Finally, the programs should protect the operators' current high satisfaction levels regarding the overall program's outreach efforts: 100% of PG&E and SCE operator survey respondents said would recommend the program to the operator of another park.

## Program Capacity

Due to program oversubscription, Synergy had to limit its services to customers in 2011. SCE continued to enroll customers that asked to participate, putting them on a reserve list to be served first when additional funds arrived. They did not, however, actively market the program once it reached its full budget allocation.

## Recommendations

Consider increasing program funding. PG&E anticipated depleting funds in 2012, but increased the program budget to avoid potential problems, and Synergy could meet the additional workload.

Programs should continue to enroll parks once funds are exhausted, but be transparent about any delay in work until program funding is available. Synergy indicated that this approach generally worked well in 2011 as long as this group was given priority as soon as the program re-launched in 2012.

## Site Inspection Process

Early in the program cycle, PG&E's DIMMH program had a 75% inspection pass rate, the second-lowest rate among all PG&E programs. That has climbed to over 90%. While this represents a substantial improvement, Synergy stated the inspection process with CIP has become the most complicated program feature.

## Recommendations

We have noted the importance of customer satisfaction the success of the program. The programs should continue to build on enhancements, such as adjustments to the scoring methodology, and introduction of quality production managers, to ensure quality problems have been resolved.

Further, the implementer should continue to work closely with the independent QA staff to understand what they are looking for in their inspections and how to meet their expectations.

Continue to offer program manager and inspectors opportunities to conduct ride-alongs throughout year to better understand work being done

## Data Tracking

Bulk data uploads to PG&E's program data warehouse have not provided sufficient data for CIP to provide inspections. The California Public Utility Commission (CPUC) has been unwilling to update or replace the existing system.

## Recommendations

Interviews with program staff indicated that using a manual process, while cumbersome, provided CIP with much better data. For instance, it proved easier to locate the place of measure installations. This has increased pass rates during project inspections. PG&E should capitalize on the flexibility of the current system to refine the process and to verify that appropriate data are being collected and transferred. PG&E should continue to seek additional funding from the CPUC or other sources to upgrade its data warehouse and data transfer.

## APPENDIX A. PROGRAM MATERIALS REVIEW

### PG&E Materials

PG&E's DIMMH Program provides energy-efficiency upgrades for mobile homes, manufactured homes, and mobile home park common areas at no cost to homeowners or park managers. A turnkey contractor, Synergy, implements the program. PG&E provides:

- Verified duct test and seal
- Verified AC diagnostic and tune-up
- Low-flow showerheads
- Faucet aerators
- Interior and exterior CFLs
- Interior and exterior hardwired fixtures
- T-8 retrofits
- Vending machine controllers and common area lighting

The overall goal of this review was to assess the content and visual elements of the program materials for adequacy, clarity, and effectiveness of messaging, based on industry best practices.

Cadmus reviewed all documentation provided by PG&E program staff, including:

- Direct Install for Manufactured and Mobile Homes Program Policies and Procedures manual (2010–2012);
- DIMMH Program Coordination Plan (2010–2012);
- DIMMH Program Quality Assurance and Quality Control Plan (2010–2012); and
- PG&E Website and marketing collateral.

Cadmus divided these materials into three types for review: (1) program manuals; (2) data collection instruments; and (3) marketing materials.

### Research Questions

For each type of material, we developed research questions that guided our review.

#### Program Manuals and Guides

By asking the following, we directed our review of the program manuals; the quality assurance and payment desk guide; and the reservation, data entry, and verification desk guide:

1. Do the program manuals and desk guides cover all necessary topics to guide new and existing staff members in program implementation?
2. Are the program manual and desk guides organized in a manner that appears intuitive and straightforward for the intended user?

## Data Entry

The following questions that guided our review of the rebate applications and reservation forms:

1. Are systems in place to ensure reliable data collection?
2. Are systems in place to ensure project verification and quality?
3. Is sufficient information available to validate customer eligibility?
4. Do application and rebate forms gather sufficient information for the evaluation?

## Marketing Materials

The following questions guided our review of program marketing materials:

1. Does the Website reflect best practices regarding user experience, architecture, content, and design?
2. Are available marketing materials adequate to support the marketing and outreach needs of the program?
3. Are marketing materials, forms, and brochures professionally designed and formatted, free of errors, consistent with the PG&E brand, and easy to read, and are they creative and compelling?

## Materials Review

Based on our review, this section describes what works well and what might be improved for each document Cadmus reviewed.

The program contractor, Synergy, produces all the Mobile Homes Program marketing materials to support their own program marketing needs. At a high level, the key program marketing materials provide useful information and support both participation and follow up by customers. The program flyer provides visual representations of available measures, and features a direct call to action, which makes it easy for customers to engage with the program. The tri-fold brochure appears to be a leave-behind piece, and focuses on energy-savings tips and information about additional PG&E programs that may benefit the target population. A postcard/comment card allows participants to provide feedback on the services provided.

Each of these pieces includes appropriate content for their intended purposes. Synergy also uses an introduction/endorsement letter from the PG&E program manager, produced on PG&E letterhead, to verify their status as the program contractor to potential customers. Taken as a whole, Synergy's marketing collateral presents a good overview of the program features and spans a range of uses; however, small adjustments in a few areas could improve the materials' overall usefulness.

Although all of the program marketing materials are co-branded with PG&E's logo, the materials have the look and feel of Synergy documents, and are not consistent with the PG&E brand identity. While the program materials highlight the "no-cost" measures and services the program provides, added details about cost savings from implementation of program measures over a lifetime would further strengthen this message.

Additionally, these materials could benefit from adjustments to content, design, and messaging, to convey a stronger connection to PG&E, which can increase trust and credibility with customers. Cadmus also notes that PG&E's Website does not appear to include a page or any supporting information on this program. While we recognize the program's nature is such that a public Webpage may not necessarily be required to promote the program, specific key information could be particularly useful to provide credibility that the program is, in fact, sponsored and supported by PG&E, and that PG&E selected Synergy to implement the program.

Most of program marketing materials reference Synergy's Website ([www.synergycompanies.org](http://www.synergycompanies.org)), which contains the Program Flyer and Illustrated Program Measure Installation Sheet. However, locating the information is not intuitive, and requires three clicks. Clicking on the heading "Multifamily and Hospitality" and then "energy efficiency" leads to a page focused on a San Diego Gas and Electric's commercial direct-install program.

## **Materials Review Summary**

Table 1 summarizes findings from the reviews of each program manual, data collection, and marketing materials. Each review area summarizes what PG&E does well, and what it could refine or improve.

**Table 1. Materials Review Summary**

	Content	Visual Elements
<b>Program Documents</b>		
Policies and Procedures Manual	Provides good overview of program process. More detail could be added to clarify roles and responsibilities and systems to collect information.	Provides copies of all relevant forms; helpful and clear.
Mobile Home Program Coordination Plan	Concise and clear plan. Detail on the process for eliminating double-dipping could be beneficial.	Clear headings and flow.
Mobile Home Quality Assurance and Quality Control Plan	Clear, thorough, and easy to follow. Potential conflicts of interest if Synergy is both installing and inspecting jobs completed.	Well organized. Screen shot cuts out some words.
<b>Marketing</b>		
Website	Currently, there is no program Webpage on PG&E's Website.	
	Most marketing materials reference Synergy's Website, <a href="http://www.synergycompanies.org">www.synergycompanies.org</a> , which contains the CMH Program Flyer and Illustrated Program Measure Installation Sheet.	The PG&E DIMMHP information is difficult to find on Synergy's website (three clicks from the home page).
Materials: Mobile Homes Program Flyer, Brochure, Customer Communications Documents	Program flyer emphasizes no-cost measures and services, and includes a prominent call to action. All marketing materials contain useful information for their intended purpose.	Tight bullets, concise wording, and plenty of white space demonstrate best practices in marketing design.
	Content could benefit from focus on additional program benefits, such as long-term energy savings, improved comfort, quality, etc.	Marketing materials are clearly Synergy documents, and are not consistent with the PG&E brand.

## SCE Materials

SCE's CMHP provides energy-efficiency upgrades to mobile homes and mobile home park common areas, without costs to homeowners or park managers. SCE provides interior and exterior fluorescent fixtures and lamps for dwellings and common areas.

A turnkey contractor implements the program. The contractor offers a comprehensive package of measures to mobile home park residents by combining CMHP measures with Energy Savings Assistance Program measures for both SCE and SCG. These measures consist of low-flow faucet aerators, low-flow showerheads, pipe wrap, and duct tests and sealing.

### Purpose and Methods

Overall, Cadmus' review sought to assess the content and visual elements of the program materials for adequacy, clarity, and effectiveness of messaging, based on industry best practices.

Cadmus reviewed all documentation provided by SCE program staff, including:

- CMHP Policies and Procedures Manuals for program years 2010-2012;
- Enhanced Inspection Plan for SCE's Multiple Dwellings Programs (dated September 14, 2011); and
- SCE Website and brochures.

We divided these materials into three areas for review: (1) program manuals; (2) data collection instruments; and (3) marketing materials. For each type of material, we developed research questions that guided our review.

### Materials Review

Based on the review, this section describes what works well and what might be improved for each type of material.

#### Program Manuals

The objectives of the CMHP policies and procedures manuals are to inform staff of program requirements and to provide guidelines on operational procedures (such as tracking, rebate application measure verification, and funding allocation rules). The following key questions guided the review of program manuals:

1. Does the program manual cover all necessary topics to guide new and existing staff members in program implementation?
2. Is the program manual organized in a manner that appears intuitive and straightforward for the intended user (target audience)?

At a high level, Cadmus found the program manuals provide thorough direction, with good examples and visual elements that support the overall objectives. However, we identified some areas where the manuals could be improved to ensure that critical information is clear and easy to locate. Improving the consistency of formatting and certain language elements also would make manuals easier to understand.

## Assessment

The CMHP policies and procedures manual provides detailed information and direction regarding the oversight of each program, such as:

- Specific information about qualifying measures and required submission of documentation, as well as step-by-step procedures for tracking data.
- A clear outline of all program processes and operations, with many useful references (e.g., tables, screen shots, and references to additional information elsewhere).
- Meticulous descriptions of staff roles, responsibilities, and the relationships between staff.

