

# Process Evaluation of Southern California Edison's 2006-2008 Home Energy Efficiency Rebate (HEER) Program

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## 1 Executive Summary

This section summarizes the findings of the process evaluation of the 2006-2008 Southern California Edison (SCE) Home Energy Efficiency Rebate (HEER) Program. The 2006-2008 HEER Program offered rebates on a number of energy-efficient measures for SCE residential customers in single-family housing. These measures included:

- Energy Star refrigerators;
- Energy Star room air conditioners;
- Electric storage water heaters with Energy Factors of 93 or greater;
- Whole house fans;
- Energy-efficient ducted evaporative cooling systems;
- Energy-efficient pumps;
- Insulation; and
- Cool roofs.

HEER Program participants can apply for the rebates through mail-in or online application forms. With some participating retailers they can also receive instant point-of-sale (POS) rebates in which the discount is applied automatically at the cash register.

The findings in this report come from a number of surveys as well as other information sources. These included:

- A December 2008 survey of the general population of SCE single-family customers;
- A February-March 2009 survey of SCE customers who participated in the HEER Program;
- A January-February 2009 survey of appliance retailers who participated in the HEER Program;
- September-October 2008 interviews with swimming pool contractors or retailers who signed up to be eligible for the HEER upstream rebates for energy-efficient pool pumps;

- 
- Interviews with HEER Program staff in March and November 2008; and
  - Reviews of HEER Program documents and tracking databases.

KEMA Inc. is responsible for the vast majority of information and analysis in these reports. However, Katherine Randazzo of Fielding Graduate University provided the analyses for subsections 6.2, 6.4.5, and 6.4.6.9.

This section also describes the evaluator recommendations for improvements in SCE's HEER Program along with the evidence from the evaluation findings that these recommendations were based on.

## **1.1 Summary of Findings from the General Population Survey of Single-Family SCE Customers**

This section summarizes the more detailed findings of the general population survey found elsewhere in this report.

### **1.1.1 Purpose of General Population Survey**

In December 2008 a telephone survey was conducted with general population of SCE single-family customers. We completed surveys with 658 of these customers. The objectives of this survey were to:

- Measure awareness of the Home Energy Efficiency Rebate (HEER) program among non-participants;
- Assess their level of interest in HEER rebates;
- Gauge the effectiveness of SCE's energy efficiency marketing and customer education efforts;
- Establish baseline measures of customers' awareness, knowledge, and attitudes toward energy efficiency; and
- Better understand the role that rebates play in appliance purchase decisions.

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### **1.1.2 Program Awareness and Participation of General Population**

Eighty-five percent of single-family residential customers were aware of one or more of the HEER program rebates. This number included 22 percent who spontaneously listed a HEER rebate when asked what SCE programs they were aware of and 63 percent who said they had heard of one or more of the rebates when prompted. The rebate with the highest awareness was for refrigerators (78%), followed by room air-conditioners (42%) and electric water heaters (40%). Awareness of rebates for whole house fans was 27 percent. At the lower end of the awareness continuum were rebates for swimming pool pumps (18%), evaporative coolers (16%), and cool roofs (11%).

Awareness of several specific HEER rebates varied demographically. In general, homeowners were more aware of the rebates than renters, seniors were more aware of them than non-seniors, and women were more aware of the rebates than men.

Bill inserts were the most widely-reported channel through which customers became aware of the HEER program; 44 percent said they had learned of rebates in this fashion.<sup>1</sup> Other channels that the respondents mentioned relatively frequently included television (16%), word-of-mouth (14%), and retailers/installation contractors (13%).

A third (34%) of the single-family residential sample had not only heard of rebates from SCE but had participated in one or more of the HEER program rebates. The rebate program with the largest reported participation rate (10%) was for refrigerators.

### **1.1.3 The Effectiveness of Program Marketing and Customer Education to the General Population**

Half of the single-family residential customers recalled seeing or hearing at least one message about saving energy from SCE in the past 12 months. Message recall was somewhat lower (40%) among both renters and those who had not attended college. Most of the respondents who recalled energy efficiency messages from SCE had only the vaguest recall of their content, and only five percent reported hearing messages about rebates. Nonetheless, awareness of all

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<sup>1</sup> SCE has recently switched from bill inserts to windows on the billing form for key messaging. This new format reduces the amount of program information that can be conveyed.

of the HEER rebates was higher among respondents who recalled receiving energy saving messages from SCE in the prior year.

When asked where they had seen or heard these messages from SCE, the most common responses were television (37%), bill inserts (35%), direct mail (13%), radio (10%), the Internet (6%), and newspaper or magazine ads (5%). Senior citizens were more likely to have seen a message in a bill insert (44%) and less likely to have encountered one on television (29%) or online (2%). Households earning at least \$75,000 were more likely to have heard an SCE message on the radio (16%) or seen it on the Internet (10%). Those earning less than \$40,000 were more likely to recall an SCE ad in a newspaper or magazine (12%).

We also asked respondents where they would turn for information on saving energy and how much they trusted various sources for energy efficiency information. The most frequently-cited place that residential customers would turn for energy saving information was non-utility websites (29%) followed by utility websites (22%), a phone call to their utility (18%), and utility bill inserts (13%). College-educated and higher-income respondents were more likely to mention websites (utility or otherwise). Lower-income customers (less than \$40,000) were more likely to turn to their utility for information. Twenty-six percent said they would call the utility, 15 percent would look at bill inserts, and five percent would visit their utility's office to get information on how to save energy.

Utilities were, by far, the most trusted source of information on energy efficiency. Seventy percent of respondents rated them as trustworthy as compared with 48 percent for manufacturers of energy using equipment; 43 percent for environmental activists; 41 percent for the government; 41 percent for friends, family, and neighbors; 38 percent for retailers; and 26 percent for contractors.

Most respondents (57%) said they were interested in receiving more information from SCE about rebates. When asked how SCE could best reach them with this information they replied with bill inserts (42%), direct mail (36%), or email (19%).<sup>2</sup>

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<sup>2</sup> As noted previously, SCE has recently switched from bill inserts to windows on the billing form for key messaging. This new format reduces the amount of program information that can be conveyed.

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### **1.1.4 Energy Efficiency Awareness, Knowledge, and Attitudes (AKA) Among the General Population**

An underlying assumption of many energy efficiency program process evaluations is that the impact of programs on customer behavior is mediated by customers' awareness of energy saving tools, their knowledge of how to use such tools, and their attitudes toward saving energy. These three concepts are often abbreviated as AKA in the literature. In the interest of establishing a baseline for future studies, we included several AKA measures in the survey.

Respondents' awareness of the HEER program has already been reported. We also assessed awareness of the yellow Energy Guide stickers found on appliances and of Energy Star labels. Awareness of both stood at just under 70 percent (68% for Energy Guide and 69% for Energy Star). Awareness of both sets of labels was higher among those who recalled energy saving messages from SCE, those who owned their home, those who had attended college, and those earning less than \$40,000 a year.

To measure customers' knowledge of energy efficiency and related issues we included a five-item energy quiz in the survey. The questions focused on how much a typical customer would save by replacing an old refrigerator, whether SCE will haul away old refrigerators at no charge to the customer, whether incandescent light bulbs produce more heat or light, whether all Energy Star certified air conditioners are equally efficient, and whether homes emit insignificant amounts of greenhouse gasses compared with cars.<sup>3</sup> The average residential customer answered 3.4 of the five questions correctly. Fourteen percent answered them all correctly, 68 percent got three or four right, and 18 percent got two or fewer correct.

We included two attitude statements in the survey with which respondents were asked to rate their agreement. They were "Conserving energy is important for lowering my bills" and "Using energy in ways that preserve the environment is not worth it if it requires major lifestyle changes." Agreement with the first statement reflected a self focus on energy efficiency, while disagreement with the second statement reflected an environmental focus. Virtually all respondents (89%) agreed with the self focus statement, but only half (49%) rated the second statement in a way that reflected an environmental focus. The groups that expressed the

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<sup>3</sup> Questions and answers were taken from SCE's website and from the Flex Your Power Challenge Cheat Sheet ([www.fypower.org/pdf/challenge\\_cheatsheet0806.pdf](http://www.fypower.org/pdf/challenge_cheatsheet0806.pdf)). The answers were (in the order questions were presented above) more than \$150 a year, yes, heat, no, and no.

strongest environmental focus were women (55%), the college educated (54%), and those who recalled seeing or hearing energy efficiency messages from SCE (53%).

Finally, we included statements designed to measure two concepts related to AKA – ascription of responsibility and personal norms. Ascription of responsibility refers to individuals believing that they have a personal responsibility for saving energy, and is related to how significant they believe their energy consumption is. Having a personal norm around energy efficiency means being emotionally affected by one's energy use.

We measured ascription of responsibility by asking respondents to rate their agreement with the following statement: *"My energy use is too small to worry about in the grand scheme of things;"* disagreement reflected taking personal responsibility. By this measure 54 percent of respondents ascribed responsibility for saving energy to themselves. Lower-income households (those earning less than \$40,000 a year) were less likely to ascribe responsibility to themselves (45%), while homeowners and the college educated were more likely to do so (56% and 59%, respectively).

We assessed personal norms by asking respondents to agree or disagree with the statement *"I feel guilty if I use too much electricity."* Fifty-three percent agreed with this statement. Interestingly, households earning less than \$40,000 a year, which were less likely to ascribe personal responsibility for saving energy, were nonetheless more likely to feel guilty about using too much power (67%).

### **1.1.5 Appliance Purchasing Behavior, Barriers Among the General Population**

For each of the HEER-rebated technologies – refrigerators, electric water heaters, room air-conditioners, whole house fans, evaporative coolers, swimming pool pumps, and roofs – we identified respondents who said they had made a purchase in the past two years and asked about their decision-making process. We also identified those who expected to purchase one of these technologies within the next 12 months and asked them to speculate on how they would go about making that decision. In both cases the goal was to understand how energy efficiency and rebates affect purchase decisions and what market barriers prevent the purchase of high efficiency products.

The responses to these appliance-specific questions are summarized in the detailed section of this report. However, the key researchable question of interest to HEER Program staff is: "Why Aren't Nonparticipants Buying HEER-Rebated Appliances?" The answer to this question is

discussed in much more detail in the evaluator recommendations section of this report. However, Table 1-1 summarizes some of the evidence from the general population survey.

**Table 1-1  
Why Aren't Nonparticipants Buying HEER-Rebated Appliances?**

<p><b>Was it because they weren't aware of rebates?</b></p>	<ul style="list-style-type: none"> <li>o Yes unaided rebate awareness is very low and rebates don't seem to be mentioned by salespeople.</li> <li>o Only 10-22% of the general population who are purchasing refrigerators, RACs, or water heaters mentioned rebates for these equipment types as something that SCE offered</li> </ul>
<p><b>Was it because they don't value EE?</b></p>	<p>Mixed evidence.</p> <ul style="list-style-type: none"> <li>o In terms of general attitudes towards EE, nonparts are not much different than participants.</li> <li>o They also cited EE often as a consideration when purchasing.</li> <li>o However, for refrigerators EE is rarely the main reason why they purchase appliances. For RACs &amp; whole house fans EE is cited as main reason more often</li> </ul>
<p><b>Was it because the HEER Program was targeting the wrong barrier to their purchase of an EE appliance?</b></p>	<p>No, price/cost was by far the most cited reason why nonparticipants said they might not buy an EE refrigerator</p>
<p><b>Was it because the place they like to shop didn't have the rebated appliance?</b></p>	<p>Maybe. HEER-rebated refrigerator sales are concentrated in certain retail chains.</p>

Note: EE stands for "energy efficiency"

Table 1-2 summarizes the relative awareness of energy-efficiency technologies and rebates among general population respondents who had either recently purchased an appliance or who were in the market to do so. It also shows how the appliance purchasers varied in terms of the importance of energy efficiency or rebates in their purchasing decision. Finally it shows the key retail or contractor channels where they purchased their appliances.

**Table 1-2**  
**EE Technology /Rebate Awareness**  
**Among the General Population of SCE Residential Appliance Purchasers**  
**and the Importance of Energy Efficiency/Rebates**  
**in Their Appliance Purchase Decisions**

Appliance/ Equipment Type	Awareness of Technology	Importance of EE in Purchase Decisions	Awareness of Rebates	Importance of Rebates in Purchase Decisions	Key Channels
Refrigerators	High	Low	High	Low	Sears
Electric water heaters	High	Moderate	Moderate	Low	Home improvement stores; HVAC contractors
Room AC	High	High	Moderate	Low	Home improvement, HVAC, or big box
Whole house fans	High	High	Low	Low	Home improvement stores; HVAC contractors
Evaporative Coolers	Moderate	Low	Low	Low	Home improvement stores; HVAC contractors
Pool pumps	High	High	Low	Low	Pool contractors
Cool roofs	Low	Low	Low	Low	Roofing contractors

### 1.1.6 Other conclusions from the general population survey

The survey of the general population of SCE single-family customer found that prior marketing and customer education efforts have had some success in raising awareness of energy efficiency and the HEER program in general. Eighty-five percent of single-family households



were aware of one or more HEER rebates. Half of these customers recalled energy efficiency messages from SCE (although vaguely in many cases). Most believed that the information SCE has been providing them has increased their awareness of energy efficiency programs and their knowledge of how to save energy, and has changed their attitudes towards energy. In fact, those who recall messages from SCE are more likely to display environmentally focused attitudes than those who do not. SCE is the most trusted source of information on energy efficiency and one of the first places customers turn when they want to lower their bills or help the environment.

The findings from this survey point to several fruitful ways of building on this success. The first can be summarized as “do more of what works.” Bill inserts and direct mail appear to be succeeding as channels to residential customers. As mentioned above, a new billing format has made it more difficult for SCE to provide program information through the bill. However, direct mail should continue to be the backbone of customer education efforts. They, along with traditional channels like television (and to a lesser extent radio), should continue to be used to increase overall awareness of energy efficiency and the available SCE programs to help customers be more efficient.

Moreover, these marketing and education efforts should be used to increase customers’ awareness of the link between home energy use and climate change. The survey data show that this is a weak link in customers’ knowledge of energy issues, and, as climate change continues to take center stage in the news, strengthening this connection in customers’ minds becomes vital to promoting energy efficient behaviors.

Next the results point to opportunities to increase the effectiveness and recall direct mailings and ads by developing separate messages tailored to different attitudinal triggers. Although a full analysis of message targeting was beyond the scope of this study, there are enough correlations between demographics and attitudes in the data to suggest the possibility of target marketing different messages to different customers. Having messages that speak to environmental concerns, budget concerns, and other issues will increase the odds of at least one message resonating with each customer even if for practical reasons all of the messages are distributed through mass channels.

Finally, the data on the role of energy efficiency and rebates in the purchasing of different technologies, summarized in Table 1-2, can be used to develop technology specific strategies. For example, consider room air-conditioners, whole house fans, and pool pumps. For all these technologies, but especially whole-house fans and room air-conditioners, energy efficiency plays a major role in customers’ choices. This implies that increasing customers’ awareness of

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which models are most efficient (perhaps through further education on the Energy Star rating system) might have a significant impact.

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## 1.2 Summary of Findings from the Survey of HEER Program Participants

### 1.2.1 Introduction

This section summarizes the findings from a telephone survey of 296 single-family residential customers of Southern California Edison (SCE). The survey was conducted in February and March 2009 and was intended to gauge the effectiveness of the Home Energy Efficiency Rebate (HEER) Program's marketing and customer education efforts; measure participant satisfaction with the Program's staff and processes; establish baseline measures of customers' awareness, knowledge, and attitudes toward energy efficiency; and learn what barriers might prevent them from purchasing energy-efficient appliances in the future.

The 2006-2008 HEER Program offered rebates on a number of energy-efficient measures for SCE residential customers. These measures included:

- Energy Star refrigerators;
- Energy Star room air conditioners;
- Electric storage water heaters with Energy Factors of 93 or greater;
- Whole house fans;
- Energy-efficient ducted evaporative cooling systems;
- Energy-efficient pumps;
- Insulation; and
- Cool roofs.

HEER Program participants can apply for the rebates through mail-in or online application forms. With some participating retailers they can also receive instant point-of-sale (POS) rebates in which the discount is applied automatically at the cash register. Table 1-3 shows which rebate types were available for which measures.

**Table 1-3**  
**Measures Rebated Through PY2006-2008 HEER Program**

Measures	Mail	Online	POS
Evaporative Cooler	X	X	
Insulation	X		
Roof	X	X	
Room AC	X	X	X
Whole House Fan	X	X	X
Water Heater	X	X	
Pool Pump/Motor	X	X	X
Refrigerator	X	X	X

The POS rebates accounted for the large majority of the 2006-2008 HEER Program's installed measures and claimed (*ex ante*) gross and net energy savings. Table 1-4 shows how the number of measures installed and claimed energy savings were distributed across the various rebate types.

**Table 1-4**  
**Program Installations and Savings\* by Program Source**  
**PY2006-2008**

	Measures Installed**	Gross KWh Savings	Net KWh Savings	Gross KW Reduction	Net KW Reduction
Mail-in	113,929	16,131,941	12,905,553	7,184	5,748
Online	15,704	2,841,165	2,272,932	1,202	961
POS	212,414	42,557,968	34,042,894	23,363	18,688
<b>Total</b>	<b>342,047</b>	<b>61,531,074</b>	<b>49,221,380</b>	<b>31,749</b>	<b>25,397</b>

### 1.2.2 Program Awareness Among HEER Participants

Among all respondents, refrigerator rebates were the most widely recognized HEER rebate (94%), followed by room air conditioner rebates (58%), water heaters (49%), whole house fans (46%), insulation (39%), and pool pumps (39%). Less than a third of the HEER participants were aware that SCE offers rebates for evaporative coolers, and awareness of cool roof rebates was even lower.

When asked what SCE energy-saving programs or services they had heard of, refrigerator rebates were the most frequently-mentioned SCE offering, but several other programs were mentioned more frequently than the other HEER rebates. These included assistance for low-

income customers to purchase energy efficient appliances (Energy Management Assistance), miscellaneous other rebates, and A/C cycling (Summer Discount Program).

Bill inserts were by far the most common way that respondents reported learning about SCE programs. Sources mentioned by at least 10 percent of respondents also included retailers and installation contractors, the SCE website, and television.

### **1.2.3 Marketing and Customer Education to HEER Participants**

Exactly half of the participating residential customers recalled seeing or hearing at least one message from SCE in the past 12 months that focused on how to manage home energy use, the energy efficiency of specific products, or SCE programs to help customers save energy. When asked to recall the subject of these messages, there was a wide variety of responses with “how to save energy at home” (15% of respondents) and adjusting/programming the thermostat (11%) being the two most-recalled messages. Television was by far the most common channel cited for receiving these SCE messages (51% of respondents) followed by SCE bill inserts (22%) and other SCE direct mail (9%).

When asked what information sources they used in purchasing their HEER-rebated energy-efficient appliances, nearly two thirds (65%) of the refrigerator purchasers cited retailers or salespersons. This was also the primary information source for room air conditioner purchasers (58%) and water heater purchasers (60%). However, the purchasers of HEER-rebated evaporative coolers, whole house fans, and pool pumps were about as likely to cite the Internet (32%, 32%, and 23% respectively) as an information source as they were a retailer or salesperson (32%, 34%, and 25% respectively). For the whole participant group the most-cited information sources were the retailer/salesperson (61%), followed by Internet (24%), and Consumer Reports or other similar magazines (10%). Only three percent mentioned SCE as an information source for their research. However, respondents indicated that utilities are the most trusted source for information (83% of respondents), followed by equipment manufacturers (52%), friends or family (42%), government (41%), and equipment retailers (39%).

Asked whether they would like to receive additional information about SCE’s appliance rebates, respondents were fairly evenly split with 48 percent answering “yes” and 52 percent “no.” When asked what would be the best way for SCE to contact them if SCE wanted to inform them about

programs to save energy, most customers preferred bill inserts (47%), email (25%), or direct mail (24%).<sup>4</sup>

## **1.2.4 Participant Satisfaction with the HEER Program**

This subsection summarizes findings from the HEER Program participant survey concerning satisfaction with the 2006-2008 Program. It discusses satisfaction for the overall HEER participant population as well as for demographic subgroups of this population. Finally it compares participant satisfaction with the 2006-2008 HEER Program to satisfaction levels from older evaluations of the Program.

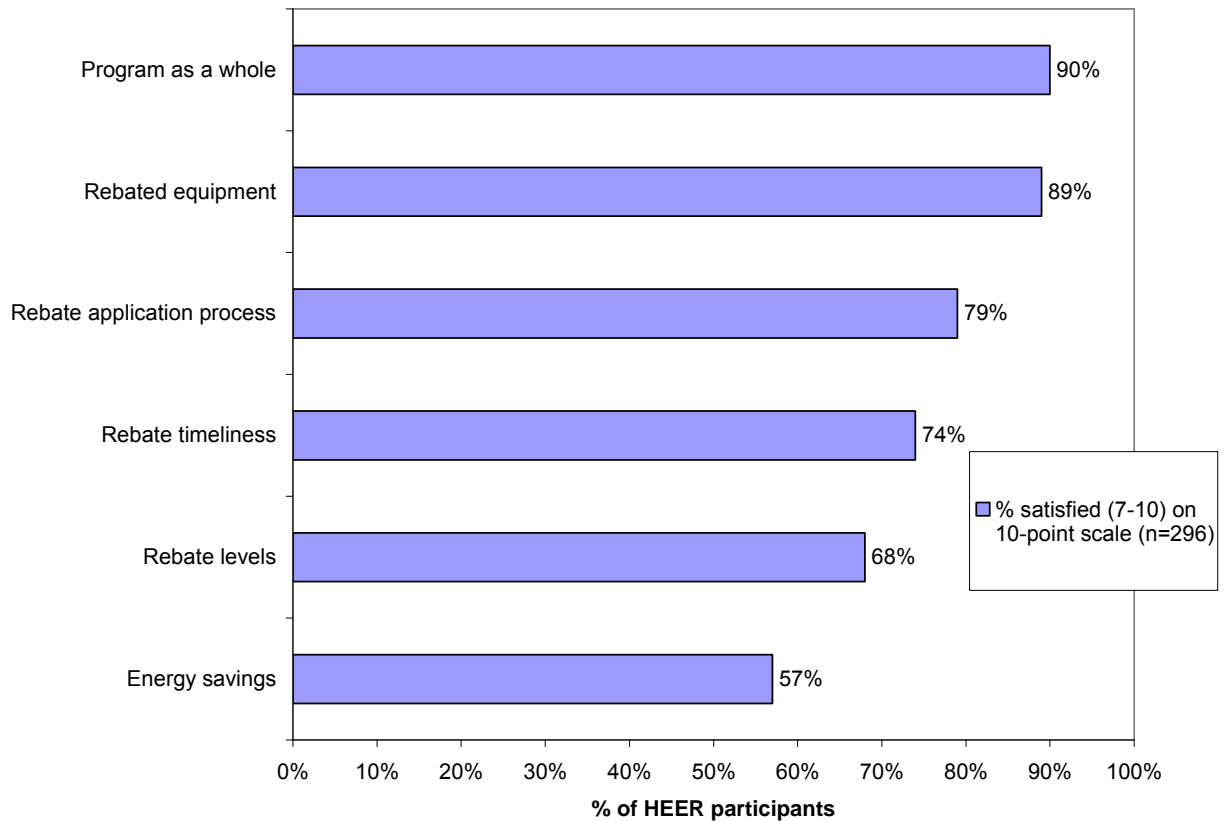
### **1.2.4.1 Overall Satisfaction**

We asked the participating residential customers a number of questions about their satisfaction with the HEER program and its various attributes. We asked them about their satisfaction with the rebated equipment, the rebate application process, rebate timeliness, rebate levels, energy savings, and the Program as a whole. Figure 1-1 shows that participant satisfaction was very high for the Program as a whole and for the rebated equipment, but satisfaction declined when they were asked about the rebate processes/levels or the energy savings they realized from the new equipment.

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<sup>4</sup> As noted previously, SCE has recently switched from bill inserts to windows on the billing form for key messaging. This new format reduces the amount of program information that can be conveyed.

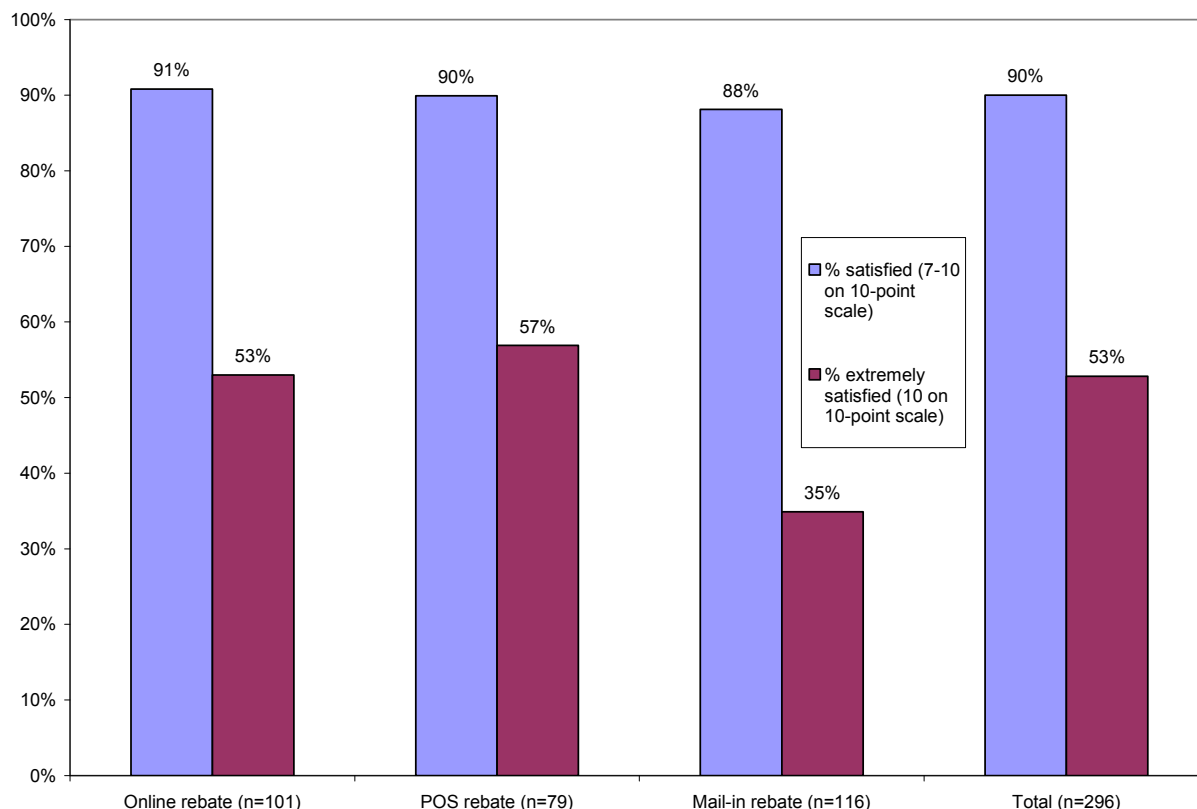
**Figure 1-1  
HEER Participant Satisfaction  
with the Program and Its Processes**



#### 1.2.4.2 Satisfaction by Participant Subgroup

The SCE HEER Program staff was interested in knowing whether Program satisfaction varied with the type of rebate that the participant received – whether it was a point-of-sale (POS) rebate, an online rebate, or a mail-in rebate. They theorized that participants that had received the point-of-sale rebates would be most satisfied due to the absence of paperwork, that online participants would be the next-most satisfied, and the mail-in rebate participants would be the least satisfied. Figure 1-2 shows that if one just looks at the participants who were “extremely satisfied” (10 on the 10-point satisfaction scale), this theory holds true. However, once one groups those participants who gave satisfaction ratings of 7 or higher together, these differences largely disappear. The average satisfaction rating of the participants for the Program overall was 9.0 with online participants reporting an average rating of 9.2, POS participants reporting an average rating of 9.0, and mail-in rebate recipients reporting an average rating of 8.5. These findings are discussed in more detail in the main body of the report.

**Figure 1-2  
HEER Participant Satisfaction  
with the Program by Participant Rebate Type**



The percentage of participants who were satisfied (7-10 on the 10-point satisfaction scale) with various aspects of the HEER Program also could vary significantly depending on the type of rebated appliance/measure that the participant received.

- *Satisfaction with the rebated equipment:* The highest average satisfaction ratings (93-100% of respondents were satisfied) were for water heaters, whole house fans, evaporative coolers, and pool pumps. Slightly lower average satisfaction ratings (88-89%) were reported for refrigerators and cool roofs.
- *Satisfaction with the rebate application process:* Average satisfaction ratings were in the same general range (76-83% of respondents were satisfied) for all the participant groups except the room air conditioner recipients who only had a 68 percent average satisfaction rating for this process.



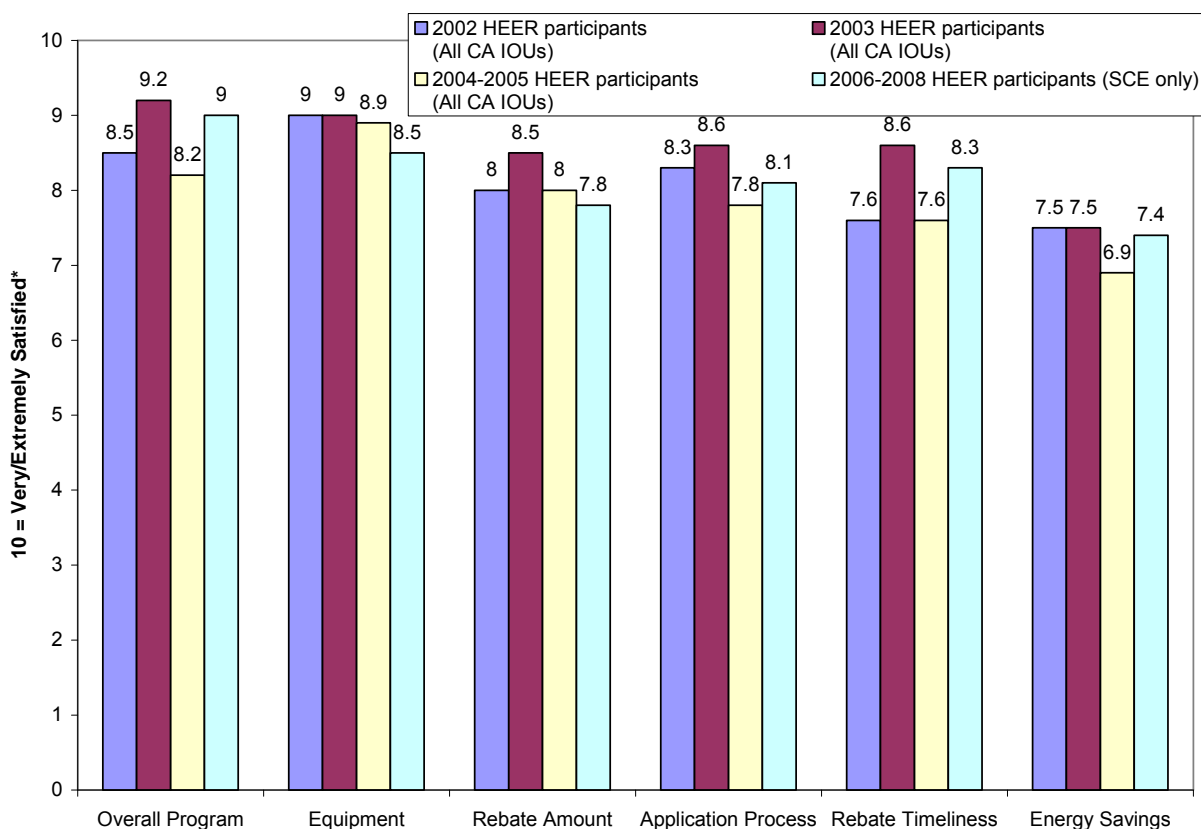
- *Satisfaction with the rebate timeliness:* Average satisfaction ratings were in the same general range (73-80% of respondents were satisfied) for all the participant groups except the room air conditioner (65%) and water heater (60%) recipients.
- *Satisfaction with rebate levels:* For this program attribute there was a lot of variation in the average levels of satisfaction by appliance/measure type. Evaporative cooler, cool roof, and room air conditioner participants were most satisfied (80-84% of respondents were satisfied) with their rebate levels. Refrigerator, pool pump, and whole house fan participants had lower average satisfaction ratings (67-71%). The water heater participants had the lowest average satisfaction rating (60%), but the sample was very small (n=5).
- *Satisfaction with energy savings:* There were three tiers of average satisfaction ratings for the energy savings realized by the rebated equipment. Water heater, evaporative cooler, and whole house fan participants reported the highest average satisfaction (78-80% of respondents were satisfied) with their energy savings. The cool roof, refrigerator, and pool pump participants were much less satisfied with their energy savings (56-63%). The room air conditioner participants were the least satisfied with their energy savings with an average satisfaction rating of 43 percent.
- *Satisfaction with salesperson/contractor energy efficiency knowledge:* The frequency of HEER participant satisfaction with the energy efficiency knowledge of their salespersons/contractors varied a lot depending on the type of appliance/equipment they had purchased. The pool pumps purchasers were the most satisfied (75% of respondents) and water heater purchasers were least satisfied (35% and 40% respectively). Satisfaction levels from other equipment purchasers were also fairly poor – in the 56-65 percent range. This suggests a need for more salesperson training.

#### **1.2.4.3 Satisfaction Over Time**

We compared the average satisfaction levels of the 2006-2008 HEER participants with the average satisfaction levels of previous HEER participants. Figure 1-3 and Figure 1-4 show that 2006-2008 HEER participants had higher overall program satisfaction levels than their 2004-2005 counterparts. In terms of program processes and outcomes, the 2006-2008 HEER participants showed greater satisfaction than the 2004-2005 participants with the rebate application process, the timeliness of rebate payments, and the energy savings. Conversely the 2006-2008 participants reported lower satisfaction with the rebated equipment and the rebated levels.

It should be noted, however, that the 2006-2008 HEER participants we surveyed were for SCE only, while the satisfaction levels for 2002-2005 are for all three IOUs (PG&E, SCE, SDG&E) which participated in the HEER program. Although great effort was made to administer the HEER program uniformly across the state during this 2002-2005 period, differences in program delivery among the various IOUs, or even differences in their underlying customer populations, could lead to differences in participant satisfaction.

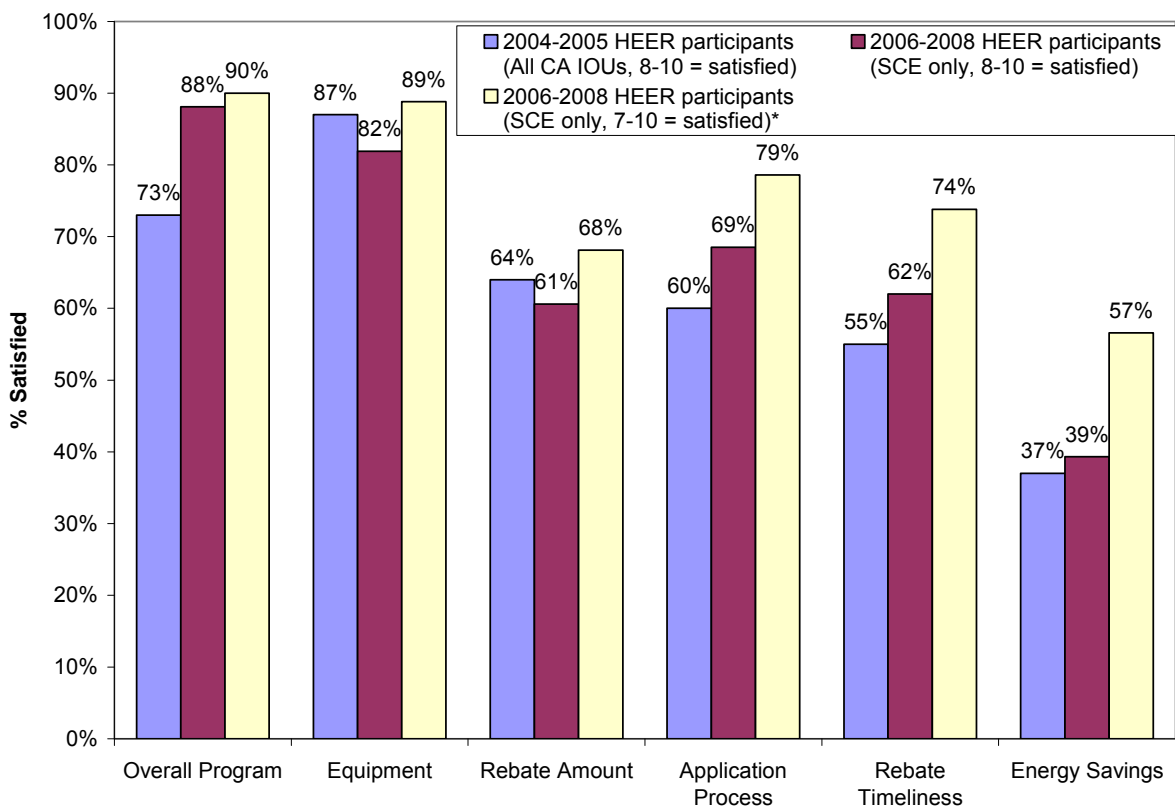
**Figure 1-3**  
**Average HEER Program Satisfaction Ratings**  
**2002 – 2008**



Note: The source for the 2002-2005 satisfaction ratings is: *2004/2005 Statewide Residential Retrofit Single-Family Energy Efficiency Rebate Evaluation, CPUC-ID#: 1115-04*, Prepared by Itron and KEMA, October 2, 2007, p. 8-26.

\*The 10-point rating was defined as “extremely satisfied” in the survey of 2006-2008 participants and “very satisfied” in the survey of 2004-2005 participants. We do not know how it was defined for the 2002-2003 participants.

**Figure 1-4**  
**% of HEER Program Participants Satisfied**  
**2004 – 2008**



Note: The 2002-2003 HEER program ratings do not appear in this figure because they were only available in terms of average satisfaction ratings and not in the “percent satisfied format. \*In this report we have chosen to define “satisfied” as ratings of 7-10 on the 10-point satisfaction scale. The evaluation of the 2004-2005 HEER Program chose to define “satisfied” as ratings of 8-10 on this 10-point scale. Since the 2004-2005 evaluation did not show how many participants gave ratings of 7, to allow an “apples to apples” comparison between 2004-2005 and 2006-2008 participant satisfaction, we show the 2006-2008 participant satisfaction using both definitions of satisfaction.

### 1.2.5 Awareness, Knowledge, and Attitudes (AKA) Among HEER Program Participants

An underlying assumption of many energy efficiency program process evaluations is that the impact of programs on customer behavior is mediated by customers’ awareness of energy saving tools, their knowledge of how to use such tools, and their attitudes toward saving energy.

These three concepts are often abbreviated AKA in the literature. In the interest of establishing a baseline for future studies, we included several AKA measures in the survey.

Respondents' awareness of the HEER program has already been reported. Eighty-four percent of the participating residential customers said they were aware of the yellow Energy Guide stickers on appliances, and 81 percent claimed awareness of the Energy Star label on appliances. Seniors were much less likely than non-seniors to recall the Energy Star label and those in the middle-income range (\$40,000 - \$74,999 in annual income) were less likely to recall the Energy Guide stickers than those in other income classes.

To measure customers' knowledge of energy efficiency and related issues we included a five item energy quiz in the survey. The questions focused on how much a typical customer would save by replacing an old refrigerator, whether SCE will haul away old refrigerators at no charge to the customer, whether incandescent light bulbs produce more heat or light, whether all Energy Star certified air conditioners are equally efficient, and whether homes emit insignificant amounts of greenhouse gasses compared with cars.<sup>5</sup> A majority of respondents answered every question correctly.

We included two attitude statements in the survey with which respondents were asked to rate their agreement. They were "Conserving energy is important for lowering my bills" and "Using energy in ways that preserve the environment is not worth it if it requires major lifestyle changes." Agreement with the first statement reflected a self focus on energy efficiency, while disagreement with the second statement reflected an environmental focus. Agreement with the self focus statement was very high with 92 percent of the participating residential customers agreeing with it. However, less than a quarter (24%) of the respondents agreed with the second statement.

We included statements designed to measure two concepts related to AKA – ascription of responsibility and personal norms. Ascription of responsibility refers to individuals believing that they have a personal responsibility for saving energy, and is related to how significant they believe their energy consumption is. Having a personal norm around energy efficiency means being emotionally affected by one's energy use. We measured ascription of responsibility by

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<sup>5</sup> Questions and answers were taken from SCE's website and from the Flex Your Power Challenge Cheat Sheet ([www.fypower.org/pdf/challenge\\_cheatsheet0806.pdf](http://www.fypower.org/pdf/challenge_cheatsheet0806.pdf)). The answers were (in the order questions were presented above) more than \$150 a year, yes, heat, no, and no.

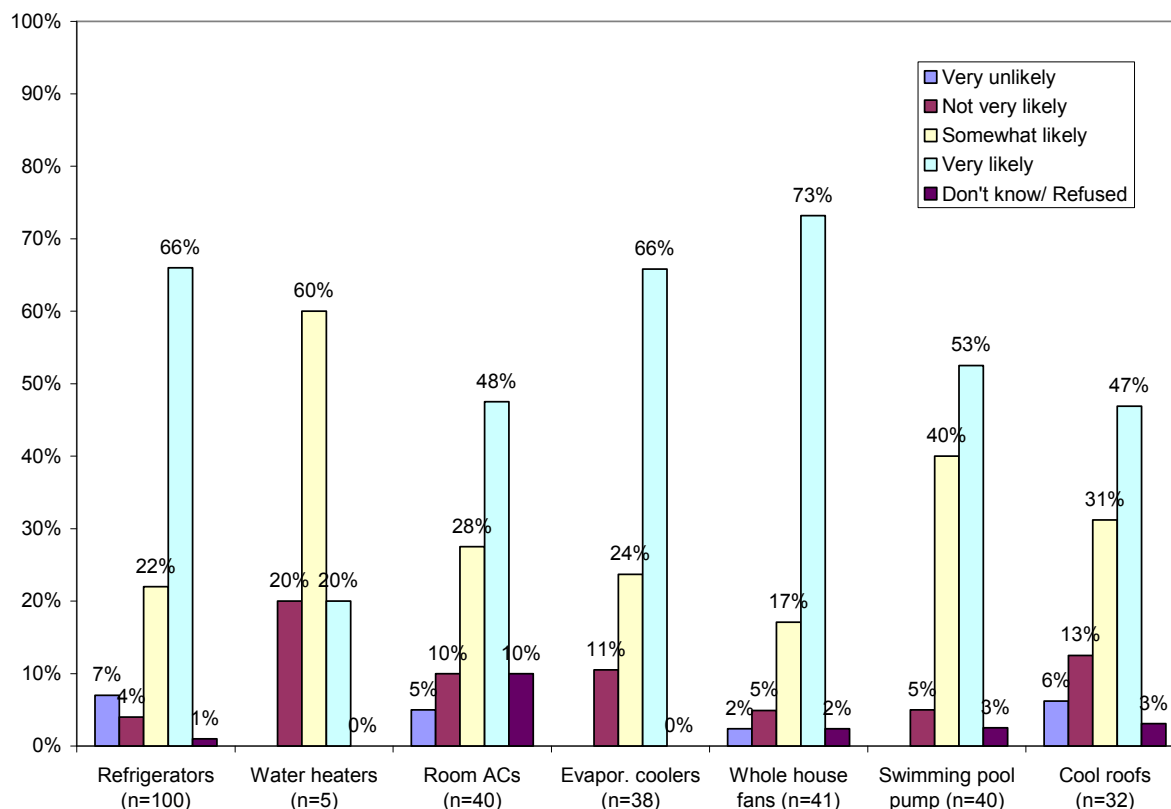
asking participating residential customers to rate their agreement with the following statement: *“My energy use is too small to worry about in the grand scheme of things;”* disagreement reflected taking personal responsibility. A majority (54%) disagreed, thus indicating personal responsibility for energy savings.

