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San Diego Gas & Electric 2004-2005 Local Energy Savers Program Evaluation Report

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Executive Summary

Program Description

San Diego Gas and Electric (SDG&E) implemented the Energy Savers Program (ESP) during 2004 and 2005. The ESP provides incentives for public and non-profit businesses to install energy-efficient non-commercial refrigerators, torchieres, and computer/monitor plug load sensors. The Program targeted its services to school districts, military bases, churches, and other not-for-profit organizations.

The incentives offered were generous and covered nearly the full incremental cost of the offered measures. Table shows the rebates for each program measure.

Measure	Projected
Plug load sensor	\$15/unit
Refrigerator	\$275/unit
Torchiere	\$30/unit

Table ES-1. Incentives Offered

Program Evaluation Methods

This study was conducted at the request of the California Public Utilities Commission. The study was managed by SDG&E. It was funded through the public goods charge (PGC) for energy efficiency and is available for download at www.calmac.org.

The primary objective of this evaluation is to provide measurable and quantifiable results in the form of achieved levels of energy and peak demand savings by the Program. The success of the Program is also being gauged through a process evaluation and participant survey. Our evaluation activities were designed to provide 1) ongoing feedback and corrective guidance regarding Program implementation and delivery and 2) verification of energy and demand savings estimates of Program impacts.

For this study we conducted the following evaluation activities:

- Interviewed Program Manager
- Verified project measure installation
- Assessed *ex ante* energy and demand savings
- Interviewed Program participants
- Reviewed Program marketing materials

Our EM&V plan called for selecting a sample of completed projects to include in the verification, energy/demand savings assessment, and participant interviews. As of the end of

2005, however, only a fraction of anticipated participation occurred (and on average, single decision makers represented large blocks of participation); therefore, we attempted to survey all Program participants. While measures were installed in a total of 135 sites, only 24 key decision makers were identified. We completed interviews with 18 of these 24 participant contacts.

Program Goals and Achievements

Table ES-2 summarizes the program goals and achievements.

Table ES-2. Program Goals and Achievements

Program Goal	Goal	Actual	Percent of Goal Achieved
Plug load sensors installed	25,000	12,294	49%
Refrigerators installed	650	1,101	169%
Torchieres installed	800	25	3%
Coincident peak savings (kW)	129	122	94%
Annual energy savings (kWh)	6,218,316	3,571,497	57%
Lifetime energy savings (kWh)	34,902,056	18,876,193	54%

Table ES-3 compares the gross savings goals (before application of the deemed net-to-gross factor of 0.80).

Table ES-3. Gross Savings Goals and Net Savings Achieved

	0	0	
Program Goal	Gross Program- Projected Savings	Net Evaluation Confirmed Program Savings	Net-to-Gross Ratio ¹
Coincident peak savings (MW)	0.161	0.122	76%
Annual energy savings (MWh)	7,773	3,571	46%
Lifetime energy savings (MWh)	44,004	18,879	43%

Conclusions and Recommendations

The SDG&E ESP fulfilled its objective to increase participation by targeted customers in energy efficiency programs, and deliver cost-effective energy savings. As a result of the Program, 13,420 energy-efficient measures were installed, saving over 3.5 million kWh per year. Furthermore, the Program increased awareness of the importance of energy efficiency within the participating organizations and the constituencies they serve (students, military families, members and clients). Program participants were very satisfied.

A net-to-gross factor is used to adjust gross projected and confirmed savings to account for free-ridership.. The net-to-gross ratio compares the gross projected program savings to the net evaluation confirmed program savings.

The evaluation findings support SDG&E's decision to consolidate Program offerings and include the measures previously offered through the Energy Saver program in the Express Energy and the Small Business Super Saver programs. Within these programs, special attention to these non-profit organizations (increased marketing and outreach and technical assistance) may be warranted to ensure their continued participation.

1. Introduction

This report presents the results of our Evaluation, Measurement, and Verification (EM&V) study for the Energy Savers Program (ESP, the Program) implemented by San Diego Gas & Electric Company (SDG&E). Quantec, LLC, was selected by SDG&E to conduct the EM&V for the ESP.

Program Overview

Program Description

SDG&E implemented the ESP during 2004 and 2005. The ESP provides incentives for public and non-profit businesses to install energy-efficient non-commercial refrigerators, torchieres, and computer/monitor plug load sensors. It is very similar to the Express Efficiency program but has a different customer eligibility criteria. The Program targeted its services to school districts, military bases, churches, and other not-for-profit organizations.