Cadmus' review revealed the following inconsistencies in formatting, and some minor areas in which the manuals could be improved.

As a result of the SCE's careful attention to detail, the policies and procedures manuals contain considerable quantities of material. Thus, streamlining future versions of these documents should render them easier to use. Specifically, having highly detailed materials in appendices should improve the document's usability.

Most users are probably familiar with the explanations about how to use the manual. For example, in Section 003 contains the instruction: "*See above*" means you should look for a paragraph or an illustration that is in the same Section, but comes **before**, whatever you are reading now" (CMHP Policies and Procedures Manual, page 003-2). We realize that SCE's experience with new program managers may have shown a need for these instructions; however, having a separate section of user guidelines could streamline the manual.

Cadmus' review also revealed some issues concerning acronyms. The program acronyms may be familiar to seasoned program staff; however, the number and variety of acronyms in the manuals may be confusing for a new reader. In many cases, the meaning of acronyms is not identified with the first uses, or, conversely, these definitions are provided multiple times in the manuals.

## Summary of recommendations

Cadmus suggests that SCE review the policies and procedures manuals—and the specific elements noted here—to improve effectiveness of these materials

- Review the documents with the goal of streamlining them.
- Create a section for general information to contain user manual guidelines (including, for example, standard computer navigation tips).
- Place highly detailed materials in appendices.
- Review bold-formatted text for consistency of use.
- Add a list of acronyms and abbreviations at the beginning of the document or in an appendix. Also, review the manual to ensure consist use of these acronyms and abbreviations.

## Assessment of the CMHP Enhanced Inspection Plan

The objectives of the CMHP Enhanced Inspection plans are to provide guidelines for the inspection procedures for projects installed under the programs. These plans describe: (1) the relative risk associated with each of programs' outputs; (2) the rate at which outputs of the programs should be inspected; and (3) the expected success rate of inspected outputs.

The following key questions guided the review of the Enhanced Inspection Plan:

1. Are there systems in place to ensure reliable data collection?
2. Are there systems in place to ensure project verification and quality?
3. Is there sufficient information to determine any issues with customer eligibility?
4. Are application and rebate forms gathering sufficient information to enable the evaluation?

As Cadmus authored this document; we assigned its review to a Cadmus team member who had not worked on the original project. We observed that the inspection plan was developed at a high level of generality. Consequently, supplemental information about program indicators would be required for program managers to implement the plan fully. Also, the language in the document may be difficult for non-technical readers.

Having a separate document that provides a detailed checklist for potential errors for each program would be valuable. Specifically, the target audience would benefit from supplemental material that contains photographs or other graphics, showing passing and failing installation conditions. Such a document would contribute to clarity and consistency during program inspections, and, as measures change, the document would be updated accordingly.

## Recommendations

- Create a document providing both a detailed implementation checklist and graphics to show passing and failing installation conditions for each program.
- Review the plan language to determine whether it is appropriate for the target audience.

## Marketing Materials

The objectives for the CMHP marketing materials are to provide potential customers with critical program information and to encourage their participation. Industry best practices in energy-efficiency program marketing materials dictate that materials contain a clear call to action, be visually appealing, and be easily understandable by customers.

The following key questions guided the review of the program Websites and brochures:

1. Does the Website reflect best practices regarding user experience, architecture, content, and design?
2. Are marketing materials, forms, and brochures professionally designed and formatted, free of errors, consistent with the SCE brand, and easy to read? Also, are these creative and interesting?

At a high level, Cadmus found the CMHP marketing materials adequate for communicating program benefits:

- The CMHP customer communication materials demonstrate well-constructed content and design. These materials lead with value propositions that address key barriers.
- The SCE Website includes tips, guidelines, and self-evaluations useful for participants who want to learn more about energy efficiency.

Relative to this, the areas identified for improvements are minor. Specifically, while the marketing materials and the program Website provide essential program information, these items could benefit from adjustments to content, design, and messaging to accomplish the following:

- Increase consistency;
- Be more visually compelling (e.g., more white space and fewer words per page);
- Target prospective participants more accurately; and
- Increase program information and rebate details.

## Materials Review Summary

In Table 2, Cadmus has summarized the content and visual highlights of each review area. We combined our findings for the policies and procedures manuals for MFEER and CMH, due to the similarity of the manuals. We separated findings for each programs' data collection and marketing materials. Each review area has a summary of what SCE does well and what it could refine or improve.

**Table 2. Materials Review Summary**

	Content	Visual Elements
<b>Program Documents</b>		
Policies and procedures manuals	Contains good detail regarding roles and responsibilities, as well as program processes and procedure. Has clear direction with additional information elsewhere.	Plentiful and helpful references (table, screen shots, etc.). Font easy to read and amply spaced.
	Excessive direction and detail in the body of the manual. Inconsistent and excessive use of acronyms. Uses old program year information (e.g., Control Header document).	Inconsistent use of bold formatting. Process flows difficult to read due to font size.
<b>Data Collection</b>		
Enhanced inspection plan	Thorough.	Coherent headings and flow of information.
	Specific indicators of success and failure could be defined either in this document or in a supplement. Language may be difficult for non-technical readers.	An accompanying visual of the inspection steps would add to the usability.
Website	The main value message ("Save Energy and Money") is in the second paragraph. Best practice presents critical messages first.	The CMH site page is accessed with only two clicks from the home page, a Web architecture best practice.
	The word "free," a motivator addressing a clear barrier, is not highlighted within the text.	Some content will fall "below the fold" on personal computers. Design appears to be constricted by the design template of sce.com, which requires the content area to be narrow and long.
Brochure	Rebate flyer and sales sheet include complete program information. Content is well-presented and simply stated.	White space and short phrases demonstrate best practices in marketing design.
	Website design elements, images, and logos are not consistent with marketing material design	Website design elements, images, and logos are not consistent with marketing material design

## APPENDIX B. PROGRAM MANAGER INTERVIEWS

### Introduction

This section summarizes results from Cadmus interviews with key program stakeholders in PG&E's DIMMH and SCE's CMHP. Cadmus conducted these interviews with the utilities' program managers and with the programs' implementation contractors as part of process evaluations for the 2010–2012 program cycle. The interviews allowed us to clarify key points in the program process and to determine how the delivery model changed during 2010 and 2011.

### Purpose and Methods

Cadmus' interviews (in combination with other process evaluation tasks) primarily sought to assess the effectiveness of program design and implementation, including marketing and outreach, and actions taken to improve the program. Consequently, Cadmus developed a set of researchable issues for each program, integrating these into structured interview instruments. Structured interviews focused on the following:

- Roles and responsibilities of program staff and implementers.
- Program processes and procedures, training opportunities, and progress regarding educating contractors on program goals, including the incentive mechanism's effectiveness.
- Perceived program participation barriers, and staff approaches for overcoming those barriers.
- Descriptions of all program services, educational processes with outputs, and expected outcomes from each activity.
- Expected savings opportunities and market effects.
- Perceived successes and future challenges.
- Data resources, databases, and tracking system processes for securing required data.
- Documentation of evaluation and key researchable issues for data collection and analysis.

### PG&E

#### Program Overview

PG&E's DIMMH program provides comprehensive energy-efficiency services to residents of manufactured and mobile homes at no cost to the customer. These services include: customer education, direct installation of tailored measures, quality assurance, and referrals to additional programs. Measures include: lighting fixtures and CFLs (up to five per home), air conditioning tune ups, duct sealing, low-flow showerheads, and faucet aerators. The most common measures installed are lighting measures and air-conditioning tune ups.

Synergy, a turnkey implementation provider, delivers the services for the Manufactured and Mobile Home Program. Synergy is responsible for all of program marketing, which includes canvassing, phone contact, and direct mail. Synergy provides additional measures for low-

income customers, including low-income contractor referrals, when program overlap occurs in the service territory.

## Program Delivery

The DIMMH program has achieved its three-year energy-savings goals within 18 months. New energy-savings goals, set in August 2011, are twice as high, though the program is still on track to meet these goals.

The program has received positive customer feedback, with participation oversubscribed and exceeding its goals. Synergy reported a 97.5% customer satisfaction rate, with customers expressing gratitude for the program. Synergy also reported having received thank-you notes and calls regarding customers' satisfaction with the technicians.

Synergy's and PG&E's relationship seems to function well. Synergy has praised the PG&E team, stating that the staff has been supportive, encouraging, and that it is "*great to have a PM that supports the program and helps find ways to keep improving.*" Program staff rated Synergy, "*on a scale of 1 to 5 they get a 4.5.*"

Mobile home parks are selected based on Synergy's research. Synergy meets with the park manager to discuss the program, provides flyers, and requests permission to contact the residents. Customers participating in the program receive two services. The first is an energy-efficiency assessment, which includes low-cost/no-cost recommendations, and determines if direct-install measures are feasible for the home. If so, it determines which measures are to be offered. The second service is the installation of the selected direct-install measures. Synergy reports the incentive and direct-install measure data to its tracking system. Customer information and invoices are uploaded to a swap drive or a password-protected secure server. Upon completion of the measure installation, PG&E conducts inspections, selecting "*a 10% to 15% random sample for inspection.*"

## Program Benefits

Synergy described a variety of program benefits, including:

- **Cost Savings.** The program is a direct-install program, which means it has no cost to the customer. As described by Synergy: "*this allows [us] to break down barriers and serve a market that would not initiate these changes and would not be able to afford them.*"
- **Comprehensive Program.** Synergy considers PG&E's program to be "*pretty comprehensive*" by offering HVAC, water, gas, and electric measures.
- **Customer Satisfaction.** Synergy stated that the program's operational procedures work well, resulting in a "*high quality install with very happy customers.*" Additionally, Synergy stated that even customers who report dissatisfaction "*end up feeling pretty good... [and are] ultimately happy.*"

## Program Challenges

During Cadmus' interviews, program staff and implementation staff cited the following challenges:

- **Inspection Process.** According to program staff, the program has an inspection pass rate of 75%, the second lowest rate of all PG&E programs. Synergy stated that the inspection process with Central Inspection Group (CIG) is the most complicated operational feature of the program. According to Synergy, PG&E inspects “*about 1% of jobs*” and “*if [inspectors] cannot get in [the home] then automatically fails the inspection.*” This may impact the program’s inspection pass rate. Program staff stated they “*select a 10% to 15% random sample for inspection*” and they have recently seen an upward trend in inspection pass rates.
- **Establishing credibility with the mobile home population.** Program staff indicated that “*sometimes customers don’t believe [Synergy] represents PG&E and they call police for verification.*” Synergy reported that, “*customers have so many forces out there—quite a few people that scam with fake programs—there’s enough of an element of this that it makes people leery. With time they come to trust Synergy and PG&E but sometimes [there are] barriers of being worried about fake programs.*” To address this, Synergy suggested increasing co-branding with PG&E to “*increase trust*” and recommended co-branding trucks as one way to do so.
- **Overcoming the “gatekeeper” barrier.** Synergy noted mobile home park managers “*may not feel like this [program measure] is something that their park ought to have – It does not happen very much but it makes it hard for the whole park.*”
- **Market Saturation.** Program staff stated: “*the market is pretty much saturated so they [Synergy] go back to parks they’ve already served and offer the service to those who were not served the first time.*” Program staff indicated they are concerned about “*how long it [the Program] can keep going*” but further stated: “*Synergy is talking about the next cycle-they feel they can keep it going.*”

## Potential Improvements/Lessons Learned

PG&E and Synergy staff noted several areas where the program could benefit from potential improvements and lessons learned. As noted below, implementation staff already has started to implement some of these improvements.