We assessed personal norms by asking respondents to agree or disagree with the statement *“I feel guilty if I use too much electricity.”* Fifty-seven percent of respondents agreed with this statement. The mean rating was 3.7 on a five-point scale where 5 signified “agree completely.”

### **1.2.6 Free Ridership Indicators Among HEER Program Participants**

In order to guide their program planning efforts, SCE EM&V staff also wanted us to collect some preliminary information on free ridership. So we asked the appliance purchasers how likely they would have purchased the HEER-rebated equipment if the rebate had not been available. Figure 1-5 shows that 66–73% of the refrigerator, whole house fan, and evaporative cooler respondents said that they were “very likely” to have purchased the equipment without the rebates. The levels were lower (47 – 53%) for the room air conditioner, pool pump, and cool roof participants.

**Figure 1-5**  
**Likelihood of Purchasing the HEER-Rebated Equipment**  
**if the HEER Rebates Had Not Been Available**



However, while the responses to this question are useful as one piece of evidence to consider when trying to assess free ridership for the HEER program, it is important to bear in mind two considerations. First this was only one question and the question batteries that are used to officially calculate net-to-gross ratios for the CPUC impact analysis are much more extensive and are based on protocols that are designed to have participants think more carefully about how a program or rebate may have influenced their decision-making. Second the responses that appear in Figure 1-5 only reflect the perspective of the end users and do not reflect the retailer's or contractor's perspective on how frequently they would have sold the energy efficient equipment in the absence of the HEER rebate. These retailer/contractor estimates of free ridership are discussed elsewhere in the report.

A third consideration in interpreting these responses is that since many HEER Program participants received their rebates instantly through a point-of-sale deduction at the cash register, it is possible that they were less aware of the rebate amount than those who

participated in the Program through the mail-in or online channels and received a check in the mail. However, the evidence for this is mixed. The mail-in rebate participants most frequently (17% of respondents) said that they were “not very likely” or “very unlikely” to have bought the appliance/equipment without the HEER rebate – compared to 10 percent for the online rebate participants and point-of-sale rebate participants. Yet if the “check in the mail” was indeed contributing to greater program attribution (e.g., lower free ridership), then one would expect to see differences in the likelihood scores between the online and point-of-sale rebate participants.<sup>6</sup>

### **1.2.7 Information, Selection Criteria and Barriers for Future Equipment Purchases**

We asked the HEER Program participants who were planning to buy another piece of energy-using equipment in the next 12 months a series of questions about this purchase decision. We asked them where they were planning to get their information, what product attributes/features would be important to them, how important energy efficiency would be in their purchase decision, and what barriers might prevent them from purchasing an energy-efficient model. The sample sizes were generally small – probably because the participants had just recently purchased a piece of equipment through the HEER Program.

The responses to these questions are discussed in the report’s detailed findings. Table 1-5 summarizes the relative awareness of energy-efficiency technologies and rebates among participant respondents. It also shows how the appliance purchasers varied in terms of the importance of energy efficiency or rebates in their purchasing decision. Finally it shows the key retail or contractor channels where they purchased their appliances.

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<sup>6</sup> It is possible that because mail-in rebate participants have to do more work than other participants to get their rebates, that they are more proactive than other participants about making sure that they receive the rebate check as compensation for their labors. If this was true, then this might lead to higher recall of the rebate amount and higher program attribution (lower free ridership). Unfortunately we did not ask the participants what their rebate amount was to determine whether rebate recall was better for mail-in participants vs. point-of-sale participants or online participants.

**Table 1-5  
EE Technology/Rebate Awareness Among HEER Participants  
and the Importance of Energy Efficiency/Rebates  
in Appliance Purchase Decisions**

Appliance/ Equipment Type	Awareness of Technology	Importance of EE in Purchase Decisions	Awareness of Rebates	Importance of Rebates in Purchase Decisions	Key Channels
Refrigerators	High	Moderate	High	Low	Sears
Electric water heaters	High	High	High	High	Home improvement stores; HVAC contractors
Room AC	High	Moderate	High	Moderate	Home improvement, HVAC, or big box
Whole house fans	High	Moderate	Moderate	Moderate	Home improvement stores; HVAC contractors
Evaporative Coolers	High	High	Low	Low	Home improvement stores; HVAC contractors
Pool pumps	High	Moderate	Moderate	Low	Pool contractors
Cool roofs	Low	High	Low	High	Roofing contractors

Comparing results across different rebate categories reveals multiple features common to most appliances types covered by the HEER program:



- Retailers and salespeople are a dominant information source for most participants, particularly those who made purchases over the past two years. The internet is also a popular resource, especially for customers planning to buy an appliance in the next year.
- Customers tend to purchase eligible appliances from appliance stores and brand retailers, but rely on a variety of other vendors as well.
- Most respondents stated that energy efficiency would be an important factor in future appliance purchases.
- Virtually all respondents identified price as the principal market barrier to purchasing energy-efficient models.
- There is general satisfaction with appliances bought under the HEER program.

However, as Table 1-5 shows, the product features that participants considered did vary somewhat across appliances. For example, energy savings was a very important product attribute for purchasers of electric water heaters, evaporative coolers, and cool roofs. The availability of rebates was a low priority item for purchasers of refrigerators, evaporative coolers, and pool pumps.

### **1.2.8 Conclusions from the Participant Survey**

Findings about program awareness demonstrate that refrigerator rebates are the highest profile element in SCE's suite of residential programs. When asked about different types of HEER rebates, almost all respondents (98%) were familiar with refrigerator rebates, nearly double the percentage of those familiar with the next most common response (room air conditioners). When asked about SCE programs more broadly, one-third of respondents cited refrigerator rebates without prompting, triple the percentage citing the next most common answer. Refrigerators were also by far the most common eligible appliance that participants had purchased or were planning to purchase (87%).

Results from the marketing and customer education segment of the survey indicate that multiple media channels educate and inform residential participants. Exactly half of respondents recalled at least one message from SCE over the previous year, and 51 percent of those who recalled these messages saw them on television. When asked about where they would first look for

information about energy conservation, the two most common responses were non-utility websites (32%) and utility websites (29%). And when asked about preferred information sources, the vast majority favored either bill inserts (47%), email (25%), or direct mail (24%).<sup>7</sup>

Customer awareness, knowledge, and attitudes were found to reflect a growing appreciation of the benefits of energy efficiency. When given a simple quiz about energy efficiency and related issues, a majority of participants answered every question correctly. Respondents were inclined to recognize the personal cost savings attributable to energy efficiency (mean rating of 4.7 on a 5-point scale). Overall, respondents registered high levels of satisfaction with the HEER program (90% satisfied).

Yet from a marketing perspective, the summary of these attributes for the general population of SCE single-family customers (see Table 1-2) is probably more useful. This is because most of the general population has not yet participated in the HEER Program and these are the types of people that the Program is trying to recruit. In addition, comparing Table 1-5 and Table 1-2 shows that the SCE HEER Participants valued energy efficiency and the rebates more than the general population of SCE single-family customers. While some of this could be an effect of Program participation, some of this could also be why they joined the Program in the first place.

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<sup>7</sup> As noted previously, SCE has recently switched from bill inserts to windows on the billing form for key messaging. This new format reduces the amount of program information that can be conveyed.

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## 1.3 Summary of Findings from the Survey of Appliance Retailers Who Participated in the HEER Program

### 1.3.1 Introduction

This section summarizes the results of a survey conducted with retailers who participated in SCE's 2006-2008 HEER Program. The survey covered Program awareness, knowledge of ENERGY STAR™ standards, satisfaction with the Program and Program processes, satisfaction with Program marketing efforts, and Program activity involving specific types of appliances (refrigerators, room air conditioners, whole house fans, electric storage water heaters, and ducted evaporative coolers). The findings are based on telephone surveys of 79 retailers out of a population of 191 participating retailers.<sup>8</sup> Most of the surveys were completed in late January and early February 2009.

This section is split into several sections: Program awareness, Program processes, specific types of appliances, and miscellaneous. Key findings from each section are presented below.

### 1.3.2 Program Awareness

All of the respondents were aware of SCE's HEER Program. KEMA also asked the participating retailers about several topics related to Program awareness and communication:

- *Sources of information about Program:* The most common way that respondents heard about the Program was through SCE mailings and brochures. Word-of-mouth and equipment manufacturers were also common means of finding out about the Program.
- *Preferred means of communication from Program:* Almost three-fourths of the participating retailers said that direct mail and brochures were the best medium for keeping them informed of Program changes. There was a strong preference for direct mail: the next most common medium was the SCE website, mentioned by only 13 percent of the respondents.

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<sup>8</sup> SCE provided KEMA with a list of participating appliance retailers.

- *Ease/difficulty in keeping up with Program changes:* Over three-fourths of the participating retailers reported that it was easy to keep up with Program changes. Those that said it was difficult cited the need for more information from utilities. Few (10%) respondents said that it was difficult to find out which appliances were eligible for rebates.
- *Familiarity and satisfaction with point-of-sale rebate process:* Almost three-fourths of the participating retailers said they were familiar with the point-of-sale rebate process. Almost all of these respondents were satisfied with the point-of-sale process. The most common reason for dissatisfaction was that the store did not receive forms on a regular basis.
- *Familiarity and satisfaction with mail-in rebate process:* Slightly less than half of the participating retailers reported familiarity with the mail-in rebate process. However, only nine respondents said they had filled out any mail-in rebate forms on behalf of their customers. All nine of these respondents reported satisfaction with the forms in terms of length and level of detail.
- *Familiarity and satisfaction with the online rebate process:* Less than half of the participating retailers reported familiarity with the online rebate process. Only nine respondents said that they had filled out the online forms on behalf of their customers. Eight of those nine reported satisfaction with the online forms in terms of length and level of detail.

### **1.3.3 Satisfaction with Program Processes**

KEMA conducted a similar survey of appliance retailers in 2006 as part of the evaluation of California's 2004-2005 Statewide Residential Retrofit Single-Family Energy Efficiency Rebate (SFEER) Program.<sup>9</sup> The HEER Program, which was a component of the SFEER Program, was part of this evaluation. This subsection will compare the 2004-2005 SFEER/HEER findings and

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<sup>9</sup> 2004/2005 Statewide Residential Retrofit Single-Family Energy Efficiency Rebate Evaluation, CPUC-ID#:1115-04, Prepared by Itron and KEMA, October 2, 2007. The SFEER program included the HEER program as well as IOU upstream lighting programs.

the 2006-2008 HEER findings when possible (see Table 1-6).<sup>10</sup> Satisfaction with the Program was generally high, and in most cases, improved over 2004-2005 HEER Program levels. More specifically:

- *Satisfaction with the Program in general:* Almost all (94%) of the participating retailers said that they were satisfied with the Program in general. This was an improvement over 2004-2005 program levels.
- *Satisfaction with interactions with Program staff:* Almost three-fourths of the participating retailers said that they were satisfied with their interactions with Program staff. This was an improvement over 2004-2005 program levels.
- *Satisfaction with utility marketing of Program:* Over three-fourths of the respondents said that they were satisfied with the way the utility markets the Program. This was an improvement over 2004-2005 program levels.
- *Satisfaction with SCE's website:* Slightly less than half of the participating retailers said that they were satisfied with the way SCE's website promotes the Program. This is a slight decrease from 2004-2005 program levels. However, there was also a substantial decrease in the proportion of respondents who said they were dissatisfied.
- *Reasons for dissatisfaction:* For the Program in general, interaction with Program staff, and utility marketing of the Program, the mostly commonly-cited reason for dissatisfaction was difficulty getting information about the Program. Regarding SCE's website, dissatisfied respondents said that it was difficult to navigate and understand.

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<sup>10</sup> It is important to note that the SFEER Program was a statewide program. Although it was designed to be delivered fairly uniformly across the PG&E, SCE, and SDG&E service territories, there were some small variations in program delivery from utility to utility.

**Table 1-6**  
**Retailers Participating in HEER Program**  
**Comparison of Satisfaction with Program Processes**  
**2004-2005 vs. 2006-2008 Programs**

Program component	2004-2005 Statewide HEER % of Participating Appliance Retailers Satisfied with Program (n=25-26)	2006-2008 SCE HEER % of Participating Appliance Retailers Satisfied with Program (n=79)
Program as a whole	84%	94%
Interactions with Program staff	64%	73%
Way utility markets Program	60%	80%
Program promotion on utility websites	54%	49%

Over half of the respondents said that they were satisfied with the timeliness of downstream rebate payments. The evaluation of the 2004-2005 HEER Program did not collect similar data.

KEMA asked the participating retailers to suggest improvements to the 2006-2008 HEER Program. Almost three-fourths of the respondents did not offer suggestions. KEMA also asked how the Program could improve its marketing efforts. Responses to this question were better, with the most common suggestion being to increase non-television advertising. Respondents also suggested increasing television advertising, giving retailers more information and training, and increasing the use of point-of-sale rebates.

### **1.3.4 Rebates Awareness/Adequacy, and Retailer Marketing (by Appliance)**

KEMA asked the participating retailers a similar set of questions for each type of appliance. These questions included:

- Whether the retailer sold that type of appliance;
- Awareness of the rebates;
- How actively the retailer promoted the rebates;
- Whether the current rebate level was sufficient;
- If the current rebate level was not sufficient, the rebate level that was needed to move demand for high-efficiency appliances;
- The average price difference between standard- and high-efficiency appliances;

- How actively the retailer promoted high efficiency appliances;
- How the retailer promoted high efficiency appliances;
- What methods the retailer used to promote high-efficiency appliances; and
- The retailer’s satisfaction with the information they received from manufacturers.

Table 1-7 shows comparisons of each of these questions across appliance types.

**Table 1-7  
Retailers Participating in HEER Program  
Comparison of Common Questions by Appliance Type**

Category/Topic	Refrigerators	Room Air Conditioners	Water Heaters	Whole House Fans	Evaporative Coolers
# who sell appliance type	78	43	25	24	16
% said were aware of rebates for appliance type*	94%	79%	56%	42%	33%
% said actively promote rebates	88%	73%	80%	40%	50%
Current SCE rebate level	\$50	\$50	\$30	\$50	\$300 - \$600
% said current rebate levels high enough	78%	85%	44%	67%	100%
Average rebate level respondents said needed to move demand (asked of those not thinking current rebate level is adequate)	\$95	\$92	\$60	\$92	-
Average estimated price difference between standard- and high-efficiency appliance	\$226	\$211	\$82	-	\$200
% said actively promoting high- efficiency appliances	95%	85%	78%	75%	50%
Most common method of promotion (% respondents said used this method)	Manufacturer signage (40%)	Manufacturer signage (46%)	Manufacturer signage (43%)	Manufacturer signage (56%)	Manufacturer signage (100%)
% satisfied with manufacturer info	73%	46%	44%	50%	17%

Note: \* KEMA asked the rest of the listed questions only to those respondents who said they were aware of the rebates.

Additional information concerning these responses included:

- *Which rebated equipment was sold most often:* Refrigerators were the most commonly sold type of appliance through the HEER Program. Almost the entire sample (99%) said

that they sell refrigerators. Slightly over half of the respondents reported selling room air conditioners. Electric storage water heaters and whole house fans each were sold by about one-third of the sample. Only one-fifth of the sample reported selling ducted evaporative coolers.

- *Awareness of the SCE rebates:* Participating retailers were more aware of the SCE refrigerator rebates than the other SCE rebates. Almost all of the respondents who sold refrigerators said that they were aware of the rebates. In comparison, three-fourths of the room air conditioner retailers, about half of the water heater and whole house fan retailers, and only one third of the evaporative cooler retailers reported awareness of the rebates for each of those appliance types. KEMA asked the rest of the questions about each type of appliance only to those respondents who said they were aware of the rebates for that type of appliance.
- *Promotion of the SCE rebates:* Over three-fourths of the respondents said that they actively promoted the SCE rebates for refrigerators, room air conditioners, and water heaters. Rebate promotion activity was lower for evaporative coolers (half of respondents) and whole house fans (less than half).
- *Adequacy of the SCE rebates:* KEMA asked the participating retailers whether the existing SCE rebates for each appliance type were enough to move consumer demand.
- *The advanced evaporative cooler rebates:* The appliance retailers viewed the SCE rebates for the advanced evaporative coolers to be the most effective. All of the respondents who were aware of the rebates for advanced evaporative coolers said that they were enough to move consumer demand. This may be because the \$300 to \$600 SCE rebates are significantly higher than the average reported price difference between standard- and high-efficiency evaporative coolers (\$200). However, it is unlikely that the respondents included the price of ducting in their estimates.
- *The room air conditioner rebates:* According to the participating retailers, rebates for room air conditioners were the next most effective after the advanced evaporative cooler rebates. Over three-fourths of the respondents said that the existing \$50 SCE room air conditioner rebates were enough to move consumer demand. The average rebate level cited by those who thought \$50 was not enough to move demand was \$92. The participating retailers estimated the average price difference between high-efficiency and standard-efficiency room air conditioners to be \$210.



- *The refrigerator rebates:* The appliance retailers rated the SCE refrigerator rebates as the third-most effective of the HEER Program rebates. Over three-fourths of the respondents said the \$50 SCE rebate was enough to move consumer demand. The average rebate level suggested by those who thought it should be higher was \$95. The average reported price difference between a standard-efficiency and high-efficiency unit was \$226.
- *The whole house fan rebates:* The participating retailers rated the SCE whole house fan rebates as somewhat less effective than the evaporative cooler, room air conditioner, and refrigerator rebates. About two-thirds of the respondents said that the existing \$50 SCE rebate for whole house fans was enough to move consumer demand. The average rebate level suggested by those who thought it should be higher was \$92. Since whole house fans are considered energy-efficient technologies in their own right, we did not ask for price comparisons between high-efficiency and standard-efficiency models.
- *The water heater rebates:* Participating retailers indicated that the SCE rebates on high efficiency water heaters were the least effective. Less than half of the respondents said that the existing \$30 SCE rebate was enough to move consumer demand. On average, these respondents said that a \$60 rebate would be enough to move consumer demand, and that the average price difference between high-efficiency and standard-efficiency units was \$82.
- *Promotion of energy-efficient appliances in general:* KEMA asked the participating retailers how actively they promoted energy-efficient appliances. Well over three-fourths of the respondents said they actively promoted energy-efficient refrigerators and room air conditioners. About three-fourths of the respondents reported actively promoting energy-efficient water heaters and whole house fans. Only half of the respondents said they actively promoted energy efficient evaporative coolers. For all types of appliances, respondents' most common promotion strategy was to use materials and signage provided by the manufacturers. This strategy was cited by about half of the respondents for each type of appliance, except for evaporative coolers, for which all the respondents said they used manufacturer signage.
- *Satisfaction with manufacturer information:* In general, the participating retailers were not very satisfied with the information about energy efficient appliances that they received from manufacturers. About three-fourths of the respondents said they were satisfied with manufacturer information about refrigerators. However, only half of the respondents reported satisfaction with manufacturer info about whole house fans, and fewer than half

of the respondents reported satisfaction with manufacturer info about room air conditioners and electric water heaters. Less than one quarter of respondents said they were satisfied with manufacturer information about evaporative coolers.

- *Satisfaction with equipment availability:* Almost all of the respondents said that they were satisfied with the availability of appliances that qualified for rebates.

### **1.3.5 Sales Staff Knowledge/Training, Pros/Cons of Consumer Electronic Rebates**

Over three-fourths of the respondents reported that their sales staffs were knowledgeable about ENERGY STAR™ certification. However, most of the respondents also said that additional training about ENERGY STAR™ certification would help their staff sells more energy-efficient appliances. KEMA asked the respondents who said that additional training would not be helpful to explain why. They most commonly indicated that their sales staff already knew enough.

KEMA asked the participating retailers to identify advantages and disadvantages of offering rebates for energy-efficient consumer electronics. About half of the respondents provided answers, and all those who did favored offering rebates on consumer electronics. The most commonly-cited advantage was that the rebates would improve sales, and very few disadvantages were mentioned.

#### **1.3.5.1 Retailer recommendations for program improvements**

KEMA asked the participating retailers how SCE could improve the effectiveness of its marketing efforts. Retailers most commonly suggested increasing advertising in non-television media (23%), increased television advertising (14%), and giving retailers more information or training (14%;Table 1-8).

**Table 1-8  
Participating Retailer Suggestions for Improving HEER Marketing**

<b>Suggestion</b>	<b>% of Respondents (n = 44)</b>
Increase non-TV advertising	23%
Increase TV advertising	14%
Give retailers more information or training	14%
More POS rebates or in-store application forms	11%
Increase rebate levels	9%
Simplify/ Improve signage	7%
Organize all program information in single place	7%
More brochures / Signage	7%
Use more coupons	5%
Send utility reps to stores	5%
No improvements necessary	5%
Other	9%

Note: Total exceeds 100% because multiple responses were permitted.

KEMA asked the participating retailers to suggest ways to improve the HEER Program in general. Most (71%) of the respondents did not provide suggestions. Table 7-7 shows the other suggestions respondents made.

**Table 1-9  
Participating Retailer Suggestions for Improving HEER Program**

<b>Suggestion</b>	<b>% of Respondents (n = 79)</b>
No suggestions for improvement	71%
More advertising / Public information	5%
Increase or expand rebates	5%
Use coupons	4%
Improve signage or brochures	4%
Make process easier for consumer	4%
Give retailers more info	3%
Organize all program info in one place	1%
Increase utility-retailer interaction	1%
Other	5%

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## **1.4 Summary of Findings from the Survey of Pool Contractors/Retailers Who Participated in the HEER Program**

### **1.4.1 Introduction**

This section summarizes the findings from an in-depth survey of a stratified random sample of 30 participating SCE pool contractors/retailers. These included contractors who had signed up to be eligible for a \$100 SCE upstream rebate for installing energy-efficient pool pumps as well pool retailers who were offering SCE's instant point-of-sale rebates for energy-efficient pool pumps. The most important purposes of this research task were:

- To assess participant satisfaction with the pool pump rebates offered by Southern California Edison's (SCE's) Home Energy Efficiency Rebate (HEER) Program; and
- To collect information on SCE residential pools and pool maintenance practices from pool contractor/retailer surveys.

Trained KEMA staff administered this survey during the September/October 2008 period. During this period, KEMA also administered the survey to contractors who participated in Pacific Gas and Electric's (PG&E's) pool rebate program. Results from the PG&E contractor/retailer survey are included in the charts and tables for comparison. The results of a recent on-site monitoring program of 152 pools conducted by SCE (ETCC report) are also included in portions of this report.<sup>11</sup>

### **1.4.2 Characteristics of the Pool Contractors/Retailers**

KEMA asked the contractors/retailers a series of background questions to get a basic understanding of their business structure and practices.

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<sup>11</sup> "Pool Pump Demand Response Potential: Demand and Run-time Monitored Data", DR 07.01 Report, Prepared by Design & Engineering Services Customer Service Business Unit Southern California Edison, June 2008.

- *Company size:* The average number of full-time employees per contractor/retailer across all companies was 5.6. The median number of full-time employees was only three. The average number of pools serviced annually was 518 with a median of 200.
- *Company services and qualifications:* Almost all the SCE contractors/retailers installed pool pumps and all of them offered pool maintenance and/or cleaning services. One third were C-53 licensed contractors. The SCE participant sample contained a large retailer representation. This was likely because the program offers point-of-sale pool pump rebates, which causes it to recruit and attract more pool retailers. Thirty-three percent of the SCE participating contractors/retailers claimed to belong to a pool trade association.

### 1.4.3 Awareness of the Rebate Program and Its Marketing Efforts

- *Awareness of the rebates:* All of the participating SCE contractors/retailers were aware of SCE's \$200 rebate to customers for having their existing single-speed pool pump motors replaced with new qualifying residential two-speed or variable-speed pool pump motors. However, only 60 percent were aware of SCE's \$100 rebate to contractors for installing the variable-speed pool pumps. In addition, only 41 percent of the participating SCE retailers/contractors said that they knew that SCE was allowing pool retailers to offer instant point-of-sale rebates for multi-speed pool pumps. The most commonly reported source of awareness about the rebates was the corporate office, and the most commonly reported methods of communication were manufacturer/corporate seminars and SCE visits.
- *Awareness of program promotional efforts:* Only 40 percent of the participating SCE contractors/retailers said they were aware of the utilities' efforts to promote greater use of multi-speed pool pump motors. Those contractors/retailers that were aware of these promotion efforts most commonly named mailers or flyers as the type of promotion they were aware of.

### 1.4.4 General Promotion of Energy-Efficient Pool Pumps

KEMA asked the participating contractors/retailers what factors influenced the energy efficiency of their pool pumps and how they promoted pool pumps.

- *Key factors influencing the energy efficiency of pool pumps:* For the participating contractors/retailers the most-cited factor influencing the energy efficiency of the pool

pumps they installed was the energy or cost savings that customers could potentially receive by getting a multi-speed pool pump. Nearly three quarters (72%) of the SCE participating contractor/retailers cited this as a factor in their decision-making.

- *Pool pump promotional practices:* Over three-fourths of the SCE participating contractors/retailers said that they promoted multi-speed pool pump motors differently than other pool pump motors they sell. The SCE pool retailers most commonly stated that showing the cost/energy savings from multi-speed pumps and discussing the utility rebate program were the most effective strategies for promoting efficient pool pumps.

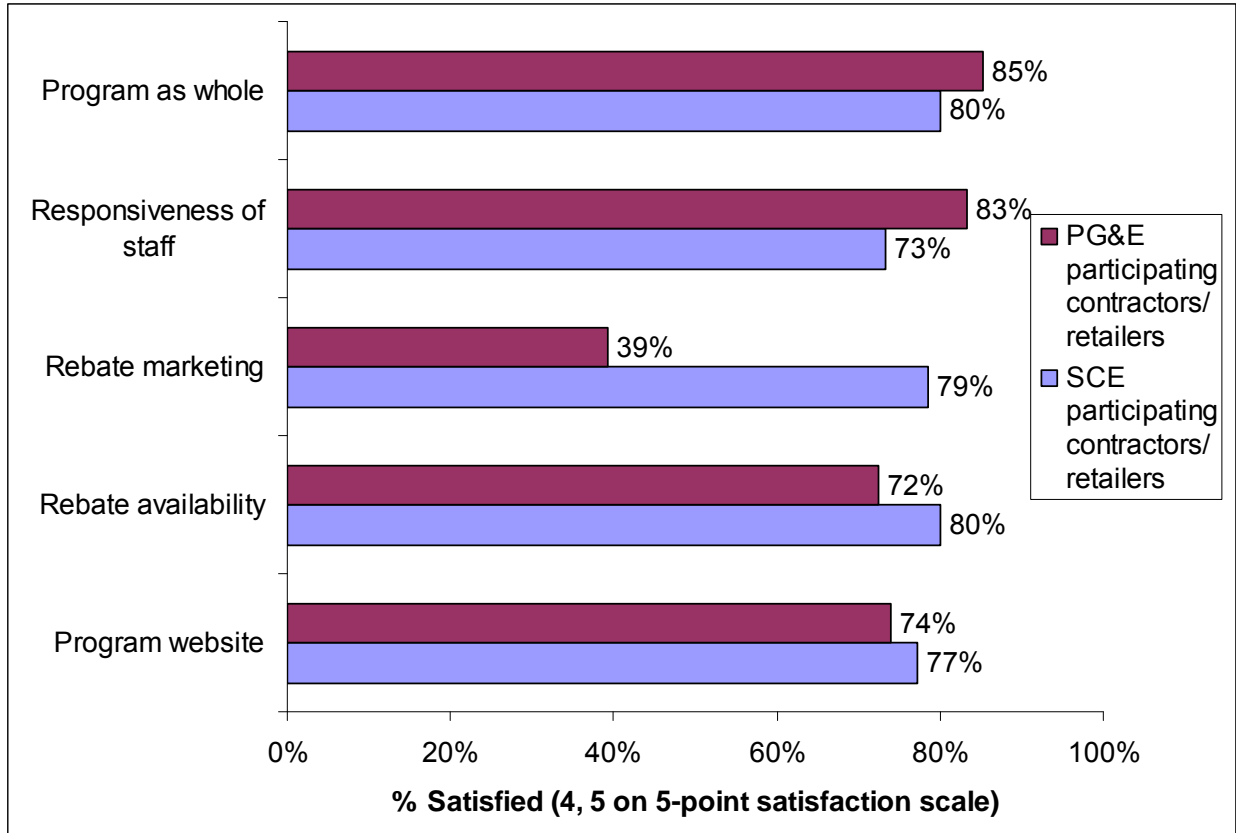
#### 1.4.5 Satisfaction with Program Processes

- *Rebate applications and eligibility determination:* Of the 13 SCE participating contractors/retailers that claimed to be working with the application forms, 92 percent found the forms to be reasonable in terms of length and level of detail. Twenty-two percent of the SCE participating contractors/retailers (n=27) said they were aware of at least one application being rejected. The two most common reasons for rejected applications included the particular pump not being listed as rebate-eligible and errors or missing information on the application forms. Most of the contractors/retailers with rejected applications said that these applications were eventually paid.
- *Keeping track of program changes:* SCE participating contractors/retailers reported a wide variety of ways to keep track of program changes, with the most common sources of information including the corporate office, trade association or supplier sources, and utility mailings or literature. Eighty-three percent of the SCE participating pool contractors/retailers found tracking program changes to be at least somewhat easy. The five pool contractors/retailers who found it difficult to track program changes said that the SCE website was difficult to navigate, that the SCE representatives no longer visit their stores, or that while they had good interactions with SCE representatives at trade shows, this was the only personal interaction they had with SCE.
- *Satisfaction with program incentives:*
  - Forty-three percent of the SCE participating contractors/retailers were less than satisfied with the level of their multi-speed pool pump rebates (\$200 for customers and \$100 for retailers/installers).
  - However, 80 percent of the SCE participating contractors/retailers were satisfied with rebate availability.

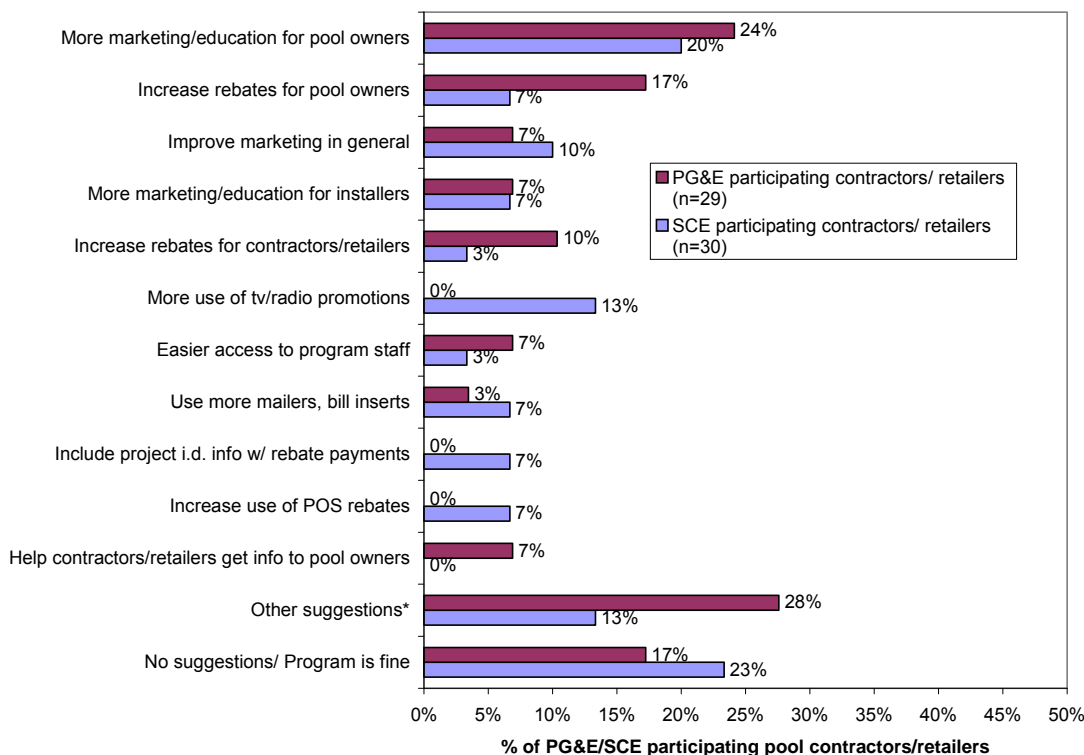
- Forty-two percent of the SCE contractors/retailers said that the new split rebate structure motivates contractors/retailers to promote more of the multi-speed pumps.
- *Satisfaction with the program website:* The SCE participating pool contractors/retailers were generally satisfied with the program website. The average satisfaction rating was 4.4 on a 5-point satisfaction scale where 5 equaled “very satisfied.”
- *Satisfaction with program marketing efforts:* Seventy-nine percent of the participating contractors/retailers were satisfied with the way the utility promoted and explained the rebates for energy-efficient pool pumps.
- *Satisfaction with the program staff:* The SCE participating pool contractors/retailers were generally satisfied with the program staff. The average satisfaction rating was 4.2 on a 5-point satisfaction scale where 5 equaled “very satisfied.”
- *Satisfaction with the program as a whole:* Eighty percent of the SCE participating contractors/retailers were satisfied with the rebate program as a whole. The SCE participating contractors/retailers that were less than satisfied with the rebate programs cited difficulty getting the rebates approved, difficulty with the rebate paperwork, waiting too long to receive rebate payments, and improvements needed for the program staff and marketing materials. Figure 1-6 summarizes the average satisfaction ratings for the various program processes.
- *Recommendations for program improvements:* Figure 1-7 shows the participating contractors/retailers’ wide variety of suggestions for program improvements.



**Figure 1-6  
Summary of Satisfaction Ratings  
for PG&E/SCE Rebate Program Processes**



**Figure 1-7**  
**Suggestions for Pool Rebate Program Improvements**  
**from PG&E/SCE Participating Contractors/Retailers**



Note: \*Other suggestions, each cited by only one respondent, include allowing above-ground pools to be eligible, listening more to the Independent Pool and Spa Service Association (IPSSA) and less to builders, providing higher rebates for remodeling vs. new construction, encouraging better multi-speed pumps and better controllers, stop requiring contractors/retailers from having to sign up every year, improving the program website, sending more flyers to pool stores, and allowing toggle switches rather than requiring electric controllers.

### 1.4.6 Pool Characteristics, Equipment Types, and Maintenance Practices in the SCE Service Territory

The sections of the report containing SCE pool market characteristics do not lend themselves to easy summarization. Readers are encouraged to view the detailed findings. However, the following are some brief summaries:

- *Pool Sizes:* SCE pool contractors/retailers reported that 74 percent of the pools they service are smaller than 30,000 gallons.
- *Pool filtration pumps:*

- *Speed options:* SCE pool contractors/retailers estimated that 90 percent of the pools they service have single-speed pool pumps, three percent have two-speed pumps, and six percent have variable-speed pumps. In the ETCC report, over 99 percent of the sampled sites had a single-speed pump.
- *Horsepower:* For single-speed pumps, the SCE contractors/retailers reported approximately one-third of pool pumps fell into each of the following horsepower ranges: less than 1 hp, 1 to 1.5 hp, and 2 to 2.5 hp. The ETCC report indicated that almost two-thirds of single-speed pumps fell into the 1 to 1.5 hp range. For multi-speed pumps, the SCE contractors/retailers reported that the majority of pumps fell into the 3 hp range.
- *Operating periods:* For single-speed pumps, the SCE contractors/retailers reported an average of 7.1 hours of operation per day. The ETCC report stated an average of 5.2 hours of operation per day. These hours of operation tended to fall between 6 AM and 7 PM, with a peak during the 11 AM hour. For multi-speed pumps, the SCE contractors/retailers reported an average of 9.3 hours of operation per day.
- *Automatic pool cleaning systems:* The SCE contractors/retailers reported that three-fourths of pool owners have suction-side cleaners. The contractor/retailers surveys estimated the daily operating times for the suction-side cleaners to be 4.6 hours.
- *Pool timers:* The SCE contractors/retailers reported that about one-fourth of the timers are controlled by indoor computer pad or wireless remote control and that pool professionals set 94 percent of the timers. However, a number of the pool professionals observed that while they will set the timer initially, some homeowners will change the settings after they leave.
- *Pool heaters:* The SCE contractors/retailers reported that about three-fourths of pool owners have pool heaters. Less than half of the pools monitored in the ETCC report had heaters.
- *Pool spas:* According to the ETCC report, about half of the sites had a spa.

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## 1.5 Evaluator Recommendations for HEER Program Improvements

This section describes the evaluator recommendations for improvements in SCE's HEER Program. The section also summarizes the evidence from the evaluation findings that these recommendations were based on.

### 1.5.1 Marketing and Education Recommendations

- *Recommendation #1: Do more direct mail or bill insert promotions of the SCE rebates, especially for non-refrigerator rebates.<sup>12</sup> To the degree possible, target messages for specific customer segments.*

There is a lot of survey evidence that awareness of SCE's non-refrigerator rebates is very low among both the general population of SCE residential customers and even among program participants. At the same time, the survey evidence shows that for some of the non-refrigerator measures, energy efficiency and rebates are significant factors in purchase decisions. Finally, SCE survey respondents cited SCE as their most trustworthy source of energy information. When all this information is considered together it suggests that not making these SCE customers aware of energy-efficient equipment and the associated SCE rebates represents an important missed opportunity.

Throughout this report there is also information on how awareness of energy efficiency rebates and labels (e.g. Energy Star), energy efficiency knowledge, attitudes towards energy efficiency, and the importance of energy efficiency in appliance purchase decisions can vary by the demographic characteristics of the respondent. These characteristics include gender, age, education level and income. It is not clear what capability SCE has to target specific subgroups of its residential customer population. However, if this is possible it should try to do so. This will increase the chance that marketing messages – whether focusing on environmental issues or “pocketbook” issues such as energy cost savings – will resonate with target audience.

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<sup>12</sup> As noted previously, SCE has recently switched from bill inserts to windows on the billing form for key messaging. This new format reduces the amount of program information that can be conveyed.

At the same time SCE should try to make its direct mailing efforts cost-efficient by insuring that promotions of types of HEER-rebated equipment that are only appropriate for certain homeowners – such as pool pumps, evaporative coolers, and electric water heaters – are only mailed to customers who could use these types of equipment. For example, in the April 2009 discussions of the preliminary HEER process evaluation results with SCE staff they indicated that they currently did not have a list of SCE customers with swimming pools. However, a June 2008 SCE report on pool pump demand response potential did indicate that another department within SCE had compiled such a list. So the HEER Program staff should obtain this list and expand and modify it as necessary so that they can target any mailings for the promotion of pool pump rebates. PG&E currently uses such a list to market pool rebates to their customers.

SCE did do some direct mailings for the non-refrigerator HEER measures during the 2006-2008 time period, although the frequency of these mailings declined significantly over time.

- In 2006 it did one direct mailing for its pool pump; two direct mailings for its whole house fan rebates; one bundled direct mailer for its refrigerator, whole house fan, evaporative cooler, pool pump, and room AC rebates; and one bundled direct mailing for its pool pump, electric water heater, room AC, refrigerator, and whole house fan rebates.
- In 2007 it did separate direct mailings promoting its rebates for pool pumps, whole house fans, and evaporative coolers.
- In 2008 it did only a direct mailing promoting its pool pump rebates.
- *Supporting evidence for Recommendation #1:*
  - *Low awareness of whole house fan, pool pump and advanced evaporative coolers rebates:* Awareness of these rebates among the general population of SCE single-family customers was fairly low. Even when asked prompted awareness questions, only 27 percent of the SCE general population single-family customers claimed awareness of the whole-house fan rebates, only 18 percent claimed awareness of the pool pump rebates, and only 16 percent claimed awareness of the evaporative cooler questions.
  - *Few who recalled SCE marketing messages mentioned seeing/hearing about rebates.* We asked the general population of SCE residential customers: “In the past 12 months do you recall seeing or hearing any messages from Southern California

Edison concerning how to manage home energy use, the energy efficiency of specific products, or Edison programs that help customers save energy?" When the 328 SCE customers who claimed to have seen or heard such messages were asked to recall the subject of these messages a third of them could not remember what they were about. The second most common response was the somewhat vague "how to conserve energy and save money." Only five percent specifically recalled hearing about rebates. However, it is not clear to what degree customers might have confused Flex-Your-Power ads with

- *Evidence that energy efficiency can be particularly influential for room air conditioner, whole house fans, and pool pumps:* The general population survey found that purchasers of these appliances valued energy efficiency more highly as a criterion for purchase than did other appliance purchasers. This implies that increasing customers' awareness of which models are most efficient (perhaps through further education on the Energy Star rating system) might have a significant impact.
- *Appliance retailers recommend this approach:* The most-cited recommendation for HEER Program improvements among SCE appliance retailers was that the program should do more non-television advertising.
- *Pool contractors recommend this approach:* The most-cited recommendation for HEER Program improvements among SCE pool contractors was that they should do more marketing and education for pool owners.
- *Utility is considered most trustworthy information source:* Seventy percent of respondents rated the utility as trustworthy as compared with 48 percent for manufacturers of energy using equipment; 43 percent for environmental activists; 41 percent for the government; 41 percent for friends, family, and neighbors; 38 percent for retailers; and 26 percent for contractors.
- *Bill inserts were most-cited source of HEER Program awareness:* When the general population of SCE single-family customers who said they were aware of the HEER Program rebates were asked how they had become aware of them, the most-cited source – by far – was bill inserts (44%). It could be argued that this is only a reflection of the current emphasis of the SCE promotional efforts. However, only 13 percent of these respondents cited a retailer or contractor as their first source – which in theory is a major channel of HEER Program promotion.

- *Bill inserts and direct mail were top two preferred ways of receiving HEER Program information:* When general population SCE single-family customers who were interested in receiving more HEER Program information were asked how SCE could best reach them, their most common responses were bill inserts (42%), direct mail (36%), or email (19%).
- *Recommendation #2: Continue promotion of generic energy saving messages with more emphasis on the link between home energy use and global warming. Develop metrics to measure progress in energy-efficiency AKA. Work with Flex-Your-Power to insure that energy efficiency educational messages are in line with SCE's AKA objectives.* While in the previous recommendation we argued for more explicit promotion of the HEER rebates, we do not mean to suggest that SCE or Flex-Your-Power should stop more general messages (e.g., not technology-specific or rebate focused) about the value of energy savings and the relationship between energy savings and global warming. We believe that there is great value in general messages promoting energy efficiency.