The incentives offered were generous and covered nearly the full incremental cost of the offered measures. Table 1 shows the rebates for each program measure.

MeasureProjectedPlug load sensor\$15/unitRefrigerator\$275/unitTorchiere\$30/unit

Table 1. Incentives Offered

The program was designed to fill a niche, both in terms of customers and technologies not served by other programs. The program was promoted by the Program Manager as well as customer account managers within SDG&E. The program manager utilized a variety of marketing and communication strategies including direct mail, presentations, and one-on-one customer communication.

Program Goals and Objectives

The two-year goal of this Program was aggressive in terms of the number of measure to be installed, as shown in Table 2. Given the Program's relatively small target market, these installation goals represent a high market penetration. Savings goals based on the projected number of installations is as shown in Table 3.

Table 2. Target Installations

Measure	Projected
Plug load sensor	25,000
Refrigerator	650
Torchiere	800

Table 3. Program Goals Based on Projected Installations

Net Projected Energy Effects					
Coincident Annual Lifecycle Annual Lifecycle Peak kW kWh kWh Therms Therms					
129	6,218,316	34,902,056	0	0	

There are no other explicit Program goals, but other intended outcomes include:²

- Provision of an equitable and cost-effective means for schools, nonprofit organizations and tax-exempt entities to install new energy efficient equipment not available through other rebate programs.
- Establishment of partnerships with Community Based Organizations (CBOs), Faith Based Organizations (FBOs), ethnic marketing groups, and promotion of the Program in conjunction with other services targeted to their constituencies.
- Coordination of marketing and delivery of the program with other programs including Express Efficiency, Standard Performance Contract, and Audit programs.

EM&V Overview

This study was conducted at the request of the California Public Utilities Commission (CPUC). The study was managed by SDG&E. It was funded through the public goods charge (PGC) for energy efficiency and is available for download at www.calmac.org.

Our EM&V approach uses the applicable CPUC Energy Efficiency Policy Manual and established EM&V methods to evaluate the ESP's success. The evaluation is primarily to provide measurable and quantifiable results in the form of achieved levels of energy and peak demand savings by the Program. The success of the Program is also being gauged through a

San Diego Gas & Electric Company, 2004. Energy Savers— Procurement.

process evaluation and participant survey. Our evaluation activities were intended to provide 1) ongoing feedback and corrective guidance regarding Program implementation and delivery and 2) verification of energy and demand savings estimates of Program impacts. The energy and demand savings verification include verification of measure installation and tabulation of the *ex ante* energy and demand savings.

In order to assess and ensure the success of the Program, the process evaluation focused on the following issues relating to the ESP:

- Was the Program implemented as designed?
- Were there any changes in the design over the Program's operation?
- Are the target audiences being reached?
- What changes, if any, are recommended for the Program design and implementation?
- Have previously recommended changes been implemented?
- Have marketing and promotional efforts been effective?
- Was the participation process simple and easy to understand?
- Are the incentives effective and sufficient?
- What was the applicability of the Program technologies
- What opportunities exist for additional energy-efficiency upgrades among the various targeted customers?
- What factors encourage customers to make efficiency upgrades?
- What types of promotional efforts are most successful with different customers in the target markets?

For this study we conducted the following evaluation activities:

- Interviewed Program Manager
- Verified project measure installation
- Assessed *ex ante* energy and demand savings
- Interviewed Program participants
- Reviewed Program marketing materials

Our EM&V plan called for selecting a sample of completed projects to include in the verification, energy/demand savings assessment, and participant interviews. As of the end of 2005, however, only a fraction of anticipated participation occurred (and on average, single decision makers represented large blocks of participation); therefore, we attempted to survey all Program participants. While measures were installed in a total of 135 sites, only 24 key decision makers were identified. We completed interviews with 18 of these 24 participant contacts.

The next section of this report presents information from an interview with the Program Manager and a review of Program materials. Section III presents feedback from Program participants to

date. The fourth section presents verification results and our assessment of energy and demand savings. The final section presents summary findings based on the Program's goals and objectives and some observations on how the Program could be modified to increase its effectiveness.

2. Program Implementer Views

This section documents Program information provided by SDG&E. It is based on an interview we conducted with the SDG&E Program Manager and also reflects information from our team's review of Program reports and materials.