- **Branding Efforts.** Synergy stated that increasing PG&E’s visibility as the program sponsor would help drop barriers to participation. They stated that co-branding “*has been an area of best practice*” in other jurisdictions, but, compared to Synergy’s other clients, PG&E’s co-branding efforts need “*to continue and perhaps do more.*”
- **Process Streamlining.** Synergy noted that recent efforts to streamline the entire program process helped improve overall delivery. Synergy described that with PG&E’s “*two new systems brought on in the last 36 months, the process is now more predictable, but they should keep looking for ways to make it streamlined across the board.*” Synergy also stated that the improved process has allowed data to be all in one place, with “*really streamlined reports.*” Finally, Synergy recommended “*working to have our invoicing and data sharing process continued to be streamlined as well.*”
- **Inspection Rates.** Program staff stated that failures sometimes resulted from how inspectors interpreted findings, not from Synergy’s installation procedures. To address the low pass rates, program staff, “*worked with inspectors and Synergy to discuss how*

*inspection should be carried out,”* stating that “*weird things can happen that affect the inspections.*” These efforts have helped to improve pass rates in recent months by increasing consistency in testing and inspection protocols. Staff further noted: “*Synergy has a good QA process, which helps increase the pass rate.*”

## SCE

### Program Overview

SCE’s CMH Program initially launched in 2005, as a part of the 2005–2008 program cycle. At no cost to customers, the program provides lighting and HVAC measures to mobile home residents (owners or residents), and to common areas of mobile home parks. The program combines electric-efficiency measures provided by SCE with gas measures offered by SCG. Measures and services most commonly implemented through this program include: energy-efficient interior and exterior lighting fixtures and lamps. These are installed most prevalently in mobile homes and mobile home parks.

Synergy, a turnkey implementation provider, delivers integrated services to customers. Services consist of measures from four programs:

- SCE’s CMH program;
- SCG’s CMH program;
- SCE’s Energy Savings Assistance Program; and
- SCG’s Energy Savings Assistance Program.

### Program Delivery

The CMH program’s operations and delivery have evolved and improved considerably during its lifetime. All interview subjects reported program implementation has expanded, and new systems, developed to help manage delivery, work with clients, and ensure quality implementation, have helped the program generate favorable results. The program has received very positive customer feedback, and participation exceeded expectations in 2011.

Synergy’s and SCE’s relationship seems to function well. SCE cited Synergy as a very good partner, handling most program aspects, and having effective internal policies to address customer issues or complaints. SCE staff considered Synergy very responsive, providing effective overall program management.

During the program cycle examined, SCE indicated it wanted to ensure service to more of its territory, including reaching more low-income customers. Thus, in 2011, SCE and Synergy began collaborating with local government partners to expand the program to a wider spectrum of customers. Synergy worked with representatives from local government partnerships to coordinate outreach efforts at the city level, and to help connect Synergy to mobile home park owners. Having a local partner facilitate this introduction increased Synergy’s credibility with target customers, and offered access to a much broader customer base.

To organize logistics and scheduling, program and implementation staff reported beginning to use a work calendar in 2011. The calendar enabled Synergy to coordinate with partner cities (as

well as SCG) months before visiting an area. The calendar also served as a planning tool to increase the geographic distribution of target customers, alleviating prior program challenges associated with program delivery limited to specific climate zones and geographic areas. Though SCE cited working with governments and implementing the work calendar as useful improvements toward reaching program goals, relationships with local government partnerships may be further improved as the program matures.

To qualify for the program, participants must be SCE/SCG customers, and receive approval from the mobile home owner (in rare cases when residents are not owners); to receive low-income measures, participants must provide income verification.

Synergy worked with mobile home park owners or managers to engage mobile home residents in the program. During initial visits, Synergy met with mobile home park managers to design marketing approaches to succeed at individual locations (e.g., fliers, canvassing, presentations). Synergy then used the identified marketing approach to inform residents about the program, and scheduled visits with those interested in participating.

## Program Benefits

Synergy described a variety of program benefits, including:

- **Increased customer comfort and safety.** Improved lighting helped customers better navigate their homes. Additionally, Synergy noted the program increased customer “*safety and security dusk to dawn [from] outdoor lighting.*”
- **Aesthetics.** The program replaced outdated fixtures with new lighting measures, improving the interior appearance of customers’ homes.
- **Cost savings.** The program provided measures to customers at no cost, enabling them to save money on their utility bills. Many participants had fixed incomes, and could not afford to make energy-saving upgrades without the program.
- **Outreach.** While on site, Synergy staff educated customers about energy conservation and energy-saving choices in their homes.
- **Co-marketing.** The CMH Program provided opportunities to introduce mobile home customers to other SCE programs.

## Program Challenges

During Cadmus’ interviews, program staff and implementation staff cited the following program challenges:

- **Establishing credibility with the mobile home population.** Synergy reported: “*People don’t believe the program is real. So when they go in, the only thing that says Edison is the brochure or flyer.*” While customers can reference the SCE.com website and find information about the program or call the SCE Call Center to verify, Synergy suggested better co-branding and displaying the SCE logo while on site. Some campaigns do already have co-branded material that includes city and partnership information.
- **Overcoming the “gatekeeper” barrier.** Synergy noted mobile home park managers often were protective of park residents, and would not allow Synergy’s staff to conduct

door-to-door marketing. Synergy staff stated: “*It can be difficult to get participation, especially in a park that doesn’t allow canvassing.*”

- **Capacity to serve demand.** Synergy had to limit services in 2011 due to program over-subscription. Although SCE continued to enroll customers asking to participate, it did not actively market the program when it reached its full budget allocation.
- **Lost opportunities to capture savings from HVAC tune-ups.** At the time of Cadmus’ interviews, the program’s HVAC tune-up component had been on hold for about 15 months. Previously, the HVAC tune-up served as an important program feature. Following policy changes in California, however, SCE suspended the HVAC tune-up component to ensure implementation and inspection could be completed consistently and transparently.

During this time, SCE developed quality protocols to ensure HVAC tune-ups could be accurately and consistently tested. Synergy cited concerns with these policies’ applicability to mobile homes, as quality maintenance (QM) protocols typically are designed for single-family homes.

## Potential Improvements/Lessons Learned

SCE and Synergy staff noted several areas where the program could benefit from potential improvements as well as lessons learned during the 2010 and 2011 program years. As noted below, implementation staff have already started to implement some of these improvements.

- **Marketing consistency.** In 2011, SCE created new marketing materials, consistent with its broader program brand, to streamline program materials and to help build program credibility. Previously, CMH program marketing materials focused more on Synergy’s brand, causing some confusion among potential customers regarding the program’s legitimacy. Program staff also reported: “*Previously, it [marketing materials] was not on the Website. Now they can transfer to Synergy’s Website and schedule on line.*”
- **Quality Control.** In the past, SCE indicated that when quality control inspections identified problems, Synergy was asked to fix issues concurrently with inspections. Although this approach resulted in needed corrections, it skewed tracking numbers. To resolve this issue, SCE now performs independent inspections utilizing their in-house EE Inspections team to verify correct installation of program measures, and, as stated by SCE, to “*provide a more true look at quality.*”
- **Data Tracking.** At the time of Cadmus’ interviews, SCE was developing an automated process to integrate Synergy’s database with the CRS system, streamlining the data entry process, and enabling records to be processed and claims to be paid more quickly. SCE reported the system, then undergoing testing, would launch as soon as functional. The process should address data accuracy issues; as described by Synergy: “[we] were on a paper based system before and there used to be data entry errors.”
- **Expanded Reach.** Synergy believed the new work calendar approach would allow staff to reach mobile home parks underserved by utility programs, ensuring service to these populations. Program staff reported seeing “*very good success with customer penetration this way.*”

## APPENDIX C. PROGRAM IMPLEMENTER INTERVIEWS

### PG&E

#### Program Overview

PG&E's DIMMH program provides comprehensive energy-efficiency services to residents of manufactured and mobile homes at no cost to the customer. These services include: customer education, direct installation of tailored measures, quality assurance, and referrals to additional programs. Measures include: lighting fixtures and CFLs (up to five per home), air conditioning tune ups and duct sealing, low-flow showerheads, and faucet aerators. The most common measures installed are lighting measures and air-conditioning tune ups.

Synergy, a turnkey implementation provider, delivers the services for the DIMMH program. Synergy is responsible for all program marketing, which includes canvassing, phone contact, and direct mail. Synergy also provides additional measures for low-income customers, including low-income contractor referrals, when program overlap occurs in the service territory.

#### Interview Findings

##### Program Delivery

The DIMMH program has been very successful, achieving its three-year energy-savings goals in 18 months. The new energy-savings goals set in August 2011 have been set twice as high, and are more challenging, though the program remains on track to meet these goals.

The program has received very positive customer feedback, with participation oversubscribed and goals exceeded. Synergy reported a 97.5% customer satisfaction rate, with customers expressing gratefulness for the program. Synergy also reported having received thank-you notes and calls regarding satisfaction with the technicians.