In addition, in its 2009-2010 Program Implementation Plans SCE has promised to measure over time changes in the energy efficiency awareness, knowledge and attitudes (AKA) of its customers. Increasing energy efficiency AKA among these customers will only be possible with such general educational efforts. While SCE could choose to rely mostly on Flex-Your-Power for these general energy efficiency messages, this would involve surrendering control over the AKA outcomes to a program that SCE will only have limited control over. Therefore the SCE marketing staff will likely have to conduct some of its own general energy efficiency campaigns along with working with Flex-Your-Power to insure that its energy efficiency educational messages are in line with SCE's AKA objectives. Finally, as noted above, SCE survey respondents cited SCE as their most trustworthy source of energy information.

For both the SCE residential general population survey and the HEER participant survey, KEMA created a number of AKA questions that SCE could use for baseline measurements for its long-term tracking of SCE customer AKA. These questions were derived from AKA literature as well as from other sources. For example, our energy efficiency knowledge questions came from the Flex Your Power Challenge Cheat Sheet ([www.fypower.org/pdf/challenge\\_cheatsheet0806.pdf](http://www.fypower.org/pdf/challenge_cheatsheet0806.pdf)) and from SCE's website ([www.sce.com/residential/rebates-savings/appliance/](http://www.sce.com/residential/rebates-savings/appliance/)). While we think these AKA questions are a good starting point for any baseline measurement, we do not want to preclude SCE from coming up with additional or alternative AKA questions.

- *Supporting evidence for Recommendation #2*

- *The energy efficiency knowledge question that SCE general population residential customers scored most poorly on was: “Homes emit insignificant amount of greenhouse gases compared with cars.” Only 38 percent of respondents gave the correct response (“false”).*
- *Awareness of all of the HEER rebates was higher to a statistically significant degree among respondents who recalled receiving energy saving messages from SCE in the prior year. It should be acknowledged, however, that correlation does not mean causation and it is possible that customers who have an interest in energy efficiency are predisposed to “tune in” to both general SCE energy efficiency messages as well as measure/rebate-specific promotions.*
- *Awareness of the yellow Energy Guide stickers found on appliances and of Energy Star labels was higher to a statistically significant degree among respondents who recalled receiving energy saving messages from SCE in the prior year.*
- *Recommendation #3: Do more cross-promotion of HEER non-refrigerator rebates among participating retailers, insuring that all salespersons of HEER-eligible equipment get rebate information.* The survey of participating retailers showed that while awareness of the HEER refrigerator rebates was very high, awareness of most of the other HEER Program rebates was much lower. Most of the participating retailers are large stores such as Home Depot, Lowe’s, Costco and Wal-Mart where the salespersons selling refrigerators may be different than those selling the non-refrigerator equipment. Therefore providing the refrigerator salesperson with information about the full range of HEER rebates may not be enough to insure that information is disseminated to the other equipment salespersons. SCE staff or their hired contractors should implement procedures to insure that all salespersons of HEER-eligible equipment get rebate information.
- *Supporting evidence for Recommendation #3: Table 1-10 shows that while nearly all the salespersons or store managers who sold refrigerators were aware of the HEER rebates, those who sold other types of HEER-eligible equipment were much less aware of these rebates.*



**Table 1-10  
Retailer Awareness of HEER Rebates**

<b>Appliance/Measure (# of retailers who sold equipment)*</b>	<b>% of HEER-participating retailers who sold that equipment and were aware of rebates</b>
Refrigerators (n=77)	94%
Room air conditioners (n=26)	73%
Whole-house fans (n=12)	42%
Electric water heaters (n=9)	56%
Evaporative coolers (n=6)	33%

Note: The actual number of retailers who sold HEER-eligible equipment was actually larger than the sample sizes in this column, but in some cases a knowledgeable salesperson or store manager for a given equipment type was not available for the interview.

- *Recommendation #4: Work with the Home Energy Efficiency Survey (HEES) Program to insure that HEES participants get easier access to HEER Program information.* As noted in the excerpt from the HEES process evaluation report below, SCE should do more cross-marketing of the SCE energy efficiency programs in the HEES materials and make sure that interested HEES participants can access detailed HEER Program information through a weblink. The HEES process evaluation also reported that many HEES participants did not recall receiving program information that they requested. So the HEER Program should review the processes for delivering its Program materials to HEES participants to make sure that these processes are operating effectively.
- *Supporting evidence for Recommendation #4:* One of the recommendations of the recent process evaluation of the HEES Program was:

*Heighten focus on other electric, water, and utility resources in the HEES marketing materials and reports.* Many respondents do not recall receiving any information on other programs, or they desired more specific information. In addition, interest in finding out about other SCE energy efficiency programs was cited by over half of respondents as a very important reason for participating. This benefit was not used at all in the headlines or taglines of marketing materials that we reviewed, and thus we recommend that SCE evaluate the effectiveness of using this benefit as a marketing message. The program could also increase both participant satisfaction and the rate at which participants implement equipment upgrade recommendations

by more aggressively advertising other utility energy efficiency programs on the results pages. New program partnerships might include the California Solar Initiative and Cool Roofs. The HEES report would also benefit from providing more detail about the program requirements and procedures. The large equipment measures with the highest implementation rates were the refrigerator and freezer recycling measures, which were paired with detailed text about the SCE Refrigerator/Freezer Recycling program. It would also be helpful to provide more specific weblinks to the appropriate rebate or other program in order to make the measures more actionable. For many of the recommendations, the links are only to the general utility websites.<sup>13</sup>

- *Recommendation #5: Do more promotion of the HEER Program's insulation rebates.*
- *Supporting evidence for Recommendation #5:* Although the HEER Program has taken the trouble to develop a separate rebate form for insulation rebates, HEER Program staff acknowledge that they have not really promoted the insulation rebates and the Program's tracking database show that only a handful of participants received insulation rebates. It's not clear why the Program has chosen to deemphasize these rebates.

### **1.5.2 Program Process/Design Recommendations**

- *Recommendation #6: Try to reduce free ridership levels by:*
  - Introducing more salesperson/contractor incentives (e.g. SPIFs, upstream incentives);
  - Adding salesperson/contractor training, and
  - Setting explicit goals to recruit new contractors and retailers.

These strategies, which are described in more detail below, should help reduce free ridership by attracting new types of appliance purchasers that may be less predisposed to energy efficiency than recent HEER participants. They should also make energy

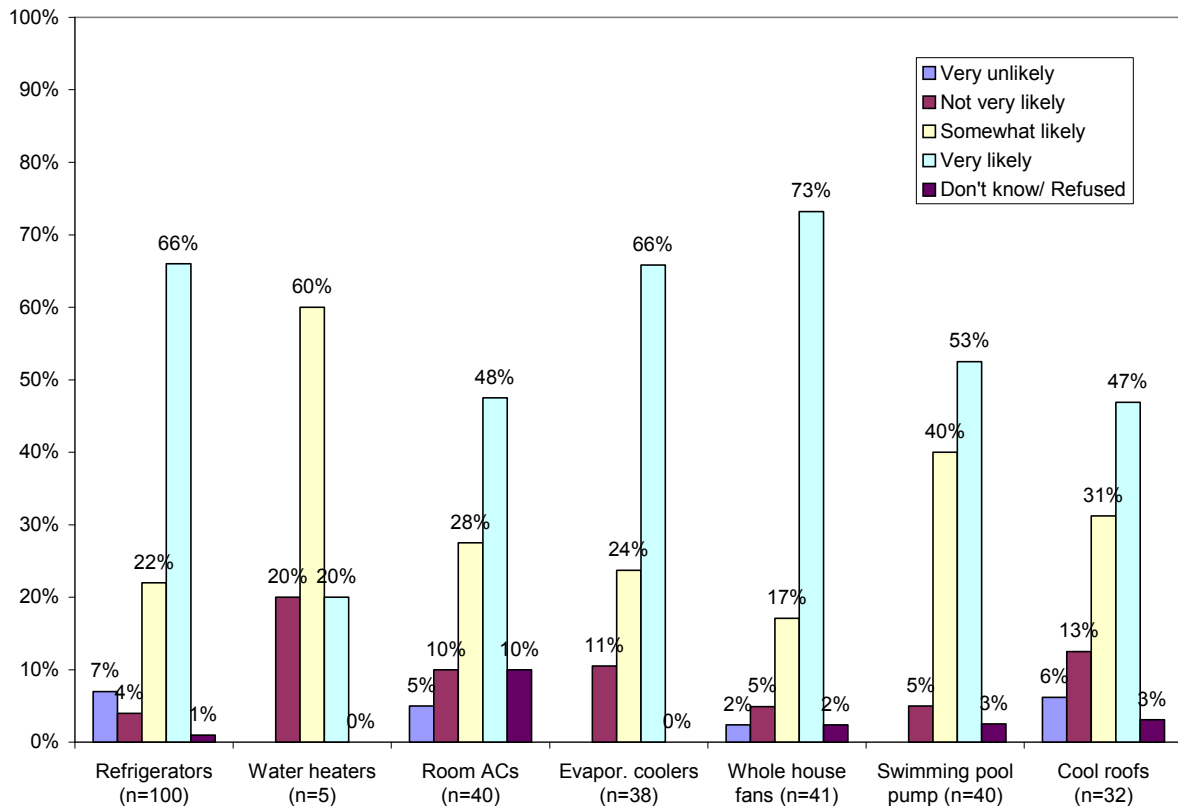
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<sup>13</sup> *Final Report: Process Evaluation of the SCE 2006-08 Home Energy Efficiency Survey (HEES) Program, Study ID: SCE0275.01; prepared by ECONorthwest, August 4, 2009.*

efficiency and HEER program rebates more common topics of discussion at the points of equipment purchase.

- Supporting evidence for this recommendation.* While the official free ridership estimates for the HEER Program – which are being produced by the CPUC impact analysis -- won't be available until November, some preliminary information from this process evaluation suggest that the free ridership levels for some of these measures may be very high. Figure 1-8 shows that 66–73% of the refrigerator, whole house fan, and evaporative cooler respondents said that they were “very likely” to have purchased the equipment without the rebates. The levels were lower (47 – 53%) for the room air conditioner, pool pump, and cool roof participants.

**Figure 1-8**  
**HEER Participant Estimates of**  
**Likelihood of Purchasing the HEER-Rebated Equipment**  
**if the HEER Rebates Had Not Been Available**



We also asked the retailers and contractors who sell the HEER-rebated equipment how their sales of this equipment would have been affected if the HEER rebates had not been available. This is another way to estimate program attribution – the portion of equipment sales that can be attributed to the HEER Program. Table 1 shows these retailer/contractor estimates of the effects on their equipment sales if the HEER rebates had not been available. It also compares these estimates with the percentage of HEER participants who has said they were “very unlikely” or “somewhat unlikely” to have purchased the HEER-rebated equipment if the HEER rebate had not been available.

The retailer/contractor sample sizes are small for all the equipment types except refrigerators. However, what is notable about this table is that – with the exception of whole house fans –the retailers, contractors, and participants are all telling very similar stories about what would happen to equipment sales if the HEER rebates were not available. This consistency of survey responses across three different groups of respondents involved in the HEER equipment purchases lends credibility to these as estimates of program attribution.

**Table 1-11**  
**Comparing Retailer/Contractor and HEER Participant Estimates**  
**of the Sales Effects**  
**of the Absence of the HEER Rebates**

HEER-Rebated Equipment Type	Retailer/Contractor Estimating Sales Effect (# providing estimate)	Average of Retailer/Contractor Estimates of % Sales Drops in Absence of HEER Rebate	Average % of HEER Participants Who Said That They Were "Very Unlikely" or "Somewhat Unlikely" to Buy the Equipment without the HEER Rebate
Refrigerator	Appliance retailers (n=50)	14%	11%
Water heater	Appliance retailers (n=4)	14%	20%
	HVAC contractors (n=5)	0%	
Room air conditioner	Appliance retailers (n=12)	12%	15%
	HVAC contractors (n=14)	13%	
Whole-house fan	Appliance retailers (n=3)	60%	7%
	HVAC contractors (n=9)	0%	
Ducted evaporative cooler*	Appliance retailers (n=1)	10%	11%
Single-stage	HVAC contractors (n=10)	6%	
Single-stage w/ dampers	HVAC contractors (n=11)	6%	
Two-stage	HVAC contractors (n=9)	5%	
Two-stage w/ dampers	HVAC contractors (n=9)	4%	

Note: We asked the retailers/contractors to estimate the sales effects over "the past year" and they were all reminded of the HEER rebate amounts. \*The appliance retailers were only asked about ducted evaporative coolers in general and the HEER rebate amount was given as a range of \$300-\$600. The HVAC contractors were asked about each of the four types of ducted evaporative coolers eligible for the HEER rebate and in each case they were reminded of the HEER rebate amount for that particular type of ducted evaporative cooler.

Why are retailers, contractors, and HEER-participating consumers all giving such low estimates of the sales effects of the rebates? One explanation is, as Table 2 shows, HEER participants are reporting that the rebates are rarely being discussed with the retailers or contractors during the purchase decision process. Therefore the rebates are also rarely being cited as a reason for equipment purchase.

**Table 1-12**  
**The Frequency with which HEER Participants**  
**Mentioned Rebates as Something They Discussed with Retailers/Contractors**  
**or as Reasons Why They Purchased the HEER-Rebated Equipment**

<b>Appliance/Measure</b>	<b>% who mentioned rebates as something they talked about with dealers/contractors</b>	<b>% who mentioned rebates as reason for buying the equipment</b>
Refrigerators (n=100)	7%	3%
Water heaters (n=5)	20%	40%
Room AC (n=40)	5%	15%
Evaporative cooler (n=38)	0%	5%
Whole-house fan (n=41)	2%	10%
Pool pump (n=40)	5%	13%
Roof (n=40)	13%	19%

We did ask the retailers whether they were actively promoting the HEER rebates and the majority said that they were (Table 1-13). However, the table also shows that their most-cited method of promoting the energy-efficient equipment was to use manufacturer-provided information and there was not a high level of satisfaction with this information. Only a small percentage of the retailers said that their salespersons received commissions for selling the energy-efficient equipment.

**Table 1-13**  
**The Promotional Practices of HEER-Participating Retailers**

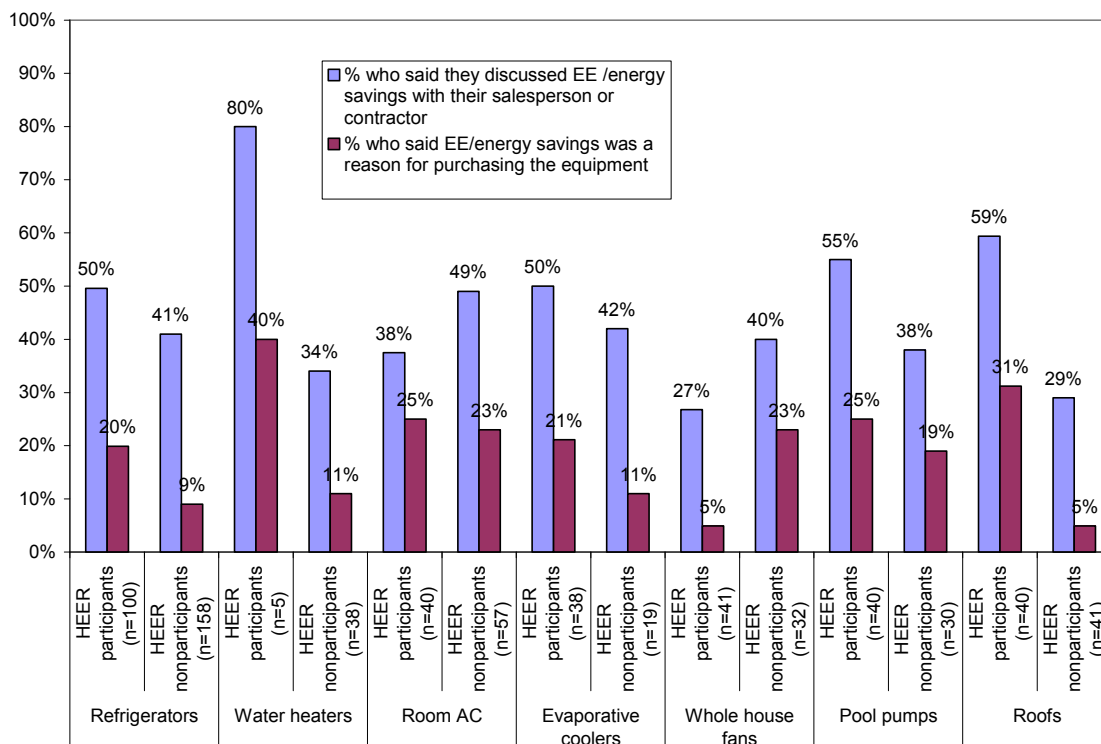
<b>Appliance/Measure (# of retailers)</b>	<b>% of retailers saying they actively promote HEER rebates</b>	<b>Most-cited way they promote the EE equipment</b>	<b>2nd-most-cited way they promote the EE equipment</b>	<b>3rd-most-cited way they promote the EE equipment</b>	<b>% satisfied with manufacturer information</b>
Refrigerators (n=77)	95%	Manufacturer signage - 40%	Utility signage - 30%	More prominent store placement - 27%	73%
Room air conditioners (n=26)	85%	Manufacturer signage - 46%	Utility signage - 27%	More prominent store placement - 18%	46%
Whole house fans (n=9)	75%	Manufacturer signage - 56%	Utility signage - 11%	Salesperson gets commission - 11%	50%
Electric water heaters (n=5)	78%	Manufacturer signage - 43%	Utility signage - 14%		40%
Evaporative coolers (n=3)	50%	Manufacturer signage - 100%	No other methods mentioned	No other methods mentioned	17%

One theory for these high free ridership estimates is that the HEER Program is attracting appliance purchasers who are already predisposed to buy higher efficiency equipment. If this was the case, then such consumers might appreciate the rebates as a “nice to have” bonuses but they would not value consider them as “tipping points” – factors that were significant in their decision whether or not to purchase the more expensive energy-efficient equipment. However, such consumers would still obtain the rebates, even though they were not important in their purchase decisions, because the transaction costs for obtaining the rebates in the HEER Program are relatively low. This is especially true for the point-of-sale rebates – which would represent “free money” for customers already pre-disposed to buy energy-efficient equipment.

If it was true that the HEER Program had a large percentage of participants who were who are already pre-disposed to buy higher efficiency equipment, then this might also explain why salespersons and contractors do not mention the HEER rebates that frequently. If they sensed that the consumer was already interested in the more energy-efficient models then they would simply tailor the discussion to other product features and would not see a need to emphasize the rebates.

One way to try to determine whether the HEER participants were more pre-disposed than the general population to value energy efficiency is to compare the percentage of HEER participants who cited energy efficiency as a reason why they purchased their equipment to the percentage of nonparticipating SCE customers who cited such a reason. Figure 1-9 makes this comparison. It shows that for the HEER Program’s dominant measure – refrigerators – the HEER participants were more than twice as likely as the nonparticipants to cite energy efficiency as a reason for their purchase. For water heaters, evaporative coolers, and roofs the HEER participants were also much more likely to cite energy efficiency as a reason. For room air conditioners and pool pumps the participants and non-participants cited energy efficiency as a reason with a similar frequency. Only for the whole house fans were the HEER participants less likely to cite energy efficiency as a reason for purchase than their nonparticipant counterparts.

**Figure 1-9  
Comparing HEER Participants and Nonparticipants  
On Energy Efficiency Discussions, Motivations  
in the Equipment Purchase Decisions**



Note: “Nonparticipant” responses were determined by taking the responses of recent (last two years) equipment purchasers from the general population survey and then excluding the responses of those who said that they had received a SCE rebate for their equipment.

Figure 1-9 also compares the percentage of participants and nonparticipants who discussed energy efficiency with their salespersons or contractors. If the level of energy efficiency discussion for the HEER participants was much higher than that of the nonparticipants, then a case could be made that the higher percentage of HEER participants who cited energy efficiency as a reason for purchase was not due to predisposition but due to the HEER-participating salespersons/contractors making energy efficiency a bigger part of their sale pitch. Figure 1-9 shows that for all the measures except room air conditioners and whole house fans the HEER participants were more likely to say that they discussed energy efficiency with their salespersons/contractors. However, it is impossible to determine who much of this



energy efficiency discussion was prompted by the salesperson/contractor and how much was prompted by the customer. For example, if the HEER participants were more predisposed than the nonparticipants towards energy efficiency, then they would also be more likely to bring this topic up in discussion.

All things considered, Figure 1-9 suggests that there may be some opportunities for the HEER program to recruit appliance purchasers who are not yet as favorably disposed to consider energy efficiency in their purchase decision as past HEER participants have been. The biggest potential benefit of this strategy would be to reduce Program free ridership – since these new recruits would presumably be more willing than past HEER participants to give the Program credit for “opening their eyes” to the benefits of energy efficiency. Figure 1-9 also suggests that, at minimum, there is a lot of untapped potential to bring energy efficiency into the equipment purchase discussion. Even among the HEER participants energy efficiency is only being discussed about half of the time.

There are a number of strategies that the HEER Program could implement to try to attract these new types of appliance purchasers (those that may not fully value energy efficiency) and to make energy efficiency more common in the equipment purchase discussions. These strategies include:

- *Make appliance shoppers more aware of the HEER rebates before they are at the store, showroom or other point of sale.* This has already been discussed in Recommendation #1.
- *Make appliance shoppers more likely to care about or ask about energy efficiency before they are at the store, showroom or other point of sale.* This has already been discussed in Recommendation #2.
- *Make it more likely that salespersons or contractors will mention energy efficiency and the HEER rebates at the point of purchase.* One way to accomplish this – making salespersons/contractors more aware of the full range of HEER rebates – has already been discussed in Recommendation #3. However, other strategies would include:
  - *Recommendation 6A: Introduce more salesperson/contractor incentives (SPIFs, upstream incentives) into the HEER Program.* SCE would be prudent to start this on a pilot basis – e.g. randomly select a few stores for salesperson SPIFs and measure whether the SPIFs indeed lead to higher

sales. If the pilot program proved successful than the HEER Program could expand the availability of the SPIFs.

- *Recommendation 6B: Provide more salesperson/contractor training.* The program could start with trainings that have proved successful with other utilities (e.g. pool contractors) or with trainings to address areas of particular need (e.g., room air conditioner salespersons).
- *Recommendation 6C: Increase the number of participating retailers and contractors, with particular emphasis on recruiting Sears:* The HEER Program should establish explicit metrics for increasing the number of participating retailers and contractors it has. Particular emphasis should be placed on recruiting Sears, which is currently not a participant in the HEER Program even though it was the most-cited source for recent refrigerator purchase among the general population of SCE customers. KEMA has not examined the contractor/retailer marketing lists used by the current HEER Program. However, we have found through past evaluations of the HEER Program and many other utility programs that contractor lists used by such programs are often out-of-date. In addition, these marketing lists often leave out many smaller companies that may not be included in lists purchased from trade associations or commercial databases such as Dun and Bradstreet. Supplementing these purchased lists with a review of local yellow page listings is often a good way to include these smaller companies.
  - *Increase incentive levels:* There is a good theoretical argument that higher incentive levels can actually reduce free ridership by attracting to energy-efficiency programs more customers who would have otherwise avoided energy-efficient equipment due to high incremental costs. This argument is discussed below.
- *Supporting evidence for Recommendation 6A: Introducing more salesperson/contractor incentives:* In addition to the evidence mentioned above in the discussion of HEER Program free ridership levels (e.g., the infrequency of discussions of rebates and energy efficiency in equipment purchase decisions), other supporting evidence for this action include:
  - *There is a precedent for it.* Salesperson incentives were parts of California energy efficiency programs of the 1990s. In addition, the HEER Program already has one upstream incentive – a \$100 rebate for pool pump installers and retailers – which the Program pays out along with a \$200 rebate to the homeowner. We asked the pool

- contractors/retailers about the pros and cons of this relatively new (2006) upstream incentive. The most-cited response (43% of the retailers/contractors) was that the new split rebate structure motivates contractors/retailers to promote more of the multi-speed pumps. Only 13 percent of the pool contractors/retailers thought that the whole rebate should go to the end user.
- *Refrigerator, room air conditioner, and water heaters purchasers cited salespersons/contractors as their source for appliance/equipment information most frequently and much more frequently than any other source.* When we asked general population SCE customers who had recently purchased an appliance where they get information on what model of appliance/equipment to buy, their answers included:
    - *Refrigerators:* 56 percent of the recent refrigerator purchasers from the general population survey said salespeople. Other information sources were only cited by a small minority of respondents -- Internet (22%), Consumer Reports (8%) and SCE (6%).
    - *Room air conditioners:* Air conditioner purchasers relied on salespeople (32%), the Internet (24%), installation contractors (21%), and Consumer Reports (10%) for input on what to buy. Prospective buyers were even more likely to say they would rely on salespeople for information (56%).
    - *Water heaters:* Recent buyers reported relying on retailers (46%); friends, neighbors, or relatives (17%); installation contractors (17%); and the Internet (12%) for information on what to buy. HEER participants and equipment purchasers among the SCE residential general population all cited salespersons and contractors as their
  - *KEMA's own evaluation experience points to the advantages of SPIFs.* In a 2005 evaluation of the Alliant Energy-Interstate Power and Light (Alliant-IPL) prescriptive rebate program, KEMA found some evidence to support the effectiveness of SPIFs. Table 1-14 compares program participant and nonparticipant responses for the top two equipment purchase reasons cited by participants. It shows that program participants were, in almost all cases, much more willing to purchase equipment because of a contractor or retailer recommendation than non-participants. Interestingly, the only measure in the table where there is no difference between participants and nonparticipants in terms of contractor/retailer influence—clothes washers— was also the only measure in the table for which the Alliant-IPL program

did not pay out SPIFs. This suggests that SPIFs may be encouraging contractors or dealers to make a more energetic or persuasive pitch for the rebated equipment. At the same time, Table 1-14 shows that the participants and nonparticipants were fairly similar as to the importance of price/value in their purchase decisions. This suggests that the reason that nonparticipants valued dealer or contractor recommendations less highly than participants was not because they were more price-conscious.

**Table 1-14**  
**Reasons for Purchasing Measures**  
**Residential Prescriptive Rebates Participants versus Nonparticipants**  
**from 2005 Evaluation of Alliant-IPL Prescriptive Rebate Program**

Measure	Bought measure because contractor/retailer recommended		Bought measure because of price/value	
	Residential Prescriptive Rebate Participants	Non-Participants	Residential Prescriptive Rebate Participants	Non-Participants
Programmable thermostat (part n = 50, non-part n = 21)	36%	13%	18%	20%
Furnaces (part n = 50, non-part n = 16)	30%	6%	36%	44%
Cooling unit (part n = 52, non-part n = 15)	52%	20%	35%	27%
Replacement windows ( part n = 49, non-part n = 28)	22%	4%	31%	28%
Clothes washers (part n = 65, non-part n = 47)	5%	6%	25%	23%

Note: Source is Final Report: Impact, Process, and Market Evaluation of the Energy Efficiency Programs, Volume I; prepared for Alliant Energy–Interstate Power and Light Company, Cedar Rapids, Iowa; prepared by KEMA Inc., August 5, 2005

- *Supporting evidence for Recommendation 6B: more salesperson/contractor training:* In addition to the evidence mentioned above in the discussion of HEER Program free ridership levels (e.g., the infrequency of discussions of rebates and energy efficiency in equipment purchase decisions), other supporting evidence for this action include:
  - *There is a precedent for it.* Salesperson training was a key part of California market transformation energy efficiency programs of the 1990s.

- *Nearly two-thirds of participating retailers said it would be useful.* KEMA asked the participating retailers to what extent additional training about ENERGY STAR™ would help their sales staff sell energy-efficient appliances. Most (65%) of the respondents said that additional training would be useful.
- *PG&E has had good recent experience with its pool contractor training program.* While SCE no longer offers training course for its pool contractors, PG&E continues to do so. In a 2008 survey KEMA found that 86 percent of the PG&E contractors found the training to be useful.
- *Some HEER participants were dissatisfied with the energy efficiency knowledge of their salespersons.* Only 35 percent of HEER room air conditioners participants and 40 percent of HEER water heater participants were satisfied (7-10 on a 10-point satisfaction scale) with the energy efficiency knowledge of their salespersons.
- *Supporting evidence for Recommendation 6C: expanding the contractor/retailer base:*
  - *For the HEER program, as with all vendor-driven programs, customers who use nonparticipating vendors are usually unaware of the rebates.* Many rebate programs rely heavily on trade allies to promote the program. There are many good reasons for this including the significant influence that these contractors and retailers have on customers at the moment of purchase as well as reduced marketing costs for the rebate programs. However, over-reliance on trade allies as a program promotional strategy can leave large segments of the residential population unaware of the rebates. This is because if a customer's usual contractor or favorite retailer is not participating in the HEER program, these contractors/retailers are not going to be made aware of the program rebates. As noted above, awareness of the HEER rebates among the general population of SCE single-family customers was fairly low. Even when asked prompted awareness questions, only 27 percent of the SCE general population single-family customers claimed awareness of the whole-house fan rebates, only 18 percent claimed awareness of the pool pump rebates, and only 16 percent claimed awareness of the evaporative cooler questions.
  - *Sears is currently not a participant in the HEER Program even though it was the most-cited source for recent refrigerator purchase among the general population of SCE customers.*
- *Increasing Rebate levels: Opportunities and Barriers.* As noted, there's a good theoretical argument that increasing rebate levels to a higher proportion of incremental costs can

reduce free ridership.<sup>14</sup> While we chose not to make this one of our recommendations due to practical barriers to implementation, we think it is an important enough issue for a more detailed discussion. One initial premise is that if incentives are small compared to the energy-efficient measure's costs, one would not expect the incentive to change many customers' decision about investing in the measure. As a result, the majority of those who participate in the program would be expected to be customers who would have bought the energy-efficient measure with or without the incentive. These are free riders. This may help explain the high free ridership levels in the HEER program. Based on incremental cost estimates provided by HEER-participating retailers/contractors, current HEER refrigerator rebates only cover 22 percent of incremental costs and current room air conditioner rebates only cover 24 percent of incremental costs.

To continue discussion of the theory, as the incentive level is increased, while these free riders are still in the program and will still be free riders, new customers, who would not otherwise have bought the measure, are induced to buy it. These new customers are not free riders—that is, they are induced by the program (and incentive) to adopt the measure. Thus, while the number of free riders in the program is not reduced, the number of non free riders in the program increases so that the proportion of free riders is lowered.

Now, increasing the incentive level will not only increase the program-attributable (non free rider) adopters in the program. It will also attract free riders that are not currently participating in the program. However, according to the theory if the program's "hassle factors" – the transaction costs (e.g., filling out rebate applications, etc.) of obtaining the rebates -- are very low, then the potential increase in free riders will likely be very small. This is because it is assumed that if the "hassle factor" of participation is small compared to the value of the incentive, most natural adopters (e.g., free riders) will already be participating in the program even at the lower incentive level. As a result, the higher incentive level will add proportionately more non-free-riders than free riders. Once again an analogy can drawn to the HEER Program where the wide use of point-of-sale rebates have significantly reduced program "hassle factors." Therefore, according to theory, significantly increasing the HEER

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<sup>14</sup> This is a very high-level summary of an analysis contained in Focus on Energy Public Benefits Evaluation Business Programs: Measure Review; prepared by Bobbi Tannenbaum, Mimi Goldberg, and Chris Dyson, KEMA Inc. under contract for PA Governments Services Inc., prepared for State of Wisconsin Department of Administration Division of Energy, February 3, 2006. The full analysis contains diagrams illustrating the key concepts as well as a demonstration of the model using hypothetical inputs.

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Program incentive levels would not bring in a significant volume of new free riders because most of the free riders are already in the program.

However, while theory would suggest that the HEER Program – with its low incentive levels and low hassle factors – would reap great program attribution benefits by significantly increasing incentive levels – there are significant practical barriers to implementing such a plan. Discussions with HEER Program staff in July 2009 indicated that it would very difficult to significantly increase HEER Program rebates due to budgetary constraints and current measure benefit/cost testing criteria.

- *Recommendation #7: Use program satisfaction and other program indicators identified in this report as benchmarks to track future program performance.* SCE staff said that they are in the process of identifying which of these indicators would be most suitable for monitoring program progress.

## 2 Program Theory and Assumptions<sup>15</sup>

The 2006-2008 HEER program took a downstream program design approach, offering incentives to end users directly for different measures. HEER Program participants could apply for the rebates through mail-in or online application forms. With some participating retailers participants could also receive instant point-of-sale (POS) rebates in which the discount is applied automatically at the cash register. Table 2-1 shows which rebate types were available for which measures.

**Table 2-1**  
**Measures Rebated Through PY2006-2008 HEER Program**

Measures	Mail	Online	POS
Evaporative Cooler	X	X	
Insulation	X		
Roof	X	X	
Room AC	X	X	X
Whole House Fan	X	X	X
Water Heater	X	X	
Pool Pump/Motor	X	X	X
Refrigerator	X	X	X

Figure 2-1 below shows the process diagram for the non-lighting component of the 2006-2008 HEER Program’s umbrella Residential Energy Efficient Incentive Program. Figure 2-2 shows the program logic diagram for the HEER Program.

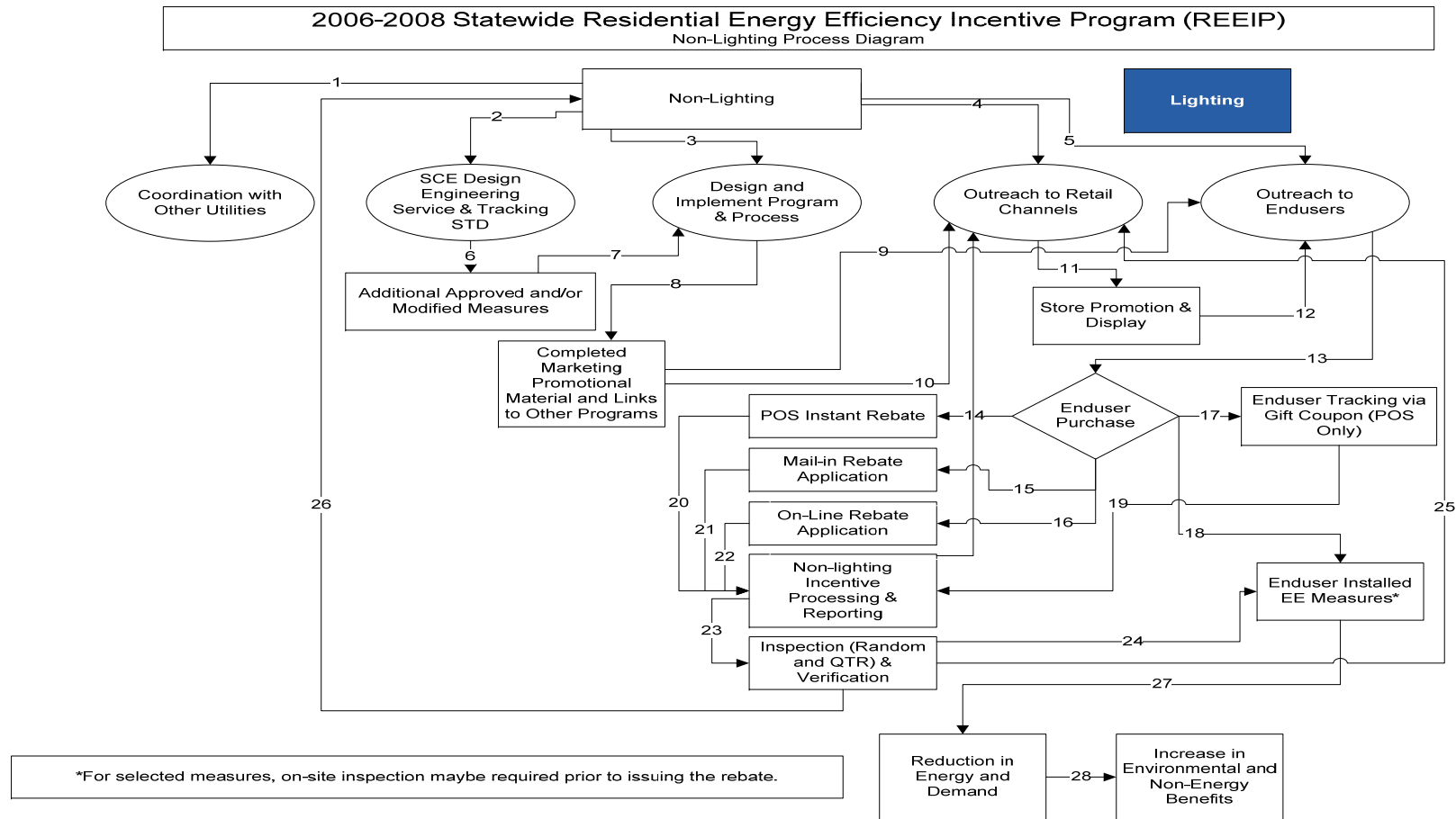
The 2006-2008 HEER Program was designed to overcome first cost, support Energy Star standards, and increase energy efficiency awareness. The HEER program’s strategy was to focus on technologies where goals (i.e., Energy Star) are not being met by offering incentives to motivate the desired purchase decision. These strategies included:

<sup>15</sup> This summary of the HEER program theory was provided by SCE.

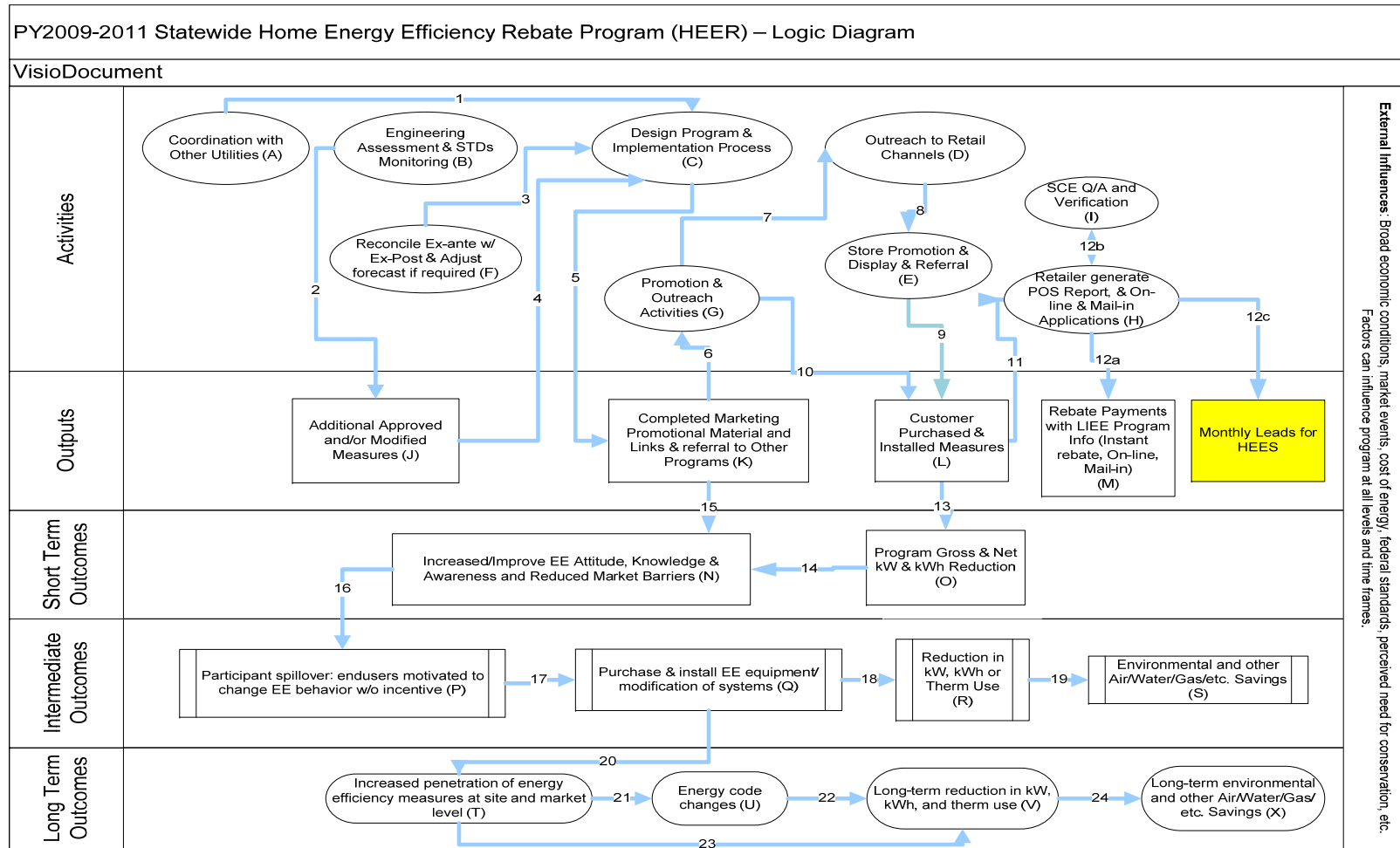


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1. Concentrating resources to support for retailers where goals are not being met (i.e., push for Energy Star adoption),
  2. Expanding awareness campaign tactics to beyond bill inserts, especially on measures that are replaced upon burnout,
  3. Tying Flex-Your-Power to specific measures where goals aren't being met (i.e., tie-in between HEER refrigerator and Appliance Recycling Program),
  4. Increasing resources for promotion of multi-speed pool pumps, room A/Cs, and advanced evaporative coolers, and
  5. Work more closely with contractors to help them promote energy efficiency by supporting pool contractors to prepare them for changes in standards and by increasing outreach to HVAC contractors concerning room A/C applications.

**Figure 2-1**  
**The Process Diagram for**  
**the 2006-2008 HEER Program**



**Figure 2-2  
HEER Program Logic Diagram**



### 3 2006-2008 Program Activity

This section summarizes the reported (pre-evaluation) activities of the SCE 2006-2008 HEER Program.

