

Final Report

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City of Pomona Energy Efficiency Partnership Program Evaluation

Prepared for:

Southern California Edison Company

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Prepared by:
M. Sami Khawaja
Michelle Levy
Quantec, LLC

Quantec Offices

720 SW Washington, Suite 400
Portland, OR 97205
(503) 228-2992; (503) 228-3696 fax
www.quantecllc.com



Printed on
recycled paper

1722 14th St., Suite 210
Boulder, CO 80302
(303) 998-0102; (303) 998-1007 fax

3445 Grant St.
Eugene, OR 97405
(541) 484-2992; (541) 683-3683 fax

28 E. Main St., Suite A
Reedsburg, WI 53959
(608) 524-4844; (608) 524-6361 fax

20022 Cove Circle
Huntington Beach, CA 92646
(714) 287-6521

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Executive Summary

Overview

The City of Pomona Energy Efficiency Partnership Program (the Program), implemented by Southern California Edison (SCE) in 2004-2005, was designed to create energy savings through a combination of strategies including building and traffic signal retrofits and educational outreach activities. The objective of the Program was to improve the energy efficiency of Pomona's City buildings and traffic signals, and to help overcome market barriers facing Pomona's underserved residential and small-commercial population.

Evaluation activities for the Program consisted of both process and impact components. The process portion focused on information effects for recipients of educational, marketing, and outreach activities, and included surveys with attendees of Program events. In addition, the process evaluation incorporated in-depth interviews with key Program implementers. These interviews were designed to review the Program's goals and objectives, learn staff perceptions of the Program's success in meeting these goals, and record lessons learned. The impact portion of the evaluation entailed on-site verifications of claimed installed measures and a deemed savings analysis to estimate the total energy and demand savings resulting from both the building retrofits and the LED pedestrian indicator conversions.

Achievement of Goals

In the summer of 2005, the Program completed equipment retrofits at seven fire stations and three police stations in Pomona. Measures included T-8 linear fluorescents, Compact Fluorescent Lights (CFLs), occupancy sensors, and high-efficiency air conditioning units. Following retrofit completion, verification site visits were performed at each station, whereby the Program's database of claimed measure installations was compared to on-site measure counts. Table 1 displays the Program's initial energy savings goals, and Table 2 presents these goals alongside claimed Program savings (calculated from the installation summary provided by the retrofit contractor), and realized savings (calculated from verified measure counts).

Table 1. Program Retrofit Goals

Revised PIP					
Measure/ Activity Name	Unit Goals	Net Annual Energy Savings Per Unit (kWh)	Net Demand Reduction Per Unit (kW)	Annual Net Savings (kWh)	Annual Net Demand Reduction (kW)
T-12 to T8 Fluorescent Fixture/Ballasts	1,662	133.2	0.02	221,299	25.26
Lighting Occupancy Sensors	155	437.6	-	67,823	0.00
High Efficiency Packaged AC Units	35	1323	0.18	46,291	6.30
CFLs	-	127.2	0.00	-	-
Reflective Window Film	-	10.2	-	-	-
LED Pedestrian Indicators	908	147.2	0.02	133,629	15.25
Totals				482,650*	47.0*

*Total savings goals as specified in the Program Implementation Plan (PIP). Multiplication of per-unit savings estimates by the unit goals provided in the PIP, as presented in Table 1, do not total to 482,650 kWh and 47 kW. The basis for this discrepancy is unclear, but it is most likely due to the Program making a savings estimation for CFLs in the absence of unit goals for this measure.

Table 2 shows the Program accomplishments and the percent of goal achieved. Overall, the Program achieved 65.7% of its energy savings goal and 83.3% of its demand reduction goal.

Table 2. Program Goals, Claimed Achievement and Realized Savings

	Net Savings		Percent of Goal	
	Energy Savings (kWh)	Demand Reduction (kW)	Energy Savings (kWh)	Demand Reduction (kW)
Program Goal	482,650	47.0	-	-
Claimed Result	323,714	39.9	67.1%	84.9%
Total Realized Savings	316,910	39.2	65.7%	83.3%

It should be noted that, though retrofit opportunities in Pomona turned out to be less than originally thought, SCE was proactive in identifying as many additional prospects as possible so the Program could achieve its total savings goals. Different options were considered, such as computer efficiency initiatives in City offices, but it was ultimately decided that the level of effort directed toward the retrofit activities for the City of Pomona were consistent with the requirements of the PIP, although the Program was short on achieving its total savings goal.

In addition to the equipment retrofits, the Program also sponsored several marketing and outreach events with the goal of increasing energy efficiency awareness among Pomona’s hard-to-reach residential and small-business population. Specific activities included small-business seminars, vendor consultations, information booths at City events, a direct mail campaign, and creation of an energy-efficiency Web site (linked to the City Web site). Educational materials focused on energy efficient technologies and available incentive programs. The complete list of Program outreach activities is presented in Table 3.

Table 3. Marketing/Outreach Program Activities

Event Title	Number of Events	Total Participants*
Small Business Seminars	5	92
Vendor Meetings	4	31
Booths at City Events	3	2,500
Brochure Direct Mail	2	150,000
Web Site	1	N/A

* City Event participant numbers are estimated attendees of event as a whole.

The Program’s marketing/outreach activities were evaluated to assess their effectiveness at raising participant awareness of energy efficiency options and encouraging behavioral changes, as well as for general event satisfaction. Evaluation data were collected through participant surveys, phone interviews, and in-depth interviews with key Program staff. Although small sample sizes for the surveys and interviews resulted in anecdotal findings of the Program’s marketing/outreach effectiveness, participant feedback did provide an indication of overall Program effect.

Key Findings

The process evaluation looked at the presence of immediate and intermediate outcomes that support achievement of the long-term Program objectives. The following immediate and intermediate outcomes were examined:

Immediate Outcomes

- Vendor understanding of marketing energy efficient options
- Increased awareness about energy-efficiency options
- Installed building and traffic signal measures

Intermediate Outcomes

- Behavioral changes

In addition, we assessed the demand and energy impacts of the Program, and the extent to which these impacts realized Program goals.

Immediate Outcomes

Vendor Understanding of Marketing Energy-Efficient Options

Anecdotal feedback from three vendors who attended an informational vendor meeting presented through the Program showed that, for the most part, vendor understanding of energy efficiency options did not increase dramatically as a result of the event. However, one of the three attendees

interviewed did report a small increase in awareness, and felt that the likelihood of his promoting energy efficiency options to his customers had increased.

Increased Awareness About Energy-Efficiency Options

The evaluation confirmed that five small-business seminars and 4 vendor training sessions and consultations occurred. Participant feedback from the seminars indicated that there was an increase in awareness of energy-efficiency options for most attendees. Vendor surveys indicated a slight increase in awareness from one participant. Informational booths at City events, brochure mailings, and the energy link on the City Web site were all achieved as planned. Although the impacts from these events were not directly measured as part of the evaluation, it is assumed that the immediate goal of increased awareness was achieved as described in the Program Logic Model since the events were successfully executed.

Installed Measures

Of the 1,739 claimed measure installations, 1,706 were verifiable. Site visits confirmed the installation of 1,698 measures, of which 1,679 were found to be operational. The revised Program measure installation goal was 1,887. These goals fell short due to fewer air-conditioning, T-8, and occupancy sensor opportunities than projected.

Intermediate Outcomes

Behavioral Changes

Although this was not measured directly, participants in nearly all of the Program activities were asked how the likelihood of implementing energy efficiency measures or participating in energy efficiency programs had changed as a result of seminars. Results showed that most (22 of 24) of the small business participants felt that they were either “somewhat more likely” or “much more likely” to implement energy efficiency options in their businesses as a result of attending Program-sponsored seminars. In terms of general outreach activities such as the mail campaign, booths, and web site, this evaluation was limited to verifying that the events occurred as planned. Since the activities did occur as outlined in the plan, and the immediate outcomes were achieved, it is assumed that these led to the intermediate outcomes.

Final Goals

Gross Annual Energy Savings and Coincident Peak Demand Reduction

Original retrofit unit goals were modified mid-Program to accommodate a difference in available opportunities from original projections. Once the Program was underway, it was discovered that there was a difference in projected vs. actual retrofit opportunities. This resulted in greater pedestrian indicator retrofits, fewer T-12 to T-8 conversions, fewer high-efficiency air conditioner installations, fewer occupancy sensors, the addition of compact fluorescent bulb

retrofits, and the elimination of reflective window film. The Program's energy savings goal, as specified in the revised PIP, was 482,650 kWh, and its demand reduction goal was 47.0 kW. The Program's final claimed savings fell short of its goal, but on-site verifications of the equipment retrofits for both the City buildings and the pedestrian indicators showed a high realization rate of claimed vs. actual kWh energy savings (97.9%) and kW demand reduction (98.2%). Realized energy savings totaled 316,916 kWh (65.7% of goal), and demand savings equaled 39.14 kW (83.3% of goal).

Program Scope Changes

Due to the conditions and opportunities in Pomona turning out differently than originally envisaged, approximately \$70,000 of the Program budget for retrofits remains unutilized. Discussions were held between SCE and Intergy on potential strategies to use the remaining funds, but it was determined that, to date, the level of effort directed toward the retrofit activities for the City of Pomona were consistent with the requirements of the PIP, although the Program was short on achieving its total savings goal, so likely these funds will remain unspent.

Introduction

Project Overview

Southern California Edison company (SCE), in partnership with the City of Pomona Utility Services and Public Works Department, implemented the City of Pomona Energy Efficiency Partnership Program (the Program) in 2004-2005. The Program was designed to create energy savings through a set of innovative strategies entailing both retrofit and outreach activities. The objective of the Program was to improve energy efficiency in City buildings and to help overcome market barriers facing Pomona's underserved residential and small-commercial population. Pomona has more than 155,000 residents, with over 64% of the population being Hispanic.¹ The median annual household income is approximately \$40,000,² and there are more than 2,500 small businesses in the City. The hard-to-reach small-business market was hard-hit by the rising energy costs and economic downturn of the past few years. Furthermore, Pomona's hot climate makes it particularly susceptible to increases in energy costs.

The Program received funding from the California Public Utilities Commission (CPUC) to improve energy efficiency in three target areas:

1. The hard-to-reach residential population via outreach activities
2. The hard-to-reach small-commercial market segment via education and training events
3. City buildings and traffic signals via energy-efficient equipment retrofits

The Program was designed to leverage the existing mechanisms and partnerships unique to local governments (such as the Chambers of Commerce and the Business District) to facilitate efficient and streamlined Program delivery. City building retrofits and education/outreach activities were carried out by Intergy Corporation of Dublin, California, in cooperation with the City of Pomona Utility Services and Public Works Department. The pedestrian indicator retrofits were performed by Macadee Electrical Construction of Chino Hills, California. This document presents the results of evaluation activities conducted to assess the Program's effectiveness and success in meeting its goals.