Synergy's and PG&E's relationship seems to function well. Synergy has praised the PG&E team, stating the staff has been supportive, encouraging, and it is "*great to have a PM that supports the program and helps find ways to keep improving.*" Program staff rated Synergy "*on a scale of 1 to 5 they get a 4.5.*"

Mobile home parks are selected based on Synergy's research. Synergy meets with park management to discuss the program, provides flyers, and requests permission to contact the residents. Customers participating in the program receive two services. The first is an energy-efficiency assessment, which includes low-cost/no-cost recommendations, determines if direct-install measures are feasible for the home, and, if so, which measures will be offered. The second service is the installation of the selected direct-install measures. Synergy reports the incentive and direct-install measure data to its tracking system, the Marketing Decision Support System software. Customer information and invoices are uploaded to a swap drive or to a secure, password protected server. Upon completion of the measure installation, PG&E conducts inspections, selecting "*a 10% to 15% random sample for inspection.*"

## Program Benefits

Synergy described a variety of program benefits, including:

- **Cost Savings.** The program is a direct-install program, which means there is no cost to customers. As described by Synergy, “*this allows [us] to break down barriers and serve a market that would not initiate these changes and would not be able to afford them.*”
- **Comprehensive Program.** Synergy considers PG&E’s program to be “*pretty comprehensive*” by offering HVAC, water, gas, and electric measures. Synergy indicated that offering HVAC is unique from SCE and SCG.
- **Customer Satisfaction.** Synergy stated that the procedural process goes very well, including “*high quality install with very happy customers.*” Additionally, Synergy stated that even customers who report dissatisfaction “*end up feeling pretty good... [and are] ultimately happy.*”

## Program Challenges

During Cadmus’ interviews, program staff and implementation staff identified the following challenges:

- **Inspection Process.** According to program staff, the program’s has a 75% inspection pass rate, the second lowest rate of all PG&E programs. Synergy stated that the inspection process with CIG is the most complicated, operational feature of the program. According to Synergy, PG&E inspects “*about 1% of jobs*” and “*if [inspectors] cannot get in [the home] then automatically fails the inspection.*” However, program staff stated they “*select 10% to 15% random sample for inspection*” and they have seen an upward trend in inspection pass rates recently.
- **Establishing credibility with the mobile home population.** Program staff indicated that “*sometimes customers don’t believe [Synergy] represents PG&E and they call police for verification.*” Synergy reported that, “*customers have so many forces out there- quite a few people that scam with fake programs- there’s enough of an element of this that it makes people leery. With time they come to trust Synergy and PG&E but sometimes [there are] barriers of being worried about fake programs.*” To address this, Synergy suggested increasing co-branding with PG&E to “*increase trust*” and recommended co-branding trucks as one way to do so.
- **Overcoming the “gatekeeper” barrier.** Synergy noted mobile home park managers “*may not feel like this [program measure] is not something that their park ought to have – It does not happen very much but it makes it hard for the whole park.*”
- **Market Saturation.** Program staff stated that “*the market is pretty much saturated so they [Synergy] go back to parks they’ve already served and offer the service to those who were not served the first time.*” Program staff state they are concerned about “*how long it [the Program] can keep going*” but further state that “*Synergy is talking about the next cycle-they feel they can keep it going.*”

## Potential Improvements/Lessons Learned

PG&E and Synergy staff noted several areas where the program could benefit from potential improvements and lessons learned during program implementation. As noted below, implementation staff have already started to implement some of these improvements:

- **Branding Efforts.** Synergy stated that the Program can improve from PG&E's branding efforts, which will help drop barriers to participation. They state that co-branding "*has been an area of best practice*" and, compared to Synergy's other clients, co-branding with PG&E needs "*to continue and perhaps do more*."
- **Process Streamlining.** One of the lessons learned, as indicated by Synergy, is to streamline the entire program process. Synergy described that with PG&E's "*two new systems brought on in the last 36 months*," *the process is now "more predictable" but they should "keep looking for ways to make it streamlined across the board.*" Synergy also stated that the improved process has allowed data to be all in one place with "*really streamlined reports.*" Finally, Synergy recommended "*working to have our invoicing and data sharing process continued to be streamlined as well.*"
- **Inspection Rates.** Program staff stated that failures can come from how inspectors interpret the results, not from Synergy's installation procedures. To address the low pass rates, program staff, "*worked with inspectors and Synergy to discuss how inspection should be carried out,*" stating that "*weird things can happen that affect the inspections*" but that "*Synergy has a good QA process, which helps increase the pass rate.*"

SCE

## Program Overview

SCE's CMHP initially launched in 2005 as a part of the 2005–2008 program cycle. The CMHP provides lighting and HVAC measures to mobile home residents (owners or residents), and in the common areas of mobile home parks, at no cost to customers. The program combines electric-efficiency measures provided by SCE, with gas measures offered by SCG. The most common measures and services implemented through this program are energy-efficient interior and exterior lighting fixtures, as these are the most prevalent in mobile homes and mobile home parks. This program is implemented by a turnkey provider, Synergy. Cadmus' interviews with program staff and the program implementer allowed us to clarify key points in the program process and how the delivery model has changed this year.

The CMHP's operations and delivery have evolved and improved considerably during its lifetime. All interview subjects commented that program implementation has expanded, and new systems, put into place to help manage delivery, work with clients, and ensure quality implementation, have helped the program generate good results. Customer feedback has been very positive, and program participation in the current delivery year has exceeded expectations.

In 2011, SCE and Synergy began collaborating with local government partners to expand the program to a wider spectrum of customers. Synergy works with representatives from local government agencies, who then help connect Synergy to mobile home park owners and managers in those cities. Having this local partner facilitate an introduction increases Synergy's credibility with its target customers, and gives it access to a much broader customer base.

To organize which locations are visited and when, program staff and implementation staff reported they use a work calendar, which is a new program aspect this year. This calendar enables better coordination with these cities as well as SCG, as they can plan months in advance when implementers will be in their areas. The calendar also alleviates a prior program challenge associated with program delivery limited to specific climate zones and geographic areas, and SCE wanted to ensure more of its territory was being served, including reaching more low-income customers. SCE staff found the work calendar is a great improvement, but, as this is the first year of working with local government partnerships, it can continue to be improved upon.

Participant require no pre-qualification other than: being an SCE/SCG customer, having approval from the mobile home owner (in rare cases when the resident is not the owner), and, for the low-income program, proving income eligibility. Mobile home park owners serve as the primary party working with Synergy to engage mobile home residents in the program. Synergy meets with the mobile home park manager to determine a marketing approach that will be most successful at that location (e.g., fliers, canvassing, presentations). Synergy then pursues these marketing efforts, and schedules visits with individual homeowners who are interested in participating in the program.

## Program Benefits

Synergy mentioned a variety of program benefits to the customer:

- Increased customer comfort. Customers receive improved lighting which helps them navigate their homes better. The program lighting measures also increase the aesthetics of the home as outdated fixtures are replaced with new ones.
- The program provides measures to customers at no cost, enabling the customer to save money on their utility bills. Many participants are on fixed incomes, and could not otherwise afford to make these energy saving upgrades.
- Synergy staff provides an energy education component as a part of the program. When on site, the auditor provides energy conservation information, and educates participants on how to make energy-saving choices in their homes.
- The CMHP provides an avenue to introduce mobile home customers to other utility programs.

## Program Challenges

During the interviews, program staff and implementation staff cited the following challenges:

- **Establishing credibility with the mobile home population.** Many potential customers do not believe the program is genuine. Synergy reported better co-branding and being able to identify the SCE logo may assist in mitigating this challenge.
- **Capacity to serve the participation demand.** For this program year, the program has become over-subscribed, and Synergy had to pull back on offering services. Currently, SCE continues to enroll customers who call in and are interested in participating, but no longer actively markets the program this year.
- **Lost opportunity to gain savings from HVAC tune-ups.** The program's HVAC tune-up aspect has been on hold for about 15 months. Previously, the HVAC tune-up served as

one of the more important program aspects, but, due to policy changes in California, and SCE wanting to ensure implementation and inspection could be completed consistently and transparently, the program's HVAC aspect was put on hold. During this time, SCE has worked to develop policies that will ensure HVAC tune-ups can be accurately and consistently tested. Synergy cited a concern with these policies, as they have been designed for single-family homes, not mobile homes, and the technicians will need to be QI certified; however, field work on mobile homes does not count towards receiving QI certification. Once this is resolved, Synergy's technicians will be certified and will begin offering HVAC services again. When the HVAC aspect of CMHP functions again, SCE will add a new measure to the program: the brushless fan motor, which will replace inefficient motors in the HVAC system.

### Potential Improvements/Lessons Learned

- This year, CMHP created new marketing materials that are consistent with SCE's program brand in an effort to streamline program materials and help build program credibility. Previously, the CMHP marketing materials were not consistent with other SCE materials, and focused more on Synergy's brand, which caused some confusion among potential customers as to the program's legitimacy.
- In prior evaluations, when SCE would conduct quality control ride-alongs with Synergy staff, if they came across an issue that needed to be fixed, SCE would let Synergy fix it, and then would conduct the inspection. This approach, while correctly doing the work, led to skewed tracking numbers. Currently, SCE has an internal team to verify that Synergy installed program measures correctly.
- SCE is developing an automated process through the CRM system, which will integrate with Synergy's database, streamline the data entry process, and enable records to be processed and paid more quickly. Currently undergoing testing, the system will launch as soon as it is functional.
- Due to the new work calendar approach, an opportunity may exist to reach mobile home parks that have not yet been visited by any program, and ensure these populations are served.
- The relationship between Synergy and SCE seems to be going well. SCE reported that Synergy is a very good partner; they handle most program aspects, have effective internal policies in place to deal with customer issues or complaints, are very responsive, and provide good overall program management.

## APENDIX D. PARTICIPATING MOBILE HOME PARK OPERATOR SURVEY

### Introduction

Hello, my name is **[INTERVIEWER NAME]** from Marketing Excellence, and I'm calling on behalf of **[UTILITY]**, your local electric utility. **[UTILITY]** wants to learn about your recent experience with the **[UTILITY] [PROGRAM]** Program. May I speak with the person who decided to participate in the **[UTILITY] [PROGRAM]** Program for the facilities at **[INSERT ADDRESS]**?