**Table 3-1  
Program Installations and Savings PY2006-2008  
By Program Participation Mode**

	Measures #	%	Gross kWh	%	Gross kW	%
<b>Mail-in</b>	113,929	33%	16,131,941	26%	7,184	23%
<b>On-line</b>	15,704	5%	2,841,165	5%	1,202	4%
<b>POS</b>	212,414	62%	42,557,968	69%	23,363	74%
<b>Total</b>	342,047	100%	61,531,074	100%	31,749	100%

**Table 3-2  
Program Installation and Savings PY2006-2008  
by Measure, kW, kWh**

<b>Mail-in</b>						
Measure type	Measures #	%	Gross kW	%	Gross kWh	%
Room A/C	5,756	5%	760	11%	1,321,781	8%
Refrigerators	96,121	84%	107	1%	6,295,926	39%
Insulations	13	0%	7	0%	14,218	0%
Water Heater	118	0%	4	0%	18,805	0%
Whole House Fan	3,756	3%	30	0%	224,759	1%
Roof	730	1%	216	3%	549,615	3%
Evap Cooler	2,153	2%	5,069	71%	3,286,866	20%
Pool Pump	5,282	5%	992	14%	4,419,972	27%
<b>Total</b>	<b>113,929</b>	<b>100%</b>	<b>7,185</b>	<b>100%</b>	<b>16,131,942</b>	<b>100%</b>
<b>Online</b>						
Measure type	Measures #	%	Gross kW	%	Gross kWh	%
Room A/C	833	5%	110	9%	189,043	7%
Refrigerators	12,188	78%	14	1%	798,314	28%
Insulations	0	0%	0	0%	0	0%
Water Heater	31	0%	1	0%	4,959	0%

Online						
Measure type	Measures #	%	Gross kW	%	Gross kWh	%
Whole House Fan	1,245	8%	10	1%	76,895	3%
Roof	2	0%	1	0%	1,591	0%
Evap Cooler	344	2%	761	63%	517,586	18%
Pool Pump	1,061	7%	305	25%	1,252,778	44%
<b>Total</b>	<b>15,704</b>	<b>100%</b>	<b>1,202</b>	<b>100%</b>	<b>2,841,166</b>	<b>100%</b>
POS						
Measure type	Measures #	%	Gross kW	%	Gross kWh	%
Room A/C	174,886	82%	23,085	99%	39,710,777	93%
Refrigerators	28,980	14%	32	0%	1,898,190	4%
Insulations	0	0%	0	0%	0	0%
Water Heater	0	0%	0	0%	0	0%
Whole House Fan	8,229	4%	133	1%	605,701	1%
Roof	0	0%	0	0%	0	0%
Evap Cooler	0	0%	0	0%	0	0%
Pool Pump	319	0%	113	0%	343,300	1%
<b>Total</b>	<b>212,414</b>	<b>100%</b>	<b>23,363</b>	<b>100%</b>	<b>42,557,968</b>	<b>100%</b>
Measure type	Measures #	%	Gross kW	%	Gross kWh	%
Room A/C	181,475	53%	23,955	75%	41,221,601	67%
Refrigerators	137,289	40%	153	0%	8,992,430	15%
Insulations	13	0%	7	0%	14,218	0%
Water Heater	149	0%	5	0%	23,764	0%
Whole House Fan	13,230	4%	173	1%	907,355	1%
Roof	732	0%	217	1%	551,206	1%
Evap Cooler	2,497	1%	5,830	18%	3,804,452	6%
Pool Pump	6,662	2%	1,410	4%	6,016,050	10%
<b>Total</b>	<b>342,047</b>	<b>100%</b>	<b>31,750</b>	<b>100%</b>	<b>61,531,076</b>	<b>100%</b>

During the 2006-2008 period, SCE's marketing team designed and implemented the following promotional activities for the HEER program:

- Comprehensive program brochure updates,

- Updates of the point-of-sale collateral and addition of Starbucks Instant Rebate Gift Cards for participants who provide contact information,
- Design and update of the instant rebate coupon for Home Depot,
- Multiple targeted solo direct mailings for refrigerators, pool pump, whole house fan, evaporative cooler (i.e., one measure per mailing for targeted climate zones and/or end users),
- Multiple targeted direct mailings with comprehensive program offerings (i.e., multiple measures for each mailing for targeted climate zones and/or end users),
- Inclusion of HEER Program in SCE summer seasonal campaigns to promote refrigerator efficiency and recycling, and
- Active interchange with both EnergyStar and CEE to promote appliance energy efficiency.

## 4 Prior Evaluation Recommendations and Disposition

This section compares recommendations from the evaluation of the 2004-2005 statewide HEER Program with the 2006-2008 activities of the SCE HEER Program.

**Table 4-1**  
**Comparing Recommendations from**  
**the Evaluation of the 2004-2005 Statewide HEER Program**  
**and the 2006-2008 Activities of the SCE HEER Program**

Recommendations from the 2007 Evaluation of 2004-2005 Statewide HEER Program	2006-2008 Activities of the SCE HEER Program
<ul style="list-style-type: none"> <li>• The trade ally groups that the Program engages – retailers and contractors – believe the Program could do more to raise awareness among consumers about the Program and its energy efficiency products and rebates.               <ul style="list-style-type: none"> <li>○ a) The Program may consider ramping back up its retailer support efforts, particularly for retail channels that sell products where it is difficult to meet goals. For retailers that primarily sell products where Program goals are met quickly, it is probably not necessary to increase support.</li> <li>○ b) The Program’s bill inserts and online applications are effective at least for the products where goals are met. It may not make sense from a cost-effectiveness perspective for the Program to conduct mass consumer advertising to increase consumer awareness of the Program since many of its non-lighting measures are replace on burnout measures.</li> <li>○ c) Flex Your Power could be leveraged more effectively by tying it more directly to the Program. Flex Your Power should, if possible, conduct advertising on products for which the Program has trouble meeting goals, and attempt to return to a promotional</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <i>2006-2008 HEER Program promotional and educational activities:</i> <ul style="list-style-type: none"> <li>○ In 2006 it did one direct mailing for its pool pump; two direct mailings for its whole house fan rebates; one bundled direct mailer for its refrigerator, whole house fan, evaporative cooler, pool pump, and room AC rebates; and one bundled direct mailing for its pool pump, electric water heater, room AC, refrigerator, and whole house fan rebates.</li> <li>○ In 2007 it did separate direct mailings promoting its rebates for pool pumps, whole house fans, and evaporative coolers.</li> <li>○ In 2008 it did only a direct mailing promoting its pool pump rebates.</li> </ul> </li> <li>• <i>Working with the Flex-Your-Power Program:</i> In 2008 interviews, SCE HEER Program said that SCE’s corporate communications is working with the Flex-Your-Power Program to promote the HEER Program and other SCE programs. However, they said that the HEER Program does not get involved with the details of these promotions.</li> <li>• <i>Communication with Program trade</i></li> </ul>

<p align="center"><b>Recommendations from the 2007 Evaluation of 2004-2005 Statewide HEER Program</b></p>	<p align="center"><b>2006-2008 Activities of the SCE HEER Program</b></p>
<p>schedule in which they time these promotions to correspond with IOU and national Program promotions. FYP currently times the majority of its advertising to the summer months to decrease advertising costs associated with “Flex Alerts” that urge Californians to immediately reduce electricity use during critical periods.</p>	<p><i>allies:</i> In 2008 interviews, SCE HEER Program staff said that they maintain regular communications with participating retailers and contractors including annual meetings, direct mailings, and store visits.</p>
<ul style="list-style-type: none"> <li>• Recent changes in Federal and state standards for energy efficiency equipment have, in general, not caused problems for equipment vendors, although changing pool pump standards may be a concern in the coming year. In order to support pool contractors in adjusting to the upcoming changes we recommend:           <ul style="list-style-type: none"> <li>○ Working with California pool contractor trade associations on the development of an educational campaign so that pool contractors in the state will be ready for the new standards.</li> <li>○ Increasing awareness of utility education and training opportunities for pool pump contractors.</li> <li>○ Increasing rebate levels for multi-speed pool pumps.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• In 2006 SCE introduced a \$100 “upstream” rebate that could be paid to retailers or installers for the installation of qualifying multi-speed pool pump motors. This rebate is in addition to the \$200 rebate that is paid to pool owners for such qualifying motors. SCE also offers Point-of-Sale rebates for pool pumps.</li> <li>• SCE no longer offers training in energy-efficient practices for pool contractors.</li> <li>• The recommendation from the evaluation of the 2004-2005 HEER Program to educate pool contractors about new Federal and state pool equipment standards is mostly moot since these standards were adopted in 2006.</li> </ul>
<ul style="list-style-type: none"> <li>• Some contractors (HVAC in particular) felt that the Program could do more to keep them informed about the Program and generally be more available and knowledgeable.           <ul style="list-style-type: none"> <li>○ The Program should continue its outreach efforts to trade allies and consider increasing interactions with HVAC contractors and appliance dealers.</li> </ul> </li> <li>• Significant cost and acceptance barriers remain for the greater use of variable speed drives (VSDs) and advanced evaporative coolers among HVAC contractors. We</li> </ul>	<ul style="list-style-type: none"> <li>• The 2006-2008 SCE HEER Program continues to offer rebates for evaporative coolers.</li> <li>• The 2006-2008 HEER Program did not target HVAC contractors. Starting in 2006 this function was shifted upstream to the Comprehensive HVAC Program. However, the HEER Program maintained some interaction with HVAC contractors since the Program still offers rebates for evaporative coolers, water heaters, whole-house fans and room air</li> </ul>



<p align="center"><b>Recommendations from the 2007 Evaluation of 2004-2005 Statewide HEER Program</b></p>	<p align="center"><b>2006-2008 Activities of the SCE HEER Program</b></p>
<p>recommend:</p> <ul style="list-style-type: none"> <li>○ Offering increasing incentive levels for VSDs to overcome lingering cost barriers.</li> <li>○ Continuing to offer financial incentives for advanced evaporative coolers.</li> </ul>	<p>conditioners.</p> <ul style="list-style-type: none"> <li>● The recommendation from the evaluation of the 2004-2005 HEER Program concerning VSDs is not relevant to the SCE HEER Program. These recommendations concern gas equipment and SCE is an electric utility.</li> </ul>
<ul style="list-style-type: none"> <li>● The collection of point-of-sale customer data using incentives combined with mail-back cards was useful in expanding the sample of participants included in the evaluation. <ul style="list-style-type: none"> <li>○ The IOUs should continue attempting to collect POS data using mail-back cards.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● SCE has continued to use mail-back cards for a number of different HEER-rebated measures. This was useful in providing to evaluators the contact names of Program participants that received POS rebates. Without these mail-back cards, these participants would have been unknown.</li> </ul>
<ul style="list-style-type: none"> <li>● Relationship between Delivery Channel and Program impacts should be explored for rebated refrigerators <ul style="list-style-type: none"> <li>○ A large percentage of the SCE refrigerator program is delivered through POS rebates.</li> <li>○ Continue capturing POS customer data so that these customers can be identified.</li> <li>○ We recommend future evaluations include analysis into the effect the delivery channel has on net program impacts to determine if the POS rebates are resulting in higher levels of free-ridership and thus lowering the overall NTG ratio.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● SCE's 2006-2008 HEER Program was able to provide evaluators with contact information for participants who received POS rebates. The recommendations section of this report discusses the possible effects of the POS rebates on free ridership.</li> </ul>

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## **5 Detailed Findings from the Survey of the General Population of Single-Family SCE Customers**

### **5.1 Introduction**

The research approach for this study consisted of a telephone survey of single family residential customers of Southern California Edison (SCE). The survey was designed and analyzed by KEMA and conducted by Discovery Research Group. Respondents were surveyed in December of 2008.

### **5.2 Background and Objectives**

The primary goals of this study were to determine how aware SCE's single-family customers are of the Home Energy Efficiency Rebate (HEER) program and the specific rebates included in the program and to gauge their potential level of interest in these rebates. Secondary goals included establishing baseline measures of customers' awareness, knowledge, and attitudes toward energy efficiency; assessing the effectiveness of SCE's energy efficiency marketing and education efforts; and examining the role appliance rebates play in customers' purchase decisions.

### **5.3 Methodology**

#### **5.3.1 Sample**

Because this survey was focused on single-family residential customers, we began with a random sample of 10,000 SCE residential customers and pre-screened to eliminate multi-family dwellings. We eliminated customers on multi-family tariffs, those with an apartment number listed as part of the service address, and those where a property management company was listed in the customer name field. This left us with a sample file of 7,163 records, which we released, into the field in three waves.

Experience has shown that when asking residential customers about specific appliance rebates, it is most effective to interview those who have either recently purchased the appliance in question or who expect to be in the market for such appliances in the near future. Because it

was not possible to pre-screen the sample list for recent or near-term appliance purchasers, we targeted a total number of completed surveys (800) that we believed would give us a sufficient number of respondents who were “in the market for”<sup>16</sup> the various rebated appliances. We based the sample size on our experience in similar surveys that 20 to 30 percent of households have either purchased a major appliance in the past two years or plan to purchase one in the coming year.

In reality we found that a higher percentage (58%) of SCE customers reported recent or planned appliance purchases. This allowed us to lower our overall target for the number of completed surveys. The final dataset was based on 658 survey completes.

### **5.3.2 Survey**

The survey instrument, which can be found in the appendix, was designed to address the following questions:

- Program/Rebate Awareness and Participation
  - Awareness/knowledge of the HEER rebates and program.
  - How they heard about the program.
  - Their familiarity with the Energy Star brand.
  - If aware of the HEER program, whether they have considered participating and if not, why not.
- Energy Efficiency Awareness, Knowledge, and Attitudes
  - Baseline measurements for each of these.
  - Familiarity with less common rebated technologies
  - Their level of familiarity with advanced evaporative coolers, electric storage water heaters, and cool roofs.

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<sup>16</sup> In this report we use the phrase “in the market for” to designate households that have either purchased the designated appliance type within the past two years or that plan to purchase it within the next year.

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- Marketing and Customer Education Efforts
    - Preferred sources of program information.
    - If they recently shopped for or purchased a major appliance or piece of energy-using equipment, what kind of promotional information or sales pitch they experienced when shopping.
    - Whether the retail store displays or promotions they witnessed changed their energy-efficiency awareness, knowledge and attitudes.
    - Whether any changes in energy efficiency awareness, knowledge, or attitudes due to program information is likely to influence their future purchasing behavior.
  
  - Future Appliance Purchasing and Market Barriers
    - Whether they plan to purchase any major appliances or other energy-using equipment in the near future and which appliances/equipment they are planning to purchase.
    - What barriers might prevent or delay the purchase of energy-efficient versions of this equipment.
  
  - Miscellaneous
    - Customer demographics.

## 5.4 Findings

This section of the report contains the detailed findings from the survey of the general population of single-family SCE customers.

### 5.4.1 Program Awareness and Participation

This subsection discusses how aware the general population of SCE single-family customers were of the HEER rebates, how this awareness varied depending on the demographics of these single-family customers, how their awareness of the HEER rebates compared to their awareness of other SCE residential energy-saving programs and services, and the sources of their Program awareness including possible previous participation in the Program.

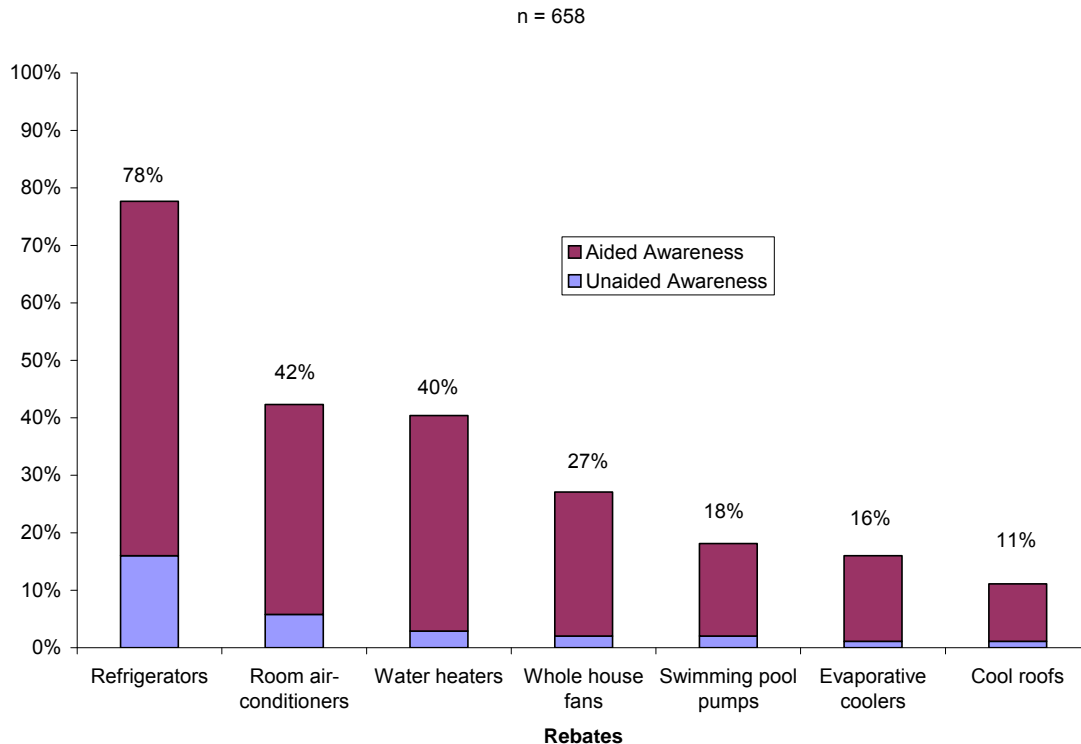
#### 5.4.1.1 Aided and Unaided Awareness of HEER Rebates

We assessed residential customers' awareness of the various HEER program rebates both with and without prompting. First we asked respondents to identify any SCE programs or services to help customers save energy in their homes that they had heard of. For each HEER-rebated technology that a given respondent failed to mention, we subsequently asked them if they were aware that SCE offered a rebate for that technology. A customer who mentioned a given rebate in response to the open-ended question demonstrated *unaided awareness* of that rebate.

Customers who did not mention a given rebate but said that they were aware the rebate was available when asked demonstrated *aided awareness*. When we simply use the terms "aware" or "awareness" in this report we are referring to the sum of aided and unaided awareness.

Overall, 85 percent of residential customers were aware that SCE offered rebates for at least one of the seven rebated HEER technologies. Twenty-two percent had unaided awareness of at least one of these rebates. Figure 5-1 shows the total percent of customers who were aware of each rebate, with aided and unaided awareness broken out separately.

**Figure 5-1**  
**Awareness of HEER Program Rebates**



Base = all respondents.

Refrigerator rebates were, by far, the most widely recognized HEER rebate. Sixteen percent of respondents mentioned refrigerator rebates without any prompting, and another 62 percent said they had heard of SCE refrigerator rebates when they were specifically asked about them. Fewer than half of the residential customers surveyed were aware that SCE offers rebates on room air-conditioners and electric water heaters, and awareness of rebates for whole house fans, swimming pool pumps, evaporative coolers, and cool roofs was even lower.

The relatively low awareness of rebates for evaporative coolers and cool roofs is not surprising given that many customers have not heard of these technologies. Only 59 percent of residential customers had heard of evaporative coolers (which were also described as swamp coolers in the survey), and only 20 percent had heard of cool roof technology.

Even those respondents who had heard of cool roof technology were not very familiar with it. When asked to rate their familiarity with cool roof technology on a five point scale (with 1 being “Not at all familiar” and 5 being “Very familiar”) the majority of those aware of the technology

(53%) rated their familiarity as a 1 or 2. Only 12 percent of those who had heard of cool roof technology said that they were very familiar with it.

#### **5.4.1.2 Awareness of HEER Compared with Other SCE Residential Energy-Saving Programs**

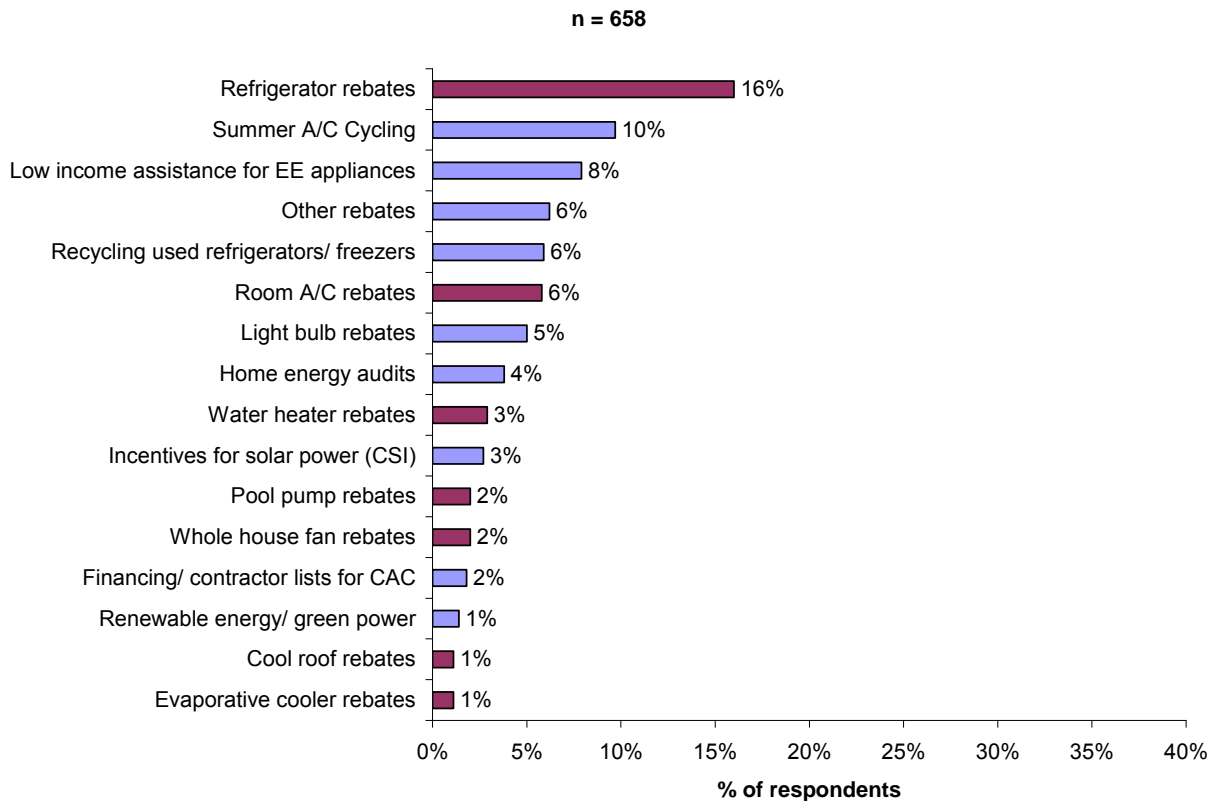
Figure 5-2 compares the unaided awareness of the various HEER rebates with unaided awareness of other energy-saving SCE programs or services for residential customers.<sup>17</sup> HEER rebates are highlighted with the darker bars.

Refrigerator rebates were the most frequently-mentioned SCE offering, but several other programs were mentioned more frequently than the other HEER rebates. These included A/C cycling (Summer Discount Program), assistance for lower-income customers to purchase energy efficient appliances (Energy Management Assistance), recycling of used refrigerators/freezers, and miscellaneous other rebates. With the exception of refrigerator rebates, no SCE program had more than 10 percent unaided awareness among residential customers.

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<sup>17</sup> The survey question was: "What, if any, Southern California Edison programs or services to help customers save energy in their homes have you heard of?" For non-HEER programs we only captured unaided awareness.

**Figure 5-2**  
**Unaided Awareness of HEER Rebates and Other SCE Programs**



Base = all respondents.

#### 5.4.1.3 Demographic Differences in Awareness of HEER

Table 5-1 summarizes all of the statistically significant differences<sup>18</sup> in rebate awareness by demographic factors. In general, homeowners were more aware of the rebates than renters, seniors were more aware of them than non-seniors, and women were more aware of the rebates than men.

<sup>18</sup> All numeric differences between sub-segments of respondents that are mentioned in the text of this report are statistically significant at the 90 percent confidence interval.



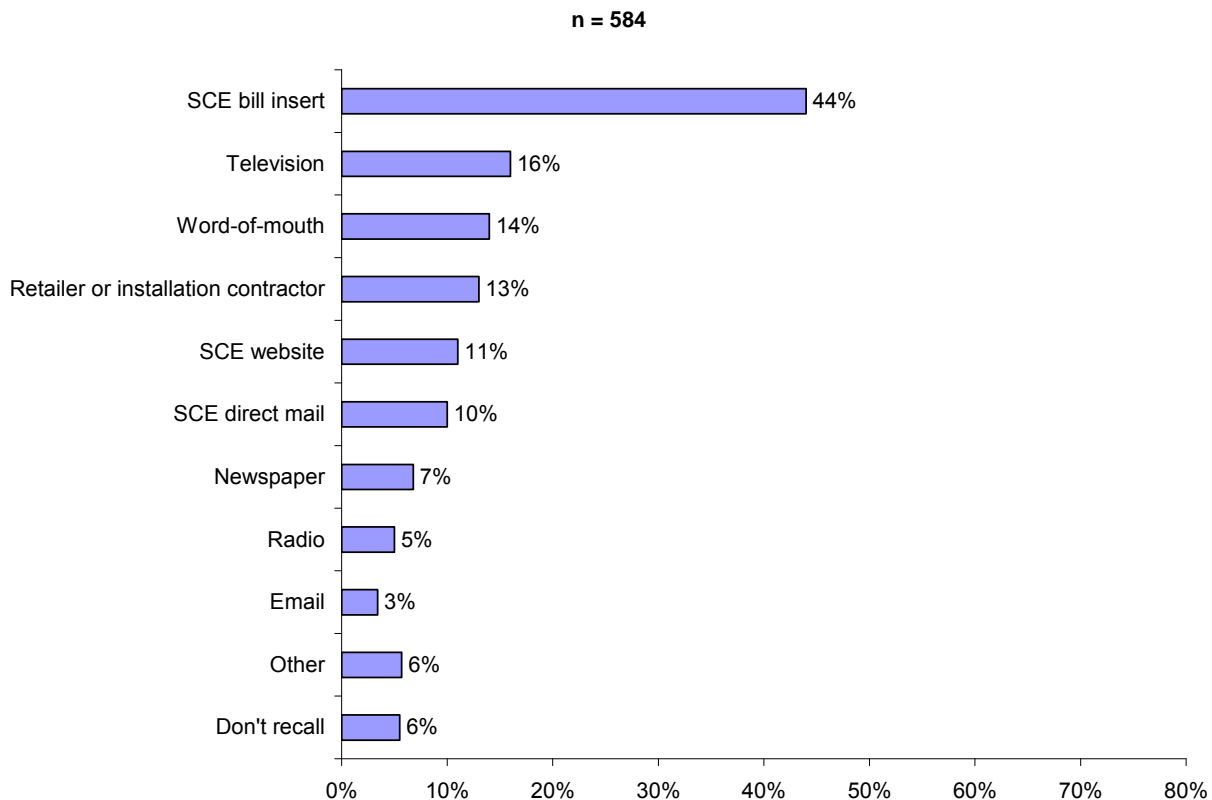
**Table 5-1  
Differences in Awareness of HEER Rebates by Demographics**

Aware of rebates for ...	Own vs. Rent	Age	Income	Gender
Refrigerators	Owners were more likely (77%) to say they were aware of the rebates than renters (63%)	Seniors were more likely (82%) to say they were aware of the rebates than non-seniors (71%)	No statistically-significant differences between income groups	Women were more likely (80%) to say they were aware of the rebates than men (68%)
Electric water heaters	No statistically-significant differences between owners and renters	No statistically-significant differences between seniors and non-seniors	Those in the middle-income group were more likely (66%) to say they were <i>not aware</i> of the rebates than those in the lower income group (53%)	Women were more likely (44%) to say they were aware of the rebates than men (33%)
Room air conditioners	No statistically-significant differences between owners and renters	Seniors were more likely (46%) to say they were aware of the rebates than non-seniors (37%)	No statistically-significant differences between income groups	No statistically-significant differences between genders
Whole house fans	Renters were more likely (79%) than owners (71%) to say they were <i>not aware</i> of the rebates	Non-seniors were more likely (74%) than seniors (66%) to say they were <i>not aware</i> of the rebates	Those in the high-income group were more likely (26%) to say they were aware of the rebates than those in the middle-income group (17%)	No statistically-significant differences between genders
Pool pumps	Renters were more likely (86%) than owners (79%) to say they were <i>not aware</i> of the rebates	Non-seniors were more likely (82%) than seniors (74%) to say they were <i>not aware</i> of the rebates	Those in the high-income group were more likely (19%) to say they were aware of the rebates than those in the middle-income group (12%)	No statistically-significant differences between genders
Evaporative coolers	No statistically-significant differences between owners and renters	Non-seniors were more likely (76%) than seniors (66%) to say they were <i>not aware</i> of the rebates	Those in the low-income group were more likely (32%) to say they were aware of the rebates than those in the middle-income group (19%)	No statistically-significant differences between genders
Cool roofs	No statistically-significant differences between owners and renters	No statistically-significant differences between seniors and non-seniors	No statistically-significant differences between income groups	Women were more likely (64%) to say they were aware of the rebates than men (46%)

#### 5.4.1.4 Sources of Program Awareness

We asked all respondents who were aware of at least one SCE program (HEER or otherwise) where they had heard about these programs. Figure 5-3 shows that bill inserts were by far the most common way that respondents reported learning about SCE programs. Sources mentioned by at least 10 percent of respondents also included television, word-of-mouth, retailers and installation contractors, the SCE website, and direct mail pieces from SCE.

**Figure 5-3**  
**Where Customers Heard About SCE Programs**

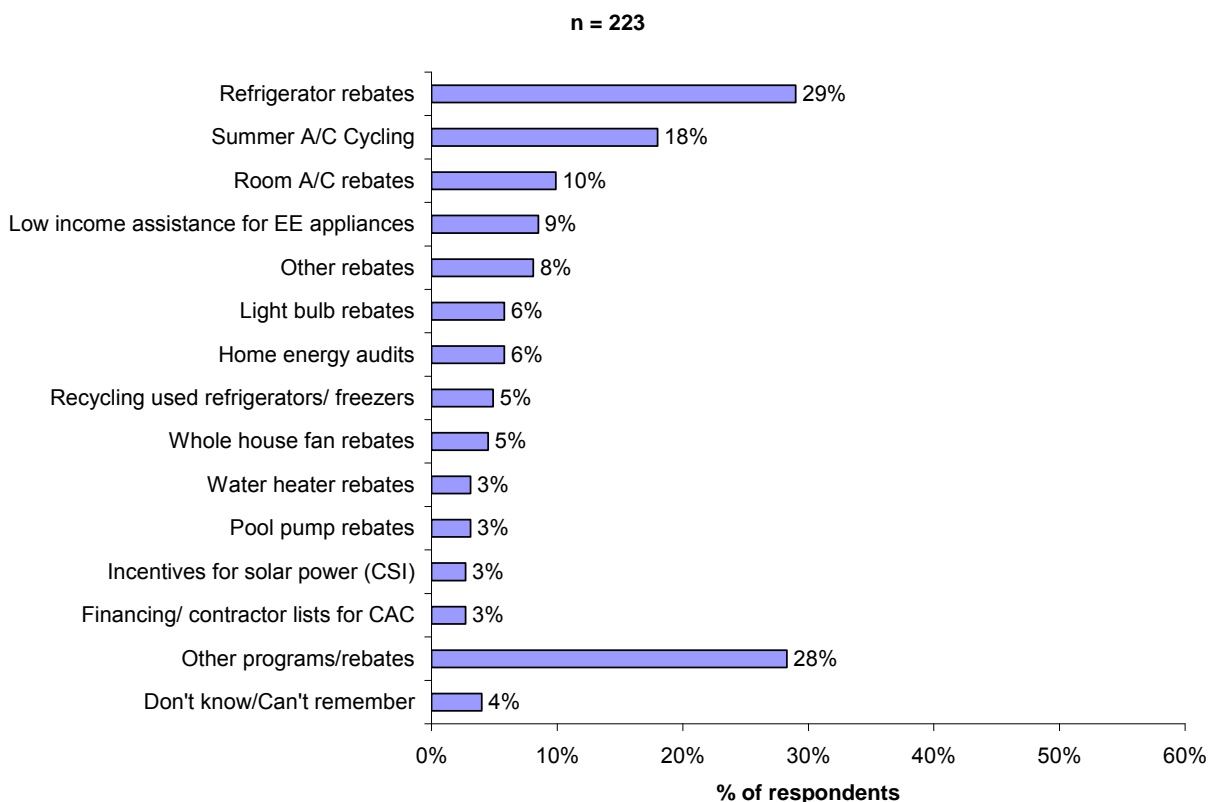


Base = respondents who had heard of at least one SCE program. Percents may not sum to 100 because multiple responses were allowed.

### 5.4.1.5 Program Participation

A third (34%) of respondents were not only aware of SCE programs, but had also participated in one or more of these programs. Homeowners were more likely than renters to have participated in an SCE program (37% vs. 23%). Figure 5-4 shows the percent of respondents who said they had participated in various programs.

**Figure 5-4**  
**Percent Participating in Specific SCE Programs**



### 5.4.2 Marketing and Customer Education

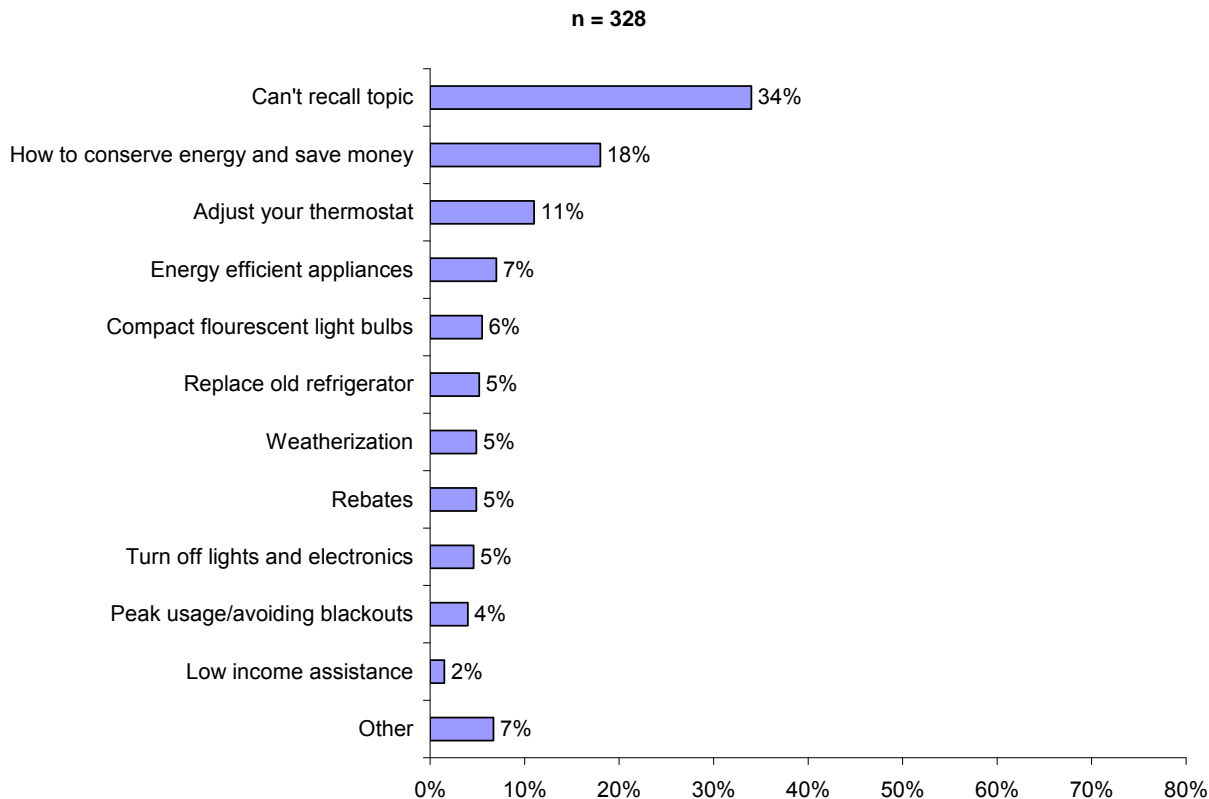
This section discusses what SCE information the residential customers recalled, where customers turn for energy efficiency information, and where customers would prefer receiving information about the HEER program.

#### **5.4.2.1 Recall of Information from SCE**

Half (50%) of the residential customers surveyed recalled seeing or hearing at least one message from SCE in the past 12 months that focused on how to manage home energy use, the energy efficiency of specific products, or SCE programs to help customers save energy. Message recall was somewhat lower among renters (40% vs. 51% of homeowners) and those who had not attended college (40% vs. 52% of college attendees).

Figure 5-5 reveals that when asked to recall the subject of these messages a third of those that recalled messages could not remember what they were about. The second most common response was the somewhat vague “how to conserve energy and save money.” Only five percent specifically recalled hearing about rebates. The “other” category represents miscellaneous responses ranging from home energy audits to renewable energy to the benefits of saving energy.

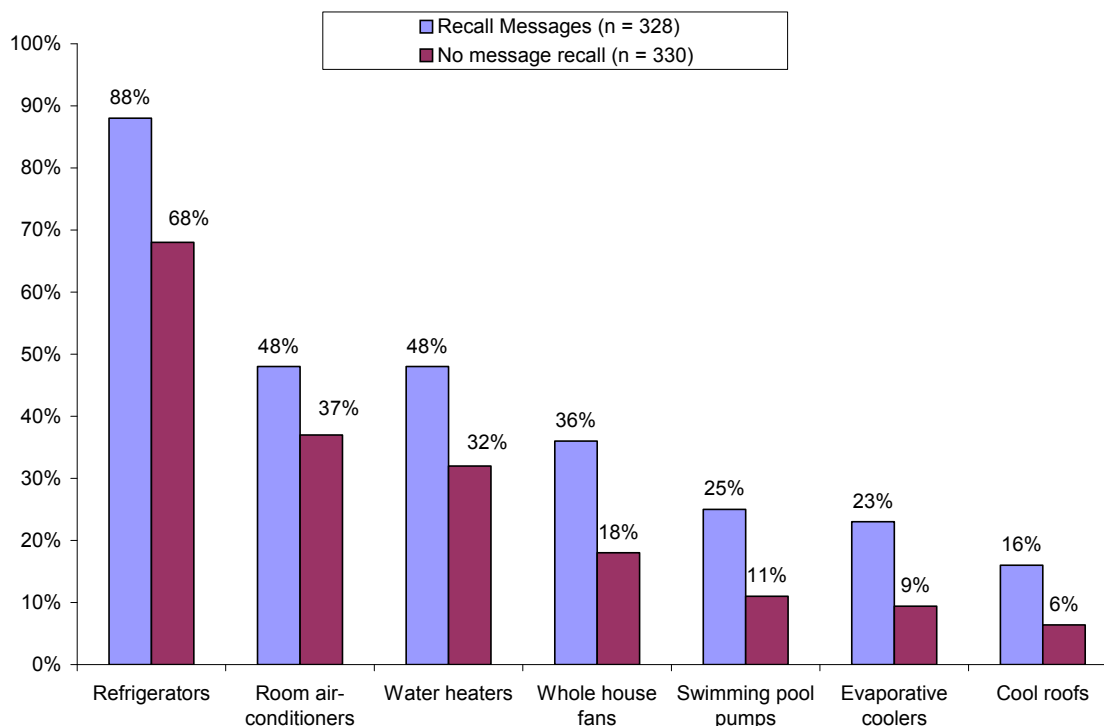
**Figure 5-5**  
**Subject of Messages Recalled**



Base = respondents who recalled at least one message. Percents may not sum to 100 because multiple responses were allowed.

Although only five percent of those who recalled messages specifically mentioned rebates as a topic, there is a correlation between message recall and awareness of rebates. As shown in Figure 5-6, awareness of all of the different HEER rebates was higher for those respondents who also recalled seeing or hearing messages about home energy efficiency from SCE in the past 12 months.

**Figure 5-6**  
**Awareness of HEER Rebates by Message Recall**

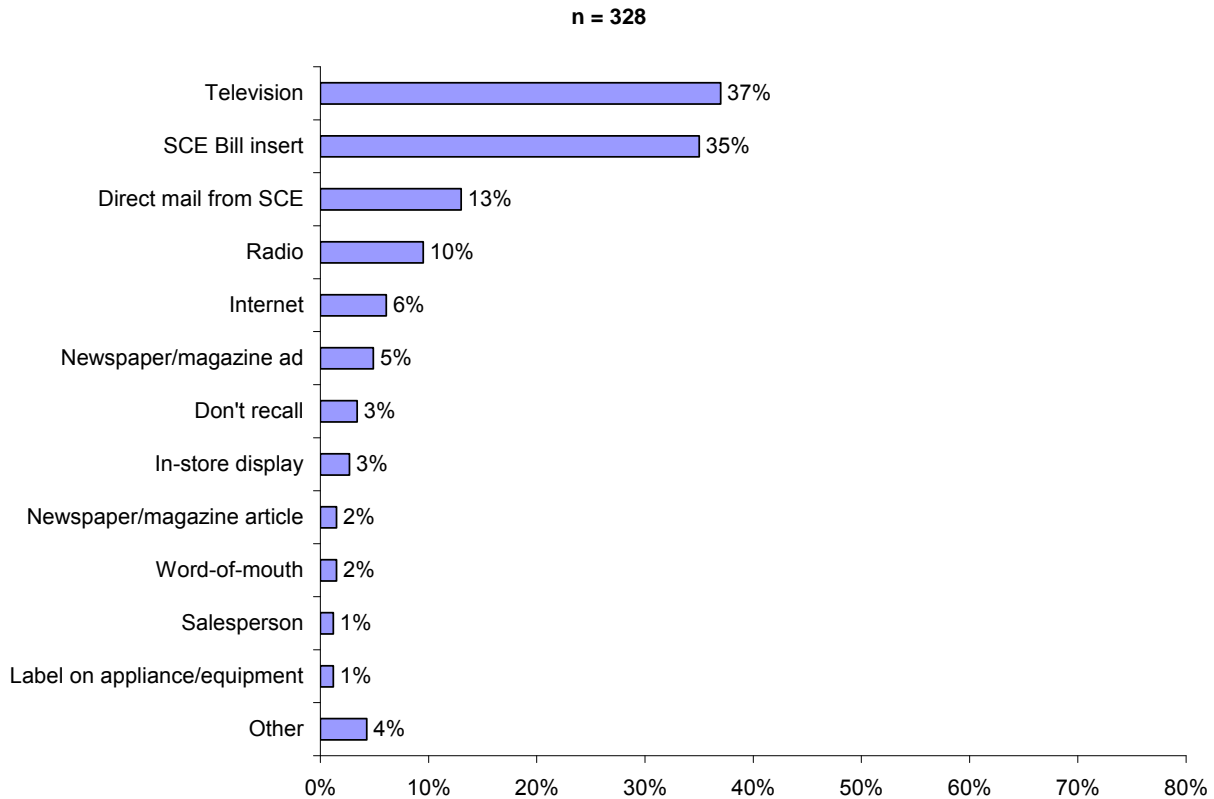


Base = all respondents.

Figure 5-7 shows the channels through which respondents recalled seeing or hearing SCE’s messages. The two most common responses, television and bill inserts, were both cited by roughly a third of respondents.

The channels through which customers had received SCE’s messages varied by demographics. Senior citizens were more likely to have seen a message in a bill insert (44% vs. 32% of non-seniors) and less likely to have seen it on television (29% vs. 40% of non-seniors) or the Internet (2% vs. 8% of non-seniors). Those earning \$75,000 or more were more likely than their lower income neighbors to recall a message from the radio (16% vs. 4%) or the Internet (10% vs. 5%). And those in households earning less than \$40,000 per year were more likely than higher income households to recall seeing a message in a newspaper or magazine ad (12% vs. 2%).