Program Goals and Objectives

Specific Program savings goals, as outlined in SCE's Program Implementation Plan (PIP), were modified mid-Program when retrofit opportunities within the City of Pomona were found to be less than originally projected and some outreach activities encountered difficulties. For example, reflective window film was found to already exist at the proposed retrofit sites, and the email campaign was eliminated due to legal concerns. Consequently, SCE submitted a change order request on November 11, 2004, which the CPUC approved on December 14, 2004.

¹ Source: 2004 Census, <http://www.census.gov>

² Source: 2004 Census. California median income = \$51,185

Actual retrofit activities at the City buildings consisted of T-12 to T-8 linear fluorescent light retrofits, incandescent to compact fluorescent light (CFL) conversions, occupancy sensor installations, and high-efficiency air-conditioning unit installations. The Program's marketing and outreach activities included the following:

- Distribution of residential energy-efficiency brochures through City utility bill inserts, City newsletter, LA Times, door-to-door delivery, and events and seminars
- Distribution of non-residential energy-efficiency brochures through direct mail, Chamber of Commerce hand-outs, City building hand-outs, Hispanic Fiesta, Chamber of Commerce newsletter, and events and seminars
- Educational seminars for the small-business community
- Vendor training sessions
- An energy-efficiency link added to the City's Web site
- Informational booths set up at City-sponsored events

The Program's original and revised goals for the retrofit component are presented Table 4. Marketing/outreach aspects are shown in Table 2. All per-unit impacts were deemed at the beginning of the Program, which includes a net-to-gross ratio of 0.8 across all measures.

Table 4. Original and Revised Program Goals – Retrofit Component

Measure/ Activity Name	Original PIP					Revised PIP					Reason for Change
	Unit Goals	Net Annual Energy Savings Per Unit (kWh)	Net Demand Reduction Per Unit (kW)	Annual Net Savings (kWh)	Net Coincident Peak Demand Reduction (kW)	Unit Goals	Net Annual Energy Savings Per Unit (kWh)	Net Demand Reduction Per Unit (kW)	Annual Net Savings (kWh)	Annual Net Demand Reduction (kW)	
T-12 to T8 Fluorescent Fixture/Ballasts	500	504.6	0.015	252,280	7.6	1,662	133.2	0.02	221,299	25.26	Additional opportunities identified
Lighting Occupancy Sensors	54	296.8		16,027		155	437.6		67,823	0.00	Additional opportunities identified
High Efficiency Packaged AC Units	50	1323	0.180	66,130	9.0	35	1323	0.18	46,291	6.30	Fewer opportunities than projected
CFLs	0	0.0			-	-	127.2	0.00	-	-	Additional opportunity
Reflective Window Film	1,354	10.2		13,865		0	10.2		-	-	Film pre-existing
LED Pedestrian Indicators	1,280	147.2	0.017	188,375	21.5	908	147.2	0.02	133,629	15.25	Fewer opportunities than projected
Totals				536,677	38.1				482,650*	47.0*	

* These are the goals as specified in the Revised PIP. However, calculation of the unit goals and savings estimates in the Revised PIP, as presented here, do not total to 482,650 kWh and 47 kW. The basis for this discrepancy is unclear, but it is most likely due to the Program making a savings estimation for CFLs in the absence of unit goals for this measure.

As shown in Table 5, modifications were made not only in installation unit goals for each measure, but also in the deemed savings estimates for T-8 retrofits and occupancy sensors. It also should be noted that a unit goal for the added CFL measure was not established in the Revised PIP, and that the deemed savings estimates for CFLs (net 127.2 kWh, 0.045 kW) differed from those provided by the installation sub-contractor Intergy (net 227.2 kWh, 0.041 kW). The latter estimates were used in evaluation calculations at the direction of the Program manager.

Table 5. Original and Revised Program Goals – Marketing/Outreach Component

Event	Original Goal	Revised Goal	Reason for Change
Residential Brochure Distribution	195,000 ³	195,000	N/A
Non-residential Brochure Distribution	24,500 ⁴	24,500	N/A
Small Business Seminar	4	5	Additional resources became available when the email campaign was eliminated
Vendor Training Session	4 group training events	4-6 individual consultations	Hard-to-reach population
Email Campaign	100,000	0	Legal concerns and limited Internet access among target population
City Events	2	3	Additional resources became available when the email campaign was eliminated
Web site	1	1	N/A

³ Unit goal exceeds total number of households in Pomona due to the distribution of mailers through several different channels.

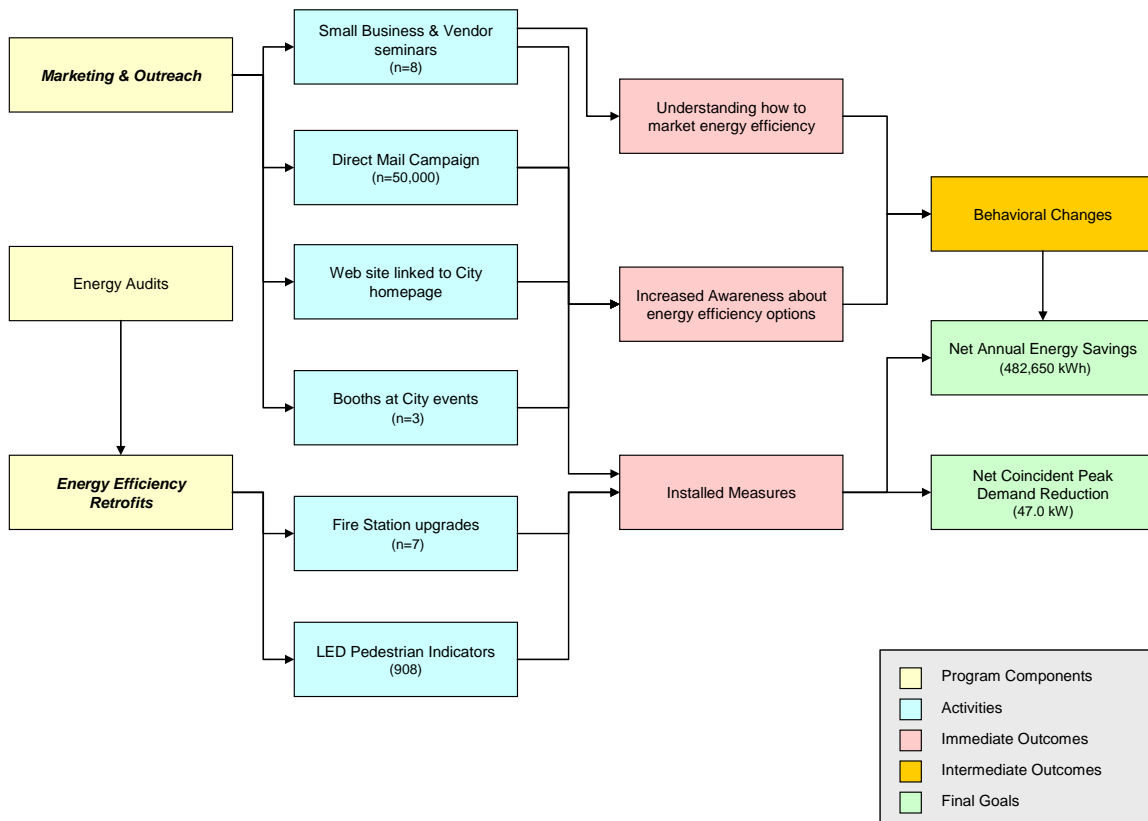
⁴ Unit goal exceeds total number of small businesses in Pomona due to the distribution of mailers through several different channels.

Evaluation Methodology

In order to obtain a high-level view of core Program elements including activities, immediate outcomes, intermediate outcomes, and final goals, the evaluation team created a Program Logic Model, presented in Figure 1. Logic models are used as tools that guide program delivery and evaluation. In conducting program evaluation, the model provides a logical road map. The evaluator starts from the left hand side and proceeds to the right. You start by first determining whether the activities took place. This is usually the most straightforward component of the evaluation.

Moving rightward, the evaluator asks whether outcomes have actually occurred. In the case of this Program, some of the outcomes are easily quantifiable, e.g., have the measures been installed. Others require seeking opinions, e.g., has awareness increased. For measure installation, we conducted site visits and collected installation data. For awareness, we conducted surveys with some target markets (i.e., small businesses and vendors). However, due to budget constraints, we did not examine impact of brochure distributions and informational booths at City events. The final impact of behavioral changes was not addressed directly. The final goals of reducing energy consumption was assumed due to installation of measures.

Figure 1. City of Pomona Energy Efficiency Partnership Program Logic Model



Evaluation activities for the Program consisted of both process and impact components. The process portion focused on information effects for recipients of educational, marketing, and outreach activities, and included surveys with attendees of Program events. In addition, the process evaluation incorporated in-depth interviews with key Program implementers. These interviews were designed to review the Program’s goals and objectives, learn staff perceptions of the Program’s success in meeting these goals, and record lessons learned. The impact portion of the evaluation entailed a deemed savings analysis to estimate the gross energy and demand savings resulting from the building retrofits and the LED pedestrian indicator conversions. A summary of data collection activities performed as part of the evaluation is displayed in Table 6.

Table 6. Summary of Data Collection Activities

Process Evaluation	Completed Interviews/Surveys	Interview Mode
Activity 1: In-depth interviews with key Program staff	2	Phone interviews
Activity 2: Surveys of Small Business Seminar Attendees	26	Paper surveys
Activity 3: Vendor Consultation Follow-Up Interviews	3	Phone interviews
Impact Evaluation	Total Number	Verification Method
Activity 4: Police Station Retrofit Verifications	3	In-Person verification
Activity 5: Fire Stations Retrofit Verifications	7	In-Person verification
Activity 6: Count of LED conversions	960	Contractor documentation

Activity 1: In-Depth Interviews with Key Program Staff

Quantec conducted phone interviews with two key program implementers at Intergy, Corp., and at the Utility Services and Public Works Department in the City of Pomona. The interviews provided the evaluation team with insights into the goals and objectives of the Program from the perspective of these staff members, as well as perceived effectiveness of the various implementation efforts. The interviews covered the following topics:

- Program description
- Implementers’ respective roles
- Information flow and collaboration
- Goals and objectives of the Program
- Program success
- Program challenges
- Lessons learned

Questions focused on those Program areas where the implementer had been most clearly involved.