1. Yes, speaking to the decision maker
2. Yes, call transferred to someone else
3. Yes, but at a different number **[RECORD NAME AND NUMBER; THANK AND TERMINATE]**
4. No **[THANK AND TERMINATE]**
- 98. (DON'T KNOW) **[SKIP TO 0]**
- 99. (REFUSED) **[THANK AND TERMINATE]**

**[IF NEEDED]:** Let me assure you, I'm not selling anything. Your responses are confidential and will be used to improve the program.]

**[IF NEEDED]:** This survey should take about 20 minutes of your time. Is this a good time for us to speak with you? **[IF NOT, SET UP A CALL BACK APPOINTMENT]**

**[IF NEEDED]:** Studies like this help **[UTILITY]** to better understand what energy efficiency programs and services their customers want.]

**[IF NEEDED]:** The gift card is like a debit card and can be used anywhere debit or credit cards are accepted.]

**[IF NEEDED]:** If you would like to talk with someone from **[UTILITY]** about this study, feel free to call **[CONTACT NAME]** the **[CONTACT TITLE]** at **[CONTACT PHONE]**].

A1 Just to confirm, were energy saving upgrades made to the mobile homes located at **[INSERT ADDRESS]** through **[UTILITY]**'s **[PROGRAM]** Program in the past two years? You may also have received energy saving upgrades to the common areas of your park.

**[IF NEEDED]** This may have been when program staff came out to your park to install some energy efficiency technologies like lighting, showerheads or faucet aerators in the homes of some of your residents.]

1. Yes **[SKIP TO 0]**
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

A2 Our records indicate your park participated in the **[UTILITY] [PROGRAM]** Program. Is there someone else who would be familiar with participating in this program?

1. Yes
2. No **[THANK AND TERMINATE]**
  - 98. (DON'T KNOW) **[THANK AND TERMINATE]**
  - 99. (REFUSED) **[THANK AND TERMINATE]**

A3 Can I speak to this person?

1. Yes, call transferred to someone else **[REINTRODUCE AND START WITH 0]**
2. Yes, but at a different number **[RECORD NAME AND NUMBER; THANK AND TERMINATE]**
3. No **[THANK AND TERMINATE]**
  - 98. (DON'T KNOW) **[THANK AND TERMINATE]**
  - 99. (REFUSED) **[THANK AND TERMINATE]**

A4 To confirm that you qualify for this study, we need to ask you one more question. If you qualify, we are offering a **\$50** incentive once you complete our survey. We can pay this incentive to you or it can be donated on your behalf to the American Red Cross for the completion of this questionnaire. Which of these options would you prefer?

1. Myself
2. The American Red Cross

## Participation

B1 For each of four statements I will read to you, just give me a 'yes' or 'no' answer about whether it describes your involvement with the **[PROGRAM]** Program at the property at **[INSERT ADDRESS]**? **[READ STATEMENTS. ACCEPT MULTIPLE RESPONSES]**  
**NOTE: Respondent must say yes to at least one of statements (2-4) to proceed with the survey or they will be politely terminated.**

1. Park management arranged to have a program staff come to the park to tell residents about the program
2. Park management let program staffs knock on doors and ask residents if they would like energy saving equipment installed in their homes
3. Park management had program staff look for ways to reduce our energy use in common areas of the park
4. Park management had program staff install energy saving equipment, such as lighting or insulation, in the park's common areas
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

## Firmographics and Motivation to Participate

Great, you qualify to be part of our study. Now I'd like to know a little more about you and your company.

C1 What is the best way to describe your role at your company? Are you the...? **[READ LIST]**

1. Park owner
2. Park manager
3. Both park owner and manager
4. Maintenance or facilities supervisor
5. Other
  - A1a. **[SPECIFY]**
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

C2 How long have you personally been in your role at this particular mobile home park?

1. **[SPECIFY]**
- 98. (DON'T KNOW)
- 99. (REFUSED)

C3 How many years has your company been in the business of owning, managing, or maintaining mobile home parks?

1. **[SPECIFY]**
- 98. (DON'T KNOW)
- 99. (REFUSED)

C4 How many spaces do you own or manage at the **[INSERT ADDRESS]** location?

1. **[SPECIFY]**
- 98. (DON'T KNOW)
- 99. (REFUSED)

C5 How many additional spaces do you own or manage at other locations?

1. **[SPECIFY]**
- 97. Only one park/no other units/properties
- 98. (DON'T KNOW)
- 99. (REFUSED)

C6 How did you hear about the **[PROGRAM]** Program? **[DO NOT READ; SELECT ALL THAT APPLY]**

1. Program staff contacted me
2. I contacted a contractor and he/she mentioned the program
3. Resident told me
4. Heard through an apartment/ landlord/professional association
5. Heard through other building managers/owners
6. Utility bill insert
7. Utility television ad
8. Newspaper/Periodical ad
9. Utility website
10. Utility employee, account representative, customer service representative
11. Program brochure
12. Other

A1b. **[SPECIFY]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

C7 Using a scale of 0 to 10 where 0 means Not at all Important and 10 means Extremely Important, how important were each of these factors in motivating you to participate in the **[PROGRAM]** Program?

1. Attracting tenants
  2. Retaining tenants and keeping them happy
  3. Needing to replace equipment
  4. Saving energy
  5. Reducing owner operating costs
  6. Reducing tenant utility costs
  7. Demonstrating your properties are well maintained
  8. Increasing the value of your property
  9. Doing the right thing for the environment or being greener
  10. Meeting code requirements
  11. Receiving free lighting or rebates to lower the cost of new equipment
- 98. (DON'T KNOW)
  - 99. (REFUSED)

C8 And, using a scale of 0 to 10 where 0 means you were not at all concerned and 10 means extremely concerned, how concerned were you about these potential aspects of participating in the **[PROGRAM]** Program?

1. Participating would be inconvenient for residents
  2. Participating would be inconvenient for the park owner or manager
  3. Participating would not save money for residents
  4. Participating would not save money on the park's operating costs
  5. Program staff providing the services would not be high quality
  6. Energy efficient products installed through the program would not be high quality
- 98. (DON'T KNOW)  
-99. (REFUSED)

## Process and Involvement Questions

D1 **[IF B1.1=1(YES), ELSE SKIP TO 0]** You said that you arranged for program staff to come to your park at **[INSERT ADDRESS]** to tell your residents about the program. Did you run into any challenges or problems with having the presentation at your park?

7. Yes
  8. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

D2 **[IF 0=1]** What challenges or problems did you have?

1. [SPECIFY]
- 98. (DON'T KNOW)  
-99. (REFUSED)

D3 Did you attend the presentation?

1. Yes
  2. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

D4 **[IF 0=1]** On a scale of 0 to 10 where 0 means not at all helpful and 10 means extremely helpful, how helpful was the presentation in explaining what was available through the program and how it works?

1. [SPECIFY]
- 98. (DON'T KNOW)  
-99. (REFUSED)

D5 **[IF 0=1]** Again, on a scale of 0 to 10 where 0 means not at all effective and 10 means extremely effective, how effective was the presentation in convincing you of the program's benefits to your residents?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D6 **[IF 0 OR 0=0-6]** What could have improved the presentation's effectiveness?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D7 **[IF 0.3 OR 0.4=1(YES), ELSE SKIP TO 0]** You also said that you let program staff walk through the common areas of your park at **[INSERT ADDRESS]** to see if there were ways to reduce energy use in your common areas. Did you run into any challenges or problems with this part of the program?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D8 **[IF 0=1]** What challenges or problems did you run into?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D9 Did you accompany the program staff when they walked through your property?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D10 On a scale on 0-10, where 0 means not at all helpful, and 10 means extremely helpful, how helpful were the program staff in explaining how the program could help you reduce energy use in your common areas?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D11 And again, on a scale on 0-10, where 0 means not at all effective and 10 means extremely effective, how effective were the program staff in convincing you of the benefits of installing the recommended energy saving equipment in your common areas?

1. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

D12 **[IF 0 OR 0=0-6]** What could have improved the effectiveness of how the program staff presented energy saving options for your common areas to you?

1. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

D13 What improvements were recommended for the common areas of your park? **[DO NOT READ]**

1. Compact fluorescent bulbs (CFLs)
2. Hardwired fixtures
3. Linear fluorescent tubes
4. Efficient sensors and controls
5. LED exit signs
6. Duct sealing
7. Low-flow showerheads
8. Faucet aerators
9. Other

- A1c. [SPECIFY]  
-98. (DON'T KNOW)  
-99. (REFUSED)

D14 **[IF 0.3=1(YES), BUT B1.4=2(NO)]** What prevented you from installing any of the energy saving improvements that the program staff recommended to you?

1. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

D15 **[IF 0.4=1(YES), ELSE SKIP TO 0]** Now let's talk about the energy saving equipment you had installed in your common areas. To change out this equipment, did you need to get the prior approval of someone else higher up in your company?

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

D16 Do you recall what was installed in your common areas? **[DO NOT READ]**

1. Compact fluorescent bulbs (CFLs)
  2. Hardwired fixtures
  3. Linear fluorescent tubes
  4. Efficient sensors and controls
  5. LED exit signs
  6. Duct sealing
  7. Low-flow showerheads
  8. Faucet aerators
  9. Other
- A1d. **[SPECIFY]**
- 98. (DON'T KNOW)
  - 99. (REFUSED)

D17 **[IF 0=0-6]** Have you seen benefits from the lighting installed under this program? **[IF NECESSARY SAY: "SUCH AS LOWER ELECTRICITY BILLS OR BETTER LIGHTING?"]**

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

D18 Who installed the energy efficiency improvements? Was it the program staff your own internal staff, or a combination of both?