Our interview began with a review of the preliminary Program theory that Quantec developed for our EM&V plan.

Program Theory

The Energy Saver Program was designed to offer energy-efficient measures not currently available through Public Goods Charge (PGC) programs to the underserved schools, nonprofit, and federal agencies market. The installation of new equipment is intended to decrease customer utility bills, reduce electric demand, and save energy.

The measures included in the Program included:

- Plug load sensors software designed to reduce the energy consumption of networked computers
- Refrigerators early replacement of non-commercial refrigerators, including recycling of existing units
- Torchiere lamps replacement of halogen torchiere lamps with energy-efficient ENERGY STAR® torchieres

With the exception of the torchiere lamps, the measures had good applicability within the target markets. In particular, the plug load sensors were well received by local school districts within the SDG&E service area. Refrigerators were adopted by several churches and government agencies (military housing). Many of the halogen torchiere lamps that were in place had already been removed because of fire hazard concerns.

The incentives provided were important to move these customers to take action, covering most of the cost of the efficiency measures and enabling customers to adopt the efficiency measures. The Program Manager indicated that any investment required from the customer was a significant deterrent to participation.

Program Marketing

Several marketing and promotion activities were identified in the Program plan. In particular, the plan called for distribution of Program information, applications, and fact sheets via Account Executive visits, community events, Web site, and direct mail in quantities from 500 to 2,500. In response to a relatively slow start to the Program, the Program Manager employed enhanced marketing strategies to ensure that the Program achieved maximum impacts:

• SDG&E purchase a database of non-profit contacts, and sent 7,700 postcards to targeted organizations within their service area.

- The Program Manager attended industry trade shows.
- The Program coordinated with the California Alternative Rate for Energy (CARE) outreach workers to have them deliver postcards to schools and non-profits.
- Program staff attended conferences sponsored by the California's Coalition for Adequate School Housing (CASH), whose membership includes school districts, county officials and other trade allies (architects, contractors, etc.) interested in the modernization of school facilities, as well as the World Energy Congress.
- Articles appeared in the Sempra Daily News, SDG&E's employee newsletter, to ensure that SDG&E employees were aware of the Program and could identify leads as appropriate.

The marketing of the Program was more labor intensive than originally anticipated, requiring repeated interactions with customers by the Program Manager and account executives, whether they were installing multiple measures or just a single measure.

Program Design, Accomplishments, and Implementation

Implementation revealed several challenges for the Program and affirmed expectations about market barriers faced by the targeted customer group (limited fund availability, limited knowledge, and multiple responsibilities of key decision makers). The Program Manager, account executives, and other stakeholders (particularly, the vendors of the plug load sensor software packages) worked closely with targeted customers to assist them through the participation process. In addition to marketing of the Program, other implementation tasks included:

- Collection of Program applications
- Post-installation inspections 20% of installations were verified by the Program Manager
- Processing of rebate payments in some cases, the rebate payments were assigned to the vendor to expedite the procurement process

Role of Product Vendors

Two plug load sensor vendors actively promoted the Energy Saver Program. For the most part, they were effective in helping to gain participation. While one vendor (Verdiem) had more Program installations, another vendor (EDU Business Solutions) offered a local presence for technical support; a demonstration of the product for SDG&E staff; and a product that allowed control of Macintosh computers, which are widely used by some school districts.

Applicability of Technologies and Appropriateness of Program Goals

The three technologies included in the Program are relatively diverse. They were chosen not so much for their applicability to the target audience, but because:

- They are technologies not offered in other Programs
- The belief that there needed to be a minimum of three technologies offered through the Program

Two of the Program technologies proved to have wide applicability within segments of the target audience – those being plug load sensors and refrigerators.

*Installation of refrigerator*s was done by schools, universities, churches, and military housing facilities. Two particularly large installations occurred at the University of California – San Diego (62 units replaced in student housing) and at Camp Pendleton (632 units). Both of these installations were featured in the *Sempra Daily News*. Total refrigerator installations (1,101) well exceeded the target of 650 (Table 4).

The plug load sensors, which provide energy management capabilities for networked computer systems, were installed by several of the school districts in the SDG&E area. While more than 12,000 plug load licenses were rebated through the Program, it still fell short of the 25,000 unit goal. To achieve the goal would have required almost 100% penetration across the school districts, which is extremely aggressive.³ There is one school district that did not make a final participation decision under the Energy Saver program, but may still participate under other SDG&E programs.