Activity 2: Surveys of Small Business Seminar Attendees

Educational seminars for small business owners were key elements of the Program's marketing/outreach strategy. Seminars were designed to disseminate information regarding energy-efficient equipment options and incentive programs available to the small business community in Pomona. Hard-copy survey instruments were distributed following three (of five) seminars, where participants were asked to provide event feedback. Survey questions focused on the following:

- Attendant satisfaction
- Pre- and post-seminar awareness of energy efficiency options
- Usefulness of information
- Likelihood of implementing energy-efficient measures
- Likelihood of participating in energy efficiency programs
- Programs of most interest
- Comments/suggestions

Activity 3: Vendor Consultation Follow-Up Interviews

Throughout the Program duration, four vendor meetings were held where Intergy presented information on energy-efficient technologies and utility incentive programs that are available. The goal of vendor consultations was to raise awareness among equipment providers of energy efficiency options. Participants of the final vendor meeting, held on December 22, 2005, were contacted by telephone and interviewed regarding their experience at the meeting. Similar to the small business seminar surveys, the vendor interviews focused on attendees' level of energy efficiency awareness both before and after the meeting, most useful aspects of the event, likelihood of promoting energy efficiency measures to their customers, and overall satisfaction.

Activities 4 and 5: Police and Fire Station Retrofit Verifications

On October 12 and 13, 2005, Quantec, accompanied by Intergy, performed site visits at ten retrofit sites in Pomona, where visual verification was made of lighting, occupancy sensor, and air-conditioner installations. At each site, fixture, bulb, and sensor counts were recorded, and air-conditioning units were verified. Since roof access was restricted at most sites, a visual verification of air-conditioning units was possible at only one site; the remaining sites were verified verbally with site contacts. Data collected during the site visits were used to compute total Program impacts using the approved deemed savings per unit.

Activity 6: Pedestrian Indicator LED Conversion Verifications

As the pedestrian indicator retrofits were not completed at the time of Quantec's October site visits, in-person visual verifications of the LED conversions were not possible.

Process Evaluation

Table 7 presents the Program’s marketing and outreach events and associated applicable evaluation activities.

Table 7. Marketing and Outreach Program and Evaluation Activities

Event Title	Date	No. Participants*	Follow up Evaluation?
Small Business Seminars			
Pomona Chamber Mixer	10/21/2004	30	No
Good Morning Pomona (Chamber event)	01/12/2005	8	No
Pomona Rotary Meeting	08/30/2005	24	Yes (n=5)
Pomona Jaycees Meeting	10/12/2005	12	Yes (n=9)
Pomona Kiwanis Club	11/9/2005	18	Yes (n=12)
Vendor Meetings			
Presentation with KEMA	7/27/2004	16	No
Meeting at Farmer Brothers Restaurant	10/10/2004	5	No
Individual Vendor Meetings	3/3/2005	3	No
Vendor Meeting at Luxe Restaurant	12/22/2005	7	Yes (n=3)
Booths at City Events			
Pomona Concert in the Park	8/21/2004	300	No
Chamber of Commerce Hispanic Fiesta	10/10/2004	2,000	No
Pomona Public Works Week	5/18/2005	200	No
Brochure Direct Mail			
City newsletter mailing	8/1/2004	50,000	No
Utility bill mailing	1/1/2005	100,000	No
Web Site			
Energy-efficiency site linked to City Web site	9/30/2004	N/A	No

* City Event participant numbers are estimated attendees of event as a whole.

In-Depth Interviews with Program Implementers

In-depth interviews were conducted with key Program implementation staff at Intergy and the City to assess the effectiveness of Program processes and to inform recommendations on potential refinements to streamline delivery. Intergy was integral to the implementation of both the building retrofit and education/outreach components of the Program. The City helped coordinate these efforts by obtaining government approval when necessary and creating inter-agency networks and contacts to leverage the City’s resources. The City also helped with brochure distribution, City event booth set-up, and Web site implementation. The feedback obtained from these interviews is presented below.

Program Goals and Objectives

Both implementers described the Program's overall goals and objectives as creating long-term energy savings in the City of Pomona's through:

1. Equipment retrofits to improve building energy-efficiency
2. Increase awareness of energy-efficiency equipment options and available incentive programs for hard-to-reach residential and small-business customers
3. Consult with energy equipment vendors to raise awareness of the benefits of energy-efficiency options to customers and encourage marketing of efficient technologies to customers

Inter-Organizational Partnerships

Organizational collaboration was seen as key to facilitating the delivery of the Program components. In addition to the relationships between SCE, the City, and Intergy, both interviewees described the involvement of the Pomona Chamber of Commerce as especially beneficial to the Program, in particular with respect to the design and execution of the marketing/outreach activities. Chamber of Commerce contacts made it possible to leverage existing small-business networks for effective planning of educational seminars and vendor consultations. Pomona's Spanish Chamber of Commerce was also seen as providing significant contributions to outreach planning.

Program Success

The Program implementer from Intergy provided his perspective on the Program in an interview with the evaluation team. From his viewpoint, the Program was successful in raising awareness among Pomona's hard-to-reach population and in achieving energy savings through the equipment retrofits. When asked to provide specific examples of successful educational efforts, the Intergy interviewee cited the small-business seminars, the vendor consultations, and the booths at City events. Although impacts from the City event booths were not measured as part of this evaluation, the Intergy implementer felt that they were successful in raising awareness of residential energy efficiency options such as compact fluorescents and whole-house fans among event attendees. The Hispanic Fiesta was particularly well-attended, with visitors to the booth estimated in the hundreds.

This Intergy interviewee also perceived the small-business seminars and vendor consultations to be effective in raising energy efficiency awareness among the community of small-medium business owners. This market segment is hard-to-reach in part because many of these businesses are family owned and operated, with few resources and little time for attending educational events. To help overcome this barrier, seminars were held at existing events (e.g., Pomona Chamber Mixer, Pomona Jaycees Meeting, etc.) that small-business owners would be likely to attend. Seminar evaluation results support Intergy's perception that these events were effective in raising energy-efficiency awareness among this group.

The City staff interviewee echoed these feelings of Program success, stating that the partnerships between the City, Intergy, SCE, and the Chambers of Commerce were very effective in facilitating Program delivery.

Program Challenges

Although original retrofit projections were adjusted mid-Program because the available retrofit opportunities turned out to be lower than expected, this did not appear to create significant difficulties for Program staff. The area presenting the main Program challenges were related to the outreach/education components, according to both of the implementers interviewed. The Intergy implementer expressed that the foremost Program challenges were related to reaching the target audience for energy outreach and education. Particularly, equipment vendors proved to be very hesitant to attend seminars, even over lunch. For this reason, proposed vendor seminars were altered slightly to become individual consultations rather than group events. It is also noteworthy that the most highly attended vendor seminar was misunderstood to be a Request for Bid event, leading Intergy to suggest tying future seminars to events also offering real business opportunities.

The most challenging Program component in the City's view involved the design and distribution of the energy efficiency brochures. This process encountered unexpected difficulties when the City attorney disapproved the use of a picture and quote from Pomona's mayor, which required halting distribution and reprinting modified brochures. Subsequent mailings were then required to obtain approval from the City attorney, which slowed the process and affected distribution timelines.

Lessons Learned

The key lesson learned from the City's perspective was with regard to the slow-down encountered with the design and distribution of brochures. City staff indicated that subsequent projects would allow more lead-time for those activities requiring City approval. With respect to Program marketing, education, and outreach activities, Intergy indicated that future efforts will explore different methods of reaching the difficult vendor market segment, such as tying educational events to existing industry events that are of value to this group.

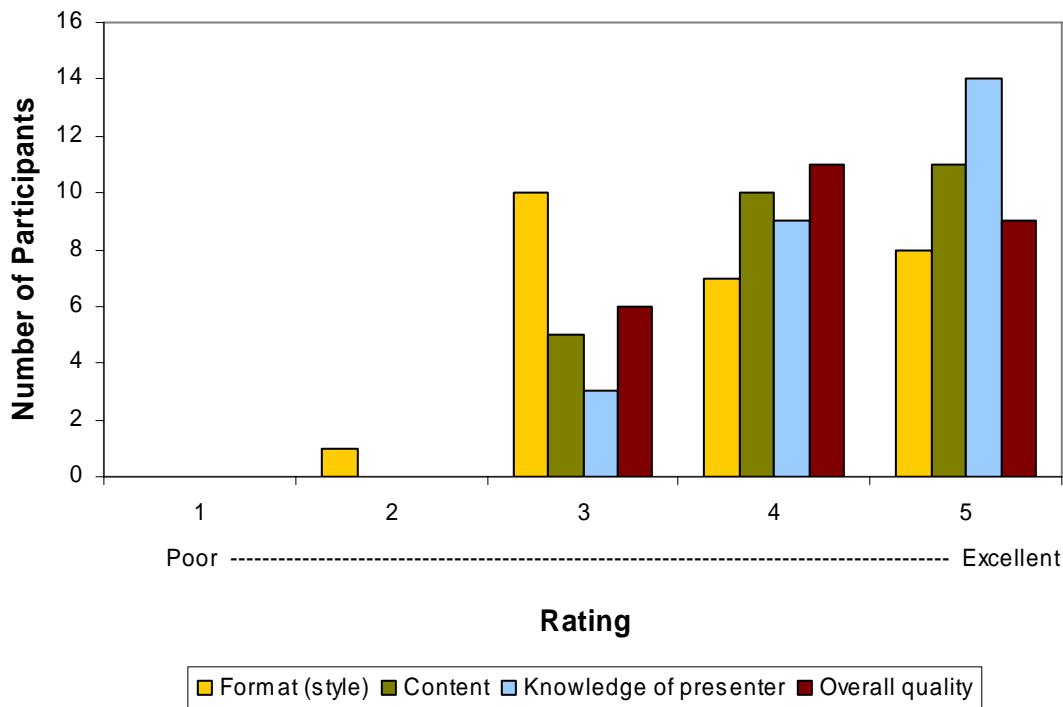
Small Business Seminar Participant Surveys

Between October 21, 2004 and November 9, 2005, Intergy held five small-business seminars at various organizational meetings in Pomona. Evaluation activities were conducted for three of these. The goal of these seminars was to educate each group's memberships on energy-efficiency programs and technologies available to the small-business community. Because these organizations contain both business owners and non-business owners, presentation content included information on basic measures for residential applications as well. The combined participant feedback from these events is presented below. Detailed results for each individual seminar are provided in Appendix A.

Background. The three small-business seminars that were evaluated were attended by a total of 54 participants, with 26 of these completing evaluation forms. Event attendees were asked to provide feedback on seminar satisfaction, change in awareness of energy-efficiency technologies and programs as a result of the events, level of interest in the various energy-efficiency options, and comments/suggestions.

Seminar Satisfaction. Overall satisfaction with the seminar was rated on a scale of 1 (“Poor”) to 5 (“Excellent”). The “Knowledge of the presenter” category received the highest ratings, with 14 of the 26 respondents giving it a rating of “5,” nine rating it “4” and the remaining three rating it “3.” The categories of “Content” and “Overall quality” were also very well received by event participants, with the majority of respondents rating each category either “4” or “5.” Slightly lower satisfaction ratings were given to presentation “style” at each event, due to the venue at one event (background noise made it difficult to hear), while participants at some events requested visual aids, more time, and greater detail on new technologies. The distribution of combined responses for each seminar aspect is presented in Figure 2.