1. Only the program staff
  2. Only the internal staff
  3. A combination of both
- 98. (DON'T KNOW)  
-99. (REFUSED)

D19 **[IF 0=1 OR 3]** On a scale of 0 to 10 where 0 is “not at all satisfied,” 10 is “extremely satisfied,” and you may use any number in between. How satisfied are you with the overall quality in the work performed by the program staff for the energy-efficient lighting improvements in the common areas at **[INSERT ADDRESS]**?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D20 **[IF 0=0-6]** Why were you less than satisfied with the quality of the program staff's work in the common areas? **[ALLOW MULTIPLE RESPONSES. READ LIST ONLY IF NECESSARY]**

1. The equipment broke down/malfunctioned
2. The quality of the equipment was not up to our standards
3. The quality of the installation was not up to our standards
4. We did not like the way the product looked
5. The installers did not meet our standards
6. The job took too long
7. The installers were too disruptive, or messy
8. Other

- A1e. [SPECIFY]  
-98. (DON'T KNOW)  
-99. (REFUSED)

D21 On a scale of 0 to 10 where 0 is “not at all satisfied,” 10 is “extremely satisfied,” and you may use any number in between. How satisfied are you with the performance of the equipment installed by the program staff in the common areas at **[INSERT ADDRESS]**.

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D22 **[IF 0=0-6]** Why were you less than satisfied with the performance of the equipment in the common areas? **[ALLOW MULTIPLE RESPONSES. READ LIST ONLY IF NECESSARY]**

1. The equipment broke down/malfunctioned
2. The quality of the equipment was not up to our standards
3. The quality of the installation was not up to our standards
4. We did not like the way the product looked
5. The installers did not meet our standards
6. The job took too long
7. The installers were too disruptive or messy
8. Other

A1f. **[SPECIFY]**  
-98. (DON'T KNOW)  
-99. (REFUSED)

D23 Did the program staff who came to the park provide you with any information about **[UTILITY'S]** other efficiency programs or other rebates for other energy-efficient products?

1. Yes
  2. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

D24 **[IF 0=1]** Have you read this material?

1. Yes
  2. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

D25 **[IF 0=1]** Have you done any of the things recommended in the material?

1. Yes
  2. No
- A1g. **[SPECIFY]**  
-98. (DON'T KNOW)  
-99. (REFUSED)

D26 Did the program staff provide any performance guarantees for the installed equipment?

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

D27 Did you interact with the **[UTILITY]** staff while participating in the **[PROGRAM]** Program?

1. Yes
2. No **[SKIP TO 0]**
- 98. (DON'T KNOW) **[SKIP TO 0]**
- 99. (REFUSED) **[SKIP TO 0]**

D28 Using a scale of 0 to 10 where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied were you with the helpfulness of **[UTILITY]** program staff?

1. [SPECIFY]
- 98. (DON'T KNOW)
- 99. (REFUSED)

D29 **[IF 0=0-6]** Why were you less than satisfied with the utility staff?

1. [SPECIFY]
- 98. (DON'T KNOW)
- 99. (REFUSED)

D30 Has the equipment been inspected by either **[UTILITY]** or **[SYNERGY]** since it was installed?

2. Yes
3. No **[SKIP TO 0]**
- 98. (DON'T KNOW) **[SKIP TO 0]**
- 99. (REFUSED) **[SKIP TO 0]**

D31 Using a scale of 0 to 10 where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied are you with the way the inspection was conducted?

1. [SPECIFY]
- 98. (DON'T KNOW)
- 99. (REFUSED)

D32 **[IF 0=0-6]** Why were you less than satisfied with the inspection process?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D33 Using a scale of 0 to 10 where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied have you been with the **[INSTALLATION MONTH] [INSTALLATION YEAR] [UTILITY] [PROGRAM]** Program as a whole?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D34 **[IF 0=0-6]** Why were you less than satisfied with this program?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D35 Do you have any suggestions for ways the program could be improved? **[DO NOT READ]**

1. Wouldn't change anything/keep program as is
2. Include additional types of equipment
3. Increase rebates
4. Simplify the installation process
5. Provide more information
6. Use better program staff
7. Improve quality/accountability
8. Provide a better warranty
9. Get a message to my owners
10. Other

D35b [SPECIFY]  
-98. (DON'T KNOW)  
-99. (REFUSED)

D36 Would you recommend this program to the owner/manager at another park?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D37 [IF D36=2] Why not?

1. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

D38 Either as part of being in this program or outside of it, have you ever looked for information on how to reduce your energy use in the common areas of your park?

1. Yes

2. No

- 98. (DON'T KNOW)
- 99. (REFUSED)

D39 [IF D38=1] Where did you look for this information? [DO NOT READ. ACCEPT MULTIPLE RESPONSES.]

- 1. Internal maintenance staff
- 2. Our regular installation contractor
- 3. An outside installation contractor we may hire or consult with occasionally
- 4. Equipment distributors/ wholesalers
- 5. Equipment manufacturers
- 6. Equipment dealers/ retailers
- 7. Apartment/trade associations (presentations and newsletters)
- 8. Our electric or gas utility representative
- 9. Our electric or gas utility website
- 10. Our own research on the Internet
- 11. Retailer salesperson referral (on floor of retail store)
- 12. Other

A1h. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

D40 Which of the following labels or program names for energy efficiency have you heard of?

1. ENERGY STAR
  2. Most efficient or Tier 2 ENERGY STAR
  3. Consumer Elect
  4. Low Income Energy Efficient (LIEE)
  5. Top Ten
  6. Energy Upgrade California
  7. Flex your power
- 98. (DON'T KNOW)  
-99. (REFUSED)

D41 Using a scale of 0 to 10 where 0 means strongly disagree and 10 means strongly agree, how much do you agree with each of the following statements? **[RECORD RATING]**

1. Inefficient use of energy has negative impacts on the environment
  2. Using energy efficient appliances and equipment can result in sizeable savings on energy bills
- 98. (DON'T KNOW)  
-99. (REFUSED)

## Intention/Behavior/Maintenance

**E1 [IF 0>1 SAY: "NOW I'D LIKE TO THINK ABOUT ALL THE PROPERTIES THAT YOU MANAGE."]** Please tell me if your company has already taken these energy saving actions, is currently taking them, or is planning to take them **within the next three years** at any of your properties. **[CODE TO SKIP ACTIONS TAKEN THROUGH PROGRAM] [-97= NOT APPLICABLE]**

Behaviors/ investments	G1_1. Have you/Are you ...	G1_2. [IF G1_1=2] Do you have plans to... in the next three years
a. Install/ed/ing energy efficient lighting for common areas/outdoors	1. Yes 2. No	1. Yes 2. No
b. Install/ed/ing energy efficient cooling equipment for common areas	1. Yes 2. No	1. Yes 2. No
c. Install/ed/ing energy efficient HVAC in building	1. Yes 2. No	1. Yes 2. No
d. Install/ed/ing more energy efficient clothes washers for the common area?	1. Yes 2. No	1. Yes 2. No
e. Increases/ed/ing the energy efficiency of the building shell, such as putting in insulation	1. Yes 2. No	1. Yes 2. No
f. Had a whole property energy audit performed by a building professional	1. Yes 2. No	1. Yes 2. No
g. Increases/ed/ing the energy efficiency of appliances in tenant units	1. Yes 2. No	1. Yes 2. No
h. Install/ed/ing more energy efficient lighting in tenant units	1. Yes 2. No	1. Yes 2. No
i. Market/ed/ing your properties as being energy efficient	1. Yes 2. No	1. Yes 2. No
j. Provide/ed/ing prospective tenants the average electric and gas bills for units before they rent	1. Yes 2. No	1. Yes 2. No

E2 **[IF ANY 0=1(YES)]** Would you or your organization consider making these improvements in the future without rebates or assistance in installation from the **[UTILITY] [PROGRAM]** Program?

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

E3 **[IF ANY 0≠1]** Why don't you have plans for making similar energy efficiency improvements over the next three years? **[ALLOW MULTIPLE RESPONSES]**

1. Already did all cost-effective energy efficient improvements
2. Unaware of/unable to identify measures
3. Residents pay their own utility bills
4. Lack maintenance staff to install measures
5. Lack of time/not a priority
6. Financial limitations
7. Lack of information on energy savings or costs
8. Question reliability of energy efficient equipment
9. Energy savings estimates for equipment are unreliable
10. Fuel prices were low
11. New to building
12. Timing
13. Technology unavailable
14. Replacing on an as-needed basis
15. It isn't unnecessary
16. Other

- A1i. **[SPECIFY]**
- 98. DON'T KNOW
  - 99. REFUSED

E4 Would you say you always, often, sometimes, or never consider energy efficiency when deciding to make improvements for your park common areas and grounds that would affect their energy use? This might include the efficiency level of appliances and lighting or changes to doors, windows and the building shell.

1. Always consider
  2. Often
  3. Sometimes
  4. Never consider
- 98. (DON'T KNOW)  
-99. (REFUSED)

E5 And, as a routine part of your park maintenance, do you take steps to make sure the buildings and grounds are operating as energy efficiently as possible – such as changing furnace filters or weather stripping doorways?

1. Yes
  2. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

E6 Is energy efficiency considered as part of keeping your residents comfortable?

1. Yes
  2. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

## Site Characteristics and Efficiency Views

Finally I'd like to know more about the specific park you own or manage at **[INSERT ADDRESS]** and then some general views on energy efficiency.

F1 What percent of the homes in the park at **[INSERT ADDRESS]** have air conditioning?

1. [SPECIFY]
- 98. (DON'T KNOW)  
-99. (REFUSED)

F2 What percent of your residents pay their own electric bills?

1. [SPECIFY]
- 98. (DON'T KNOW)  
-99. (REFUSED)

F3 What percent of your residents at **[INSERT ADDRESS]** pay their own water bills?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

F4 Does your organization have an energy policy – such as formal or informal rules about buying equipment that has a certain level of energy efficiency?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

F5 Does your organization have a person who, as part of their job responsibilities, is charged with managing energy use at your park(s)?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

F6 Do you specifically market your park as a green park?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

F7 Now please rate how **[IF 0=1 OR 3 SAY: "YOU AS THE OWNER", IF 0≠1 OR 3 SAY: "THE OWNERS"]** of the park at **[INSERT ADDRESS]** view using energy at that park. Using a scale from 0 to 10, where 0 means strongly disagree and 10 means strongly agree, how much do (you) (the owners) agree with each of these statements?