**Figure 5-7**  
**Where Customers Recall Seeing/Hearing SCE Messages**



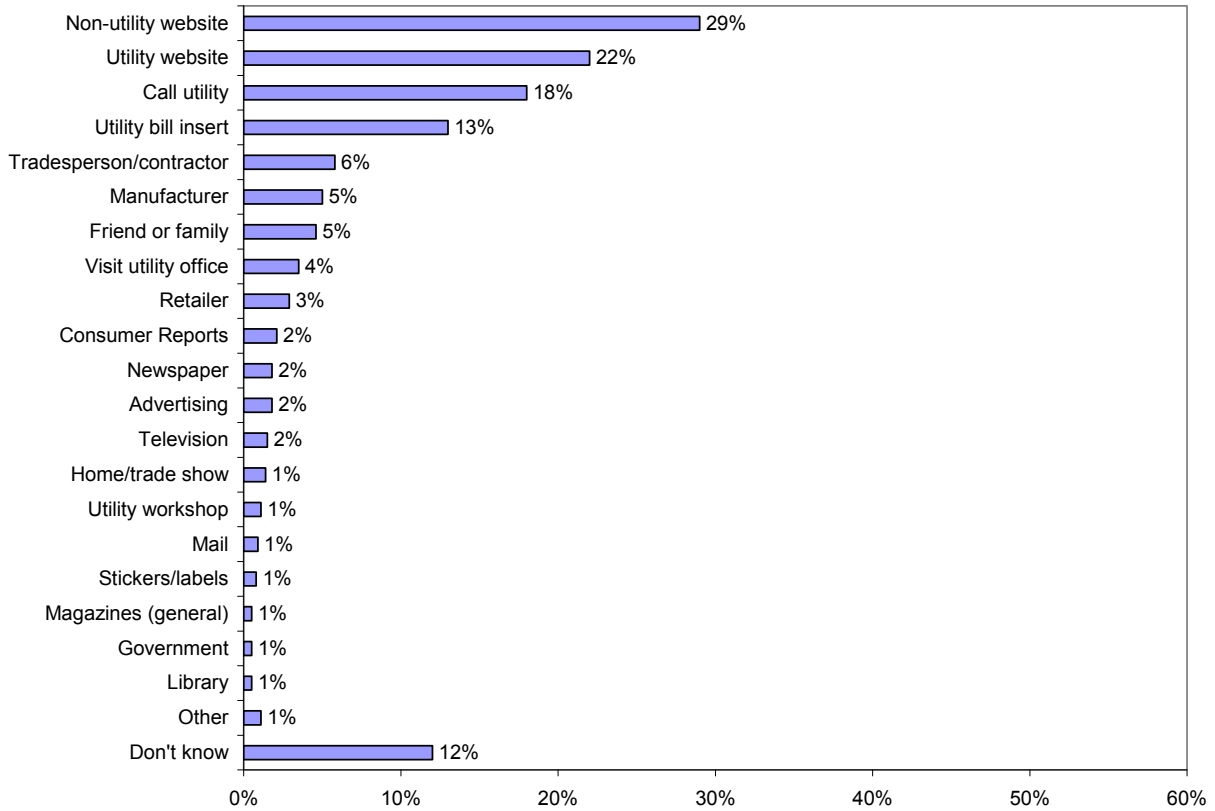
Base = respondents who recalled at least one message. Percents may not sum to 100 because multiple responses were allowed.

#### 5.4.2.2 Where Customers Turn for Energy Efficiency Information

Figure 5-8 shows the percent of residential customers who said they would look to various sources for information on energy conservation or lowering their energy bill. The only sources mentioned by more than ten percent of respondents were websites (with non-utility websites being mentioned more frequently than utility websites), calling their utility, and looking at utility bill inserts. Twelve percent said they did not know where they would look for information, and numerous other sources were mentioned by small groups of respondents.

**Figure 5-8**

**Percent That Would Look to Various Sources for Information on Saving Energy**



Base = all respondents. Percents may not sum to 100 because multiple responses were allowed.



Websites were mentioned as sources of energy information more frequently by:

- College educated respondents;
  - 33 percent of college educated respondents mentioned non-utility websites, versus 16 percent of those who did not attend college.
  - 25 percent of those attending college mentioned *utility* websites, compared with 11 percent of those who did not attend college.
- Households earning at least \$40,000 a year; and
  - 34 percent mentioned non-utility websites, versus 24 percent of lower income respondents.
  - 28 percent mentioned utility websites, versus 19 percent of lower income respondents.
- Those under 65 years of age.
  - 32 percent of non-seniors mentioned non-utility websites, versus 15 percent of seniors.
  - 27 percent of non-seniors mentioned utility websites, versus seven percent of seniors.

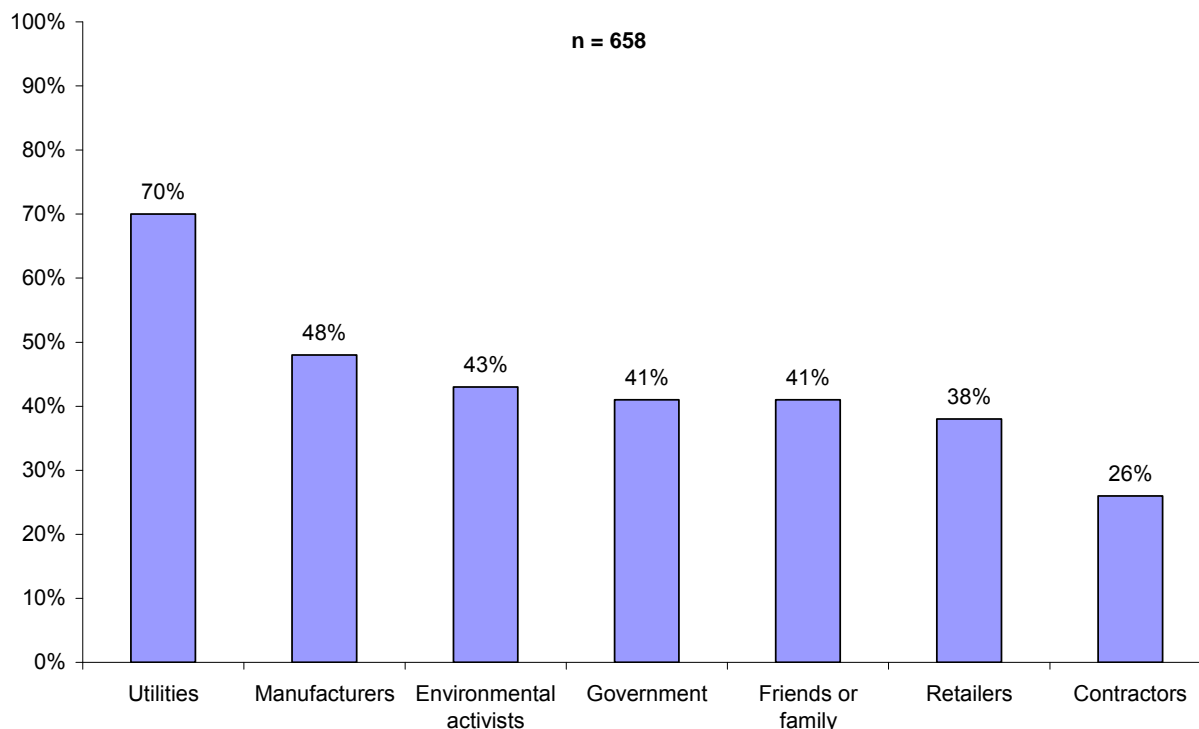
Those earning less than \$40,000 were more likely to cite their utility as a source of information. Twenty-six percent said they would call their utility, 15 percent said they would look at bill inserts, and five percent said they would go to their utility's office for information. The corresponding percentages for middle and upper income customers were 13 percent, 10 percent, and two percent.

In addition to being one of the sources more frequently mentioned by lower income households, bill inserts were mentioned more frequently by senior citizens (20% vs. 11% of non-seniors) and renters (19% vs. 11% of homeowners).

We asked respondents to rate how trustworthy several groups were as sources of information about energy efficiency. Figure 5-9 shows the percent who rated each group as highly trustworthy (rating of 4 or 5 on a 5-point scale). Utilities are the most trusted source for information, followed by manufacturers of energy-using equipment, environmental activists,

government, and friends or family members. Those who sell or install energy-using equipment were seen as the least trustworthy sources of information on energy efficiency.

**Figure 5-9**  
**Percent Rating Trustworthy as Source of Energy Efficiency Information**



Base = all respondents.

Respondents who recalled seeing or hearing messages from SCE concerning energy efficiency were more likely than other respondents to trust utilities as purveyors of energy efficiency information (77% vs. 64%), while those unaware of the HEER program were less likely to trust utilities in this role (58% vs. 72%). Demographically, lower income households (annual incomes less than \$40,000) were more trusting of all the information sources we tested. Those who had attended college were more likely than those with no college to trust the government (44% vs. 33%). Those who had not attended college were more likely to trust friends or family for energy efficiency information (50% vs. 39% of those who attended college). Trust in environmental activists was higher among renters (55% vs. 40% of homeowners) and those under 65 years of age (45% vs. 36% of seniors).

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#### 5.4.2.3 Providing Customers with Additional Information about HEER

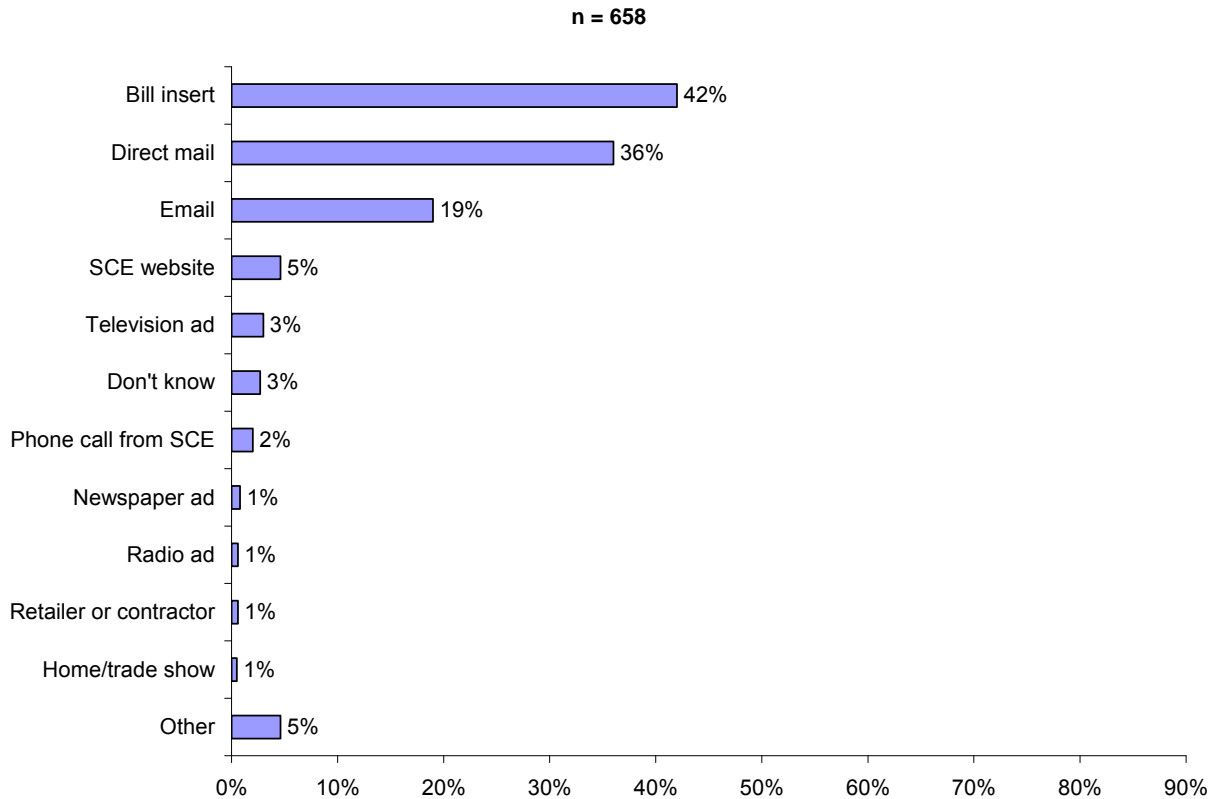
Most of the respondents we surveyed (57%) said they would like to receive additional information about SCE's appliance rebates. Interest was strongest among low income customers (68% of those earning less than \$40,000 a year versus 58% of higher income customers) and renters (64% versus 56% of homeowners).

Next we asked respondents what would be the best way for SCE to contact them if SCE wanted to inform them about programs to save energy. As seen in Figure 5-10, most customers would prefer bill inserts, direct mail pieces, or emails.<sup>19</sup>

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<sup>19</sup> As noted previously, SCE has recently switched from bill inserts to windows on the billing form for key messaging. This new format reduces the amount of program information that can be conveyed.

**Figure 5-10**  
**Percent Preferring Various Channels for Information on SCE Programs**



Base = all respondents. Percents may not sum to 100 because multiple responses were allowed.

Wealthier households, college educated customers, and those under the age of 65 tended to prefer email or the use of SCE's website more strongly:

- Income
  - Twenty-seven percent of those earning \$75,000 or more annually preferred to receive emails, versus 17 percent of those earning less.
  - Six percent of households earning \$75,000 or more wanted to use SCE's website, versus three percent of those earning less.
- Education
  - Twenty-one percent of those who attended college preferred email, versus 13 percent of those who did not.

- Five percent of college educated households preferred to use the website, versus two percent of non-college educated households.
- Age
  - Twenty-two percent of those under the age of 65 preferred email, versus eight percent of seniors.
  - Five percent of non-seniors preferred email, versus two percent of seniors.

Homeowners also preferred bill inserts more strongly than renters did (43% versus 33%).

### **5.4.3 Energy Efficiency Awareness, Knowledge, and Attitudes (AKA)**

Process evaluations of energy efficiency programs have typically assumed that the effect of programs on customer behavior is mediated by customers' awareness of tools such as efficient technologies and rebates, their knowledge of how to use such tools to change their behavior and save energy, and their attitudes toward saving energy. The literature on the relationship between awareness, knowledge, and attitudes (AKA) and energy efficiency behaviors was reviewed by KVD Research as part of the current process evaluation.<sup>20</sup> Based on their review, KVD Research identified a list of AKA factors for inclusion in the current survey to collect baseline data. These data are reported below.

#### **5.4.3.1 Baseline Awareness and Knowledge**

Sixty-eight percent of respondents were aware of the yellow Energy Guide stickers on appliances, and 69 percent were aware of the Energy Star label on appliances. As shown in Table 5-2, customers who recalled seeing or hearing energy efficiency messages from SCE were more likely to be aware of both energy labels – as were homeowners, those who had attended college, and those earning at least \$40,000 a year. Awareness of the Energy Star label was also higher among those under the age of 65.

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<sup>20</sup> Randazzo, Katherine Van Dusen, *A Short, Focused Review of the Literature on Attitudes and Behavior in Efforts to Promote Energy-Efficient Behavior* (DRAFT), May 27, 2008.

**Table 5-2**  
**Differences in Awareness of Labels by Message Recall and Demographics**

Label	Recall of SCE Marketing Messages	Own vs. Rent	Age	Education	Income
Energy Guide label	Those claiming to recall SCE marketing messages were more likely (74%) to say they recalled the Energy Guide label than those who did not recall the SCE marketing messages (62%)	Owners were more likely (72%) to say they recalled the Energy Guide label than renters (53%)	No statistically-significant differences between seniors and non-seniors	Those with at least some college education were more likely (71%) to say that they recalled the Energy Guide label than those with no college education (57%)	Those in the upper- and middle-income groups were more likely (69%, 74% respectively) to say they recalled the Energy Guide label than those in the lower-income group (only 55% recalled label).
Energy Star label	Those claiming to recall SCE marketing messages were more likely (72%) to say they recalled the Energy Star label than those that did not recall the SCE marketing messages (57%)	Owners were more likely (67%) to say that they recalled the Energy Star label than renters (55%)	Non-seniors were more likely (68%) than seniors (51%) to say that they recalled the Energy Star label	Those with at least some college education were more likely (69%) to say that they recalled the Energy Star label than those with no college education (51%)	Those in the upper- and middle-income groups were more likely (71%, 66% respectively) to say that they recalled the Energy Star label than those in the lower-income group (only 49% recalled label).

To assess respondents' knowledge of energy efficiency and related issues, we gave them a five question true or false quiz. The questions and answers in the quiz came from the Flex Your Power Challenge Cheat Sheet ([www.fypower.org/pdf/challenge\\_cheatsheet0806.pdf](http://www.fypower.org/pdf/challenge_cheatsheet0806.pdf)) and from SCE's website ([www.sce.com/residential/rebates-savings/appliance/](http://www.sce.com/residential/rebates-savings/appliance/)).

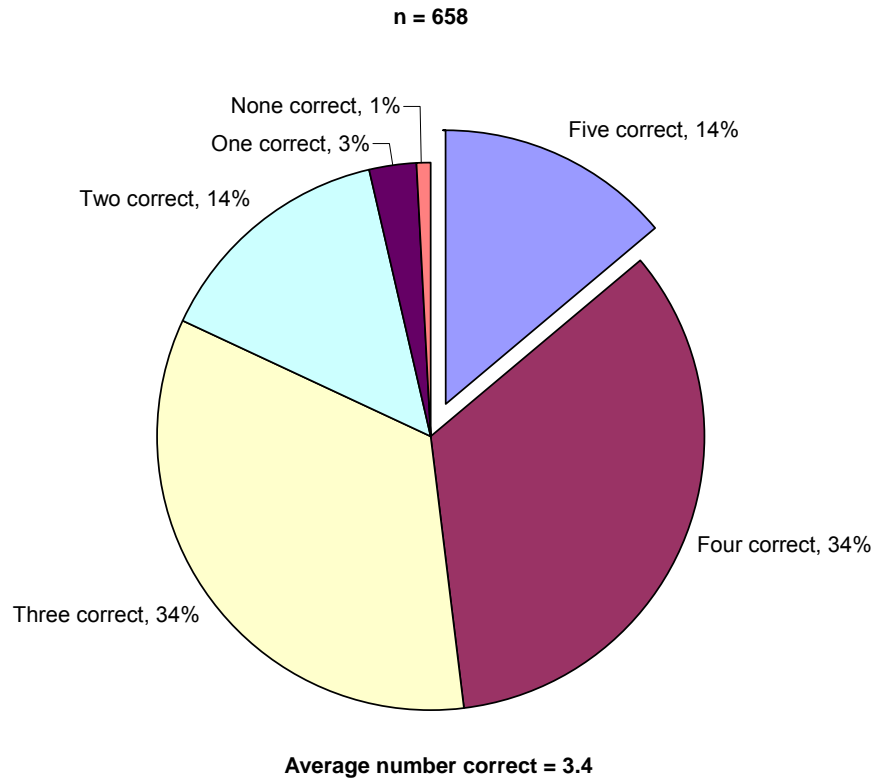
Table 5-3 shows the questions that were part of the quiz, along with the correct answers and the percent of respondents answering each question correctly. The only question that most respondents did not know the answer for was the question about household greenhouse gas emissions.

**Table 5-3  
Energy Efficiency Questions, Answers, and Percent Correct**

Question	Correct Answer	Percent Answering Correctly
Replacing an old refrigerator with a new Energy Star refrigerator will save the typical household more than \$150 a year.	TRUE	89%
Edison will haul away your old refrigerator or freezer at no cost to you.	TRUE	81%
Standard incandescent light bulbs generate more heat than light.	TRUE	71%
All air conditioners that are Energy Star certified are equally efficient.	FALSE	60%
Homes emit insignificant amounts of greenhouse gasses compared with cars.	FALSE	38%

Figure 5-11 summarizes how respondents did on the energy efficiency quiz overall. Only one out of seven answered all five questions correctly.

**Figure 5-11**  
**Overall Performance on Energy Efficiency Quiz**



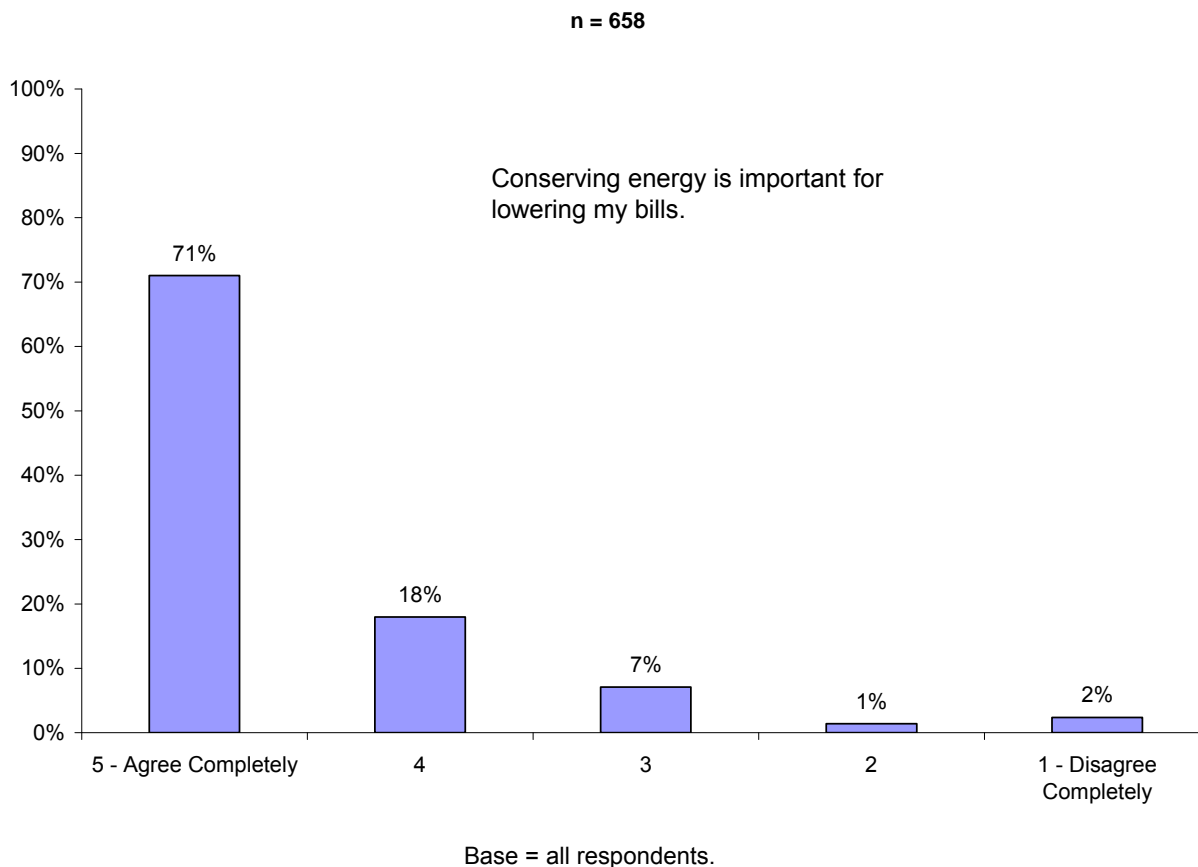
Base = all respondents.

#### 5.4.3.2 Attitudes, Ascription of Responsibility, and Personal Norms

We included two attitude statements in the survey. One (the self focus statement) was designed to measure the desire to save energy based purely on self-interest. The other (the environmental focus statement) was intended to measure the belief that saving energy for the sake of the environment is an important goal even if it requires personal sacrifices. The two statements, along with respondents' ratings of how much they agreed with them, are shown in Figure 5-12 and Figure 5-13.



**Figure 5-12**  
**Agreement with Self-Focus Statement**

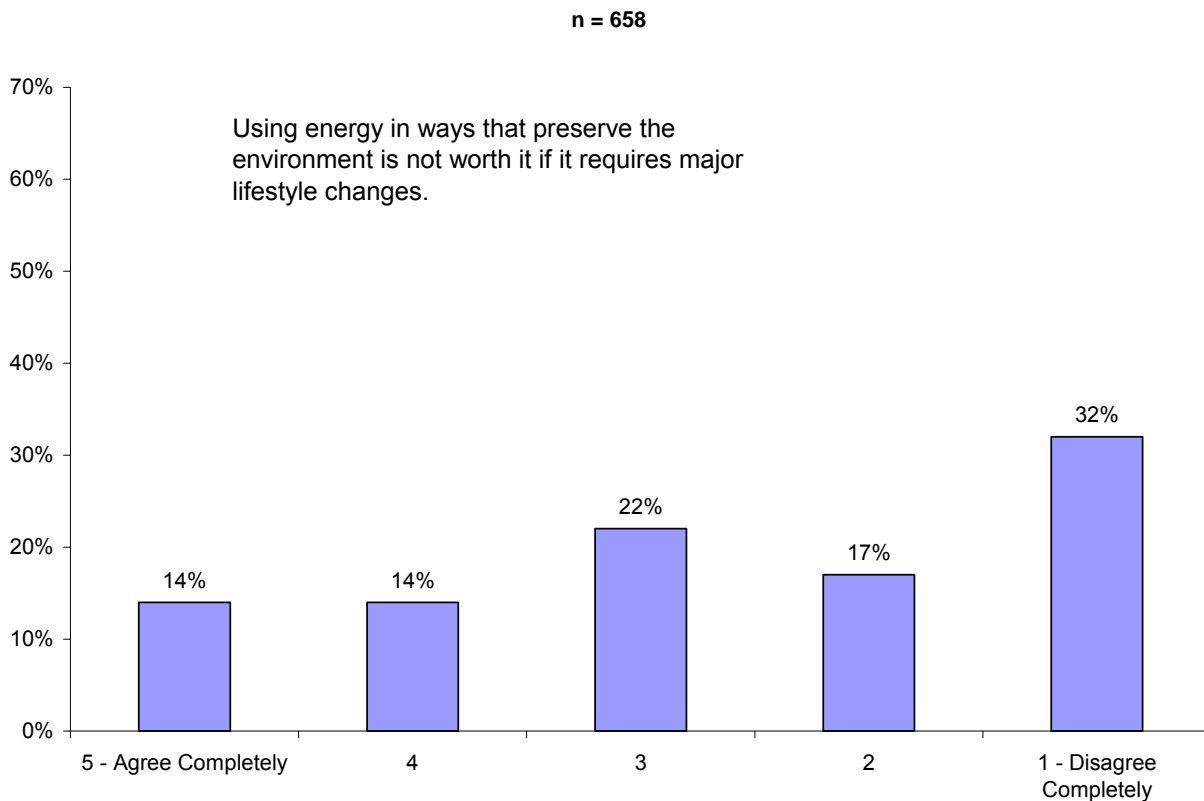


Agreement with the self focus statement (“Conserving energy is important for lowering my bills”) was very high. Almost three-quarters gave it the highest possible agreement rating. The mean agreement rating was 4.5 on a 5 point scale, and only three percent of respondents disagreed with the statement (rating of 1 or 2). Households earning less than \$40,000 a year were more likely to express complete agreement with this statement than those earning \$40,000 or more (78% vs. 67%), and women were more likely to agree completely with the self focus statement than men (74% vs. 68%).

As shown in Figure 5-13, opinions on the environmental focus question (“Using energy in ways that preserve the environment is not worth it if it requires major lifestyle changes”) were more mixed. A third of respondents disagreed completely with this statement (rating of 1), expressing a strong environmental focus. Almost as many, however, agreed with the statement (rating of 4 or 5). The mean rating across all respondents was 2.6 on a 5 point scale, reflecting mild

disagreement. The groups most likely to disagree (rating of 1 or 2) with this statement (thus indicating an environmental focus) were the college educated (54% vs. 33%), women (55% vs. 43%) and those who recalled one or more messages from SCE on saving energy (53% vs. 44%).

**Figure 5-13**  
**Agreement with Environmental Focus Statement**

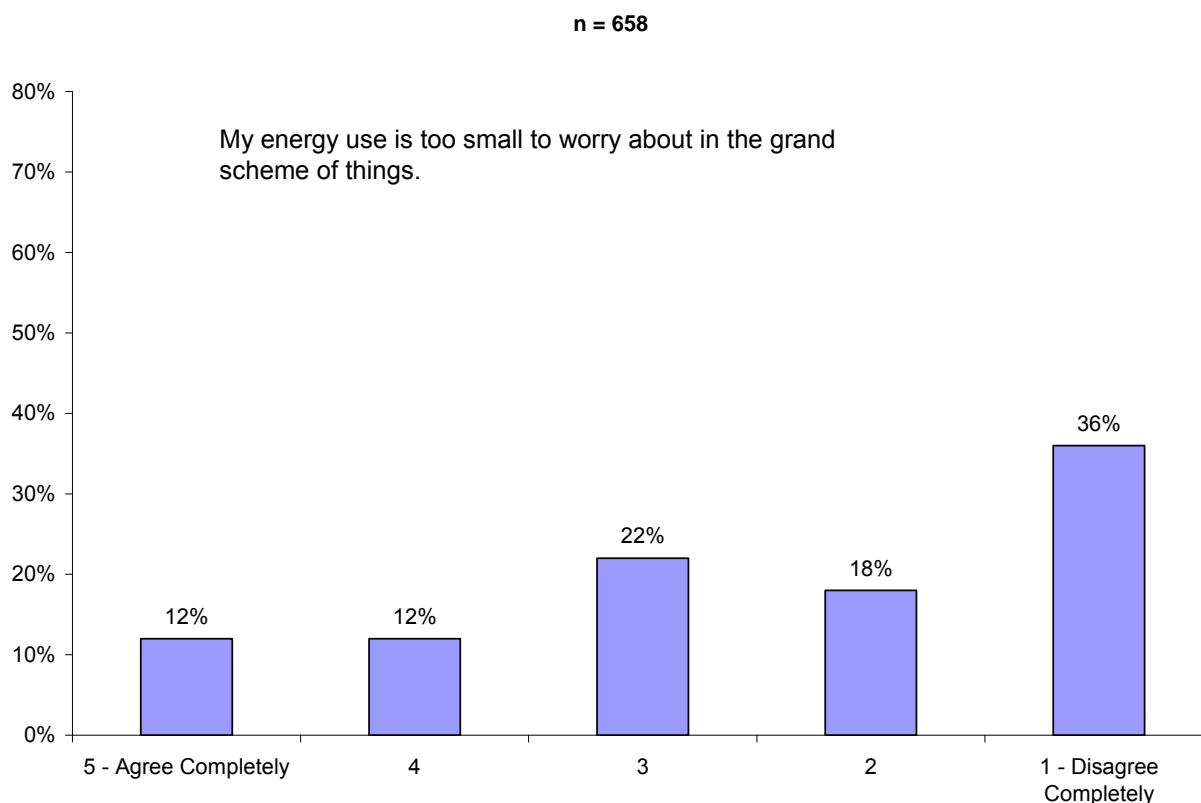


Base = all respondents.

We also included a statement in the survey designed to get at the concept of ascription of responsibility. The idea behind this is that for awareness, knowledge, and attitudes to translate into energy efficient behaviors individuals must also ascribe personal responsibility for saving energy to themselves. In the current survey ascription of personal responsibility was measured by *disagreement* with the following statement: “My energy use is too small to worry about in the grand scheme of things.”

The ratings for this statement are shown in Figure 5-14. A little more than a third disagreed completely, thus indicating personal responsibility for energy savings. A quarter, however, agreed or completely agreed with the statement. The mean rating was 2.4, reflecting mild disagreement.

**Figure 5-14**  
**Agreement with Responsibility Statement**



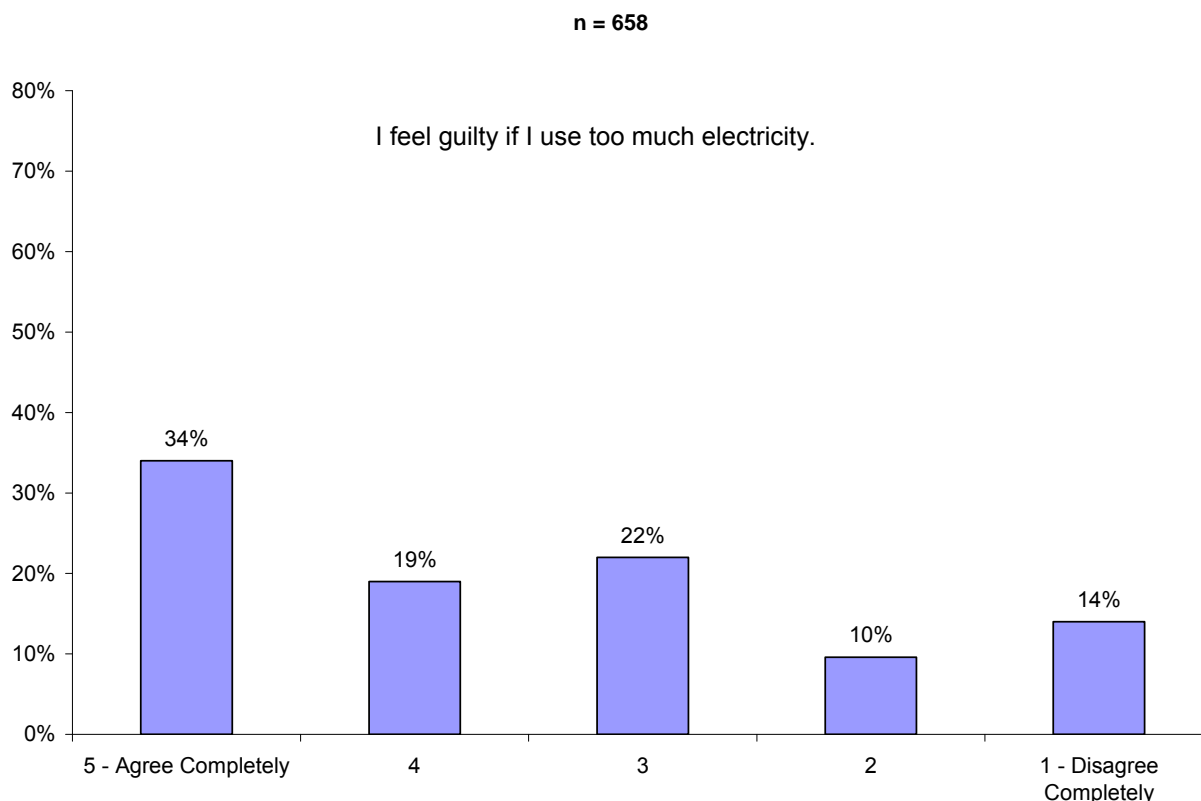
Base = all respondents.

The groups most likely to disagree with this statement (and thus indicate personal responsibility for energy savings) were homeowners versus renters (56% vs. 46%), college educated respondents (59% vs. 40%), and those earning at least \$40,000 a year (60% vs. 45%).

Figure 5-15 shows ratings of another statement, “I feel guilty if I use too much electricity.” Agreement with this statement reflects a personal norm around saving energy. Fifty-three percent of respondents agreed with this statement (rating of 4 or 5) and a third agreed completely (rating of 5). The mean rating was 3.5 signifying mild agreement. Households

earning less than \$40,000 annually were more likely to agree with the statement (67% vs. 52%), as were women (60% vs. 46%).

**Figure 5-15**  
**Agreement with Personal Norm Statement**



Base = all respondents.

Attitudes correlated with whom the respondents trusted. Those with an environmental focus<sup>21</sup> were more likely to trust environmental activists than were those without this focus (47% vs. 41%), as were those with a personal norm<sup>22</sup> around electricity use (57% vs. 30%). And those

<sup>21</sup> Environmental focus = rating of 1 or 2 (disagree) on the environmental focus statement.

<sup>22</sup> Personal norm = rating of 4 or 5 (agree) on the personal norm statement.

whose energy efficiency focus was on lowering their bills (self focus)<sup>23</sup> tended to trust utilities more than those less focused on saving money (73% vs. 62%).

#### **5.4.3.3 Impact of SCE Messages on AKA and Behavior**

We asked respondents who recalled seeing or hearing energy efficiency messages from SCE how much they agreed or disagreed with three statements concerning the impact of those messages on their awareness, knowledge, and attitudes:

- Awareness – 70 percent agreed<sup>24</sup> that information from SCE had made them more aware of energy efficiency programs offered by the utility.
- Knowledge – 61 percent agreed that they had learned practical ways to be more energy efficient from SCE.
- Attitudes – 57 percent agreed that information they had received from SCE had changed their attitudes about energy efficiency.

Senior citizens were more likely to say that SCE had increased their awareness of their programs (84% vs. 68%). Those earning less than \$40,000 a year were more likely than higher income customers to say that SCE had both increased their awareness of programs (90% vs. 64%) and had taught them ways to be more energy efficient (80% vs. 55%). Those who had attended college were more likely than non-college attendees to say that SCE's marketing and customer education efforts had changed their attitudes about efficiency (62% vs. 47%).

One out of six respondents (17%) said that SCE had affected all three aspects – their awareness, knowledge, and attitudes. Virtually all of these respondents (96%) further agreed that what they had learned from SCE would change their purchase decisions in the future.

#### **5.4.4 Appliance Purchases and Market Barriers**

We asked respondents whether they or someone else in their household had purchased each of the HEER-rebated technologies in the past two years. We then asked those who had not purchased a given technology in the past two years whether anyone in their household planned

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<sup>23</sup> Self focus = rating of 4 or 5 (agree) on the self focus statement.

<sup>24</sup> Agreed = rating of 4 or 5 on a 5-point agreement scale.

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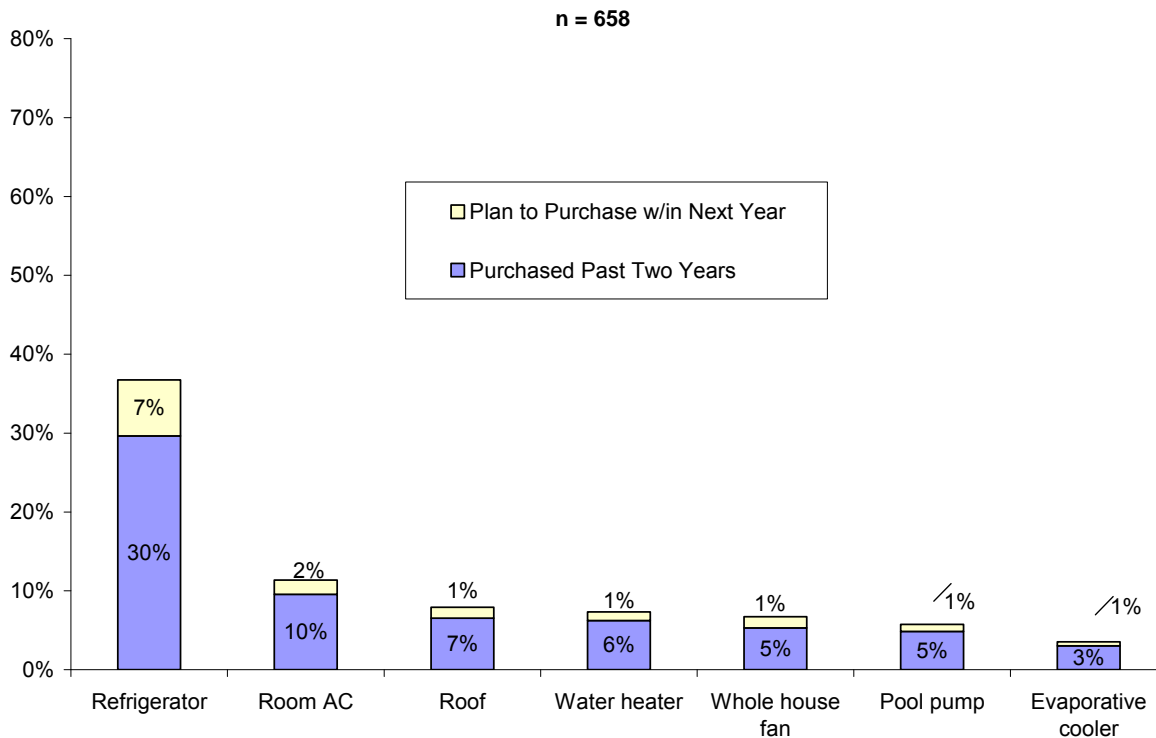
to purchase the technology within the next 12 months. In both cases the question only asked about purchases of new units for their current residence.

Figure 5-16 shows the percent of households that said they had purchased specific appliances in the past two years and the percent that planned to purchase them in the next year. Almost a third reported purchasing a new refrigerator in the past two years, with ten percent or fewer reporting a recent purchase of each of the other rebated technologies.<sup>25</sup> Adding planned purchases within the next year brings the total of recent and future purchasers to 37 percent for refrigerators and 12 percent for room air-conditioners. Planned purchases in the next 12 months add only one percent or less to the other technology purchase categories.

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<sup>25</sup> Note that this is the percent making a purchase in the technology category where HEER rebates are available, not the percent purchasing a model that was eligible for rebate.

**Figure 5-16**  
**Percent of Households Purchasing Appliances**



Base = all respondents.

At first glance, the percentage purchasing new refrigerators seems high. The engineering life expectancy for most types of refrigerators is 14 or 15 years, which would imply an annual replacement rate of roughly seven percent. In reality, however, refrigerators are typically replaced well before they stop working as homes change hands and homeowners remodel. The 2005 California Statewide Residential Lighting and Appliance Efficiency Saturation Study, for example, found that the average age of installed refrigerators was 7.4 years and that 47 percent had been purchased within the past five years.<sup>26</sup>

In general the percent of respondents reporting that they had recently purchased or planned to purchase one of these appliances did not differ as a function of awareness of the HEER

<sup>26</sup> [http://www.calmac.org/publications/2005\\_CLASS\\_FINAL\\_REPORT\\_v3.pdf](http://www.calmac.org/publications/2005_CLASS_FINAL_REPORT_v3.pdf)

program; recall of messages from SCE; awareness, attitudes, and knowledge of energy efficiency; or demographics. The exceptions are as follows:

- Respondents who were aware of HEER or recalled seeing efficiency-related messages from SCE were more likely to be in the market for an electric water heater;
- Nine percent of those aware of the HEER program were in the market for an electric water heater, versus three percent of those not aware of the program
- Eleven percent of those that recalled SCE messages were in the market for an electric water heater, versus five percent of those who did not recall messages
- Those who were highly knowledgeable about energy efficiency were less likely to be in the market for a refrigerator. Only 29 percent of those who scored 100 percent on the energy efficiency knowledge test were in the market for a refrigerator, versus 38 percent of those who made one or more mistakes on the test;
- Those whose attitudes toward energy efficiency were characterized by an environmental focus were more likely than those without such a focus to have purchased a whole house fan in the past two years (7% vs. 4%);
- Respondents with a personal norm associated with energy efficiency were less likely than those without such a norm to have purchased a swimming pool pump in the past two years (3% vs. 10%);
- Customers earning at least \$75,000 a year were more likely than lower income customers to have purchased a new refrigerator (33% vs. 25%) or a whole house fan (7% vs. 3%) in the past two years; and
- Respondents who were 65 years of age or older were less likely than younger respondents to report recent purchases of water heaters (3% vs. 7%) or room air-conditioners (6% vs. 11%).