Figure 2. Participant Ratings of Seminar Aspects



Seminar Impact. To assess seminar impact, audience members were asked to rate their awareness about energy efficiency technologies and programs both before and after attending the seminar. Rating occurred on a scale of 1 (“Not at all aware”) to 5 (“Very aware”). Pre- and post-seminar ratings were compared to assess the change in awareness participants experienced as a result of the seminars. Of the 24 attendees completing evaluation forms, 23 responded to this question. Participant responses showed an increase in awareness in all cases except two respondents who reported no change in awareness of energy efficient technologies, and two who

actually reported a slight drop in awareness. Similarly, two other participants indicated no change in awareness of energy efficiency programs, and indicated a slight drop. Figure 3 and Figure 4 present the results: For each survey respondent, the pre-seminar rating is provided along with the difference in awareness that was reported. On average, there was an increase in awareness of technologies (Figure 3) of 1.6 rating points, and an increase in awareness of programs (Figure 4) of 2.0 points.

Figure 3. Change in Awareness of Energy Efficiency Technologies after the Seminar

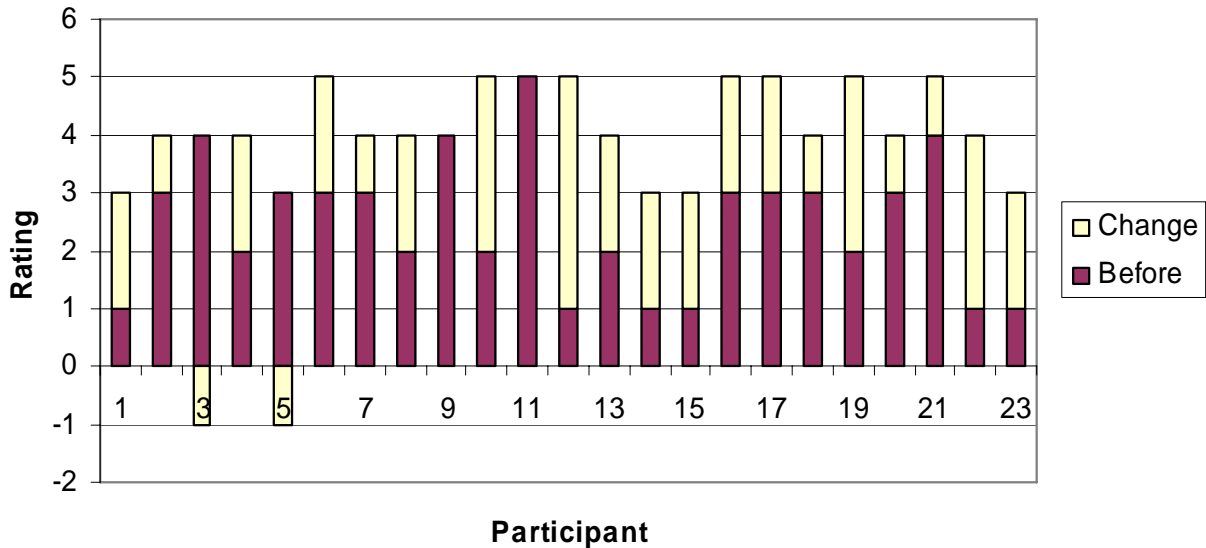
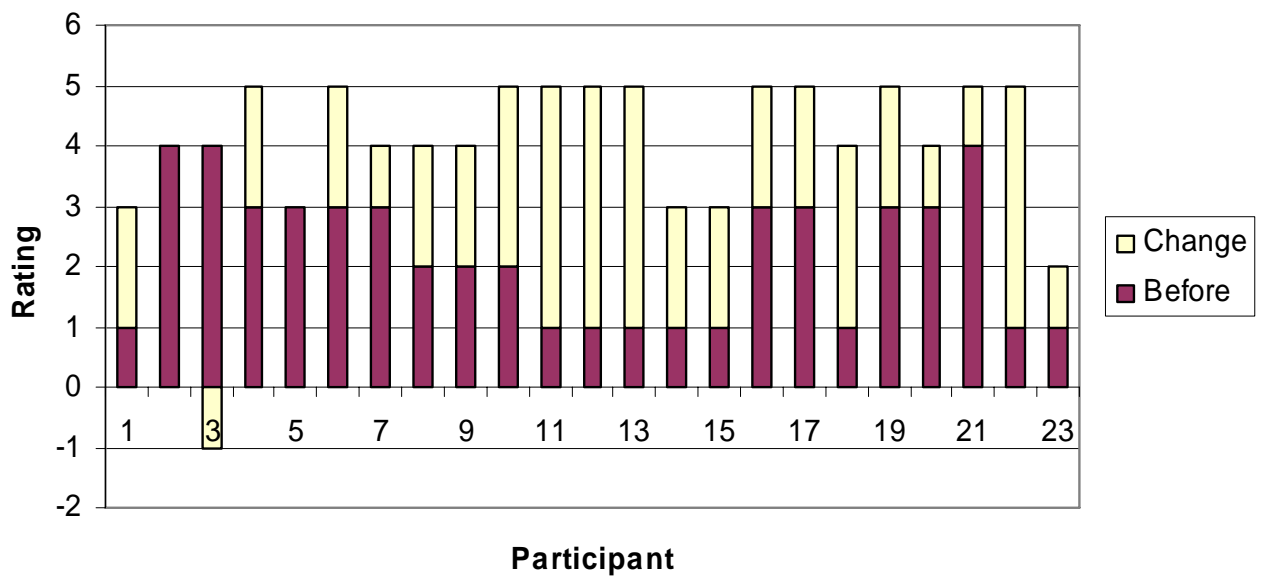


Figure 4. Change in Awareness of Energy Efficiency Programs after the Seminar



Interest in Energy-Efficiency Measures and Programs. When asked how the seminar had changed the likelihood of implementing energy-efficiency measures in their businesses, 22 of 24 attendees indicated that they were “Much more likely” or “Somewhat more likely now.” The remaining two felt there was no change in their likelihood to install energy-efficiency measures. When asked to specify the technologies in which they were most interested, 21 of 26⁵ replied with a variety of responses, but most often cited CFLs (n=8), T-8 lighting (5), whole-house fans (n=5), and programmable thermostats (n=4).

In terms of the likelihood of participating in one or more of the programs, 24 participants answered the question, with 22 of these stating that they were either “Much more likely” or “Somewhat more likely” after attending the event. The remaining two answered “No change.” Twenty-two participants pointed out the programs of greatest interest. These were the SCE Express Efficiency Program (n=11), Emerging Renewables Program (n=5), Savings by Design (n=3), SCE Standard Performance Program (n=2), and Energy Smart Grocer (n=1).

Participant Comments. On the whole, feedback from the events was very positive, with attendees indicating that they learned quite a bit about energy-efficiency options that they did not know prior to attending the meeting. The few participants who provided comments or suggestions for how the seminars could have been improved most commonly requested additional time for questions or further detail, and more visual aids. A sampling of participant comments is shown here:

Conclusions

Feedback from all seminars indicated a high level of satisfaction with “content,” “knowledge of the presenter,” and “overall quality.”

Due to a low evaluation response rate at one of the seminars (5 of 24 attendees filled out questionnaires), findings from this event should be viewed with caution. Nevertheless, based on these limited responses,

participants did not seem to gain a significant increase in awareness about energy efficiency, but did express satisfaction with presentation content and presenter knowledge.

“Very informative.”

“Great job!”

“The setting made it difficult to hear, but this was not the fault of the presenter.”

“Rather than telling about the programs, show ways of how to save energy and be excited about it.”

“The presenter seemed nervous and not as prepared as he perhaps could have been. He also discussed some programs that are not available any longer.”

“It was very informative. Your presentation was fantastic.”

Participants at the other two the meetings indicated that the seminars resulted in an increase in awareness of energy-efficiency options for their homes and businesses. One event was attended by several non-business owners, who expressed a high level of interest in the residential measures described at the seminar (CFLs, whole-house fans, programmable thermostats). Business owners from all three events were interested in a variety of commercial energy-efficiency measures, but most often cited programmable thermostats, CFLs and T-8 lighting. To

⁵ Survey participants could choose more than one response.

a lesser extent, attendees also showed interest in tankless water heaters, and advanced evaporative cooling.

With the exception of the one event that was difficult to evaluate due to limited participant feedback, the small-business seminars appeared to be successful in raising general energy-efficiency awareness, as well as awareness of specific programs and technologies available to them to improve long-term energy efficiency at their homes and businesses.

Vendor Outreach Surveys

On December 22, 2005, Intergy held a vendor outreach meeting for seven participants at the Luxe Restaurant in the greater Los Angeles area. Three of the attendees were interviewed via phone following the event to glean insight into the attendees' level of energy efficiency awareness both before and after the meeting, the most useful aspects of the event, participant likelihood of promoting energy efficiency technology to their customers, and overall satisfaction.

The three participants interviewed provide energy equipment to a variety of business types, including grocery stores, retail establishments, offices, warehouses, restaurants, and others. On a scale of 1-5, where 1 is "not at all aware" and 5 is "very aware," the interviewees rated their awareness of energy efficiency before the event between 3 and 5, and after the event between 4 and 5. One individual felt that his awareness level had increased slightly (from 4 to 5) as a result of the meeting, where the other two remained unchanged, rating themselves "very aware" (5) both before and after the event.

All three interviewees felt that useful information was disseminated at the event regarding available incentive programs and how to access these opportunities. Participants were also asked to rate aspects of the event on a scale of 1 to 5, where 1 was "poor" and 5 was "excellent." For style and content of the event, the competency of the presenter, and overall event satisfaction, the participants all rated these aspects between 4 and 5.

Finally, the three participants interviewed were asked to describe how the likelihood of their promoting energy efficiency to their customers had changed as a result of the event. Two stated that there was no change, while one felt that they were "much more likely" to promote energy efficiency after the event.

Once again, the feedback gained from these three interview should be viewed with caution as strictly anecdotal accounts of the December 22 meeting at the Luxe Restaurant. Overall, the experience of these individuals was positive, where they felt they learned valuable information on available technologies and programs, and gave high ratings of satisfaction for the event as a whole.

Impact Evaluation

Program Goals

The revised PIP, which was approved by the CPUC on December 14, 2004, provided net Program goals of 482,650 kWh and 47.0 kW, using a net-to-gross ratio of 0.8 across all measures. The Program proposed to achieve these goals through the following equipment installations: T-12 to T-8 fluorescent lamp retrofits, occupancy sensors, high-efficiency packaged AC units, incandescent to CFL retrofits, and incandescent to LED pedestrian indicator retrofits. Unit goals and associated net savings estimates for these measures are presented in Table 8.