The goal of 800 *torchiere installations* likely exceeded the potential that existed for that measure. The torchiere lamps are not frequently used by small business customers, and of the inefficient halogen lamps that did exist, many had been replaced because of concerns about fire hazard.

Table 4. ESP Projected and Actual Installations

Measure	Projected	Total Installations	Percent of Projected
Plug-Load Sensors	25,000	12,294	49%
Refrigerators	650	1,101	169%
Torchieres	800	25	3%

As estimated by the Program Manager.

3. Participant Interviews

As discussed earlier, actual participation was substantially smaller than expected, with 24 entities participating. However, those 24 entities represented a total of 135 sites. Quantec designed a standard questionnaire to gauge participant energy efficiency awareness and perceptions about barriers, effectiveness of marketing efforts, and overall satisfaction with the Program. Interviews were then conducted with 18 of the 24 participants (75%).

Program Awareness

Most of the participants heard of the Program directly from a utility representative or from word-of-mouth (typically another business colleague). The utility mailings were mentioned by a few respondents and the utility Web site and product vendor were each mentioned by one respondent, as shown in Figure 1.

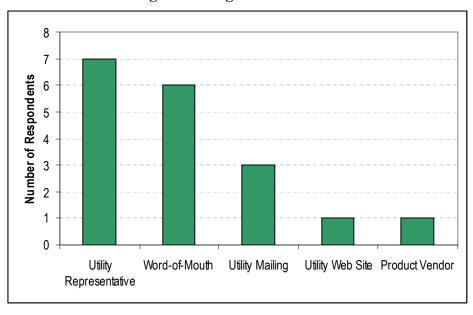


Figure 1. Program Awareness

While the Program plan called for printed materials as the primary mechanism for promotion, as the Program Manager indicated, the personal contact of the utility representatives was the most influential marketing tactic employed.

Participation Process

Respondents gave several reasons for participating in the Program, most notably to reduce their electric bills. Other reasons cited included the availability of rebates, the need to replace old or malfunctioning equipment, and the positive participation experiences of business colleagues.

Those mentioning rebates indicated both the availability and the level of rebates as influential in participation decision.

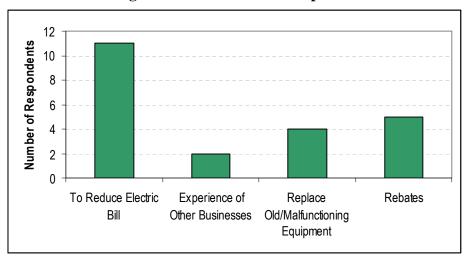


Figure 2. Reasons for Participation

Respondents were asked to rate the various aspects of the Program, including the clarity and importance of information provided and the ease in which they were able to enroll. Overwhelmingly, they indicated that the information provided was clear and germane to their decision making, and that the sign-up process was simple and effective.

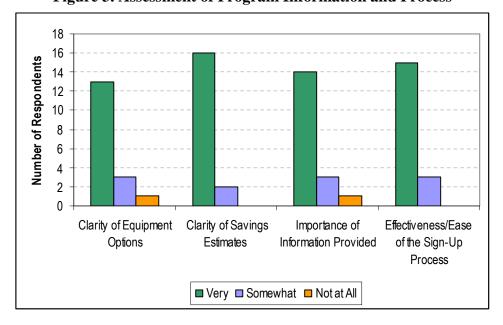


Figure 3. Assessment of Program Information and Process

One respondent expressed some confusion about the necessary forms to be completed and submitted and suggested SDG&E develop a checklist to ensure participants successfully complete each program step.

Participant Satisfaction

Program participants reported very high satisfaction with the Program, with 89% stating they were extremely satisfied and the remaining 11% indicating they were somewhat satisfied.

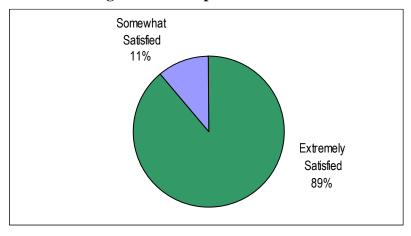


Figure 4. Participant Satisfaction

Likewise, all respondents indicated that they would recommend the Program to friends or colleagues and several already had as shown in Figure 5.