The percent of those customers who planned to purchase an appliance in the next 12 months who had already begun shopping or researching their options differed substantially by appliance type. Two-thirds (67%) of those planning to buy a new roof were already researching their options, as were 47 percent of those planning to buy a refrigerator and 33 percent of those planning to purchase a whole house fan. For the other appliances surveyed, the percent of



planned purchasers who were already shopping ranged from 29 percent for evaporative coolers to 17 percent for pool pumps.

#### **5.4.4.1 Refrigerators**

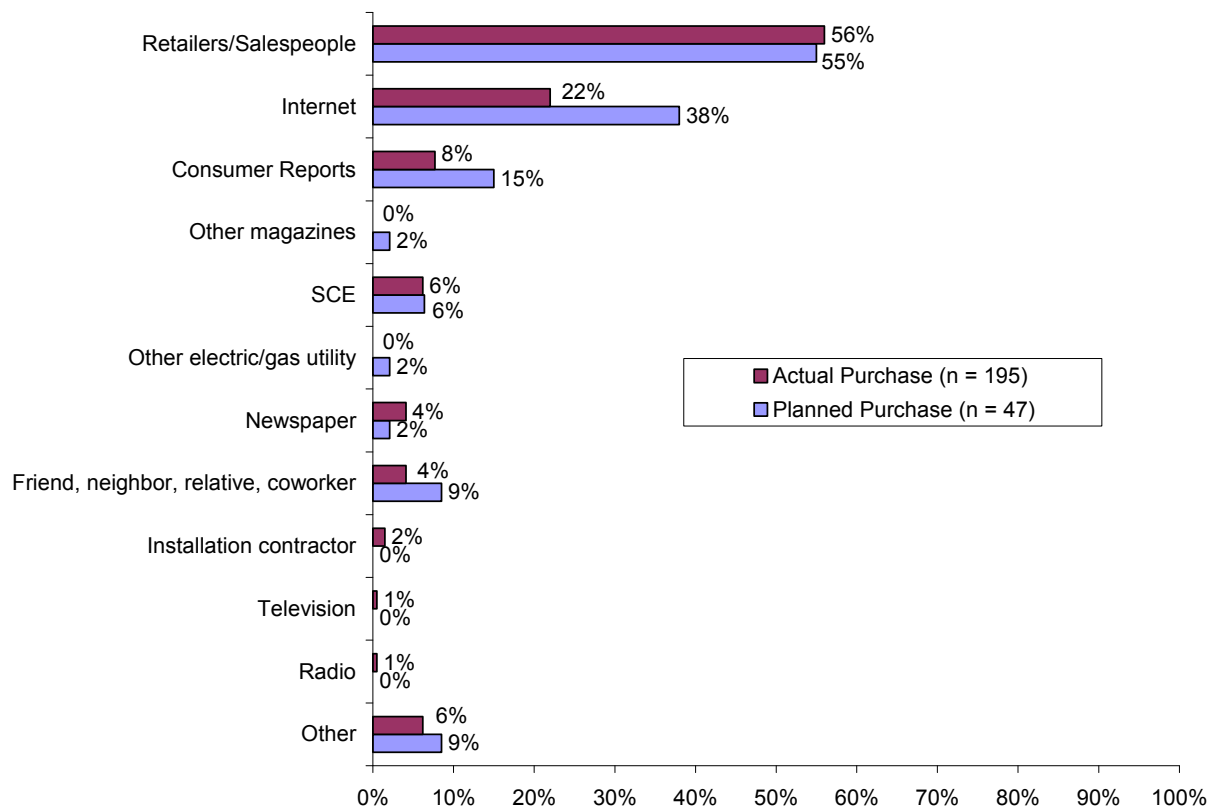
Respondents who reported purchasing a new refrigerator in the past two years were asked where they got information to help them decide what type of refrigerator to buy. Those who planned to purchase a refrigerator in the next 12 months were asked what information sources they *expected* to use in making their purchase decision. Figure 5-17 shows the percent who said they used (or expected to use) various sources of information.

The majority who had actually made a purchase in the last two years relied on retailers or salespeople for information, while almost one in four researched refrigerators on the Internet. A small percentage (6%) said they used information from SCE in making their decision. This is almost as many as reported using Consumer Reports or similar magazines.<sup>27</sup> An equal number provided responses that did not fit into one of the categories shown below (i.e., “other” responses). These included respondents who said they got information from flyers, those who simply said “I researched it myself,” and those who claim they did not use any information in making their purchase decision.

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<sup>27</sup> We use Consumer Reports in the charts as shorthand for Consumer Reports or other product-oriented magazines. This question was asked open ended.

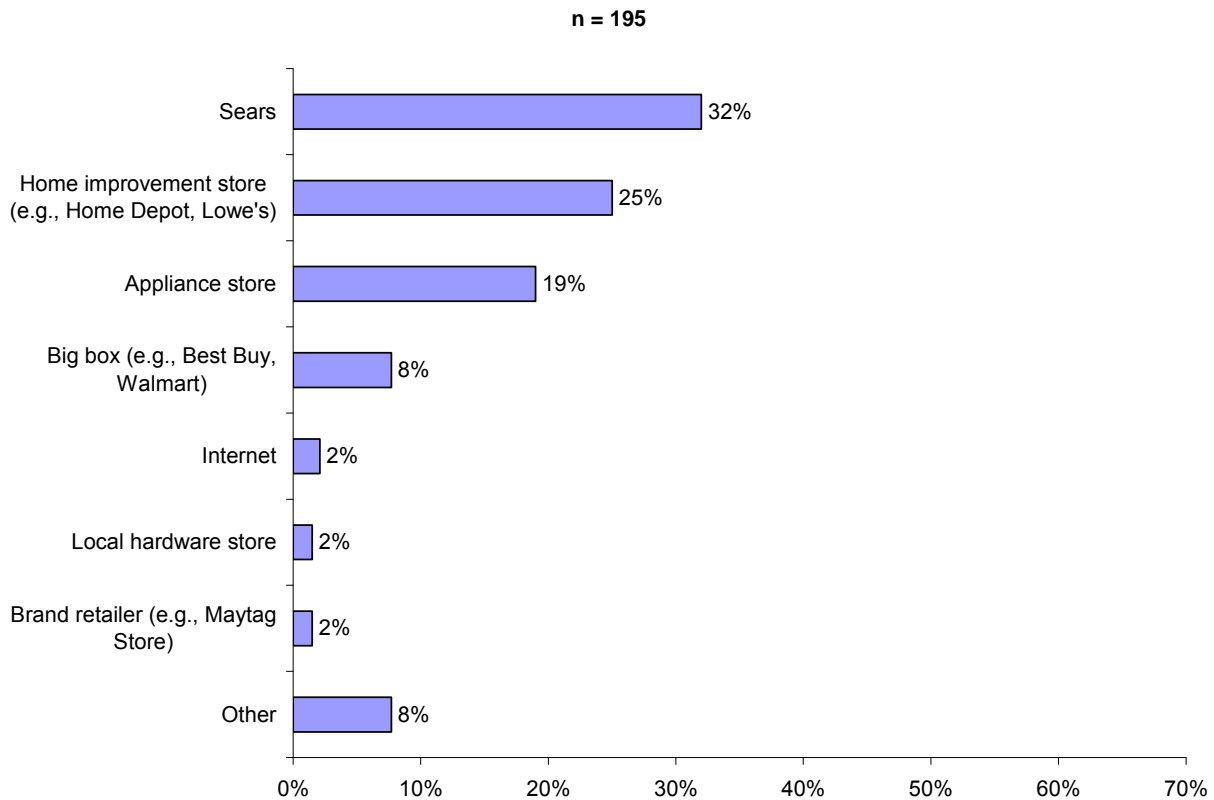
**Figure 5-17**  
**Information Sources for Actual/Planned Refrigerator Purchases**



Those planning a purchase expected to rely on similar sources of information as those who had recently made a purchase. The only statistically significant difference was that 38 percent of those planning a purchase planned to research their purchase on the Internet, whereas only 22 percent of recent purchasers reported actually using the Internet for this purpose.

Figure 5-18 shows the type of retailer from whom residential customers purchased new refrigerators in the past two years. Fully a third bought their refrigerator from Sears. A quarter purchased it from a home improvement store such as Home Depot or Lowe's. Roughly 20 percent bought from an appliance store, and eight percent bought from a "big box" store such as Best Buy or Wal-Mart.

**Figure 5-18**  
**Where Refrigerator Was Purchased**



Base = those who purchased a refrigerator in the past two years.

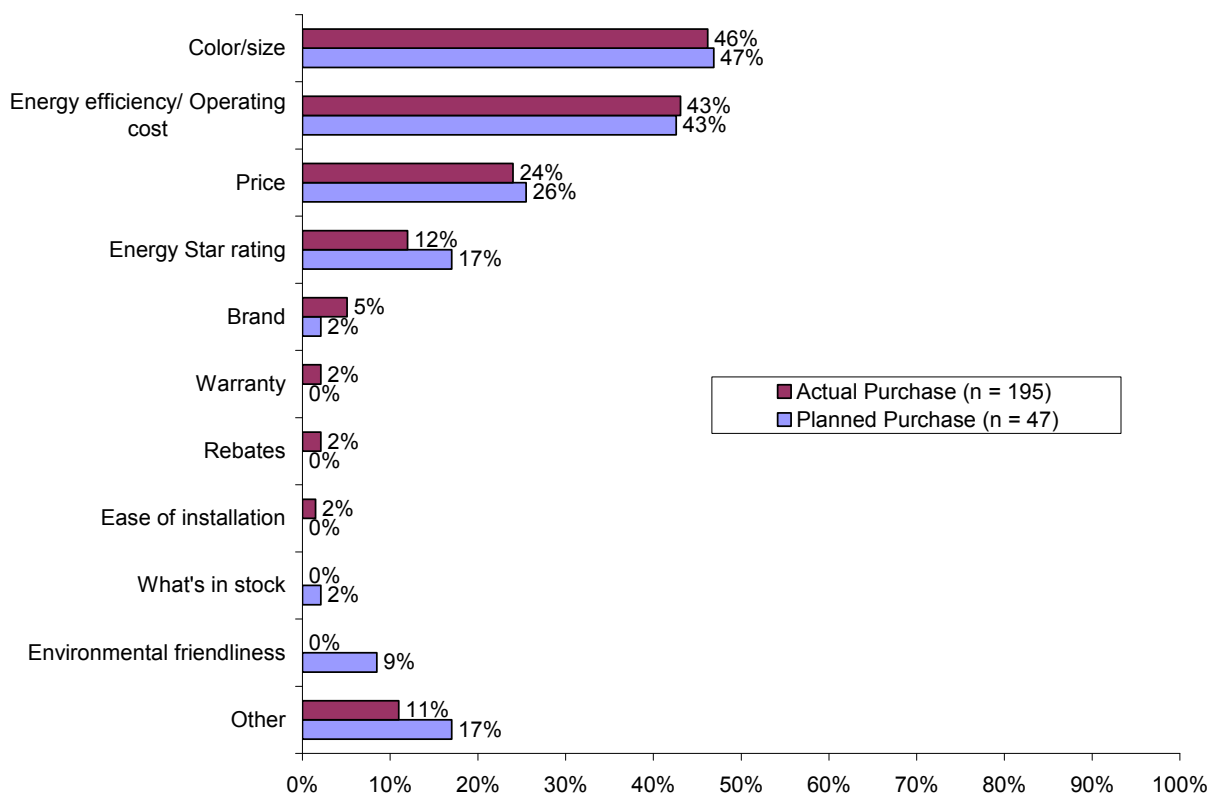
We asked both recent purchasers and prospective purchasers of refrigerators to list the characteristics of the appliance that they had considered (or expected to consider) when making their purchase decision.<sup>28</sup> As seen in Figure 5-19 the most commonly mentioned factors were the same regardless of whether we considered actual past purchases or likely future purchases.

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<sup>28</sup> For past purchasers the question was: "When you were considering the purchase of the refrigerator, what characteristics of the refrigerator did you and any contractors or salespeople talk about?" For prospective purchasers the question was: "What features will be important to you when deciding what refrigerator to buy?"

Color and/or size were cited most often, followed closely by the energy efficiency or operating cost of the unit. Price was mentioned by roughly a quarter of the respondents.

**Figure 5-19**  
**Features Considered When Purchasing Refrigerator**

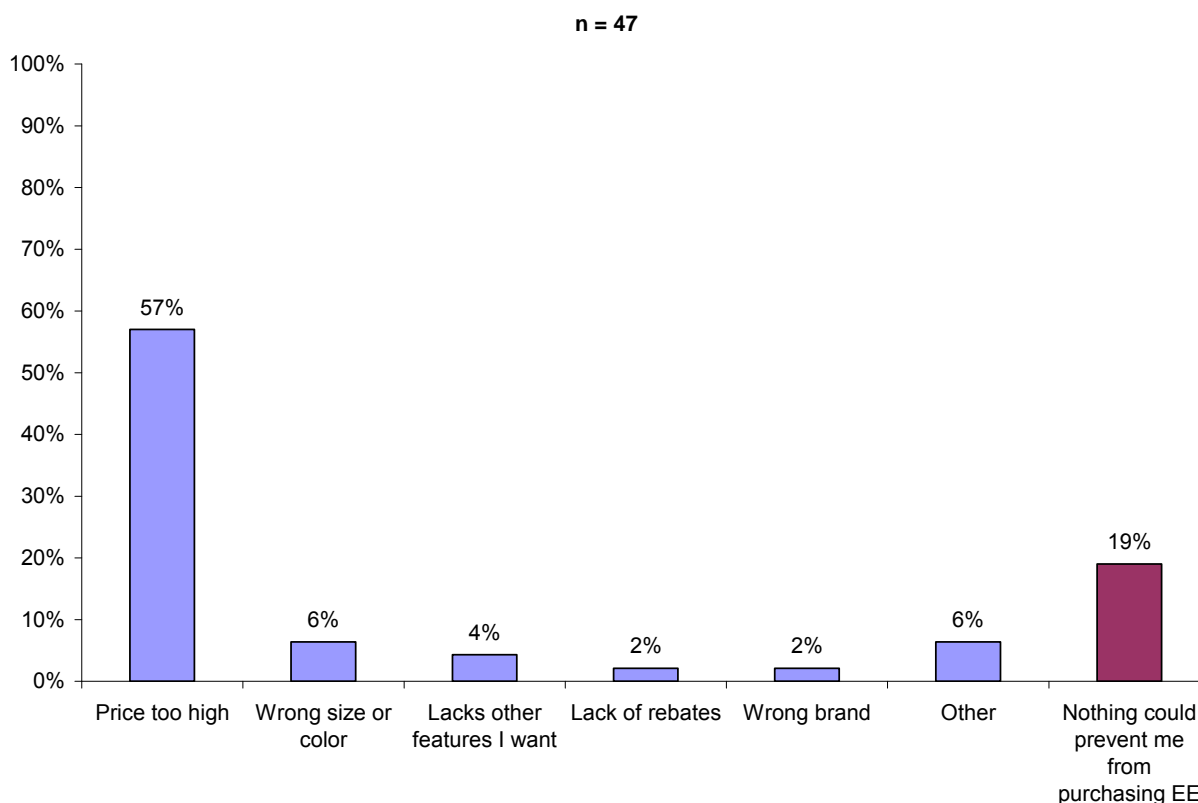


Twelve percent of actual purchasers said they discussed Energy Star ratings with sales staff, but only two percent discussed or considered rebates. For future purchases, 17 percent believed that the Energy Star rating would be an important factor, but no one mentioned rebates as an important consideration. Miscellaneous factors mentioned, which are combined in the “other” category above, included icemakers, water filters, style, up-to-date wiring, and convenience.

When asked how important it would be that they purchase an energy efficient refrigerator, 96 percent of those planning to buy a refrigerator in the next year said it would be important (rating of 4 or 5 on a 5 point scale) and 70 percent said it would be very important (rating of 5). Women were more likely than men to say that energy efficiency would be very important (85% vs. 59%) and respondents with a high effectivity score were more likely to cite efficiency as very important than were those with a low effectivity score (85% vs. 50%).

Figure 5-20 shows the potential market barriers respondents cited when we asked them what might prevent them from purchasing an energy efficient refrigerator. Most potential refrigerator buyers believed that if they did not end up buying a high efficiency model it would be due to the price. Almost one-in-five said that nothing would prevent them from buying an efficient model.

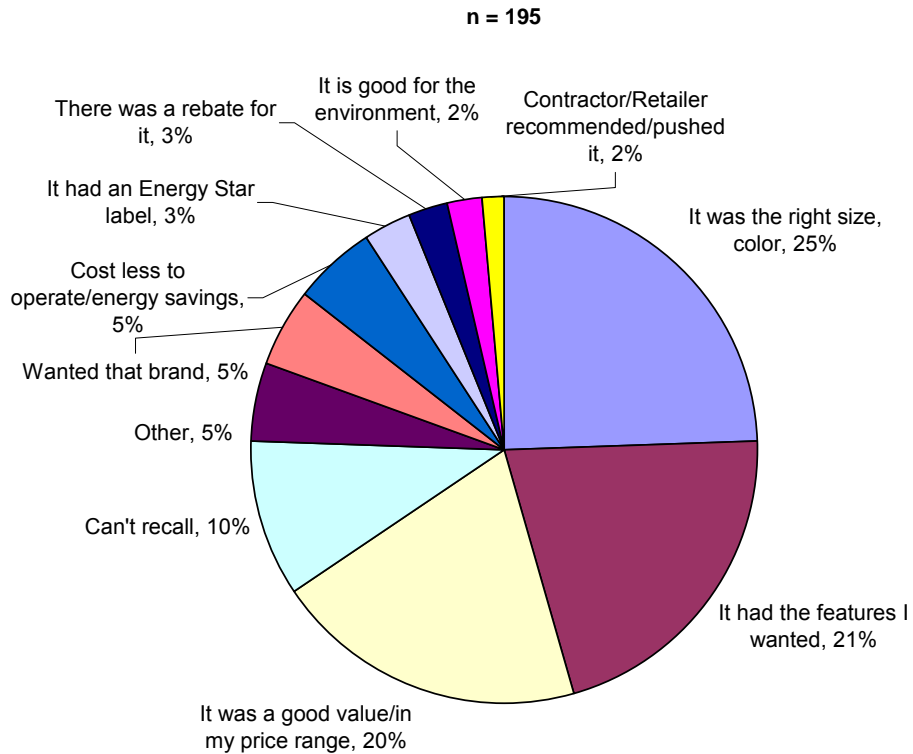
**Figure 5-20**  
**What Might Prevent You From Purchasing an Energy Efficient Refrigerator?**



Base = those planning to purchase a refrigerator in the next 12 months.

In spite of how important prospective buyers said energy efficiency was, and in spite of the fact that 43 percent of recent refrigerator buyers cited energy efficiency as a decision factor (see Figure 5-19), it was rarely seen as *the deciding factor* when recent buyers looked back on their purchase decision. When asked to name the main reason that they chose the specific model of refrigerator that they purchased, only five percent said energy efficiency (Figure 5-21). Three percent said that the Energy Star rating made up their minds, and another three percent cited a rebate as the deciding factor. Most respondents, however, based their choice of refrigerators on size, color, non-energy features, and price.

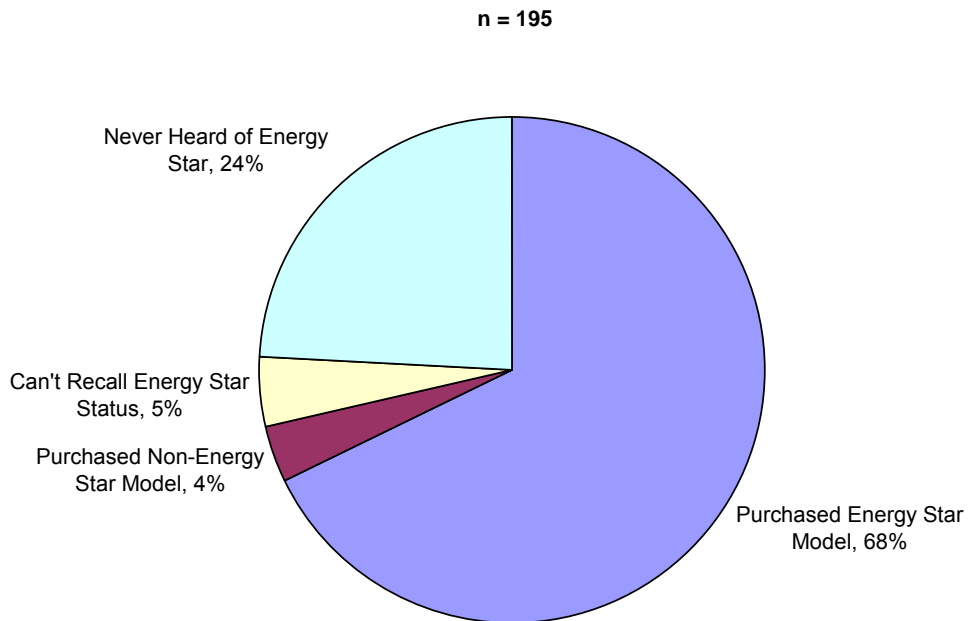
**Figure 5-21**  
**Main Reason for Choosing Specific Model of Refrigerator**



Base = those who purchased a refrigerator in the past two years.

Did respondents end up purchasing refrigerators with Energy Star labels? Yes. As shown in Figure 5-22, two-thirds of recent purchasers recalled choosing an Energy Star labeled refrigerator. The percent who actually bought an Energy Star model may be even higher, as five percent could not recall and a quarter of the respondents were not even aware of the Energy Star label.

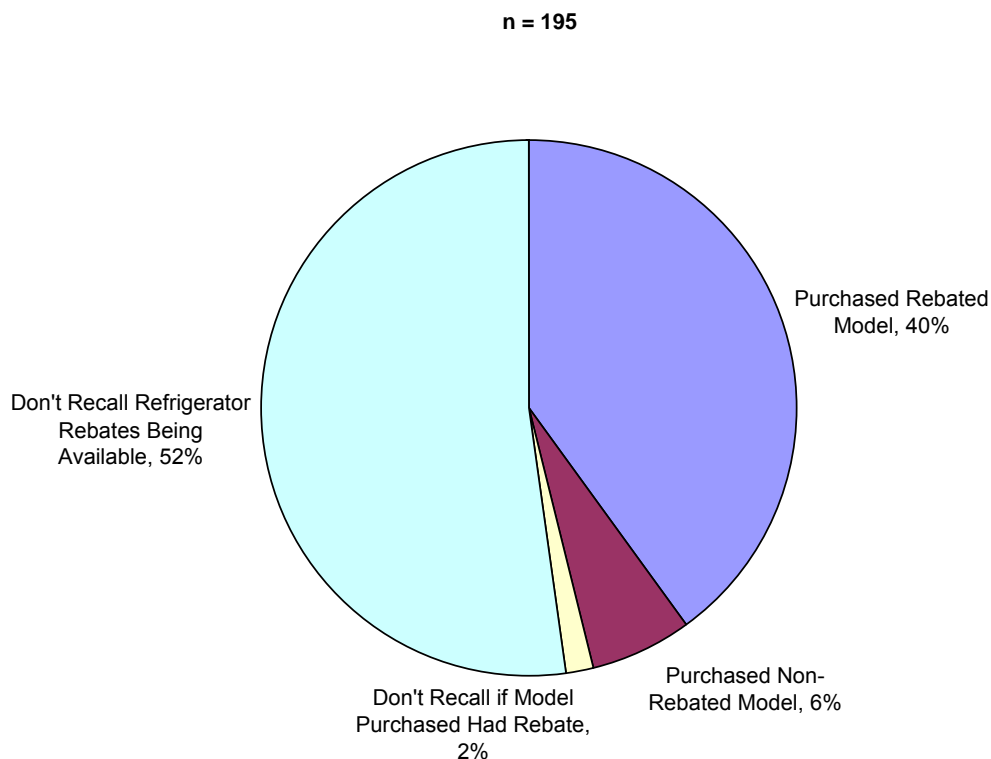
**Figure 5-22**  
**Energy Star Status of Purchased Refrigerator**



Base = those who purchased a refrigerator in the past two years.

We also asked those who had purchased a refrigerator in the past two years whether any rebates were available and whether they received a rebate for their purchase. Figure 5-23 summarizes the results.

**Figure 5-23**  
**Rebate Status of Purchased Refrigerator**



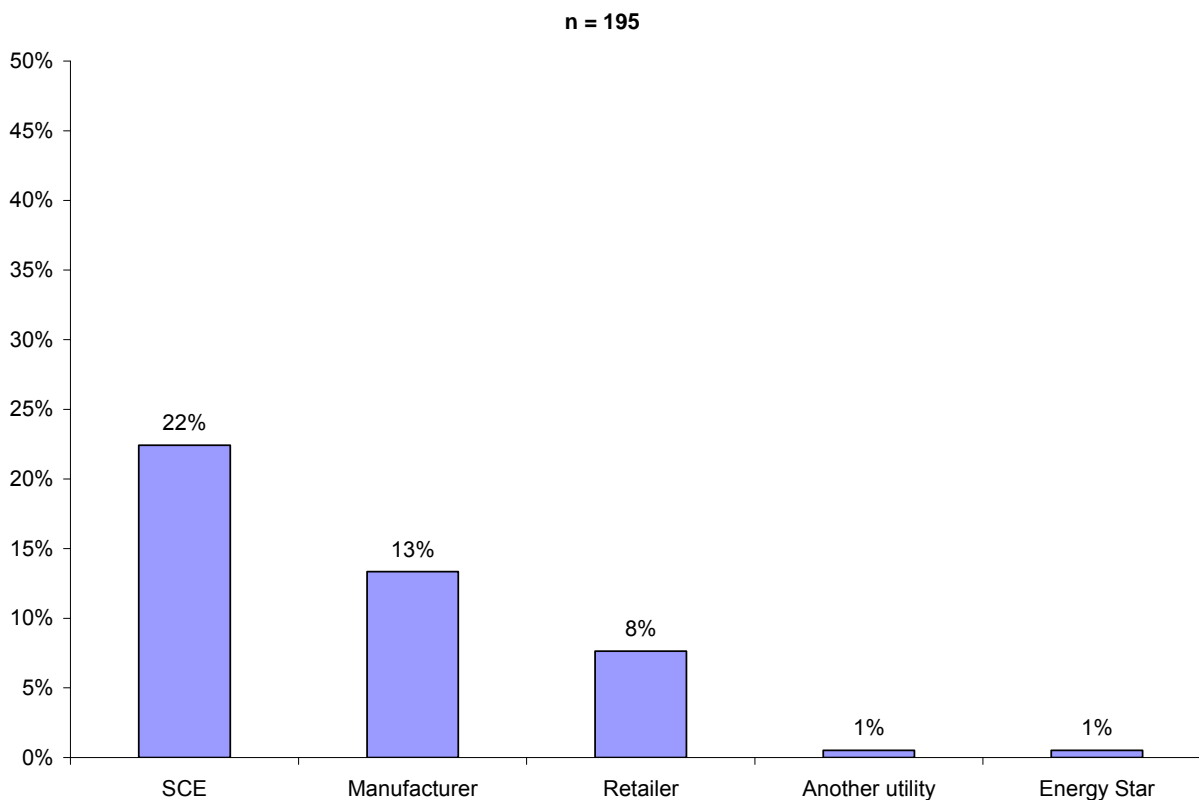
Base = those who purchased a refrigerator in the past two years.

Just under half of the respondents believed that rebates for refrigerators were available at the time they made their purchase and the vast majority of these reported receiving a rebate for the model they purchased. This does not necessarily mean, however, that they were aware of, or received, HEER rebates.

As shown in Figure 5-24, only 22 percent of recent refrigerator purchasers were aware that SCE offered a refrigerator rebate. Respondents also reported the availability of rebates from other sources, notably manufacturers and retailers.



**Figure 5-24**  
**Percent of Recent Purchasers Aware of Refrigerator Rebates by Source**



Base = those who purchased a refrigerator in the past two years. Percents may not sum to 100 because multiple responses were allowed.

The majority (56%) of those who received a rebate for their refrigerator purchase said it was very likely that they would have bought the same model without the rebate. At the other end of the spectrum 22 percent said it was unlikely<sup>29</sup> that they would have purchased the same model in the absence of the rebate.

Finally, we asked those few respondents who knew rebates were available but purchased a refrigerator without a rebate why they chose a non-rebated model. Some contended that they

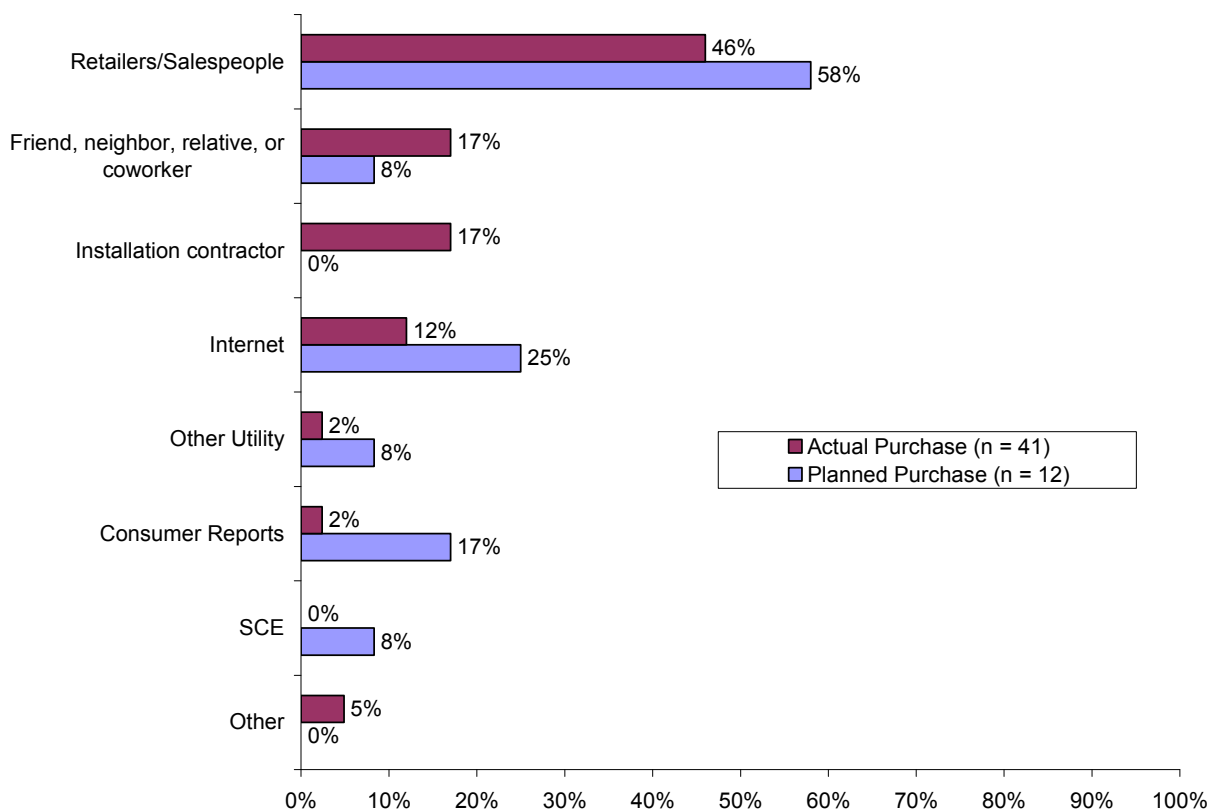
<sup>29</sup> Six percent said it was “not very likely” and 15 percent said it was “very unlikely.”

did purchase a rebated model but did not receive the rebate because SCE did not send it. Others said that the price was too high even with the rebate.

#### 5.4.4.2 Electric Water Heaters

We asked respondents who reported purchasing a new water heater in the past two years where they got information to help them decide what type of water heater to buy and asked those who planned to purchase a water heater in the next 12 months what information sources they *expected* to use in making their purchase decision. Figure 5-25 shows the percent who said they used (or expected to use) various sources of information.

**Figure 5-25**  
**Information Sources for Actual/Planned Water Heater Purchase**

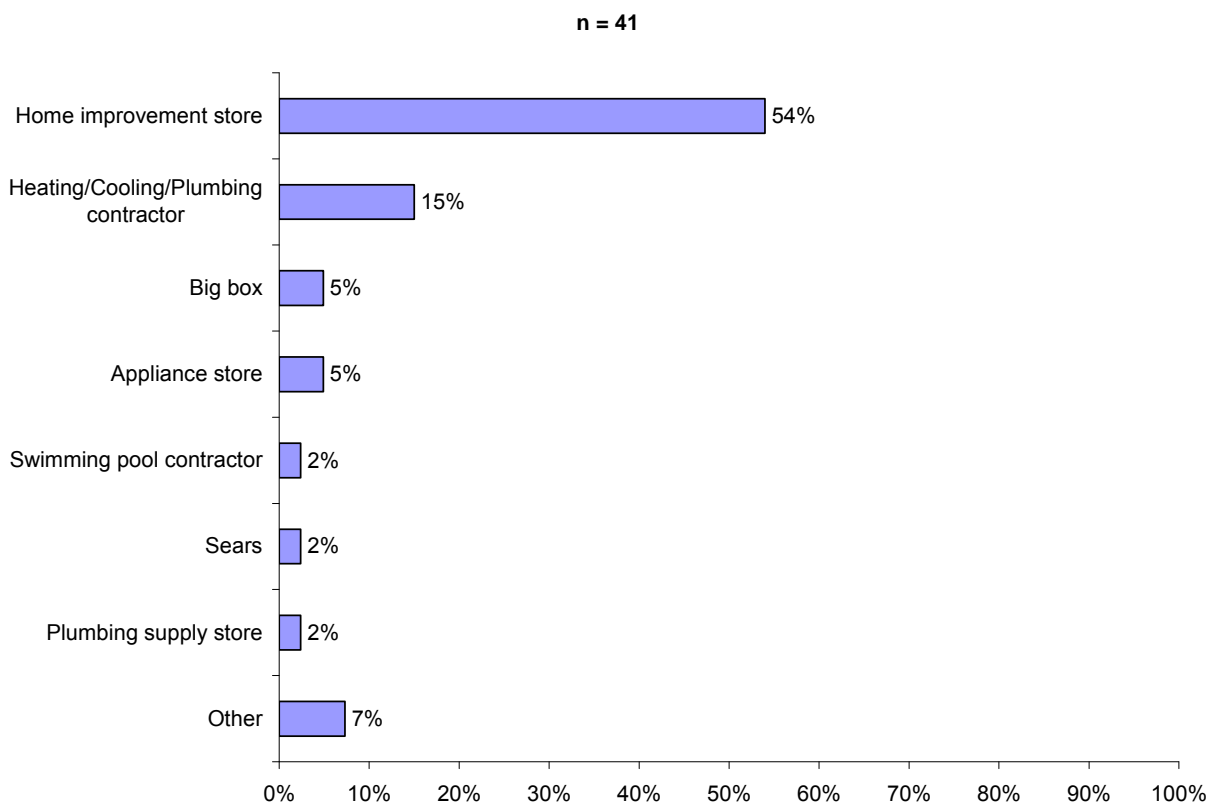


Almost half of those who had made an actual purchase in the past two years said they relied on retailers or salespeople for information. Other commonly-cited sources included friends, relatives, or coworkers; installation contractors; and the Internet. Although customers' expected information sources for future purchases appear rather different, only two of these differences are statistically significant. Contrary to the experience of recent purchasers, no prospective

purchasers thought they would rely on an installation contractor. And prospective purchasers thought they would use Consumer Reports to a greater extent than recent purchasers actually used that source.

Figure 5-26 shows where recent water heater buyers made their purchase. The majority said they purchased their water heater at a home improvement store such as Lowe’s or Home Depot, while fifteen percent said they bought it from a contractor specializing in heating, cooling, or plumbing.

**Figure 5-26**  
**Where Water Heater Was Purchased**



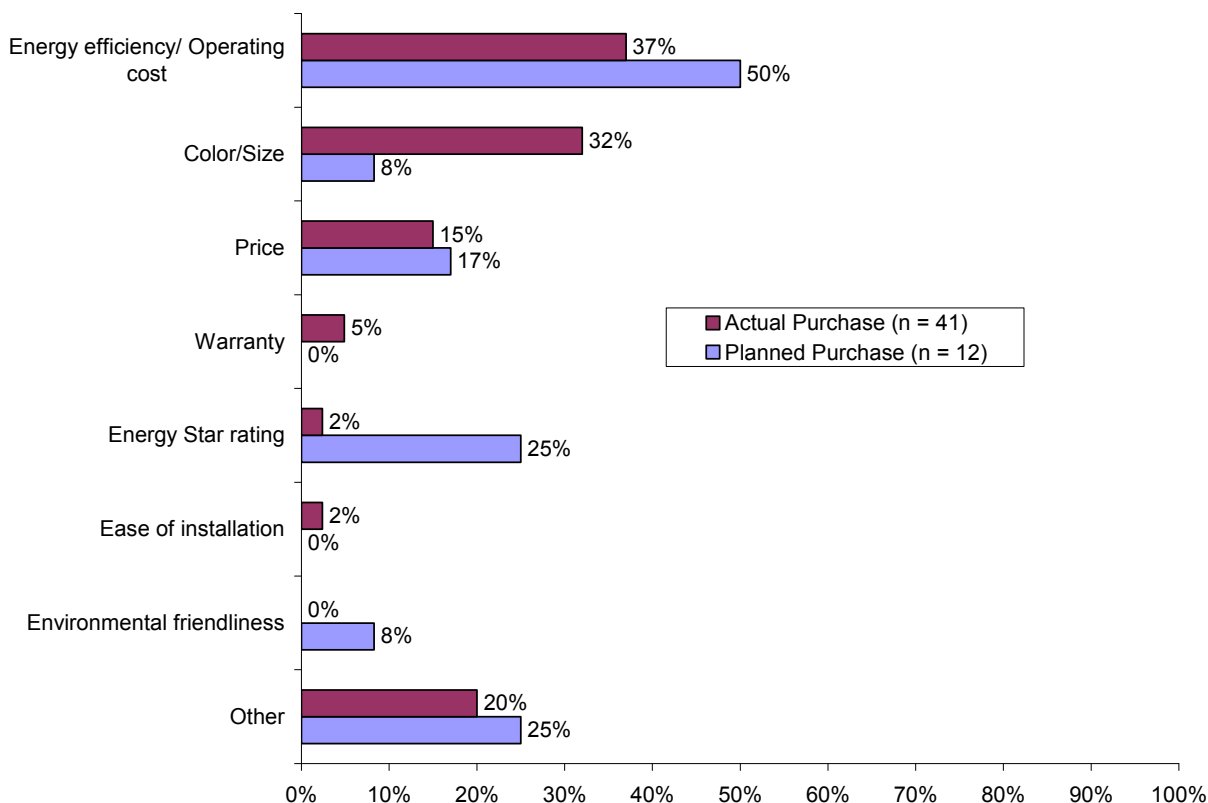
Base = those who purchased a water heater in the past two years.

Figure 5-27 shows the features that customers considered when purchasing a water heater (or they expected to consider during a future purchase). Regardless of whether we examined past or future purchases, the number one factor mentioned by customers was the energy efficiency and operating cost of the water heater. For actual purchases the second most considered factor

was the size of the water heater. This contrasts with refrigerator purchases, where size and color were the most frequently-cited issues.

Three differences between the factors recent water heater purchasers considered and the factors prospective purchasers expected to consider were statistically significant. Prospective buyers expected to pay less attention to color/size and warranties, and more attention to the Energy Star label, than recent buyers had done. The “other” response category included saving water, and replacing the old water heater with a similar one.

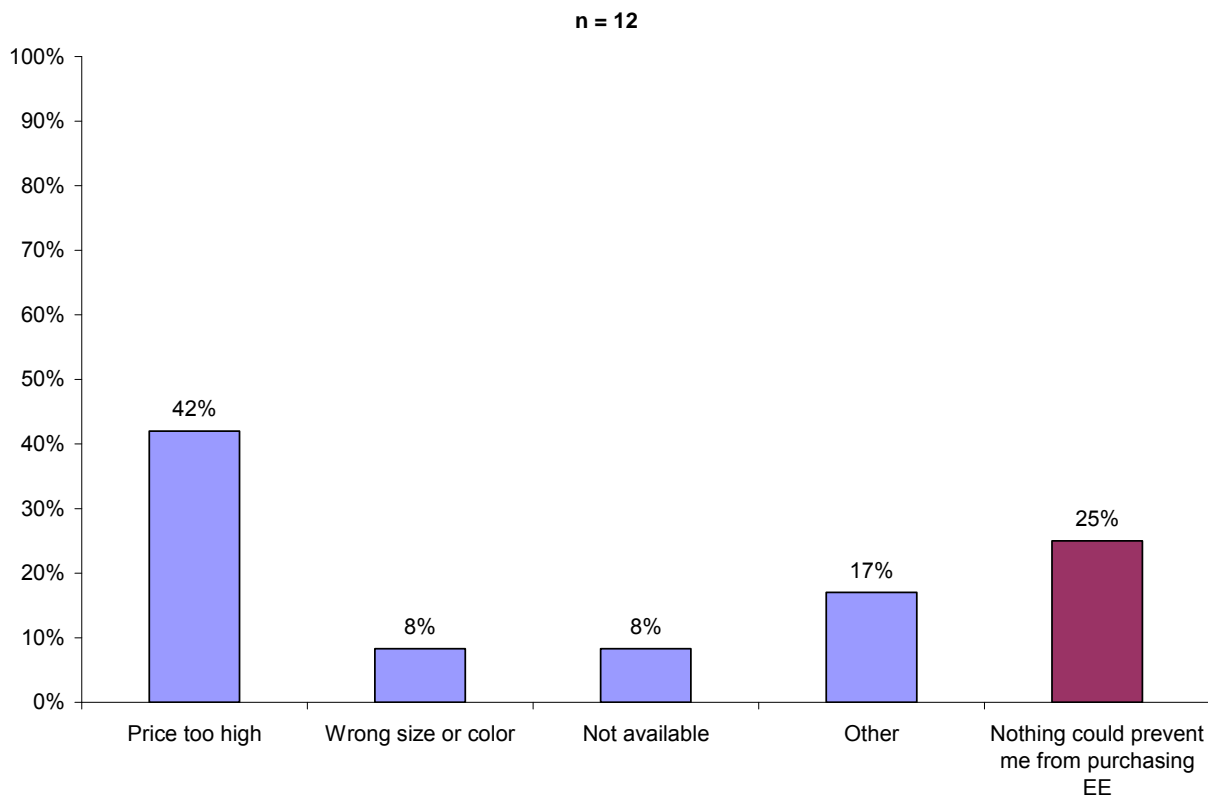
**Figure 5-27**  
**Features Considered When Purchasing Water Heater**



We asked those who were planning to purchase a water heater in the next 12 months how important it would be to them that the model they purchased was energy efficient. All of them said it would be important (rating of 4 or 5 on a 5 point scale) and 67 percent said it would be very important (rating of 5).