Table 8. Program Retrofit Goals

Revised PIP					
Measure/ Activity Name	Unit Goals	Net Annual Energy Savings Per Unit (kWh)	Net Demand Reduction Per Unit (kW)	Annual Net Savings (kWh)	Annual Net Demand Reduction (kW)
T-12 to T8 Fluorescent Fixture/Ballasts	1,662	133.2	0.02	221,299	25.26
Lighting Occupancy Sensors	155	437.6	-	67,823	0.00
High Efficiency Packaged AC Units	35	1323	0.18	46,291	6.30
CFLs	-	127.2	0.00	-	-
Reflective Window Film	-	10.2	-	-	-
LED Pedestrian Indicators	908	147.2	0.02	133,629	15.25
Totals				482,650*	47.0*

*Total savings goals as specified in the Revised PIP. Multiplication of per-unit savings estimates by the unit goals provided in the PIP, as presented in here, do not total to 482,650 kWh and 47 kW. The basis for this discrepancy is unclear, but it is most likely due to the Program making a savings estimation for CFLs in the absence of unit goals for this measure.

Verification of Measures

In the summer of 2005, the Program completed equipment retrofits at seven fire stations and three police stations. Measures included T-8 linear fluorescents, CFLs, occupancy sensors, and high-efficiency air conditioning units. In October, Quantec performed site visits at each station, with Intergy accompanying on six visits. A database of measure installations, provided by Intergy, was brought to each site and used to verify measure installations. In some cases, restricted room access precluded measure verification. For this reason, this evaluation provides counts for the population (all recorded measure installations), the verifiable population (those measures accessible for verification), and located operational measures. Realization rates were calculated using the verifiable population and operational measure counts. Details of the Program database are presented in Table 9.

Table 9. Savings by Measure – Program Database

Measure	Frequency	kWh/Unit	kW/Unit	Total Net kWh	Total Net kW
Fixture – (2) 4' T-8 Lamp & Elec. Ballast convert	303	133.2	0.015	32,276	3.68
Fixture – (2) 2' T-8 Lamp & Elec. Ballast convert	1	66.6	0.008	53	0.01
Fixture – (1) 4' T-8 Lamp & Elec. Ballast convert	11	66.6	0.008	586	0.07
Fixture – (1) 4' T-8 Lamp replacement	7	0.0	0.000	-	0.00
Fixture – (3) 4' T-8 Lamp & Elec. Ballast convert	27	199.7	0.019	4,314	0.41
Fixture – (4) 4' T-8 Lamp & Elec. Ballast convert	184	266.3	0.030	39,200	4.47
Fixture – (8) 4' T-8 Lamp & Elec. Ballast convert	4	532.6	0.061	1,704	0.19
Compact Fluorescent Lights	177	227.2	0.041	40,214	5.78
Occupancy sensors	60	437.6	0.000	26,254	0.00
LED pedestrian indicators	960	147.2	0.017	141,312	16.13
High-efficiency air conditioning units					
Site 1	1	1,927	0.49	1,927	0.49
Site 2	1	7,438	1.89	7,438	1.89
Site 3	1	4,368	1.11	4,368	1.11
Site 4	1	3,738	0.95	3,738	0.95
Site 5	1	819	1.02	819	1.02
Total	1,739			323,714	39.9

The Program database provided by Intergy claimed a total of 779 building measures were installed through the Program. Of these, 746 were verifiable. During site visits, 738 of the 746 verifiable measures were located, and 719 were found operational.

In addition to the building retrofits, 960 incandescent pedestrian indicators were converted to LEDs. Verification of these measures was done by reviewing contractor documentation. Overall savings by measure, as verified during the site visits, are displayed in Table 10

Table 10. Verification of Savings Achieved

Measure	Net Savings/Unit		Claimed Installations (Population)	Verifiable Population			Located	Located and Operational				
	kWh	kW		Number	Number	Total Net Savings		Number	Number	Total Net Savings		Realization Rate
			kWh			kW	kWh			kW	kWh	kW
Fixture (2) 4' T-8 Lamp & Ballast	133.2	0.015	303	275	36,617	4.18	272	268	35,685	4.07	97.5%	97.5%
Fixture (2) 2' T-8 Lamp & Ballast	66.6	0.008	1	1	67	0.01	1	1	67	0.01	100%	100%
Fixture (1) 4' T-8 Lamp & Ballast	66.6	0.008	11	11	732	0.08	11	11	732	0.08	100%	100%
Fixture (1) 4' T-8 Lamp	0.0	0.000	7	7	-	-	7	7	-	-	-	-
Fixture (3) 4' T-8 Lamp & Ballast	199.7	0.019	27	27	5,393	0.51	27	27	5,393	0.51	100%	100%
Fixture (4) 4' T-8 Lamp & Ballast	266.3	0.030	184	182	48,467	5.53	183	183	48,734	5.56	100.5%	100.5%
Fixture (8) 4' T-8 Lamp & Ballast	532.6	0.061	4	4	2,130	0.24	4	4	2,130	0.24	100%	100%
Compact Fluorescent Lights	227.2	0.041	177	174	39,538	7.10	173	159	36,130	6.49	91.4%	91.4%
Occupancy sensors	437.6	0.000	60	60	26,254	-	55	54	23,629	-	90.0%	-
LED pedestrian indicators	147.2	0.017	960	960	141,281	16.13	960	960	141,281	16.13	100%	100%
High-efficiency air conditioning units												
Site 1	1927.4	0.490	1	1	1,927	0.49	1	1	1,927	0.49	100%	100%
Site 2	7438.5	1.890	1	1	7,438	1.89	1	1	7,438	1.89	100%	100%
Site 3	4367.6	1.110	1	1	4,368	1.11	1	1	4,368	1.11	100%	100%
Site 4	3738.4	0.950	1	1	3,738	0.95	1	1	3,738	0.95	100%	100%
Site 5	819.3	1.024	1	1	819	1.02	1	1	819	1.02	100%	100%
Total			1,739	1,706	318,771	39.3	1,698	1,679	312,071	38.6	97.9%	98.2%
Percent of Verifiable Population							99.5%	98.4%				

Overall, we found a very high rate of consistency between reported installations and those verified during site visits. The verified rate of installation for all measures was 99.5%, with 98.4% verified and operational. Individual measures with slightly lower verification rates included CFLs and occupancy sensors. For CFLs, installations were verified in 99.4% of cases, with 91.4% found to be operational. Occupancy sensors had a verification rate of 90%, with five sensors not having been installed due to various site-specific reasons, and one located sensor not being operational.

High-efficiency air conditioning units were verified verbally with site contacts at all sites except Site 1, where roof access was granted and the unit was verified visually.

In order to estimate overall Program savings, the energy and demand impacts of each measure were determined independently. Approved deemed per-unit kWh and kW values were multiplied by the actual, verified installation rates for each measure. The Program's overall kWh and kW savings were simply the sum of these individual savings calculations.

Measure Discrepancy Explanation

Measure installation discrepancies found during site visits were carefully recorded. For lighting measures, the majority of the disparity can be attributed to bulb burn-out and non-operational lighting fixtures. In two cases, CFLs had been removed by the participant and replaced with incandescent bulbs. The remaining differential consisted of fluorescent tubes and/or CFLs that were reported in the Database but could not be located during the site verification (in some cases, additional measures were found that were not reported in the Database). Any time that a measure on that list could not be located, Quantec spoke with the site's designated contact to inquire whether that specific measure had not been installed, installed in a different location, or replaced due to measure failure or participant dissatisfaction. Only those measures that could not be located even with the help of the primary contact were finally identified as "Unable to Locate" and deducted from the number calculated in the Database. Table 11 provides explanation for the differences between the Program Database and the site visit verifications performed by Quantec.

Table 11. Breakdown of Site Visit Discrepancies

Measure	Not Located/ Not Operational	Percent of Sample	Reason for Discrepancy	No. Measures
Fixture – (2) 4' T-8 Lamp & Elec. Ballast convert	7	2.55%	Database miscount	3
			Burn Out	1
			Fixture not operational	3
Fixture – (4) 4' T-8 Lamp & Elec. Ballast convert	-1	-0.55%	Additional Measure Located	(1)
Compact Fluorescent Lights	15	8.62%	Unable to locate	4
			Burn out	9
			Customer replaced CFL with incandescent	2
			Additional measures installed	(2)
			Fixture not operational	2
Occupancy sensors	6	10.00%	Not installed because lights not retrofit	3
			Not installed due to wiring issues	2
			Not operational	1
<i>Overall</i>	<i>27</i>	<i>1.64%</i>		<i>27</i>

Total Program Savings

Table 12 compares the energy and demand savings goals of the Program with the claimed savings and the actual verified savings.

Table 12. Program Goal, Claimed Achievement, and Verified Savings

	Energy Savings (kWh)	Demand Reduction (kW)
Program Goal	482,650	47.0
Claimed Result	323,714	39.9
Verifiable Population (sample)	318,771	39.3
Total Realized Savings	316,910	39.2

Table 13 shows the Program’s overall savings realization.

Table 13. Energy and Demand: Goals and Realized

	Program Goal	Claimed Savings	Site Visit Realization Rate	Realized Savings	Overall Realization Rate
Net Energy Savings (kWh)	482,650	323,714	97.9%	316,910	65.7%
Net Demand Savings (kW)	47.0	39.9	98.2%	39.2	83.3%

Table 13 shows the Program energy savings and demand reduction goals, the Program database claimed savings, and the realization rate determined from the verifiable population of measures obtained during site visits. This site visit realization rate was applied to the total claimed savings of the Program. Thus, the evaluation found the Program savings to be 316,910 kWh and 39.2 kW, for an overall goal realization of 65.7% and 83.3%, respectively.

It should be noted that, though retrofit opportunities in Pomona turned out to be less than originally thought, SCE was proactive in identifying as many additional prospects as possible so the Program could achieve its total savings goals. Different options were considered, such as computer efficiency initiatives in City offices, but it was ultimately decided that the level of effort directed toward the retrofit activities for the City of Pomona were consistent with the requirements of the PIP, although the Program was short on achieving its total savings goal.

Conclusions

This evaluation assessed the impacts of Program activities through measure verifications, surveys of Program participants, and interviews with key Program staff members. The data and obtained through impact evaluation activities were used to quantify overall energy and demand savings attributable to the Program. The information gathered through process evaluation activities was used to assess the educational effects of seminars, training sessions, and outreach activities. The evaluation team then compared the evaluation results to the goals outlined in the Program Logic Model to determine the extent to which the Program met these goals.

The evaluation found that the Program was effective at leveraging contacts within the City such as the Chambers of Commerce to strategically implement outreach events. Existing relationships among City departments fostered several important Program opportunities such as the ability to hold small-business seminars at existing organizational meetings around the City, and to set up informational booths at City events such as the Hispanic Fiesta. These innovative approaches enabled the Program to improve access to Pomona's hard-to-reach residential and small-business population, providing relevant energy-efficiency information.