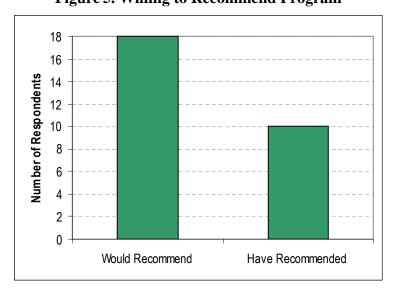


Figure 5. Willing to Recommend Program

Likelihood of Taking Energy Savings Actions

A little more than half of the respondents indicated that they would have installed the energy efficient equipment at some point, even in the absence of the Program. Those replacing refrigerators were more likely to indicate that they would have installed the efficient equipment in the absence of the Program; however, the timeframe in which they would be replaced would have been greatly extended. Additionally, one of the respondents that installed plug load sensors indicated that they would have purchased and installed them in the absence of the Program, but again over a much longer time frame. None of the torchiere recipients would have replaced the lamps in absence of the Program. The overall responses are shown in Figure 6.

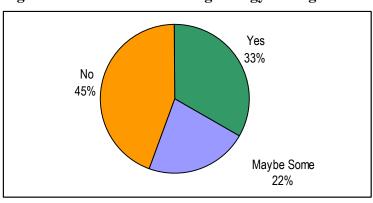


Figure 6. Likelihood of Taking Energy Savings Action

Several of the survey respondents indicated taking additional energy savings actions after their participation in the Energy Saver, both at work and at home, as shown in Figure 7. Fourteen of 18 respondents had taken additional energy savings actions at their place of business, while four were inspired to take additional action at home.

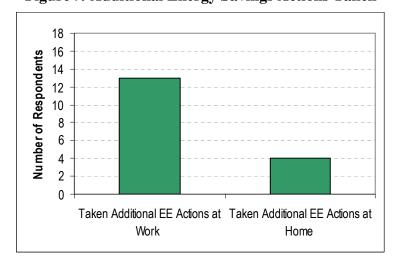


Figure 7. Additional Energy Savings Actions Taken

Specific actions they reported taking included:

- Sent out annual energy reports to all facilities in an attempt to increase energy awareness
- Appointed "Energy Czar" to increase awareness of energy efficiency
- Installed vending machine controls
- Encouraged behavior modification turn off lights, keep doors closed, etc.
- Replaced several old transformers
- Looked for similar program for HVAC controls and are looking into lighting control
 options.
- Installed energy-efficient lighting
- Changed air conditioning filters more frequently

Additional Comments

Overall, participants were very complimentary about the Program and the program staff and the information provided to guide energy-efficiency decision-making. Comments from participants included:

- "Good job."
- "The guy who came to us is a star."
- "Keep calling folks to let them know about these services."
- "Kudos to SDG&E. They were great to work with."

4. Program Impacts

Calculation of Program Impacts

The following technologies were installed through the ESP.

Table 5. ESP Installations

Measure	Projected	2004 Installations	2005 Installations	Total
Plug-Load Sensors	25,000	6,878	5,416	12,294
Refrigerators	650	4	1,097	1,101
Torchieres	800	0	25	25

The deemed savings values used to calculate the annual and lifecycle impacts of the program are shown in Table 6.

Table 6. Measure Impacts

Measure	Net to Gross	Lifetime	kWh	Peak kW	Therms
Plug-Load Sensors	0.8	5	269	-	0
Refrigerators	0.8	6	1,041	0.1361	0
Torchieres	0.8	16	464	0.0907	0

Installation of these technologies generated first year energy savings impacts as shown in Table 7 and coincident peak demand impacts as shown in Table 8.

Table 7. Program Impacts (First Year Energy Savings - kWh)

Measure	2004 Impacts	2005 Impacts	Total	Lifetime Savings
Plug-Load Sensors	1,480,146	1,165,523	2,645,669	13,228,344
Refrigerators	3,330	913,210	916,540	5,499,241
Torchieres	0	9,288	9,288	148,608
Total	1,483,475	2,088,022	3,571,497	18,876,193

Table 8. Program Impacts (First Year Coincident Peak Demand Savings - kW)

Measure	2004 Impacts	2005 Impacts	Total
Plug-Load Sensors	0.0	0.0	0.0
Refrigerators	0.4	119.5	119.9
Torchieres	0.0	1.8	1.8
Total	0.4	121.3	121.7

These impacts are compared to the program goals as shown in Table 9.