1. (I/We/They) feel a responsibility to decrease the energy use at this park in order to protect the environment.
2. (I/We/They) feel a responsibility to decrease energy use at this park in order to reduce greenhouse gasses.
3. (I/We/They) feel a responsibility to decrease energy use at this park in order to reduce energy costs
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

## Closing

G1 As I mentioned earlier, we are going to mail you a \$50 incentive check as a thank you for completing this questionnaire. We have **[INSERT ADDRESS]** on file in our records, is this the address where you would like us to send your incentive?

1. Yes
2. No

G2 **[IF Q=2]** To what address would you prefer we mail the incentive check?

1. [SPECIFY]
- 98. (DON'T KNOW)
- 99. (REFUSED)

Thank you for your taking the time to give us your views. **[UTILITY]** will use the results of these interviews to improve their programs for mobile home parks and their residents.

## APPENDIX E. PARTICIPANT RESIDENT SURVEY INSTRUMENT

### SCE RESIDENT MEASURES:

- *LOW-FLOW FAUCET AERATOR(S)*
- *LOW FLOW SHOWER HEAD(S)*
- *INTERIOR HARD WIRED CFL FIXTURE(S)*
- *EXTERIOR HARD WIRED CFL FIXTURE(S)*
- *INTERIOR CFL BULB(S)*
- *EXTERIOR CFL BULB(S)*
- *AIR CONDITIONING TUNE-UP*
- *DUCT-TEST AND SEALING*

### PG&E RESIDENT MEASURES:

- *LOW-FLOW FAUCET AERATOR(S)*
- *LOW FLOW SHOWER HEAD(S)*
- *INTERIOR HARD WIRED CFL FIXTURE(S)*
- *EXTERIOR HW FIXTURE(S)*
- *INTERIOR CFL BULB(S)*
- *EXTERIOR CFL BULB(S)*
- *T-8 RETROFIT(S)*
- *AIR CONDITIONING TUNE-UP*
- *DUCT-TEST AND SEALING*

### Introduction

Hello, my name is **[INTERVIEWER NAME]** from **[MARKETING EXCELLENCE]**. I'm calling on behalf of **[UTILITY]**, your local electric utility. **[UTILITY]** wants to learn about your recent experience with the **[PROGRAM]**. May I speak with **[CONTACT NAME]**, or the person who decided to participate in the **[PROGRAM]** for the home located at **[SERVICE ADDRESS FROM SAMPLE]**?

2. Yes, speaking to the decision maker
3. Yes, call transferred to someone else
4. Yes, but at a different number **[RECORD NAME AND NUMBER; THANK AND TERMINATE]**
5. No **[THANK AND TERMINATE]**
- 98. (DON'T KNOW) **[SKIP TO 0]**
- 99. (REFUSED) **[THANK AND TERMINATE]**

**[IF NEEDED]:** Let me assure you, I'm not selling anything. Your responses are confidential and will be used to improve the program.]

**[IF NEEDED]:** This survey should take about 15 minutes of your time. Is this a good time for us to speak with you?] **[IF NOT, SET UP A CALL BACK APPOINTMENT]**

**[IF NEEDED]:** Studies like this help **[UTILITY]** to better understand what energy efficiency programs and services their customers want.]

**[IF NEEDED]:** If you would like to talk with someone from **[UTILITY]** about this study, feel free to call **[CONTACT NAME]** the **[CONTACT TITLE]** at **[CONTACT PHONE]**].

A1 Just to confirm, did you recently have energy saving work done on your home through a program offered by **[UTILITY]** Implemented by Synergy called the **[PROGRAM]**?

**[IF NEEDED:** This may have been when a contractor came out to your home and performed some maintenance on your air conditioner or installed some energy efficiency technologies like lighting, showerheads or faucet aerators.]

2. Yes **[SKIP TO 0]**
3. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

A2 Our records indicate your home participated in the **[UTILITY] [PROGRAM]**. By any chance, is there someone else who would be familiar with participating in this program?

1. Yes
2. No **[THANK AND TERMINATE]**
  - 98. (DON'T KNOW) **[THANK AND TERMINATE]**
  - 99. (REFUSED) **[THANK AND TERMINATE]**

A3 Can I speak to this person?

1. Yes, call transferred to someone else **[REINTRODUCE AND START WITH 0]**
4. Yes, but at a different number **[RECORD NAME AND NUMBER; THANK AND TERMINATE]**
  - 6. No **[THANK AND TERMINATE]**
  - 98. (DON'T KNOW) **[THANK AND TERMINATE]**
  - 99. (REFUSED) **[THANK AND TERMINATE]**

## Participation and Awareness

First I have a few questions about your participation in the **[PROGRAM]**.

**B1** How did you hear about the program? **[DO NOT READ; SELECT ALL THAT APPLY]**

1. **[UTILITY]** bill insert
  2. Word of mouth (friend, coworker, or family)
  3. Mobile home park owner or manager
  4. Utility television ad
  5. Utility radio ad
  6. Newspaper/Periodical ad
  7. **[UTILITY]** website
  8. Another website
  9. Contractor / technician
  10. **[UTILITY]** employee, account representative, customer service representative
  11. Community event
  12. Program brochure
  13. Other
- A1j. **[SPECIFY]**  
-98. (DON'T KNOW)  
-99. (REFUSED)

**B2** **[IF 0=10 OR 11]** Did program staff come to the park and provide information about the program prior to the day you participated?

1. Yes
  2. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

**B3** **[IF 0=1]** Was the information the program staff provided helpful?

1. Yes
  5. No
- A1k. **[PROBE-WHY?]**  
A1l. **[PROBE-WHY?]**  
-98. (DON'T KNOW)  
-99. (REFUSED)

**B4 [IF 0=10 AND 0=1 OR 0=11]** Did you sign up to participate in the program at the time of the informational meeting?

1. Yes
2. No

A1m. **[PROBE-HOW DID YOU SIGN UP FOR THE PROGRAM?]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

**B5 How did you enroll in the program? [DO NOT READ]**

1. Program staff knocked on my door
2. Went to a presentation in a common area of my mobile home park (and signed up)
3. Called a toll-free number
4. Other

A1n. **[SPECIFY]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

**B6 Why did you decide to participate in the program? [DO NOT READ; SELECT ALL THAT APPLY]**

1. Lower energy costs
2. Improve the comfort of the home
3. The right thing to do for the environment
4. Health concerns
5. Friend, coworker or family recommended it
6. Park owner or manager recommended it
7. Influence of program outreach staff
8. Increase the value of the home
9. The measures were free
10. Fix/replace broken equipment
11. Other

A1o. **[SPECIFY]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

B7 Once you had decided to participate, did you run into any issues that made it difficult to have program staff come perform the work your home?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

**B8** **[IF 0=1]** What issues did you encounter?

1. **[SPECIFY]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

B9 Did the program staff walk you through your home and provide Energy Saving Tips?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

B10 Did the program staff explain why certain equipment may be appropriate for your home?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

B11 Can you list the work that the program staff performed on your home? **[DO NOT READ; SELECT ALL THAT APPLY FROM UTILITY-SPECIFIC MEASURE LIST]**

1. **[SPECIFY]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

B12 After the work was done, did the program staff leave you with any brochures or materials with tips on how to save energy in your home, or other utility programs you could participate in?

1. Yes
2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

**B13 [IF 0=1]** Have you read this material?

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

**B14 [IF 0=1]** Have you done any of the things recommended in the material?

1. Yes
- A1p. [SPECIFY]
6. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

**B15** Did the program staff explain that the work in your home was done free of charge?

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

## Satisfaction

Ok, now I'd like to ask you some questions about the equipment you received and your satisfaction with the **[PROGRAM]**.

**C1** Using a scale of 0-10, with 0 meaning Not At All Satisfied and 10 meaning Extremely Satisfied, how satisfied are you with *the work* that was performed through the **[PROGRAM]**?

1. [SPECIFY]
- 98. (DON'T KNOW)
- 99. (REFUSED)

**C2 [IF C1<5]** What aspects of the work are you less than satisfied with? **[DO NOT READ LIST, SELECT ALL THAT APPLY]**

1. The walkthrough with the program staff
2. The energy savings information materials provided
3. **[RESPONSE(S) TO 0]**
4. Other

- A1q. [SPECIFY]
- 98. (DON'T KNOW)
  - 99. (REFUSED)

C3 Using a scale of 0-10, with 0 meaning Not At All Satisfied and 10 meaning Extremely Satisfied, how satisfied are you with the *performance* of the equipment installed by the program staff?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

**C4** **[IF 0<5]** Why do you give the performance of the equipment a **[RESPONSE FROM 0]**? **[DO NOT READ LIST, SELECT ALL THAT APPLY]**

1. **THE MEASURE BROKE DOWN/MALFUNCTIONED**
2. The quality of the equipment was not good enough
3. The quality of the installation was not good enough
4. I did not like the way the product looked
5. Other
  - A1r. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

C5 Using a scale of 0-10, with 0 meaning Not At All Satisfied and 10 meaning Extremely Satisfied, how satisfied are you with the *professionalism and knowledge of the program staff* that performed the work?

1. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

**C6** **[IF 0<5]** Why do you give the program staff that performed the work a **[RESPONSE FROM 0]**?

1. The program staff were was rude
2. The program staff were messy
3. The program staff did not provide high quality work
4. The program staff did not complete the work
5. **THE program staff WERE NOT TIMELY**
6. The program staff were not very knowledgeable
7. The measure was not installed properly
8. Other

- A1s. [SPECIFY]
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

C7 Using a scale of 0-10, with 0 meaning Not At All Satisfied and 10 meaning Extremely Satisfied, overall, how satisfied are you with your experience participating in the **[UTILITY]** **[PROGRAM]**? [IF NEEDED READ LIST]

1. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

C8 [IF 0=<5] Why do you give your program experience a **[RESPONSE FROM 0]**?

1. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

C9 Would you say that as a result of participating in the **[PROGRAM]** your awareness of energy efficiency has increased, decreased, or stayed the same?

- 1. Increased
- 2. Decreased
- 3. Stayed the same
  - 98. (DON'T KNOW)
  - 99. C10 (REFUSED)

C10 Would you recommend this program to a friend or family member?

- 1. Yes
- 2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

C11 [IF 0=2] Why wouldn't you recommend this program to a friend or family member?

1. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

C12 Do you have any suggestions for how the program could be improved?

- 1. Yes
- 2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

**[IF 0=1]** What improvements would you suggest?

1. **[SPECIFY]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

## Participant Spillover

Next I'd like to ask a few questions about your energy use since participating in the program.