The Program was also successful in making necessary adjustments to maximize Program impact. For example, when it was discovered that vendors were an especially difficult group to reach, group training sessions were modified to become individual consultations. In addition, when an early attempt to obtain participant feedback at a small-business seminar did not yield an adequate response rate, the Program responded by holding a raffle to encourage event attendees to fill out the provided questionnaires.

Immediate Outcomes

Vendor Understanding of Marketing Energy-Efficient Options

Anecdotal feedback from three vendors who attended an informational vendor meeting presented through the Program showed that, for the most part, vendor understanding of energy efficiency options did not increase dramatically as a result of the event. However, one of the three attendees interviewed did report a small increase in awareness, and felt that the likelihood of his promoting energy efficiency options to his customers had increased.

Increased Awareness About Energy-Efficiency Options

The evaluation confirmed that five small-business seminars and 4 vendor training sessions and consultations occurred. Participant feedback from the seminars indicated that there was an increase in awareness of energy-efficiency options for most attendees. Vendor surveys indicated a slight increase in awareness from one participant. Informational booths at City events, brochure mailings, and the energy link on the City Web site were all achieved as planned. Although the impacts from these events were not directly measured as part of the evaluation, it is assumed that the immediate goal of increased awareness was achieved as described in the Program Logic Model since the events were successfully executed.

Installed Measures

Of the 1,739 claimed measure installations, 1,706 were verifiable. Site visits confirmed the installation of 1,698 measures, of which 1,679 were found to be operational. The revised Program measure installation goal was 1,887. These goals fell short due to fewer air-conditioning, T-8, and occupancy sensor opportunities than projected.

Intermediate Outcomes

Behavioral Changes

Although this was not measured directly, participants in some of the Program activities were asked how the likelihood of implementing energy efficiency measures or participating in energy efficiency programs had changed as a result of seminars. Results showed that most (22 of 24) of the small business participants felt that they were either “somewhat more likely” or “much more likely” to implement energy efficiency options in their businesses as a result of attending Program-sponsored seminars. In terms of general outreach activities such as the mail campaign, booths, and web site, this evaluation was limited to verifying that the events occurred as planned. Since the activities did occur as outlined in the plan, and the immediate outcomes were achieved, it is assumed that these led to the intermediate outcomes.

Final Goals

Gross Annual Energy Savings and Coincident Peak Demand Reduction

Original retrofit unit goals were modified mid-Program to accommodate a difference in available opportunities from original projections. Once the Program was underway, it was discovered that there was a difference in projected vs. actual retrofit opportunities. This resulted in greater pedestrian indicator retrofits, fewer T-12 to T-8 conversions, fewer high-efficiency air conditioner installations, fewer occupancy sensors, the addition of compact fluorescent bulb retrofits, and the elimination of reflective window film. The Program’s energy savings goal, as specified in the revised PIP, was 482,650 kWh, and its demand reduction goal was 47.0 kW. The Program’s final claimed savings fell short of its goal, but on-site verifications of the equipment retrofits for both the City buildings and the pedestrian indicators showed a high realization rate of claimed vs. actual kWh energy savings (97.9%) and kW demand reduction (98.2%). Realized energy savings totaled 316,916 kWh (65.7% of goal), and demand savings equaled 39.14 kW (83.3% of goal).

Program Scope Changes

Due to the conditions and opportunities in Pomona turning out differently than originally envisaged, approximately \$70,000 of the Program budget for retrofits remains unutilized. Discussions were held between SCE and Intergy on potential strategies to use the remaining funds, but it was determined that, to date, the level of effort directed toward the retrofit activities

for the City of Pomona were consistent with the requirements of the PIP, although the Program was short on achieving its total savings goal.

Appendix A.

Small-Business Seminars: Results by Event

Pomona Rotary Seminar

Background

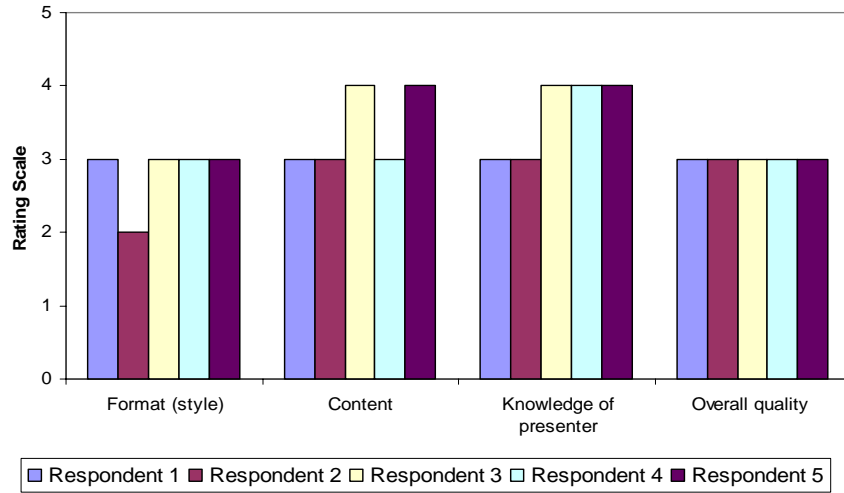
On August 30, 2005, Joe Schmutzler of Intergy held a seminar through the Pomona Rotary Club. It was geared toward providing energy efficiency education for small-business professionals in the Pomona area. A summary of energy efficiency technologies and available Southern California Edison programs was presented, along with information on self-generation and demand-response programs. The presentation also touched on additional, non-energy benefits associated with energy-efficient upgrades.

Twenty-four people attended the seminar. Evaluation forms, distributed following the event, were filled out by only five participants. This low response rate and feedback from Mr. Schmutzler indicate that participants were reluctant to remain after the presentation to fill out a form. At the next seminar, to be held October 12, Intergy might consider offering a small incentive (e.g., raffle) to encourage a higher participant response rate. Although the feedback obtained through these questionnaires was limited, the results of the survey are summarized here.

Seminar Satisfaction

Overall satisfaction with the seminar was rated on a scale of 1 (“Poor”) to 5 (“Excellent”). The “Knowledge of the presenter” category received the highest ratings, with 3 of the 5 respondents giving it a rating of “4,” and the remaining two rating it “3.” The category “Style of the presentation” received the lowest ratings, with one respondent giving it a “2” rating, and the rest rating it “3.” “Overall quality” of the event received a unanimous middle-of-the-road rating of 3. The distribution of responses for each seminar aspect is presented in Figure 5. These ratings indicate that the audience was moderately satisfied with the event, but it is unknown whether the five people who opted to evaluate the seminar represent the sentiments of the audience as a whole.

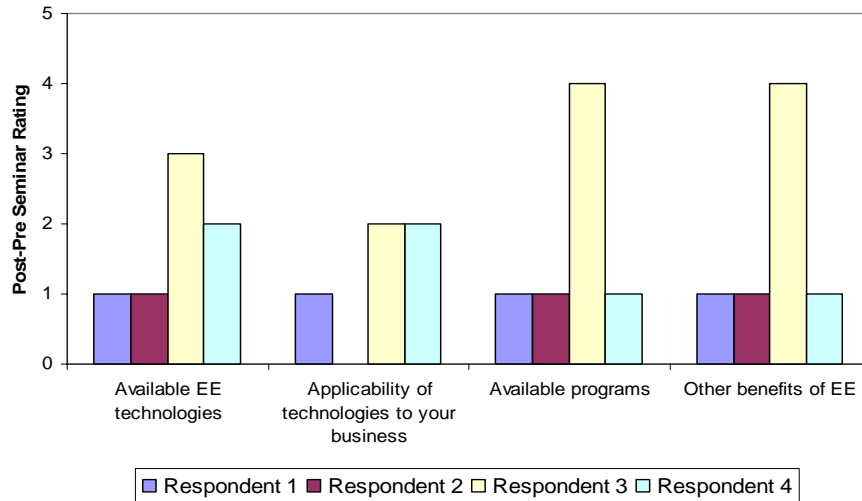
Figure 5. Participant Ratings of Seminar Aspects



Seminar Impact

Seminar participants were asked to rate their awareness about energy efficiency options both before and after attending the seminar. Rating occurred on a scale of 1 (“Not at all aware”) to 5 (“Very aware”). Post-seminar ratings were subtracted from pre-seminar ratings to assess the change in awareness participants experienced as a result of the presentation. Four of the five survey respondents provided ratings for this question. One respondent indicated a significant increase in awareness about “Available programs,” “Available energy-efficient technologies,” and “Other benefits of energy-efficiency.” Responses from the remaining 3 participants showed a more slight increase in awareness, with smaller post-pre seminar rating differences and one respondent reporting no change in awareness about “Applicability of technologies to your business.” For each survey respondent, the difference in awareness ratings after the seminar is presented in Figure 6.

Figure 6. Difference in Awareness of Energy Efficiency Options After the Seminar



Interest in EE Measures and Programs

When asked how the seminar had changed the likelihood of implementing EE measures in their businesses, three attendees responded “No change” and two responded “Somewhat more likely now.” Four of five responded to the question of the technologies in which they were most interested, with two indicating they were most interested in a programmable thermostat, and one each indicating CFLs, advanced evaporative cooling, and T8 & dimmable lighting (one person selected two measures).

In terms of the likelihood of participating in one or more of the programs, four of five answered the question, and they were evenly split between “No change” and “Somewhat more likely now.” Only three people indicated those programs in which they would be most interested, and these were the Emerging Renewables Program, SCE Express Efficiency, and Savings by Design.

Suggestions for Improvement

Two of five respondents provided comments on how they felt the seminar could have been more effective. These comments included a request for more information on large-scale solar power, and more audience interaction by the presenter. One participant provided the following comments:

“Rather than telling about the programs, show ways of how to save energy and be excited about it.”

“The presenter seemed nervous and not as prepared as he perhaps could have been. He also discussed some programs that are not available any longer.”

Conclusions

Although 24 people attended the seminar, only five filled out evaluation forms. Any findings should be viewed with caution due to this small response rate. Nevertheless, based on these limited responses, participants were:

1. Most satisfied with the knowledge of the presenter and the content of the presentation.
2. Less satisfied with the style of the presentation

The seminar did not seem to result in a significant increase in awareness about energy efficiency.

Future educational events should explore ways to boost the rate of participant feedback. Offering a small incentive such as a raffle might provide needed encouragement for participants to take extra time to fill out an evaluation form.

Pomona Jaycees Seminar

Background

On October 12, 2005, Richard Fox of Intergy held a seminar at a meeting of the Pomona Jaycees, at the 2nd Street Bistro in Pomona. The goal of the seminar was to educate the Jaycee membership on energy efficiency (EE) programs and technologies available in Pomona. Richard presented a summary of available EE technologies and Southern California Edison programs, along with a brief introduction to self-generation and demand-response programs. As the audience was comprised of a mix of business owners and non-business owners, the presentation contained information on both residential and non-residential options.