Table 9. Comparison of Achieved Impacts to Program Goals

Program Impacts	Net Savings Goals	Net Achieved Impacts	Percent of Project Goal Achieved
Coincident Peak kW	129	122	94%
Annual kWh	6,218,316	3,571,497	57%
Lifecycle kWh	34,902,056	18,876,193	54%

The gross projected and net achieved annual energy and peak demand savings based on the deemed measure impacts, net-to-gross ratios, lifetimes are shown in Table 10 in the format to be reported to the CPUC.

Table 10. Program Impacts (Annual Savings)

Calendar Year	Gross Program- Projected MWh Savings	Net Evaluation Confirmed Program MWh Savings	Gross Program- Projected Peak MW Savings	Evaluation Projected Peak MW Savings
2004	3,109	1,483	0.064	0.000
2005	7,773	3,571	0.161	0.122
2006	7,773	3,571	0.161	0.122
2007	7,773	3,571	0.161	0.122
2008	7,773	3,571	0.161	0.122
2009	5,083	2,091	0.161	0.122
2010	777	922	0.126	0.121
2011	372	9	0.073	0.002
2012	372	9	0.073	0.002
2013	372	9	0.073	0.002
2014	372	9	0.073	0.002
2015	372	9	0.073	0.002
2016	372	9	0.073	0.002
2017	372	9	0.073	0.002
2018	372	9	0.073	0.002
2019	372	9	0.073	0.002
2020	372	9	0.073	0.002
2021	223	9	0.044	0.002
Total	44,004	18,879	0.161	0.122

Appropriateness of Deemed Savings Values

Net-to-Gross Values

For the plug-load sensors and refrigerators, the net-to-gross ratio is appropriate. Most of the respondents indicated that the Program incentives were very influential in making their decision

to participate. Based on feedback from the Program Manager and the participants, it is unlikely that, in absence of the Program, the energy-efficient ENERGY STAR-labeled torchieres would have been installed at the time they were. Higher net-to-gross ratios may be warranted for that measure.

Plug Load Sensors

Currently the deemed savings for plug-load sensors is 269 kWh/year. No demand savings is assumed. Quantec collected reports from the three Energy Saver participants that purchased licenses for the Surveyor Power Management (plug load sensor) software. As shown in Table 11, estimated annual energy savings varied from 235 kWh/year to 133 kWh/year. There are a number of "drivers" that can impact these savings estimates, including:

- The length and timing of the study period. Shorter study periods that do not include typical use can potentially bias the results. For example, if the summer break is disproportionally represented in the post-enforcement period, savings may be potentially underestimated.
- *The number of computers monitored*. Smaller sample sizes will obviously be more prone to picking up "noise" (e.g., one user spending two days offsite at a meeting and leaving their computer off).
- *The type of computers monitored*. A sample that includes powerful desktops and large CRT monitors will obviously have higher potential savings versus a sample that includes a mix of desktops, laptops, and flat-panel monitors.⁴
- Baseline practices and compliance. Some companies have policies to shut off computers
 in the evenings, often because of security concerns. Companies with high compliance
 with this practice will clearly have far lower potential savings estimates than companies
 where the majority of workers leave their computers on during the evening. Quantec,
 however, was unable to obtain the raw monitoring data, which would have allowed for
 estimates of the percentage of computers left on during evenings and weekends during
 pre and post enforcement periods.
- *The space types for the client computers*. Computer labs, where staff and students typically leave the computers running all the time, may have higher savings potential than administration installations.
- Aggressiveness of enforcement. Some companies choose a less invasive, and therefore less aggressive, strategy of shutting down computers in the evening; others may choose to have computers and monitors go into "sleep" modes during the day.

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Quantec did not have access to the type of computers/monitors that were included, so all of the studies included similar estimates for Watts per state.

Table 11. Estimated Energy Savings from Plug Load Sensors

Participant Number	No. Licenses Purchased	Business Type	Estimated Savings per Workstation	Methodology
Participant 1	4,530	School District	133 kWh/year	Based on the delta of a 37-day pre-enforcement baseline monitoring period and a 26-week post-enforcement period.
Participant 2	1,859	School District	168 kWh/year	Baseline data were not available, so assumed same pre-enforcement consumption of Participant 1, took delta from 46-day post-enforcement period.
Participant 3	350	Office of Education	235 kWh/year	Based on the delta of a control group of 72 clients vs. a "10pm shutdown group" of 240 clients during a 59-day period.
Total	6,739	Weighted Aver	age Savings	148 kWh/year

As additional installations occur, it may make sense to consider adjusting the savings estimates for plug load sensors based on the baseline consumption characteristics and energy management strategies deployed.