Figure 5-28 shows the potential market barriers respondents cited when we asked them what might prevent them from purchasing an energy efficient water heater in the future. The most commonly-cited potential barrier was price. A quarter of prospective buyers claimed that nothing could prevent them from purchasing an energy efficient water heater.

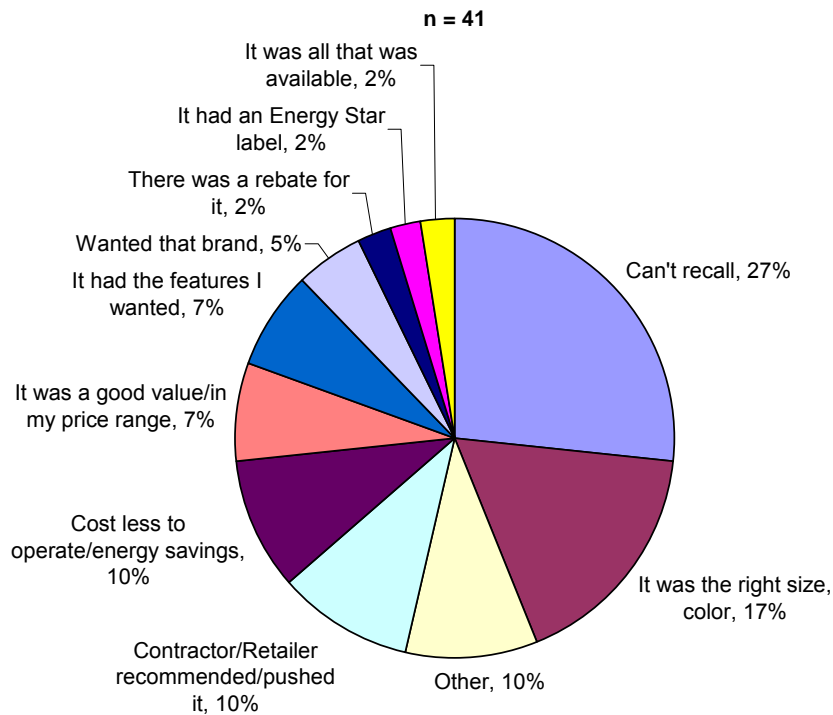
**Figure 5-28**  
**What Might Prevent You from Purchasing an Energy Efficient Water Heater?**



Base = those planning to purchase a water heater in the next 12 months.

Regardless of how important prospective purchasers believe energy efficiency is, it is not the most important factor in recent purchase decisions. As seen in Figure 5-29, only 10 percent of recent purchasers said that energy efficiency or operating cost was the main reason they purchased a specific model. Two percent each cited rebates and Energy Star labeling as the main reason for their purchase. The most common response from recent purchasers was that they did not recall why they ultimately chose the model they did. Other common responses were the size and that it was the one the salesperson recommended.

**Figure 5-29**  
**Main Reason for Choosing Specific Model of Water Heater**

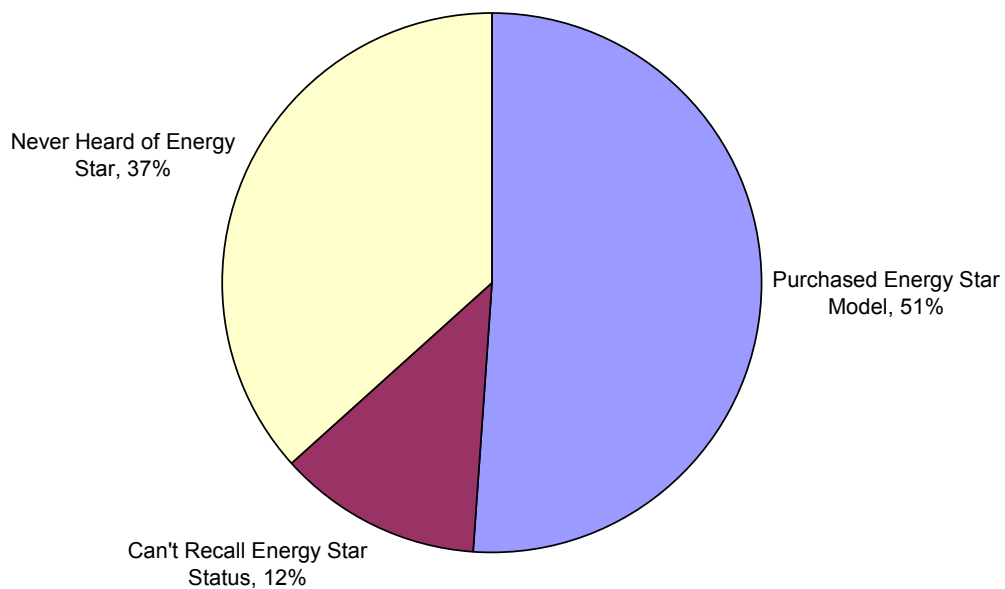


Base = those who purchased a water heater in the past two years.

Figure 5-30 shows that half of recent purchasers (51%) say they purchased an Energy Star-rated water heater. The remainder either claims to have not heard of Energy Star before taking this survey or do not recall whether they purchased an Energy Star model. No one reported buying a non-Energy Star water heater.

**Figure 5-30**  
**Energy Star Status of Purchased Water Heater**

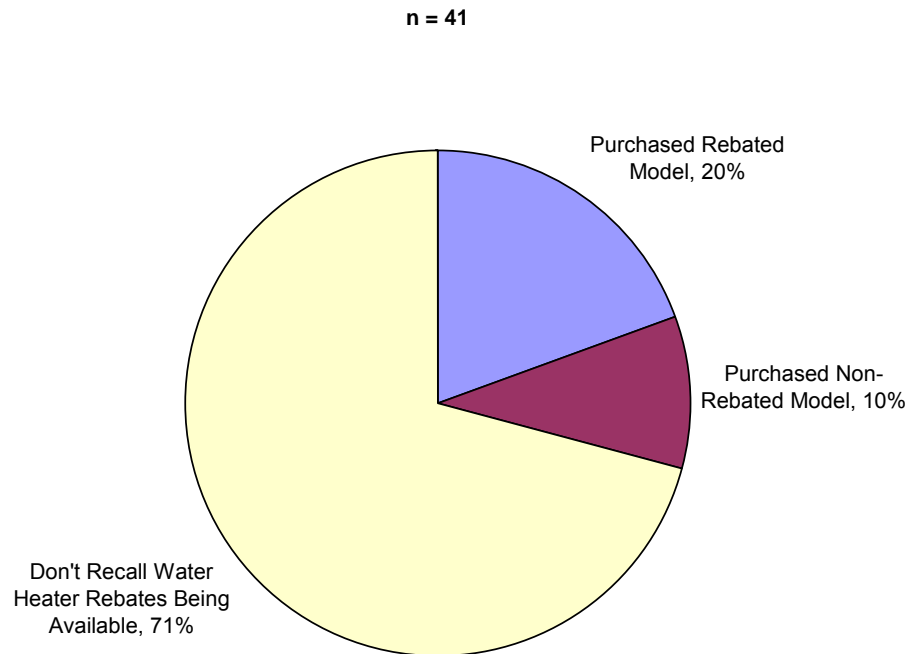
n = 41



Base = those who purchased a water heater in the past two years.

As seen in Figure 5-31, most recent buyers do not recall any rebates on water heaters being available at the time of purchase. Of those who do recall rebates, two-thirds purchased a rebated model and one third purchased a non-rebated model.

**Figure 5-31**  
**Rebate Status of Purchased Water Heater**

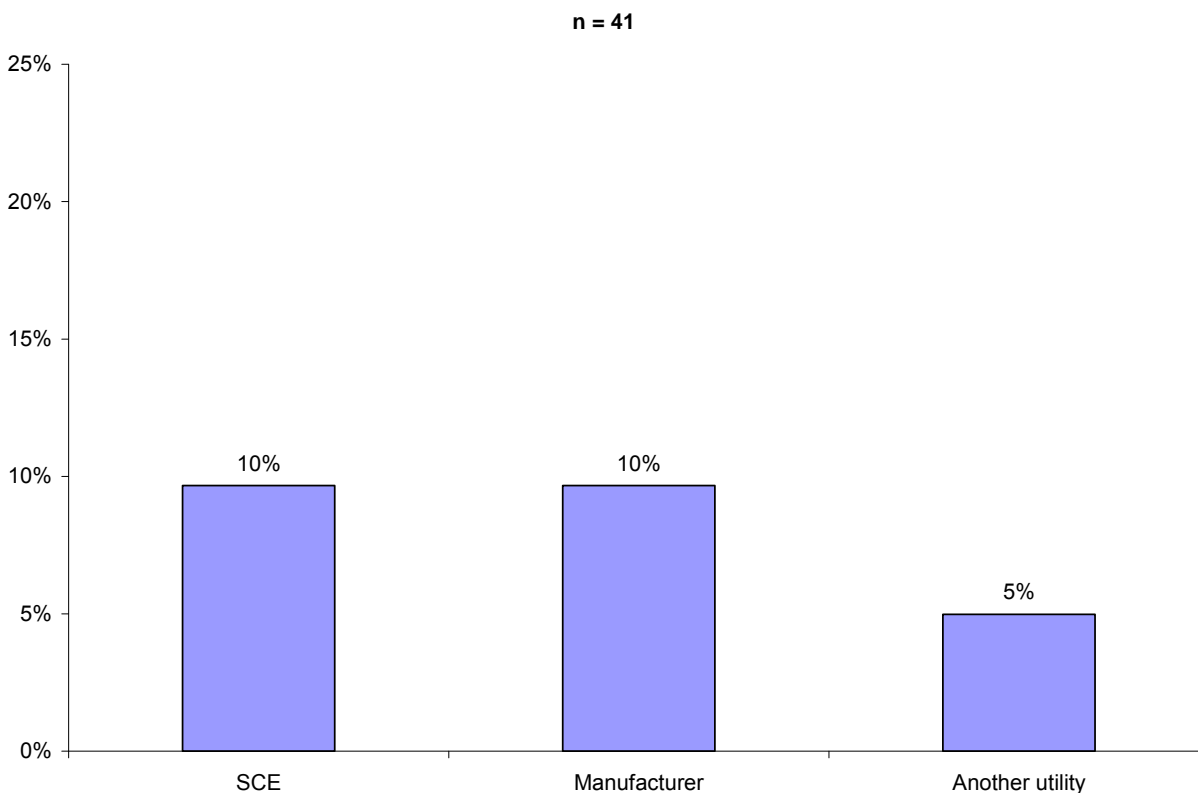


Base = those who purchased a water heater in the past two years.

Figure 5-32 shows the percent of recent water heater purchasers who were aware of rebates by source. Equal numbers mentioned rebates from SCE as from the equipment manufacturers, while a few mentioned rebates from other utilities.



**Figure 5-32**  
**Percent of Recent Purchasers Aware of Water Heater Rebates by Source**



Base = those who purchased a water heater in the past two years.

Of the few respondents who had recently purchased a rebated water heater, half said they would have been very likely to buy the same model without a rebate. The other half said they would have been unlikely to purchase it without the rebate; a quarter said they would have been very unlikely to have made this purchase without the rebate as an incentive. None of the four respondents who had recently purchased a non-rebated water heater were able to provide a reason for their decision.

#### 5.4.4.3 Room Air Conditioners

Figure 5-33 shows the percent of recent purchasers of room air-conditioners who relied on various sources of information in making their decision and the percent of prospective buyers who expected to rely on each information source. The top three sources of information used by recent purchasers were retailers/salespeople, the Internet, and installation contractors. Recent buyers reported gathering information from friends and neighbors and from newspapers;

prospective buyers did not foresee using these sources. On the other hand, prospective buyers expected to rely on salespeople even more than recent purchasers had.<sup>30</sup>

**Figure 5-33**  
**Information Sources for Actual/Planned Room AC Purchase**

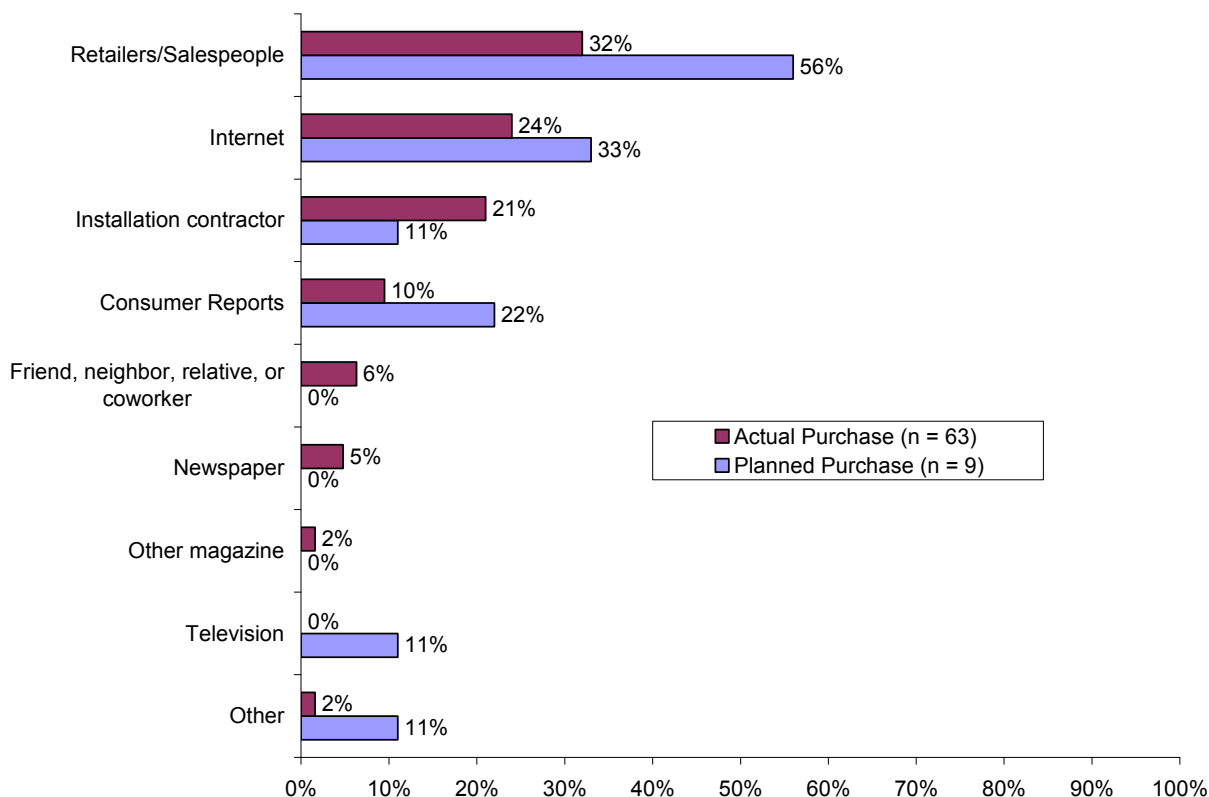
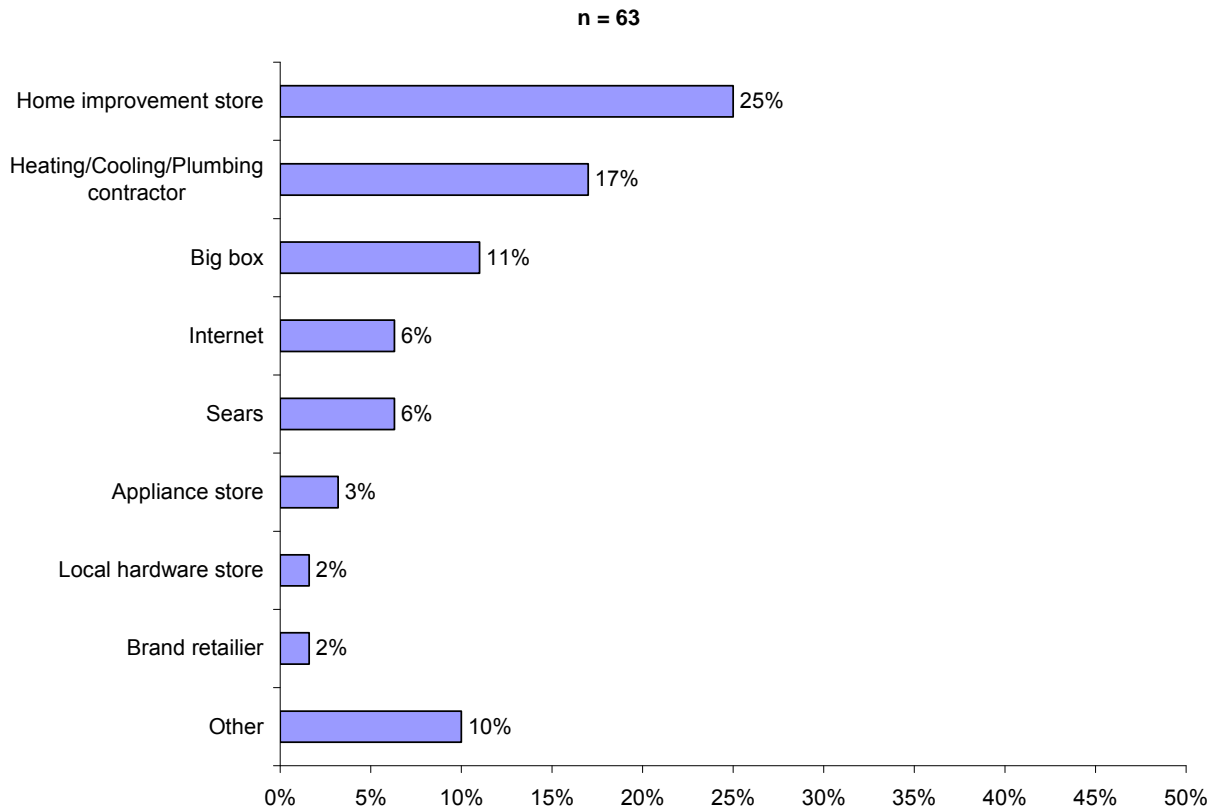


Figure 5-34 shows where recent buyers purchased their room air conditioners. A quarter made their purchase from a home improvement store like Lowe’s or Home Depot. One out of six bought their room air conditioner from a contractor specializing in heating, cooling, and plumbing; and one in ten purchased it from a big box retailer like Wal-Mart. Responses in the “other” category included homebuilders and consumer electronics stores.

<sup>30</sup> These are the only statistically significant differences between the information sources reported by recent and prospective buyers.

**Figure 5-34**  
**Where Room AC Was Purchased**



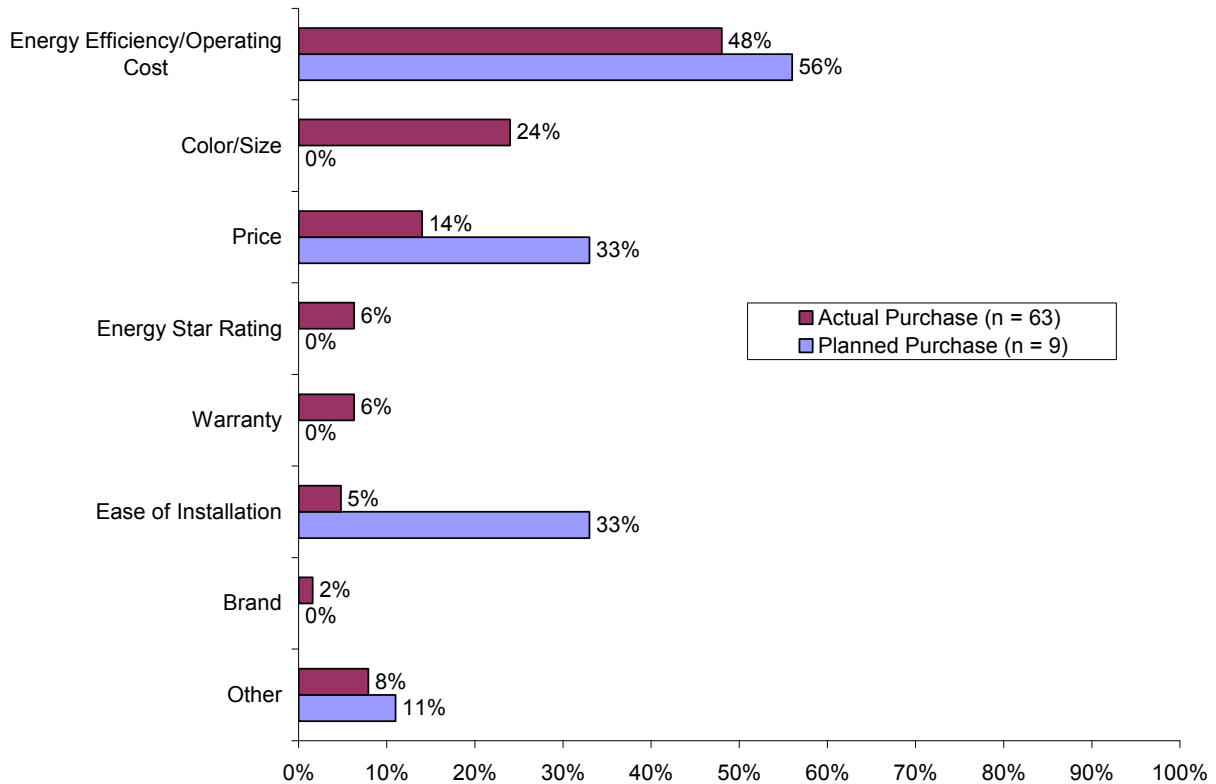
Base = those who purchased a room air conditioner in the past two years.

Figure 5-35 shows the percent of recent purchasers who considered specific features when deciding what to buy and the percent of prospective purchasers who anticipated focusing on specific factors. For both recent and prospective buyers, the energy efficiency and operating cost of the air conditioner is the most common factor considered. Recent buyers, however, focused on several factors that prospective buyers did not anticipate. These included color and size, Energy Star rating, and warranties. Prospective buyers expected to focus heavily on ease of installation, a factor that recent buyers rarely reported considering<sup>31</sup>.

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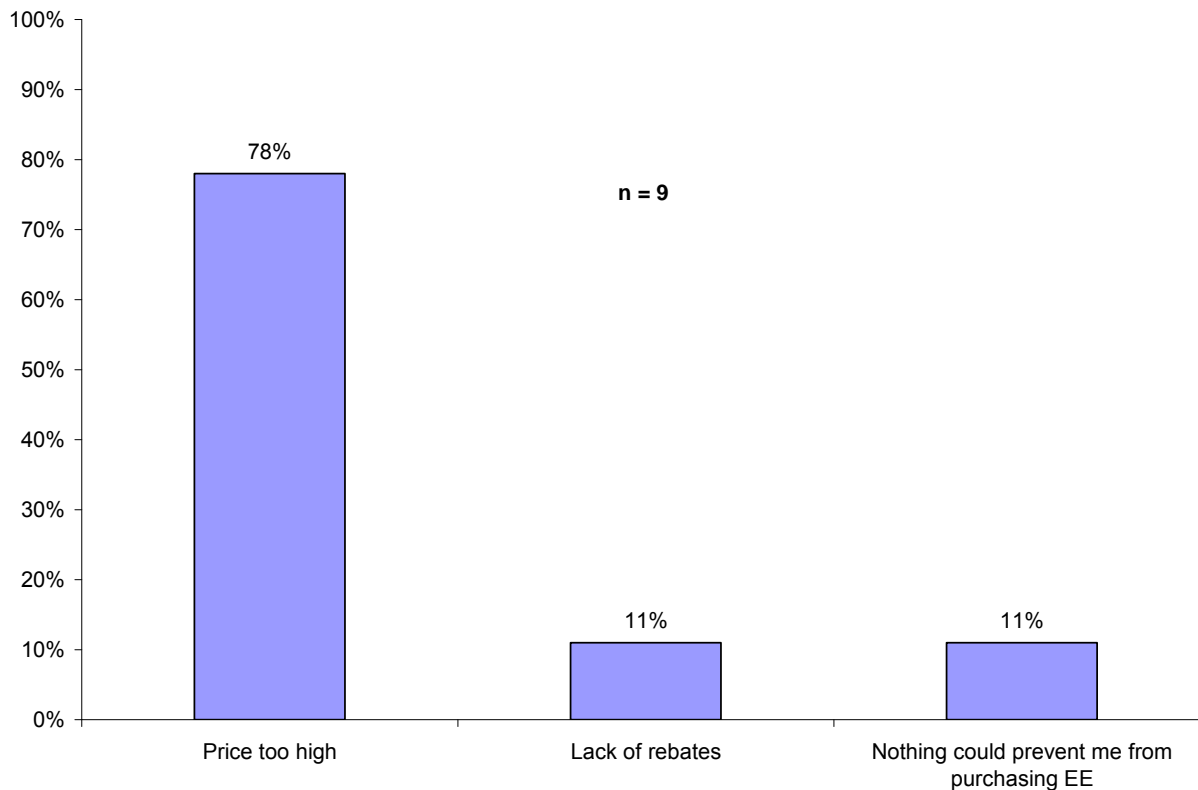
<sup>31</sup> Although it appears from the figure that prospective buyers mentioned price as a factor more often than recent buyers, this difference is not statistically significant.

**Figure 5-35**  
**Features Considered When Purchasing Room AC**



All prospective air conditioner buyers said that buying an energy efficient model was important to them (rating of 4 or 5 on a 5 point scale), and 89 percent said it was very important. When asked what might prevent them from purchasing an energy efficient model, the overwhelming response was price (Figure 5-36). Eleven percent said a lack of rebates might prevent them from buying an efficient model, and another 11 percent said nothing could prevent them from buying an efficient model.

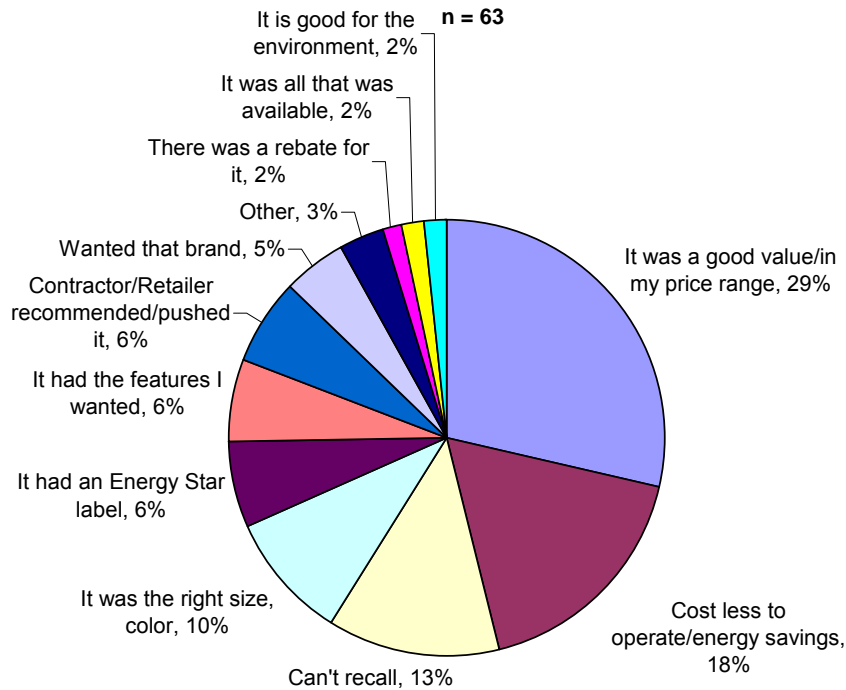
**Figure 5-36**  
**What Might Prevent You From Purchasing an Energy Efficient Room AC?**



Base = those planning to purchase a room air conditioner in the next 12 months.

As seen in Figure 5-37, energy efficiency and associated operating cost savings was the second-most-cited deciding factor when recent purchasers were choosing what model room air conditioner to buy, mentioned by 18 percent. Overall price/value was the number one decision factor. Six percent cited the model's Energy Star rating as the main reason they chose it, and two percent said it was the fact that it had a rebate. This reflects a greater focus on energy efficiency and when purchasing a room air conditioner than we saw with recent purchases of either refrigerators or water heaters.

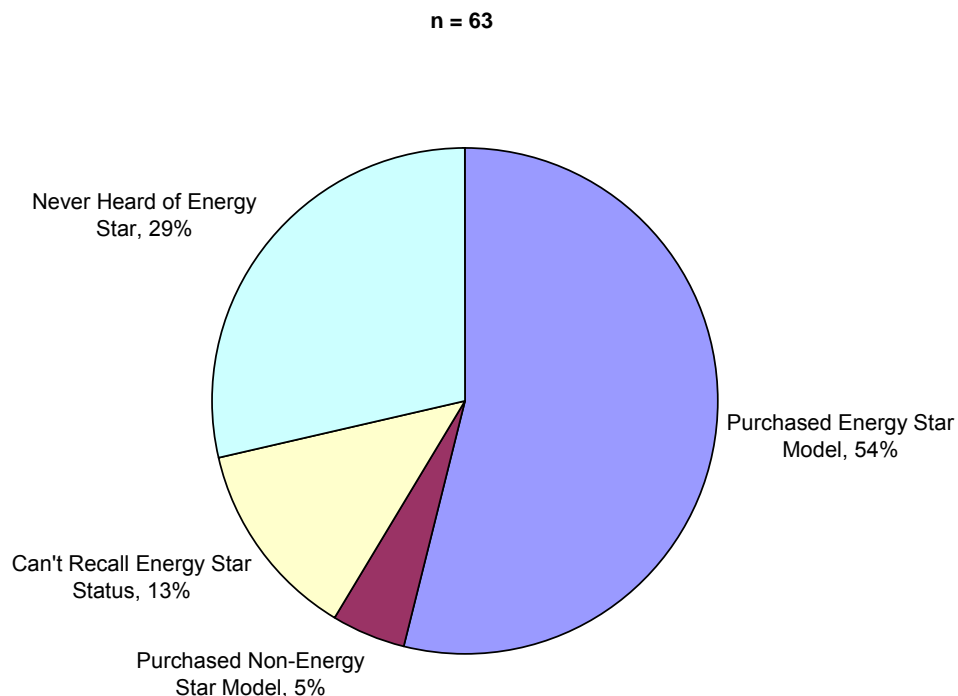
**Figure 5-37**  
**Main Reason for Choosing Specific Model of Room AC**



Base = those who purchased a room air conditioner in the past two years.

Just over half (54%) of recent purchasers said that they bought an air conditioner with an Energy Star label (Figure 5-38). Only five percent purchased a non-Energy Star model. The rest either could not recall whether the air conditioner they bought was Energy Star rated or were not aware of the Energy Star program before taking this survey.

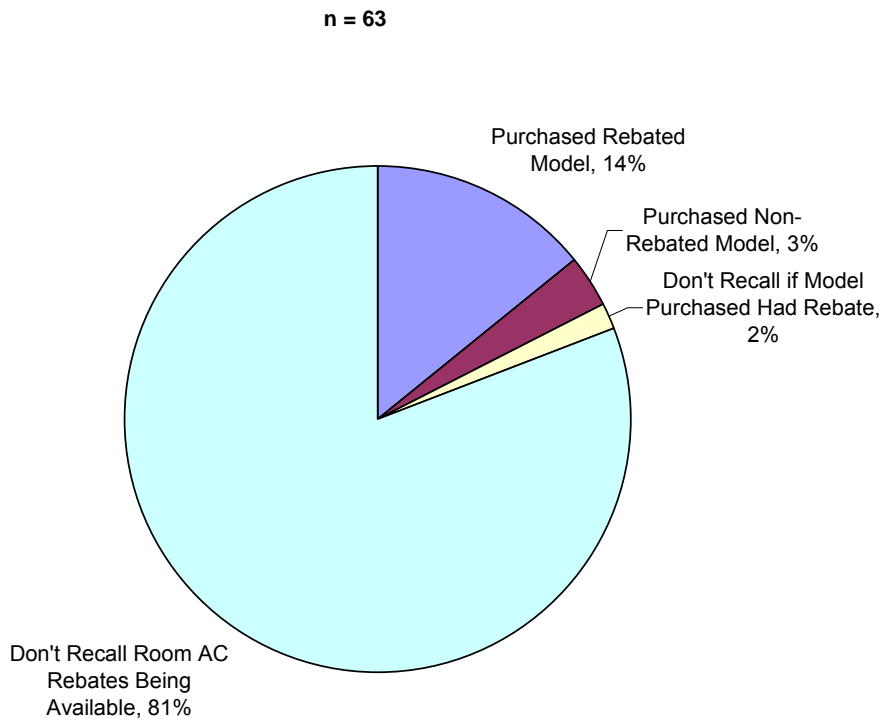
**Figure 5-38**  
**Energy Star Status of Purchased Room AC**



Base = those who purchased a room air conditioner in the past two years.

Figure 5-39 shows that the proportion of recent purchasers who bought a rebated air conditioner was 14 percent. Once again, very few respondents reported knowingly buying a non-rebated model. The vast majority (81%) were unaware of rebates on room air conditioners when they made their purchase.

**Figure 5-39**  
**Rebate Status of Purchased Room AC**

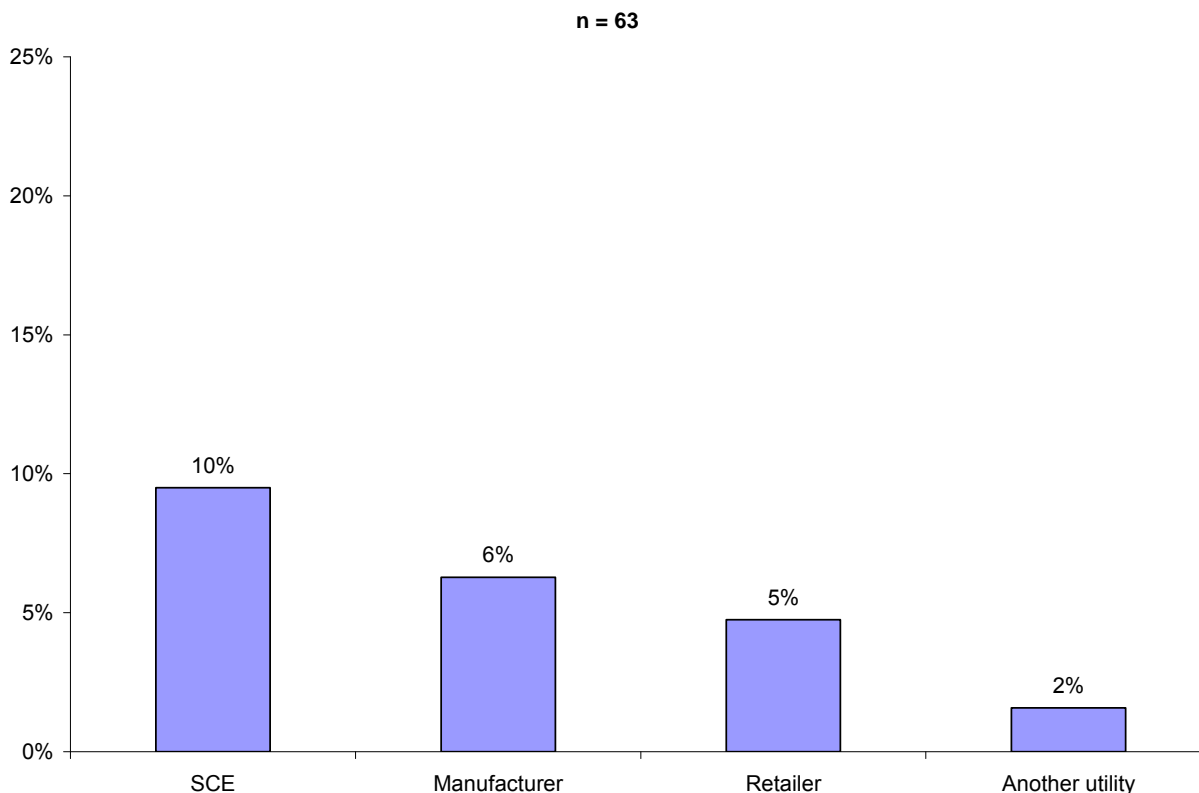


Base = those who purchased a room air conditioner in the past two years.

As shown in Figure 5-40, those who were aware of rebates were primarily aware of rebates from SCE, air conditioner manufacturers, and retailers.



**Figure 5-40**  
**Percent of Recent Purchasers Aware of Room AC Rebates by Source**



Base = those who purchased a room air conditioner in the past two years.

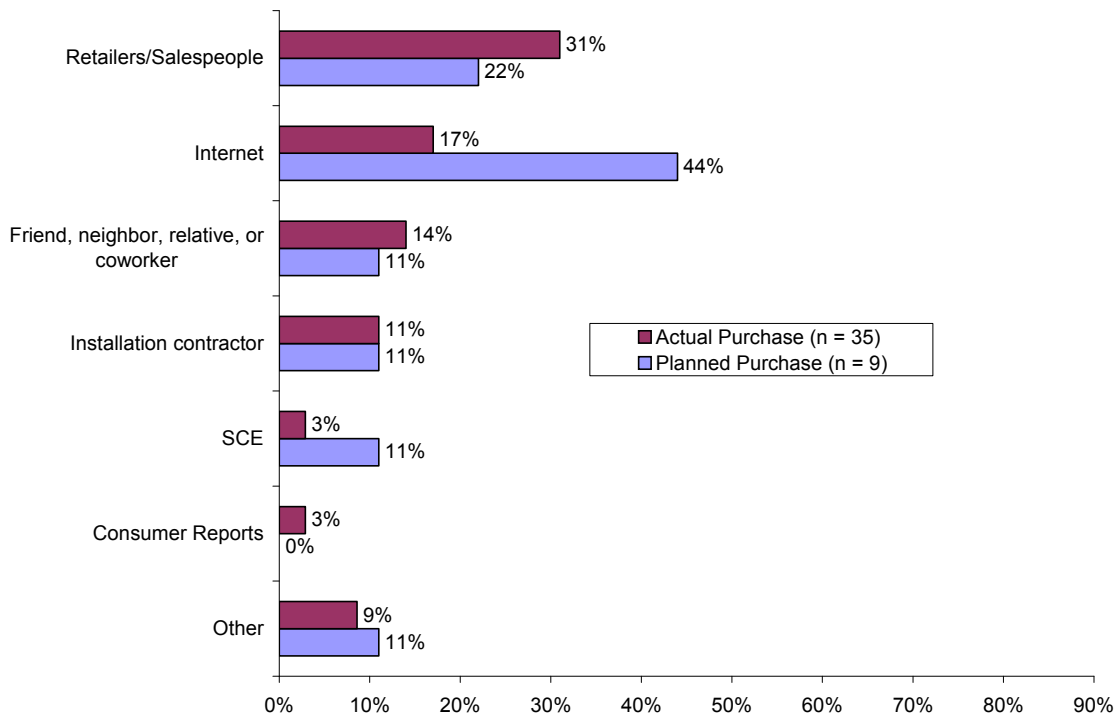
Fifty-six percent of those who received a rebate on their recent air conditioner purchase said they would have been very unlikely to have bought the same model without this rebate. A third (33%) said they would have been somewhat likely to make the same decision without the rebate, and only 11 percent said they would have been very likely to buy the same model without rebates. Once again, the handful of respondents who reported knowingly buying a non-rebated model could not provide a reason for their decision.

#### 5.4.4.4 Whole House Fans

Figure 5-41 shows the information sources that recent purchasers of whole house fans used, and prospective purchasers expect to use, in making their purchase decisions. The three sources of information used most commonly by recent purchasers were retailers; the Internet; and friends, neighbors, or family. Note that prospective buyers expected to use the Internet to a

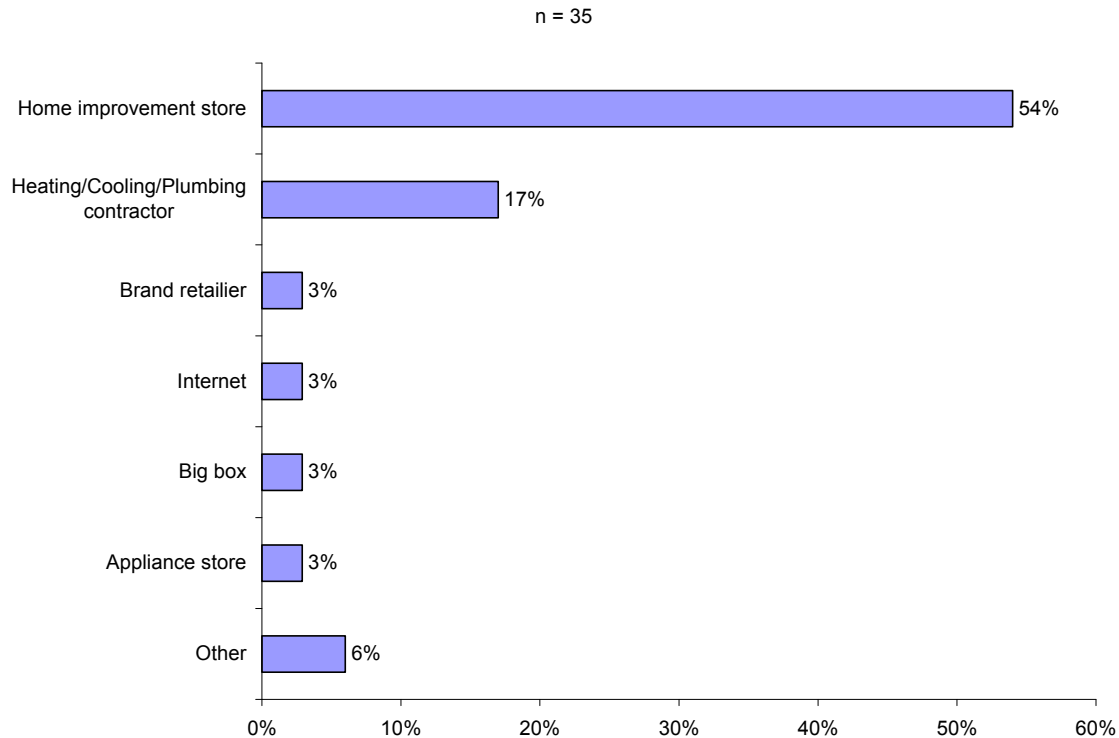
far greater degree than recent buyers actually used it. This is the only difference in information sources between recent and prospective buyers that was statistically significant.

**Figure 5-41**  
**Information Sources for Actual/Planned Whole House Fan Purchase**



As shown in Figure 5-42, most recent buyers of whole house fans purchased them from a home improvement store such as Home Depot or Lowe's. The only other frequently mentioned point of purchase, a heating and cooling contractor, was used by 17 percent of recent buyers.