Twelve Jaycee members attended the meeting, and nine completed an evaluation form following the presentation. A raffle for a \$50 gift card to Home Depot helped encourage attendees to take the extra time to complete a questionnaire, resulting in a high response rate (75%). The feedback we obtained from this event is summarized below.

Seminar Satisfaction

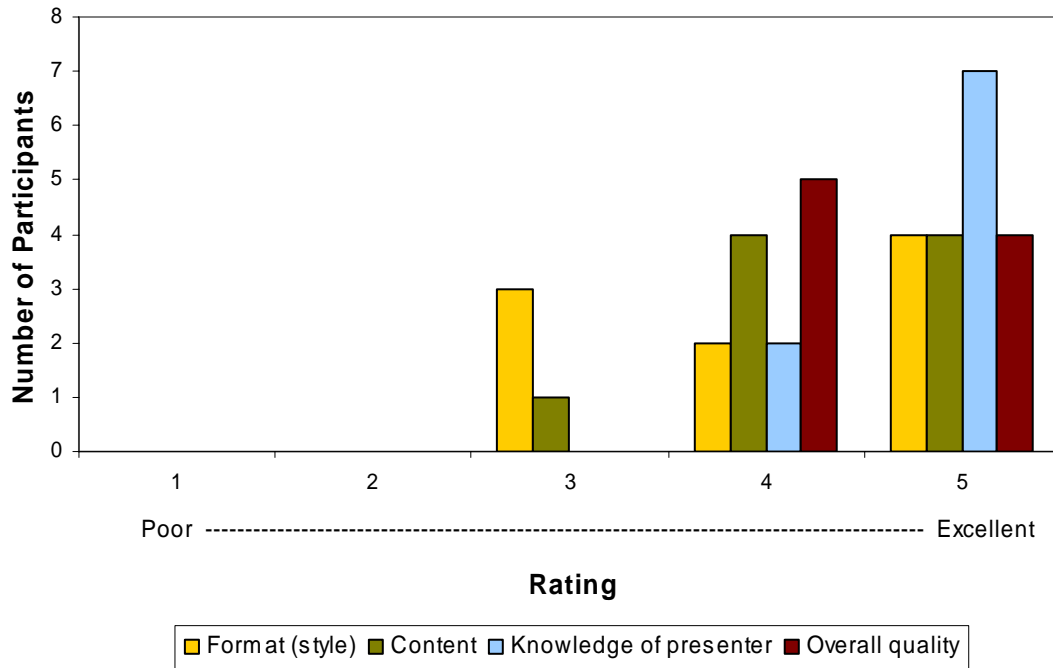
Participants rated their satisfaction with four elements of the seminar – style of the presentation, seminar content, knowledge of the presenter, and overall quality – on a scale of 1 (“Poor”) to 5 (“Excellent”). On the whole, the participant ratings indicated a high level of satisfaction with the presentation

- The “knowledge of the presenter” category received the highest ratings, with 7 of the 9 respondents giving it a rating of “5,” and the remaining two rating it “4.”
- The “overall quality” of the event was also rated very high, with 4 people giving it a “5” and 5 people giving it a “4.”

- The “style of the presentation” received a middle-of-the road “3” rating from 3 participants, and “4” or “5” from the remainder. These slightly lower ratings for presentation style may be attributable to the fact that the meeting was held on the back patio of a restaurant, where a loud fan made it difficult to hear.

The distribution of responses for each seminar aspect is presented in Figure 7.

Figure 7. Participant Ratings of Seminar Aspects



Seminar Impact

To assess seminar impact, audience members were asked to rate their awareness of energy efficiency options both before and after attending the seminar. Rating occurred on a scale of 1 (“Not at all aware”) to 5 (“Very aware”). Seven of the nine respondents provided ratings for the following categories: “Available EE technologies,” “Applicability of technologies to your business,” “Available programs,” and “Other benefits of EE.” Participant responses showed an increase in awareness in all cases except one respondent who reported no change in awareness of “other benefits.” Figure 8 and Figure 9 present the results.

Figure 8. Awareness of Energy Efficiency Technologies, before and after Seminar

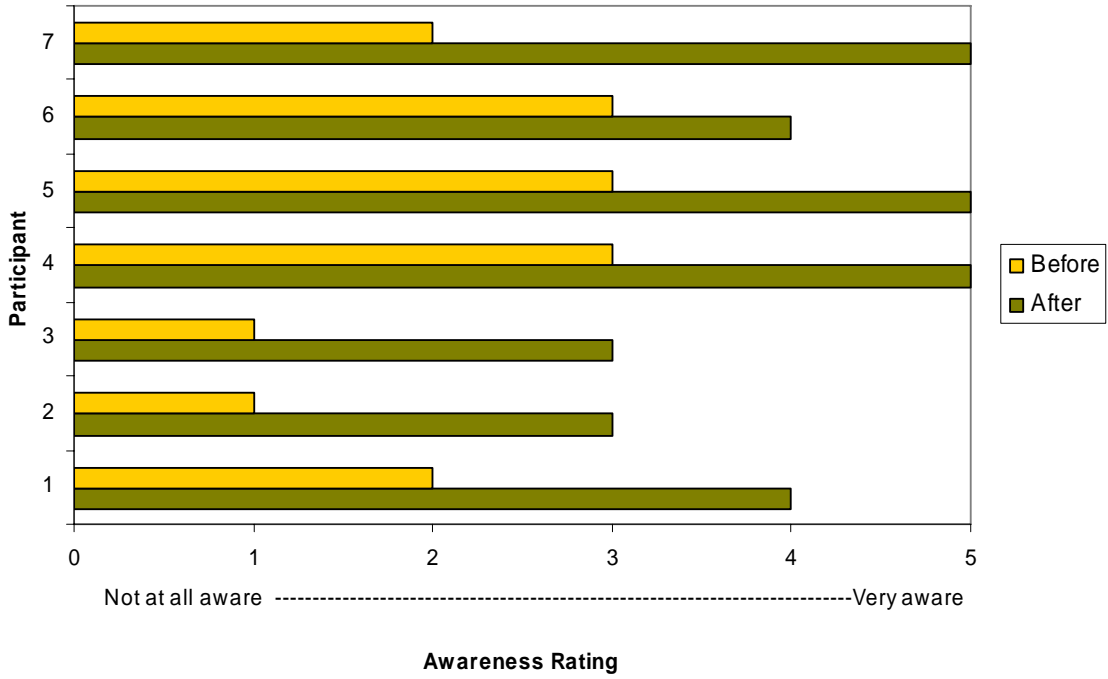
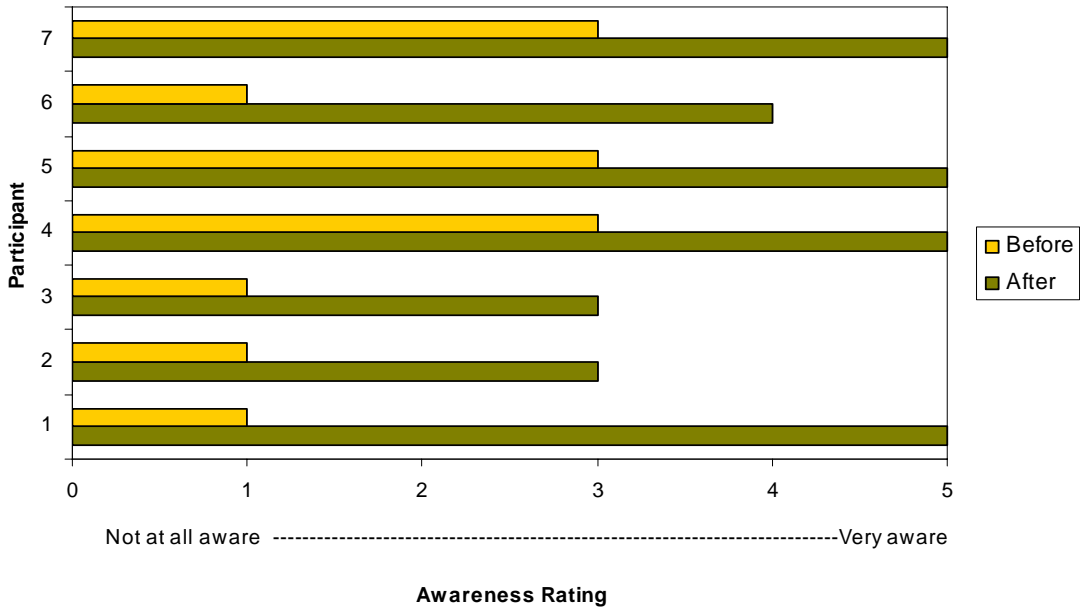


Figure 9. Awareness of Energy Efficiency Programs, before and after Seminar



Interest in EE Measures and Programs

Although only three of the nine attendees were small business owners, all nine participants felt that they were either “much more likely” or “somewhat more likely” to implement EE measures in their business or home as a result of what they learned in the seminar. Participants were asked to indicate those technologies they were most interested in for their home or business, and were asked to check all that apply. Five of the nine participants responded to this question, with two people interested in programmable thermostat, CFLs, and whole house fan, and one each interested in T8 & dimmable lighting and tankless water heaters.

When asked how the seminar had changed the likelihood of participating in one or more EE programs, 5 of 9 indicated that they would be “much more likely,” and 4 felt they were “somewhat more likely” to participate in an EE program. Seven people specified those programs in which they would be most interested, with five citing the SCE Express Efficiency program, and one each citing the Emerging Renewables Program and the Savings by Design program.

Participant Comments

On the whole, feedback at this event was very positive, with attendees indicating that they learned quite a bit about energy efficiency options that they did not know prior to attending the meeting. When asked if there was anything not covered in the seminar that would have been useful, one person replied, “It would have been interesting to learn more about new technologies,” and one thought it would have been helpful to hear “more explanation of self-generation and demand-response.” In terms of suggestions for how the seminar could have been improved, one participant cited visual aids, and one thought a more interactive style would have improved the event. A Participant comments included:

“Very informative.”

“Great job!”

“The setting made it difficult to hear, but this was not the fault of the presenter.”

Conclusions

This seminar was held at a relatively small meeting of a local organization, where the attendees represented a mix of professions. While only three of the attendees were small business owners, all three indicated a high level of interest in both EE technologies and programs to help save energy at their businesses. Likewise, the non-business owners expressed interest in residential measures (i.e., CFLs, whole house fan, programmable thermostat). Overall, participant feedback indicates a high level of satisfaction with the event, with “knowledge of the presenter” and “overall quality” receiving the highest satisfaction ratings. The format/style of the seminar received slightly lower ratings, but this was most likely due to the outdoor location of the meeting, which made it difficult to hear at times. Finally, participant responses reported an increase in awareness about energy efficiency options, including measures and incentive programs, indicating that the event was successful in meeting its goal of educating the Pomona community about energy efficiency.