Refrigerators and Torchieres

The deemed savings estimates for these technologies seem reasonable based on the input from Program participants and the Program Manager. In some cases, participants reported replacing more than one refrigerator or lamp with the new measures, which may drive additional savings. However, it is our view that the deemed savings estimates are appropriately conservative.

5. Findings and Recommendations

Program Goals and Achievements

Table 12 summarizes the program goals and achievements.

Table 12. Program Goals and Achievements

Program Goal	Goal	Actual	Percent of Goal Achieved
Plug load sensors installed	25,000	12,294	49%
Refrigerators installed	650	1,101	169%
Torchieres installed	800	25	3%
Coincident peak savings (kW)	129	122	94%
Annual energy savings (kWh)	6,218,316	3,571,497	57%
Lifetime energy savings (kWh)	34,902,056	18,876,193	54%

Table 13 compares the gross savings goals (before application of the deemed net-to-gross factor of 0.80).

Table 13. Gross Savings Goals and Net Savings Achieved

Program Goal	Gross Program- Projected Savings	Net Evaluation Confirmed Program Savings	Net-to-Gross Ratio⁵
Coincident peak savings (MW)	0.161	0.122	76%
Annual energy savings (MWh)	7,773	3,571	46%
Lifetime energy savings (MWh)	44,004	18,879	43%

Measurable Objectives

The accomplishments of the ESP relative to the measurable objectives listed in SDG&E's Program plan are summarized below.

- The Program achieved total estimated annual net energy savings of 3,571,497 kWh and coincident peak demand savings of 122 kW.
- The Program provided measures to 135 sites representing 24 school districts, military bases, churches and other non-profit organizations.
- The Program created high satisfaction amongst Program participants.

A net-to-gross factor is used to adjust gross projected and confirmed savings to account for free-ridership.. The net-to-gross ratio compares the gross projected program savings to the net evaluation confirmed program savings.

- The Program generated additional awareness of other programs available to SDG&E customers, including Express Efficiency (for customers with demand > 100 kW) and the Small Business Super Saver programs (for customers with demand < 100 kW).
- The Program established partnerships with local groups that provide services to the target customers, such as the CASH organization.

Additional Observations

The Program, by definition, served a segment of the market that could be defined as hard-toreach. Historically, they have been underrepresented in Program participation for other efficiency programs because of two primary barriers:

- Availability of funding for efficiency investments
- Multiple responsibility of organization staff give them limited time to assess efficiency opportunities and act on them

The Program effectively addressed both of these barriers with the original Program design and the adaptive management adjustments made to respond to customer needs. The substantial incentives offered were part of the original Program design. The primary adaptive management adjustment made was to significantly increase the marketing and interaction with target customers to assist them in actually making the decision and taking the necessary steps to participate. This was especially necessary with the torchieres. Without the commitment of the Program Manager, virtually none of these measure would have been installed.

Issues

There was some concern by the Program Manager that the myriad of programs targeted to the small or "hard-to-reach" business customers made participation somewhat confusing for customers. Even these smaller customers would prefer a one-stop shopping experience. This is supported by the number of participants planning to make additional investments in energy efficiency. And despite the narrow focus of the Program in terms of customers targeted and technologies included, it still required an significant amount of effort to implement and manage.

Conclusion and Recommendation

The SDG&E Energy Savers program fulfilled its objective to increase participation by targeted customers in energy efficiency programs, and deliver cost-effective energy savings. As a result of the Program, 13,420 energy-efficient measures were installed, saving over 3.5 million kWh per year. Furthermore, the Program increased awareness of the importance of energy efficiency within the participating organizations and the constituencies they serve (students, military families, members and clients).

We agree with SDG&E's decision to consolidate Program offerings and include the measures previously offered through the Energy Savers program in the Express Energy and the Small Business Super Saver programs. Within these programs, special attention to these non-profit

organizations (increased marketing and outreach and technical assistance) may be warranted to ensure their continued participation.