D1 Do you believe you have benefited from the program services?

1. Yes

2. No

- 98. (DON'T KNOW)
- 99. (REFUSED)

D2 What do you believe the benefits are from these services? **[ALLOW MULTIPLE RESPONSES]**

1. Energy conservation

2. My utility bills will be (are) lower

3. Other

A1t. **[SPECIFY]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

D3 Have you installed any other energy-efficient equipment since participating in this program?

1. Yes

2. No

- 98. (DON'T KNOW)
- 99. (REFUSED)

**[IF 0≠1, SKIP TO 0]**

D4 What have you installed?

1. **[SPECIFY]**

- 98. (DON'T KNOW)
- 99. (REFUSED)

D5 Did the program influence your decision to do this?

1. Yes
  2. Partially
  3. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

D6 Have you taken any other energy saving steps or actions since participating in this program?

1. Yes
  2. Somewhat
  3. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

[IF 0≠1, SKIP TO 0]

D7 What energy saving steps or actions have you taken?

1. [SPECIFY]
- 98. (DON'T KNOW)  
-99. (REFUSED)

D8 Did the program influence your decision to take those energy saving steps or actions?

1. Yes
  2. Partially
  3. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

D9 Have you participated in any other **[UTILITY]** programs since participating in the **[PROGRAM]**?

1. Yes
  2. No
- 98. (DON'T KNOW)  
-99. (REFUSED)

[IF 0≠1, SKIP TO 0]

D10 What program(s) have you participated in? **[READ]**

1. Rebates **[SPECIFY APPLIANCE/PRODUCT]**
2. Product give-away/turn-in event (CFLs, torchieres)
3. Refrigerator turn-in/re-cycling
4. Energy survey (mail-in, in-home, telephone, online)
5. Low income program
6. CARE rate
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

D11 Did the program influence your decision to participate in other programs?

1. Yes
2. Partially
3. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

## Segmentation Items and AKA-B

On a scale of 0 to 10 where 0 is Strongly Disagree and 10 is Strongly Agree, please tell me how much you agree or disagree with the following 2 statements.

E1 I compare prices of at least a few brands before I choose one.

1. **[RECORD]**
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

E2 I do NOT feel responsible for conserving energy because my personal contribution is very small.

1. **[RECORD]**
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

E3 I'm going to read you a list of 6 reasons why people might change their daily actions to save energy. Please tell me which of these would motivate you the MOST to save energy? **[READ CHOICES] [IF DK PROBE "IF YOU HAD TO CHOOSE FROM THE FOLLOWING REASONS WHICH ONE WOULD MOTIVATE YOU THE MOST"] [RANDOMIZE]**

1. Saving money
  2. Maintaining Health
  3. Protecting the environment
  4. For the benefit of future generations
  5. Reducing our dependence on foreign oil
  6. Helping California lead the way on saving energy
- 98. (DON'T KNOW)  
-98. (REFUSED)

E4 Next I'm going to read a list of energy-saving actions. For each action, please tell me if your household has already taken the action:

Infrequent actions Did you...		
(a)...install an attic vent to keep the attic cooler	(Yes) (No) (DK) (NA) (Came with the house)	(Ref)
(b)...install programmable thermostats	(Yes) (No) (DK) (NA) (Came with the house)	(Ref)
(c)...Install ceiling fans	(Yes) (No) (DK) (NA) (Came with the house)	(Ref)
(d)...Install motion detectors for lights	(Yes) (No) (DK) (NA) (Came with the house)	(Ref)

Next I'd like to gather your insights and opinions about some energy related issues.

E5 I'm going to list several energy-efficient product labels or energy efficiency programs. For each, please tell me if you have heard of it. **[RANDOMIZE LABELS/NAMES OF PROGRAMS EXCEPT "ENERGY STAR MOST EFFICIENT" SHOULD ALWAYS IMMEDIATELY FOLLOW "ENERGY STAR"]**

1. ENERGY STAR
  2. ENERGY STAR Most Efficient
  3. Flex Your Power
  4. Top Ten
  5. Energy Upgrade California
- 98. (DON'T KNOW)  
-99. (REFUSED)

E6 Are you worried about global warming?

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

E7 **[IF Q=1]** How worried are you about global warming?

1. Not at all worried
2. A little worried
3. Somewhat worried
4. Very worried, or
5. Extremely worried
- 98. (DON'T KNOW)
- 99. (REFUSED)

E8 Now, I'm going to read a few statements. Using a scale of 0 to 10 where 0 means *Not at all agree*, and 10 means *Completely agree*, please tell me how much you agree with each statement. [RANDOMIZE]

1. I sometimes worry whether there is enough money to pay my energy bill.  
A1u. [RECORD]
2. I often worry that the cost of energy for my home will increase.  
A1v. [RECORD]
3. I am very concerned about how energy use affects the environment.  
A1w. [RECORD]
4. It is my responsibility to use as little energy as possible to help the environment.  
A1x. [RECORD]
5. I feel guilty if I use too much energy.  
A1y. [RECORD]
6. I intend to conserve on gas or electricity consumption in my home this winter.  
A1z. [RECORD]
7. I intend to conserve on electricity consumption in my home this summer.  
A1aa. [RECORD]
8. If my utility bill goes up, I feel like I must do something to reduce it.  
A1bb. [RECORD]
9. I have to take the lead in my household if we're going to keep our utility bills down.  
A1cc. [RECORD]
10. If others in my household can't or won't change their behavior to lower our utility bills, I feel I should do even more to control our energy costs.  
A1dd. [RECORD]
11. Household electricity use has an impact on the environment.  
A1ee. [RECORD]
12. I believe that household energy use has an impact on global warming and climate change.  
A1ff. [RECORD]
13. Conserving electricity will help reduce global warming.  
A1gg. [RECORD]
- 98. (DON'T KNOW)
- 99. (REFUSED)

## Home Characteristics and Energy Use

Next I'd like to ask a few questions about your home and its energy use.

F1 How many people live at this residence?

1. [SPECIFY NUMBER OF PEOPLE]  
-98. (DON'T KNOW)  
-99. (REFUSED)

F2 What are the ages of the residents in your household? [INSERT NUMBER OF PEOPLE IN HOUSEHOLD]

1. How many are 17 years old or younger?

- A1hh. [SPECIFY]
- 2. How many are between 18 and 59?
  - A1ii. [SPECIFY]
- 3. How many are 60 or older?
  - A1jj. [SPECIFY]
- 98. (DON'T KNOW)
- 99. (REFUSED)

F3 What is the approximate annual household income from all sources in 2011, before taxes? This information will be kept confidential.

1. Under \$15,000
  2. \$15,000 to less than \$20,000
  3. \$20,000 to less than \$25,000
  4. \$25,000 to less than \$30,000
  5. \$30,000 to less than \$40,000
  6. \$40,000 to less than \$50,000
  7. \$50,000 to less than \$75,000
  8. \$75,000 to less than \$100,000
  9. \$100,000 to less than \$150,000
  10. Over \$150,000
- 98. (DON'T KNOW)
  - 99. (REFUSED)

F4 When did you move to this address? [IF NECESSARY RECORD BOTH MONTH AND YEAR]

1. [SPECIFY]
- 98. (DON'T KNOW)
  - 99. (REFUSED)

F5 Do you own or rent the mobile home at [ADDRESS]

1. Own
  2. Rent
- 98. (DON'T KNOW)
  - 99. (REFUSED)

F6 In what year was your home built?

1. [SPECIFY]

- 98. (DON'T KNOW)
- 99. (REFUSED)

F7 Was it built...?

- 1. Within the last 12 years (since 2000)
- 2. Between 1990 and 1999
- 3. Between 1980 and 1989
- 4. Between 1970 and 1979
- 5. Between 1960 and 1969
- 6. Between 1950 and 1959
- 7. Between 1940 and 1949
- 8. Before 1940
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

F8 Do you pay your own electric bill or is it included in your mortgage or rental payment each month?

- 1. Pay own electric bill
- 2. Included in mortgage or rental payment
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

F9 Does your home have air conditioning?

- 1. Yes
- 2. No
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

F10 Is it room air conditioner(s) or central air conditioning?

- 1. Room air conditioner(s)
- 2. Central air conditioning
  - 98. (DON'T KNOW)
  - 99. (REFUSED)

**F11 [IF 0≠2]** Does your home have ventilation ducts? **[IF NECESSARY SAY: "THESE ARE TUBES THAT CARRY AIR FROM A CENTRAL AC UNIT OR FURNACE TO VENTS AROUND YOUR HOUSE?"]**

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

**F12** Do you have both gas and electric appliances installed? Or just electric? **[IF NECESSARY SAY: "FOR EXAMPLE, DO YOU HAVE A NATURAL GAS WATER HEATER OR GAS FURNACE IN ADDITION TO AN ELECTRIC STOVE?"]**

1. Electric only
2. Electric and gas
- 98. (DON'T KNOW)
- 99. (REFUSED)

**F13 [IF 0=2]** Is your water heater gas or electric?

1. Electric
2. Gas
- 98. (DON'T KNOW)
- 99. (REFUSED)

**F14** Before participating in the **[PROGRAM]**, did you buy compact fluorescent light bulbs for your home?

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

**F15 [IF 0=2]** Will you consider buying them in the future?

1. Yes
2. No **[PROBE- Why not?]**  
A1kk. **[PROBE-WHY NOT?]**
- 98. (DON'T KNOW)
- 99. (REFUSED)

F16 Since participating in the program, have you noticed a change in your energy bills?

1. Yes
2. No
- 98. (DON'T KNOW)
- 99. (REFUSED)

F17 [IF 0=1] On average, have your bills gone up or have they gone down?

1. Gone up
2. Gone down
3. (Neutral-Have not changed)
- 98. (DON'T KNOW)
- 99. (REFUSED)

F18 [IF 0=1] Why do you think this is?

1. [SPECIFY]
- 98. (DON'T KNOW)
- 99. (REFUSED)

## Closing

G1 Thank you for your time. Your input is greatly appreciated by [UTILITY]. Do you have any other comments?

1. Yes
  2. No
- A1II. [SPECIFY]
- 98. (DON'T KNOW)
  - 99. (REFUSED)