Pomona Kiwanis Club Seminar

Background

On November 9, 2005, Richard Fox of Intergy held a small-business seminar at a meeting of the Pomona Kiwanis Club. The goal of the seminar was to educate the Kiwanis Club on energy efficiency (EE) programs and technologies available in Pomona. Richard presented information on available EE technologies and Southern California Edison programs, along with a brief introduction to self-generation and demand-response programs. Richard also briefly discussed EE equipment options available for residential application.

Eighteen Kiwanis Club members attended the meeting, most small-business owners, and twelve completed an evaluation form following the presentation. Of these twelve attendees, five categorized their business as “office,” two as “retail,” and five as “other,” (e.g., social services, automotive, residential (n=2), retired). Participants were asked to provide feedback regarding their level of EE awareness both before and after the seminar, likelihood of implementing EE measures and/or participating in EE programs, as well as their satisfaction with the seminar. The feedback obtained from this event is summarized below.

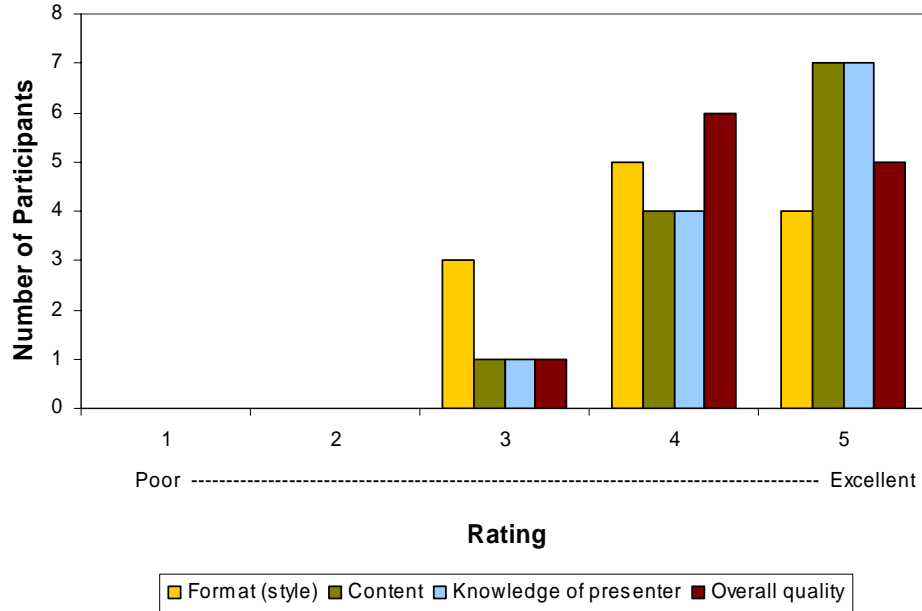
Seminar Satisfaction

Participants rated their satisfaction with four elements of the seminar – style of the presentation, seminar content, knowledge of the presenter, and overall quality – on a scale of 1 (“Poor”) to 5 (“Excellent”). On the whole, the participant ratings indicated a high level of satisfaction with the presentation.

- “Knowledge of the presenter” and “Content” received the highest satisfaction ratings. Both categories received identical ratings, with 7 of 12 rating each “5,” four rating each “4,” and one rating each “3”.
- The “Overall quality” of the event was also rated very high, with 5 people giving it a “5,” 6 giving it a “4,” and one giving it a “3.”
- The “Style of the presentation” was given a “4” or “5” from 9 of the 12 participants, with the remaining 3 rating it as “3.”

The distribution of responses for each seminar aspect is presented in Figure 10.

Figure 10. Participant Ratings of Seminar Aspects



Seminar Impact

To assess seminar impact, audience members were asked to rate their awareness of energy efficiency options both before and after attending the seminar. Rating occurred on a scale of 1 (“Not at all aware”) to 5 (“Very aware”). Seven of the nine respondents provided ratings for the following categories: “Available EE technologies,” “Applicability of technologies to your business,” “Available programs,” and “Other benefits of EE.” Participant responses showed an increase in awareness in the majority of cases. Two individuals reported no change in awareness, while two others reported a drop in awareness for both EE technologies and EE programs. It is unclear why these individuals indicated a decrease in awareness. Five attendees indicated no change in awareness of “Applicability to your business,” and one reported no change for “Other benefits.” Figure 11 and Figure 12 present the results of pre- and post-seminar awareness ratings for EE technologies and EE programs:

Figure 11. Awareness of Energy Efficiency Technologies, before and after Seminar

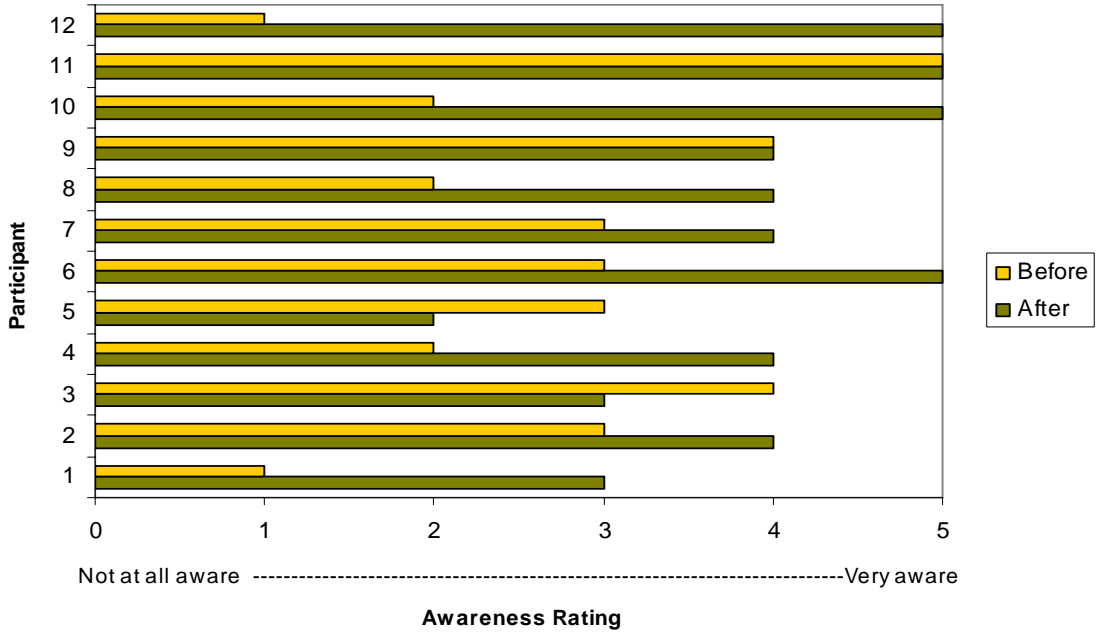
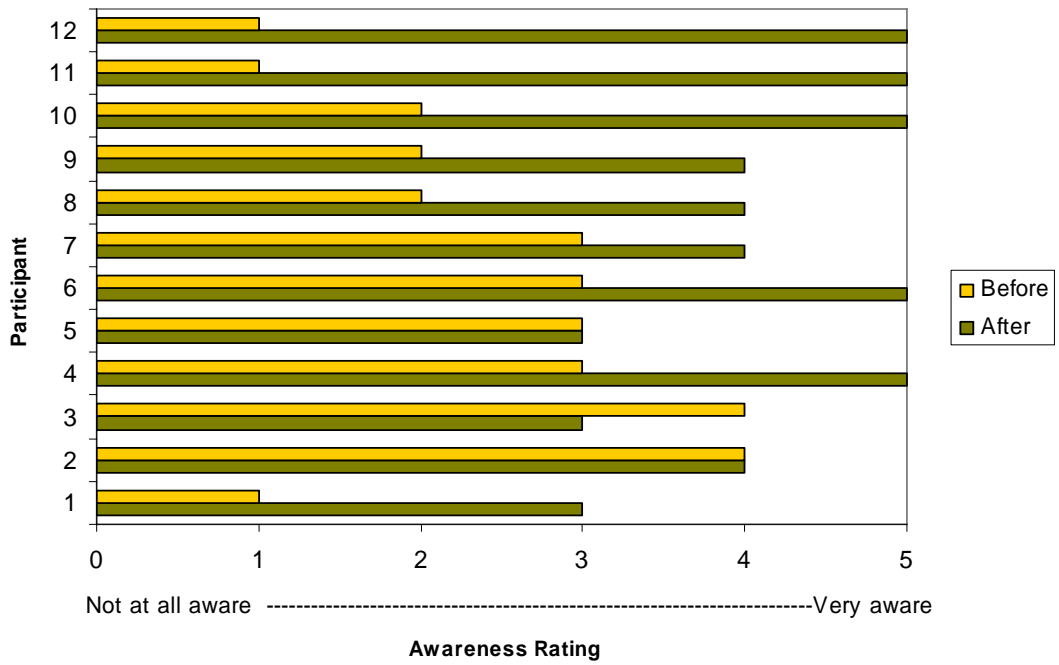


Figure 12. Awareness of Energy Efficiency Programs, before and after Seminar



Interest in EE Measures and Programs

Eleven of the twelve attendees indicated that they were either “much more likely” or “somewhat more likely” to implement EE measures in their business as a result of what they learned in the seminar. One participant denoted no change. When asked to specify the technologies they were most interested in, participants most commonly identified CFLs (n=5), tankless water heaters (n=4). There also was some interest in T-8 and dimmable lighting (n=3), as well as whole house fan for residential application (n=3).

When asked how the seminar had changed the likelihood of participating in an EE program, four attendees indicated that they would be “much more likely,” and seven felt they were “somewhat more likely” to participate in an EE program (one individual did not answer the question). Five participants cited the SCE Express Efficiency program as the program of most interest. There also was some interest in the Emerging Renewables Program (n=3), the SCE Standard Performance (n=2), Energy Smart Grocer (n=1) and Savings by Design (n=1).

Participant Comments

At the end of the survey, participants were given the opportunity to provide specific comments for the event. Most attendees commented generally that the seminar had increased their awareness of energy efficiency technologies and program options. When asked if anything was not covered in the seminar that would have been useful, only one person replied with a request for information on solar technologies. In terms of suggestions for how the seminar could have been improved, one participant responded that visual aids would be helpful, and another commented that more time for going into greater detail would have improved the event.

“It was very informative. Your presentation was fantastic.”

“Great!”

“Allow more time for additional information.”

Conclusions

On the whole, participant feedback indicated a high level of satisfaction with the presentation, with “knowledge of the presenter,” “content,” and “overall quality” receiving the highest individual satisfaction ratings. The format/style of the seminar received slightly lower ratings, with one participant suggesting visual aids as a way to improve the format. Finally, participant responses reported an increase in awareness about energy efficiency options, including measures and incentive programs, indicating that the event was successful in meeting its goal of educating the Pomona community about energy efficiency.