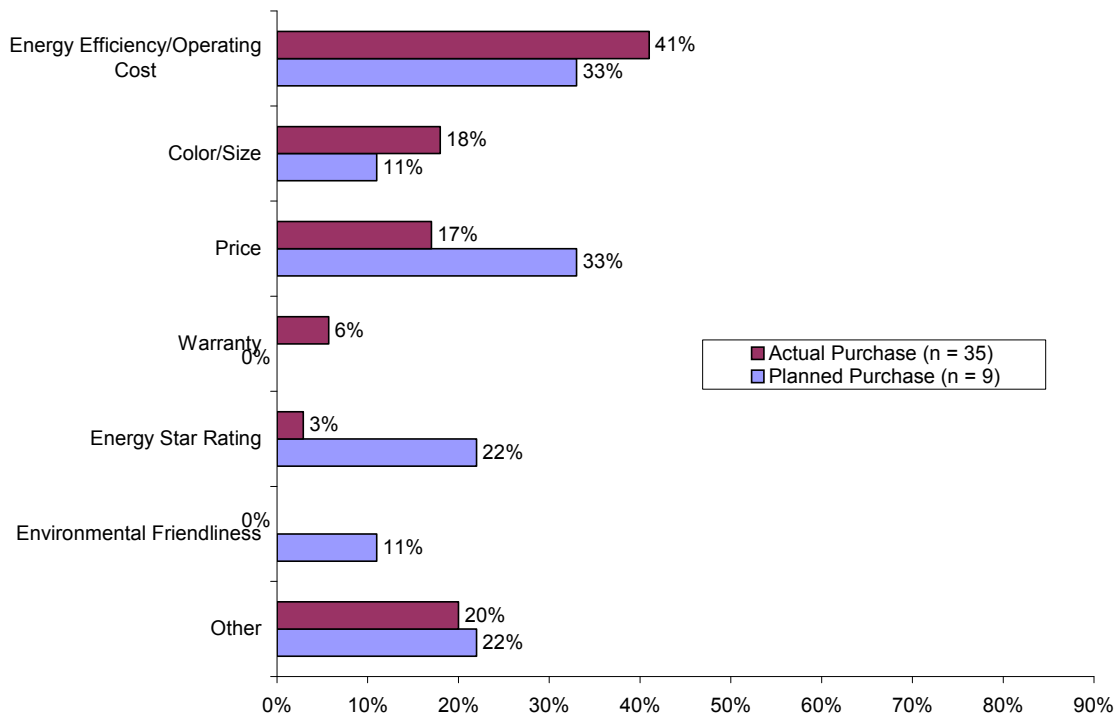
**Figure 5-42**  
**Where Whole House Fan Was Purchased**



Base = those who purchased a whole house fan in the past two years.

Figure 5-43 shows that energy efficiency was the most frequently considered aspect of a whole house fan among recent purchasers. In fact, more than twice as many buyers reported focusing on energy efficiency as reported focusing on color/size or price. Once again the differences between recent and prospective purchasers appear substantial, but the small sample size for prospective buyers results in few of these differences being statistically significant. The exceptions are warranties, which were considered by six percent of recent buyers but are not on the radar screen for prospective purchasers, and Energy Star ratings, which far more prospective buyers expect to consider. Responses that fell into the “other” category included automatic controls, speed and sound, reliability, and filtration systems.

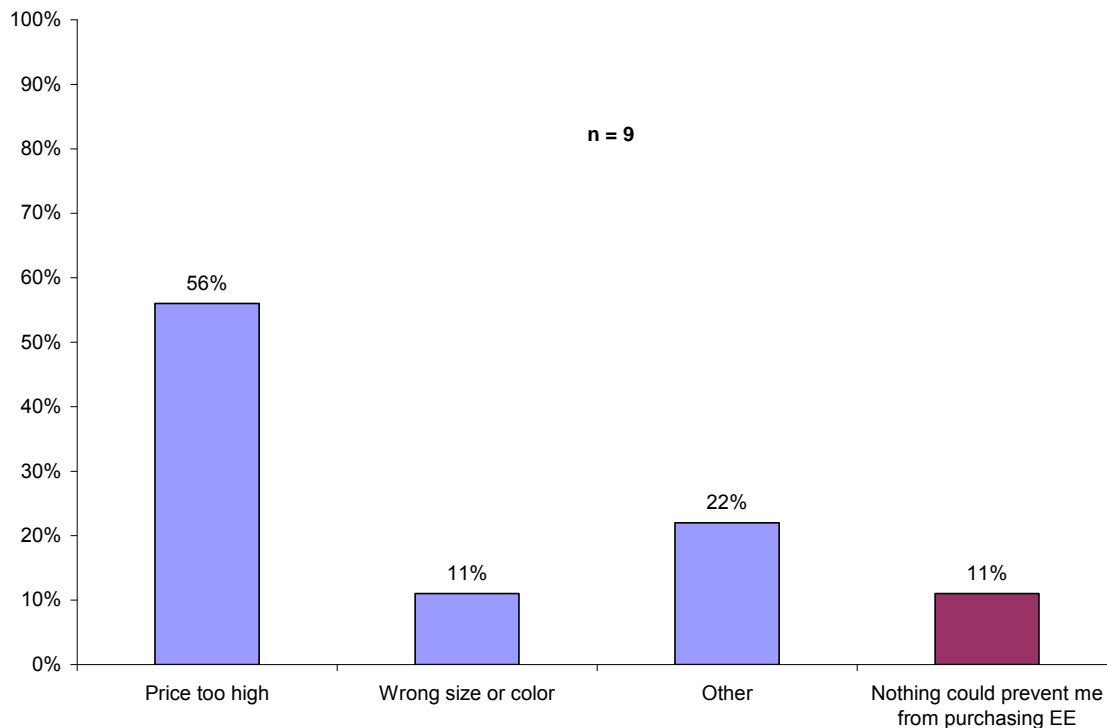
**Figure 5-43**  
**Features Considered When Purchasing Whole House Fan**



When asked how important it was that the purchase an energy efficient whole house fan, 78 percent of prospective buyers said it was important (rating of 4 or 5 on a 5 point scale) and 56 percent said it was very important (rating of 5). The other 22 percent rated the importance of energy efficiency considerably lower (rating of 2).

Figure 5-44 shows that prospective buyers thought that price was the factor most likely to prevent them from purchasing an energy efficient model. Only 11 percent said that nothing would prevent them from buying an energy efficient model. The “other” category included installation costs and when they could get the unit delivered.

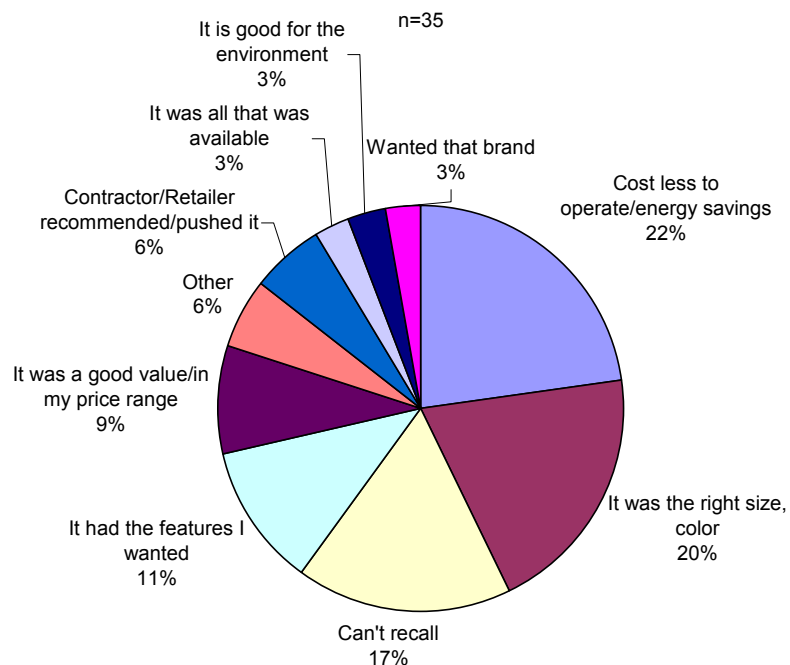
**Figure 5-44**  
**What Might Prevent You From Purchasing an Energy Efficient Fan?**



Base = those planning to purchase a whole house fan in the next 12 months.

Operating cost and energy efficiency were cited as the deciding factor by more recent buyers of whole house fans (23%) than any other factor (Figure 5-45). Efficiency was followed by size/color, “I can’t recall,” and other features as the primary decision drivers. Interestingly, no one mentioned either Energy Star rating or rebates as the most important consideration when buying a whole house fan.

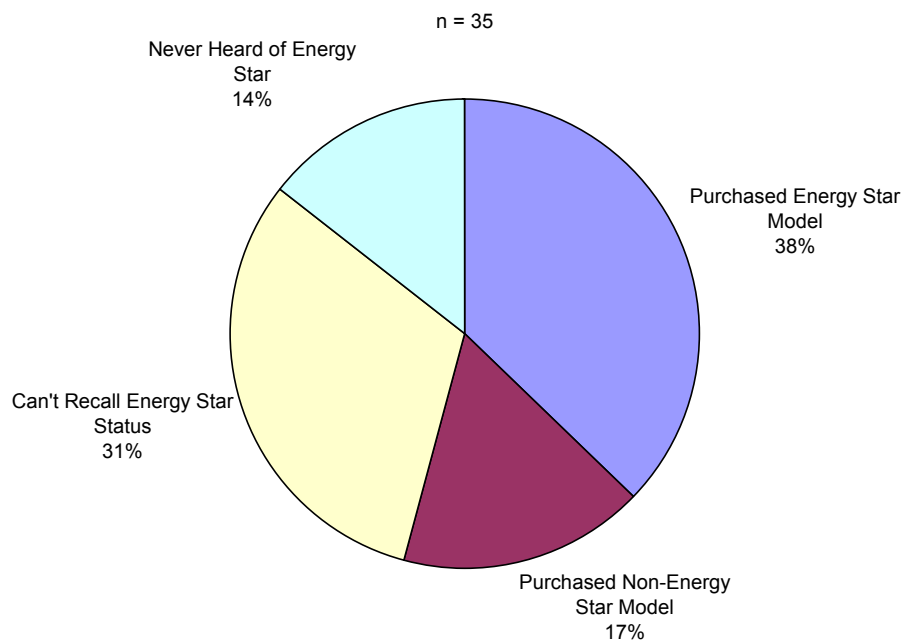
**Figure 5-45**  
**Main Reason for Choosing Specific Model of Whole House Fan**



Base = those who purchased a whole house fan in the past two years.

As seen in Figure 5-46, a third of recent buyers (37%) bought a fan with an Energy Star rating. One-in-six knowingly purchased a non-Energy Star model, while the rest either could not recall the Energy Star status of their fan or were unfamiliar with the Energy Star program.

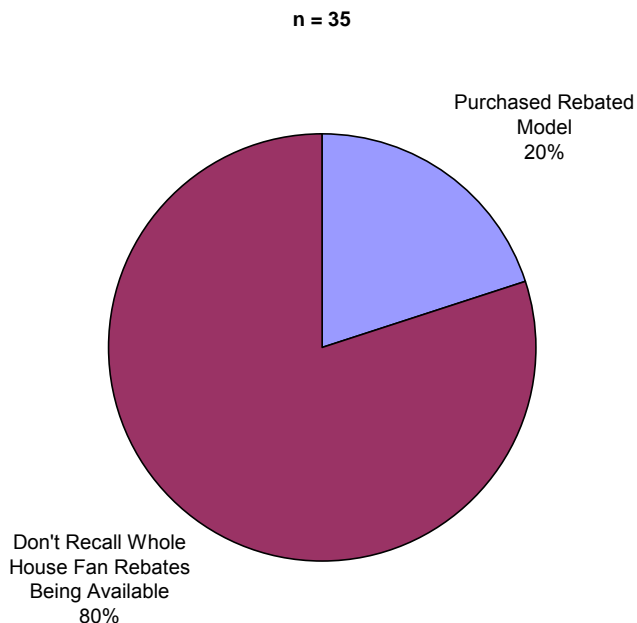
**Figure 5-46**  
**Energy Star Status of Purchased Whole House Fan**



Base = those who purchased a whole house fan in the past two years.

Eighty percent of recent buyers were unaware that rebates were available for whole house fans (Figure 5-47). The 20 percent who were aware of such rebates all purchased a model that qualified. All of the respondents who were aware of (and took advantage of) these rebates said that the rebates were provided by SCE; no other rebate source was mentioned. Most (86%), however, said they would have purchased the same model of fan without the rebate.

**Figure 5-47**  
**Rebate Status of Purchased Whole House Fan**



Base = those who purchased a whole house fan in the past two years.

#### 5.4.4.5 Evaporative Coolers

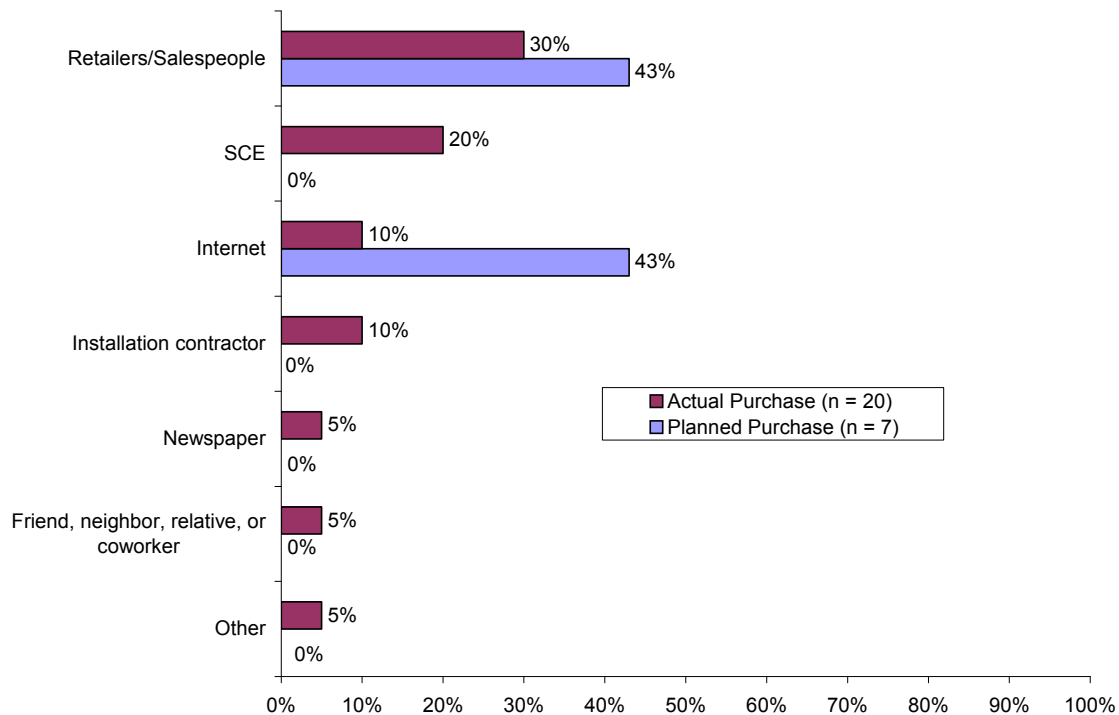
Figure 5-48 shows that SCE was the second most commonly-cited source of information for recent purchasers of evaporative coolers, after retailers. None of the prospective buyers of evaporative coolers, however, said that they would turn to SCE for information. Instead, prospective buyers expected to rely exclusively on retailer salespeople and the Internet.<sup>32</sup>

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<sup>32</sup> The difference for SCE, the Internet, and installation contractors are statistically significant in spite of the small sample size.

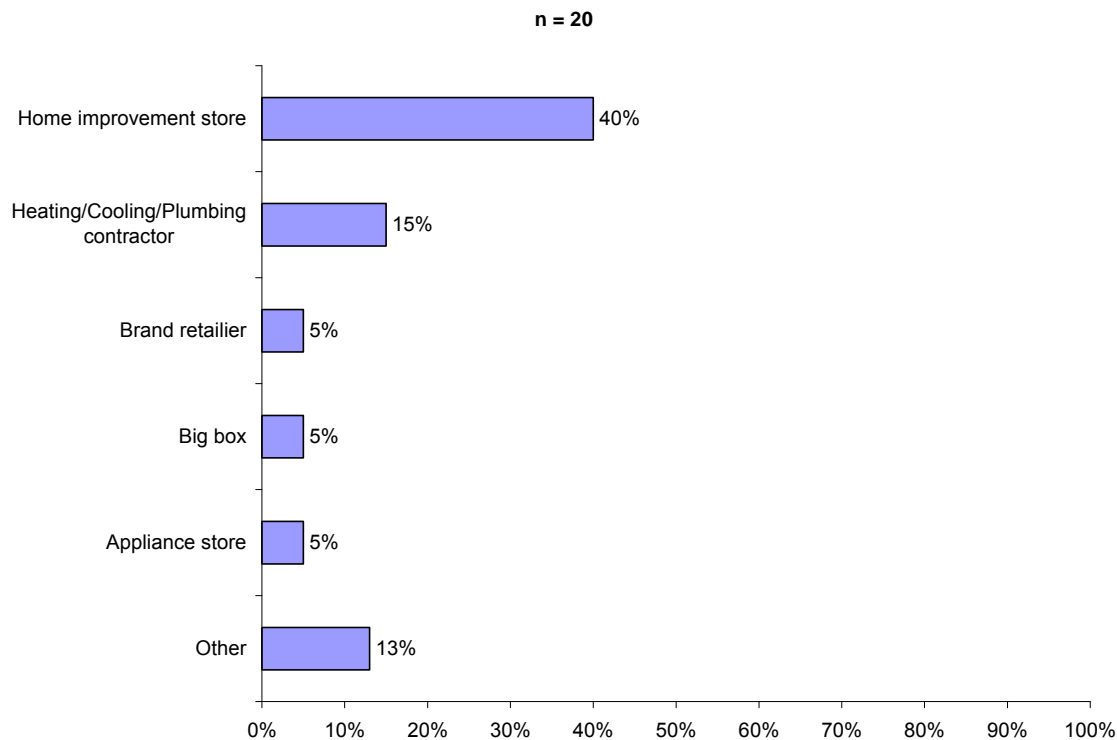


**Figure 5-48**  
**Information Sources for Actual/Planned Evaporative Cooler Purchase**



Most recent purchasers (55%) bought their evaporative cooler either at a home improvement store or from a heating and cooling contractor (Figure 5-49). The “other” response category included warehouse stores and swimming pool contractors.

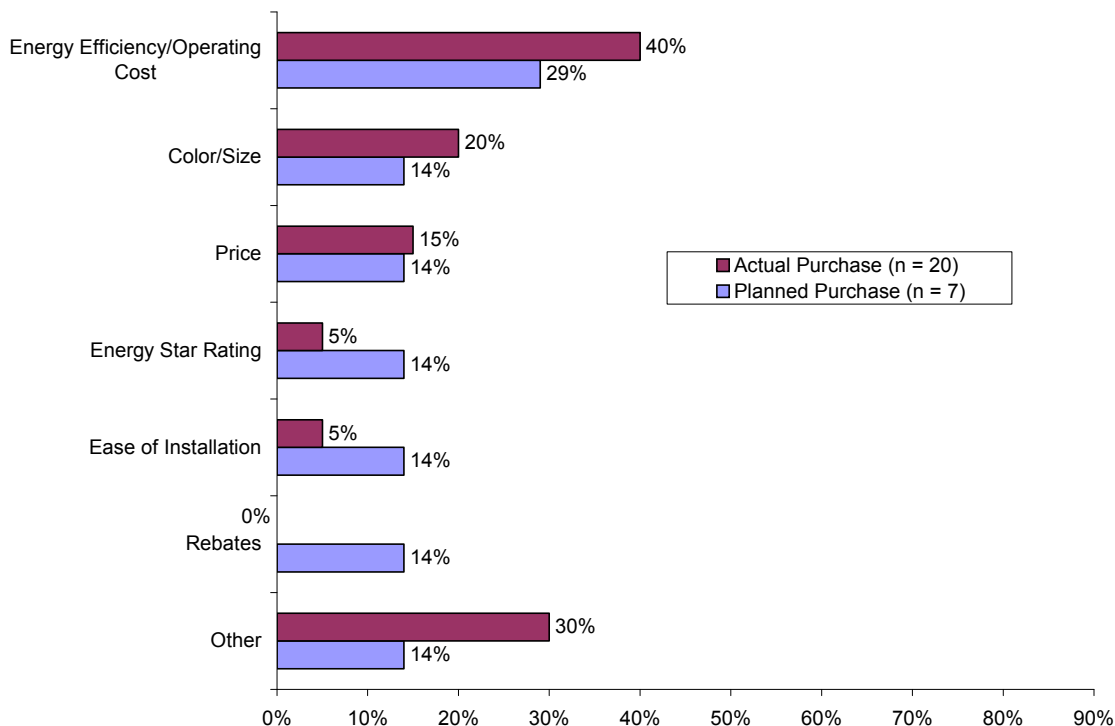
**Figure 5-49**  
**Where Evaporative Cooler Was Purchased**



Base = those who purchased an evaporative cooler in the past two years.

Figure 5-50 shows that the features most commonly considered by those deciding what evaporative cooler to buy were energy efficiency, color/size, and price. Due to the small sample size, none of the apparent differences between recent and prospective buyers are statistically significant. Responses in the “other” category included ease of maintenance and water consumption.

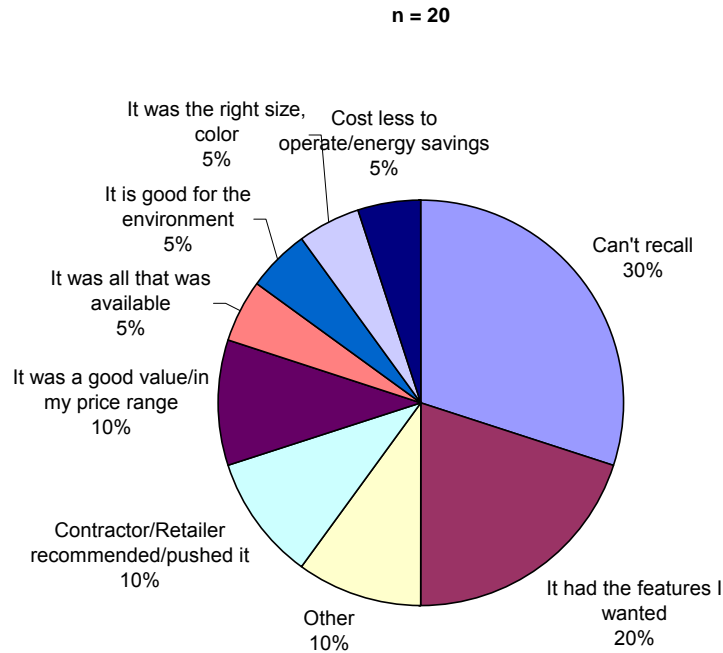
**Figure 5-50**  
**Features Considered When Purchasing Evaporative Cooler**



All of the prospective buyers said that it was very important that they purchase an energy efficient evaporative cooler (rating of 5 on a 5 point scale). Seventy-one percent, however, believed that the high price of an energy efficient model might prevent them from purchasing it. While no other specific barriers were mentioned, none of the prospective buyers felt confident that nothing would stop them from buying an efficient model.

Figure 5-51 shows the responses of recent buyers when asked what the main reason was that they purchased the particular model of evaporative cooler that they did. The most common response was “I can’t recall” (30%). Energy efficiency was cited as the deciding factor by only five percent of recent buyers, while none mentioned Energy Star or rebates as the most important consideration.

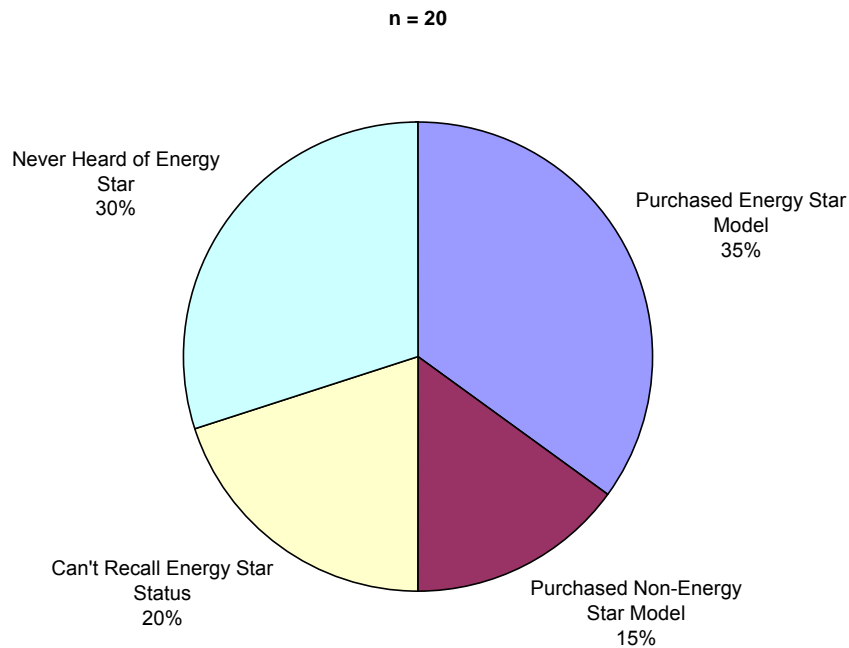
**Figure 5-51**  
**Main Reason for Choosing Specific Model of Evaporative Cooler**



Base = those who purchased an evaporative cooler in the past two years.

As shown in Figure 5-52, a third of recent buyers (35%) said that they purchased an Energy Star evaporative cooler while 15 percent knowingly purchased a non-Energy Star model. The other half either could not recall whether the evaporative cooler they bought was Energy Star rated or were unfamiliar with the Energy Star program.

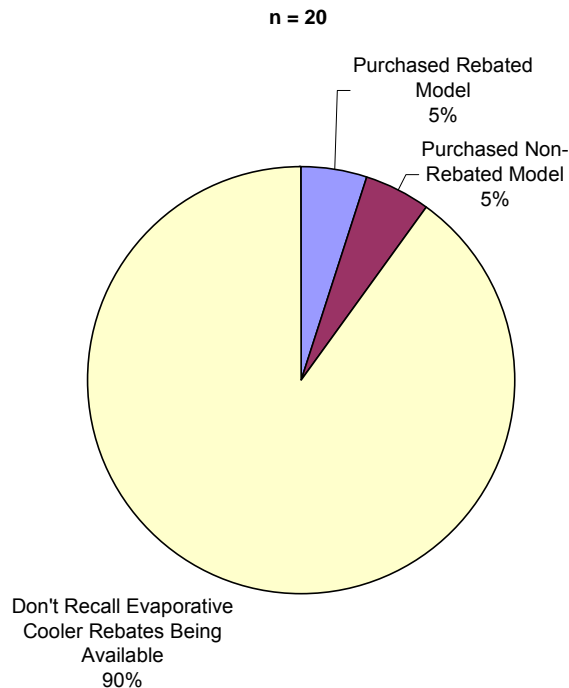
**Figure 5-52**  
**Energy Star Status of Purchased Evaporative Cooler**



Base = those who purchased an evaporative cooler in the past two years.

Of the 20 recent purchasers of evaporative coolers, only two were aware of rebates being available at the time they made the purchase (Figure 5-53). One of them purchased a rebated model and said that they would have been “somewhat likely” to have bought the same model without the rebate. The other purchased a non-rebated model because the rebated model did not have the features they wanted. Neither respondent could recall who provided the rebates.

**Figure 5-53**  
**Rebate Status of Purchased Evaporative Cooler**

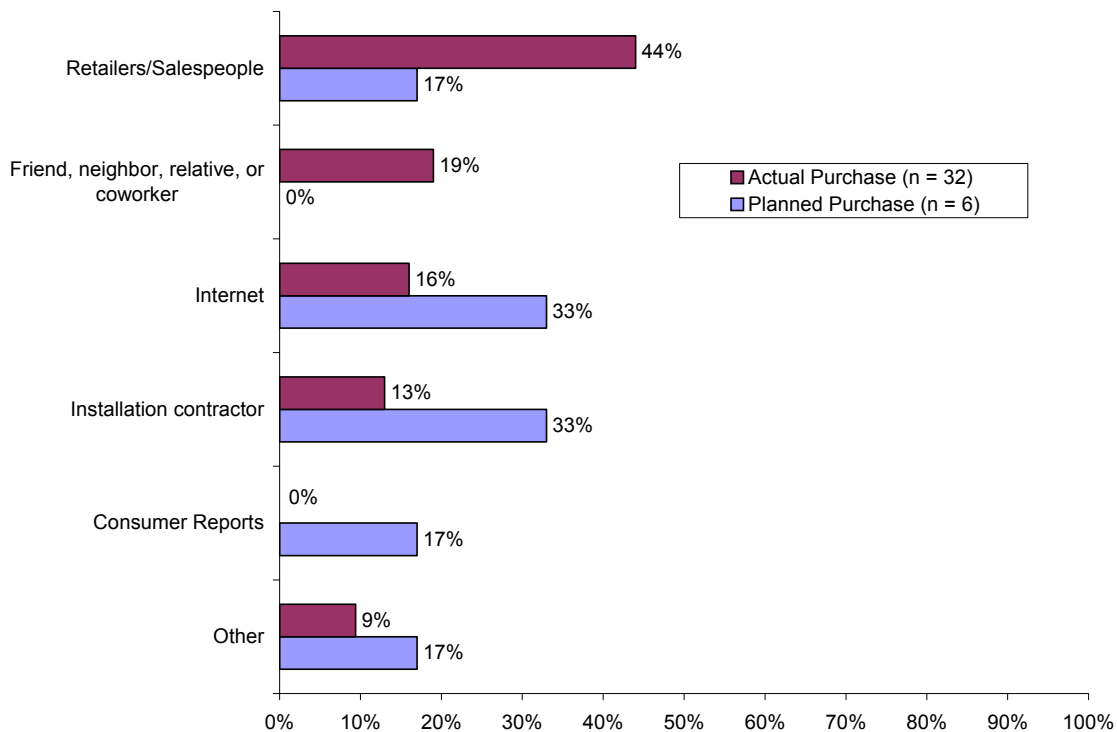


Base = those who purchased an evaporative cooler in the past two years.

#### 5.4.4.6 Swimming Pool Pumps

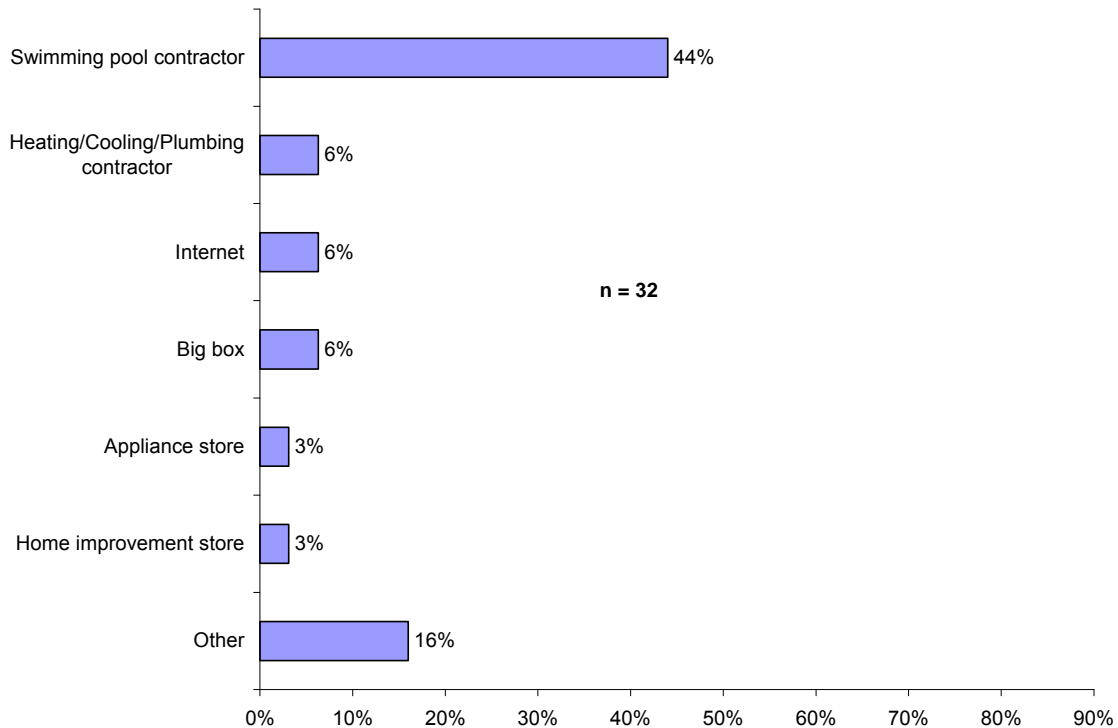
Figure 5-54 shows the sources of information used by recent pool pump buyers and the sources prospective buyers expect to use. Among recent buyers the most common sources were retailers; friends, neighbors, and family; the Internet; and installation contractors. Prospective buyers were far less likely to think they would rely on retailers or friends/neighbors/family. The potential information sources most commonly-cited by prospective buyers were the Internet and installation contractors.

**Figure 5-54**  
**Information Sources for Actual/Planned Pool Pump Purchase**



Not surprisingly, the place where most recent purchasers acquired their pool pumps was from a swimming pool contractor (Figure 5-55). Six percent of the respondents or fewer mentioned other purchase points.

**Figure 5-55**  
**Where Pool Pump Was Purchased**

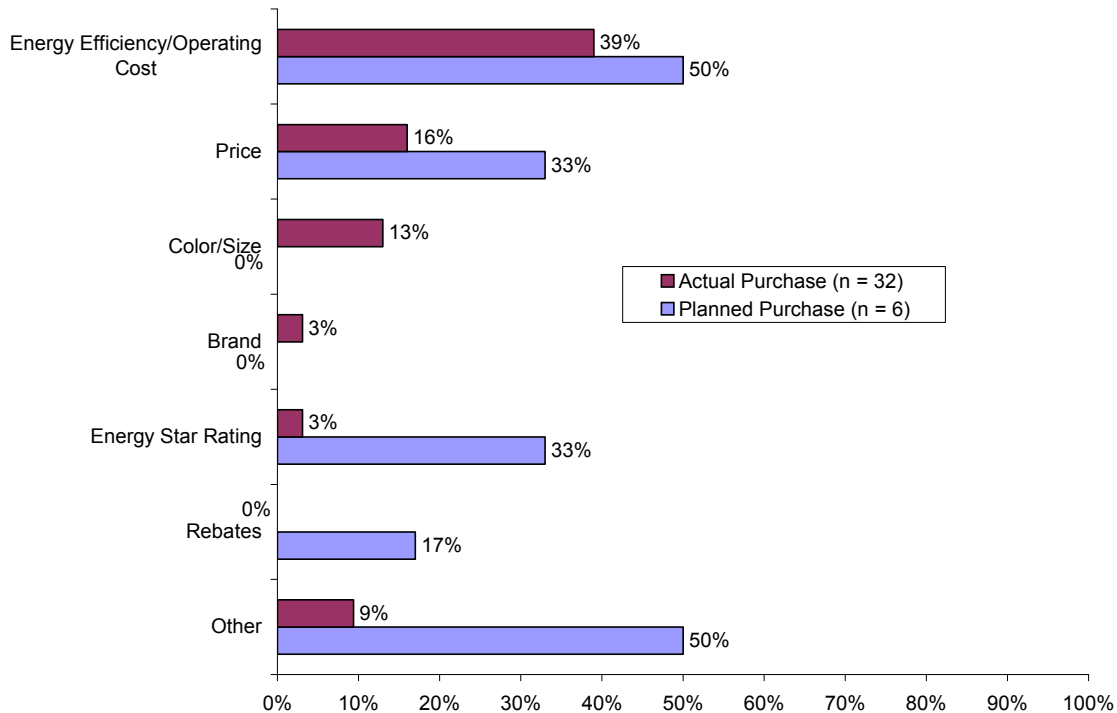


Base = those who purchased a pool pump in the past two years.

The product feature that more recent buyers said they considered than any other was energy efficiency (Figure 5-56). It was followed by price and color/size. Prospective purchasers were less likely to mention color or size and more likely to mention Energy Star ratings and miscellaneous other responses as likely factors to consider. The responses categorized as “other” included reliability, durability, and quietness.

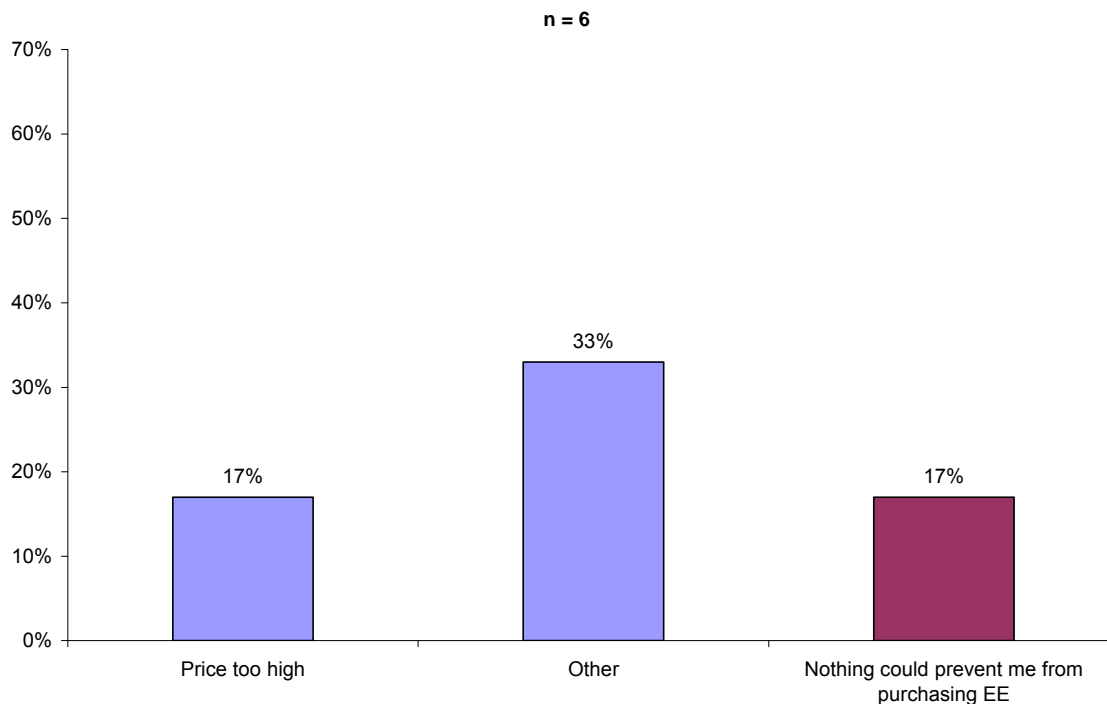


**Figure 5-56**  
**Features Considered When Purchasing Pool Pump**



All prospective pool pump buyers said that it was important that they get an energy efficient model (rating of 4 or 5 on a 5 point importance scale), and two-thirds (67%) said it was very important (rating of 5). When asked what barriers might prevent them from buying an efficient pool pump, 17 percent said the price, 33 percent mentioned a combination of factors including the fact that they might end up getting a used pump and their concern that “if you have to run it twice as long to get the efficiency it’s not worth it,” and 17 percent said nothing would prevent them from buying an efficient pool pump (Figure 5-57).

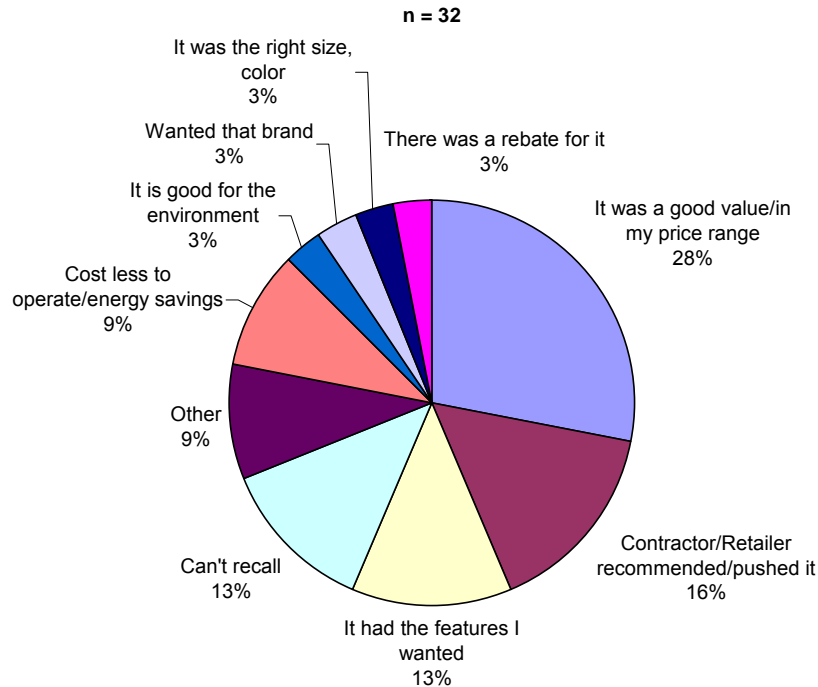
**Figure 5-57**  
**What Might Prevent You From Purchasing an Energy Efficient Pool Pump?**



Base = those who planned to purchase a pool pump in the next 12 months.

As shown in Figure 5-58, the most common reasons that recent purchasers chose the pool pump they ultimately bought were overall price/value, contractor recommendation, and features. Only nine percent said that the pump’s energy efficiency was the deciding factor, and only three percent made their selection because of a rebate.

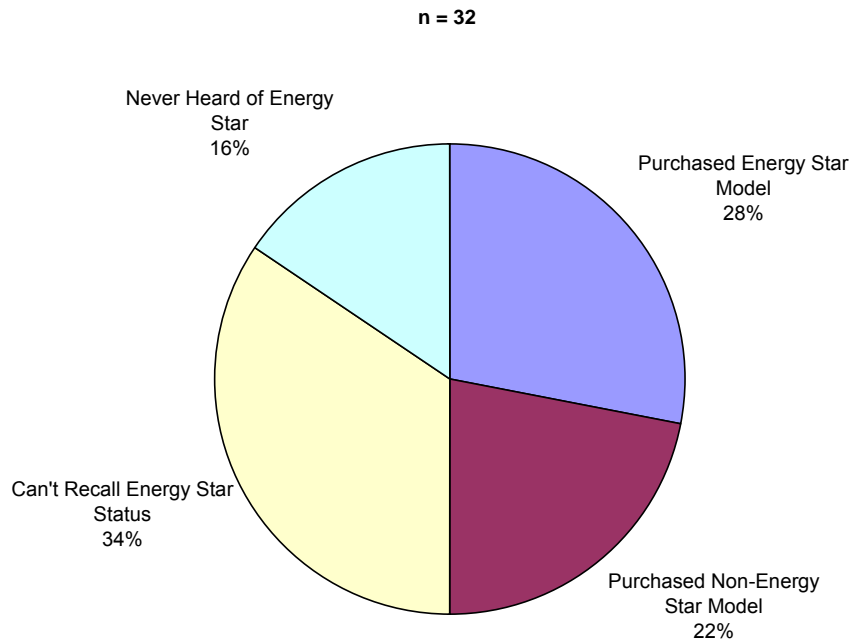
**Figure 5-58**  
**Main Reason for Choosing Specific Model of Pool Pump**



Base = those who purchased a pool pump in the past two years.

Figure 5-59 reveals that a little more than a quarter (28%) of recent buyers purchased an Energy Star pool pump. Twenty-two percent knowingly purchased a non-Energy Star model, while the other half either could not recall the Energy Star status of their pump or were unfamiliar with the Energy Star program.

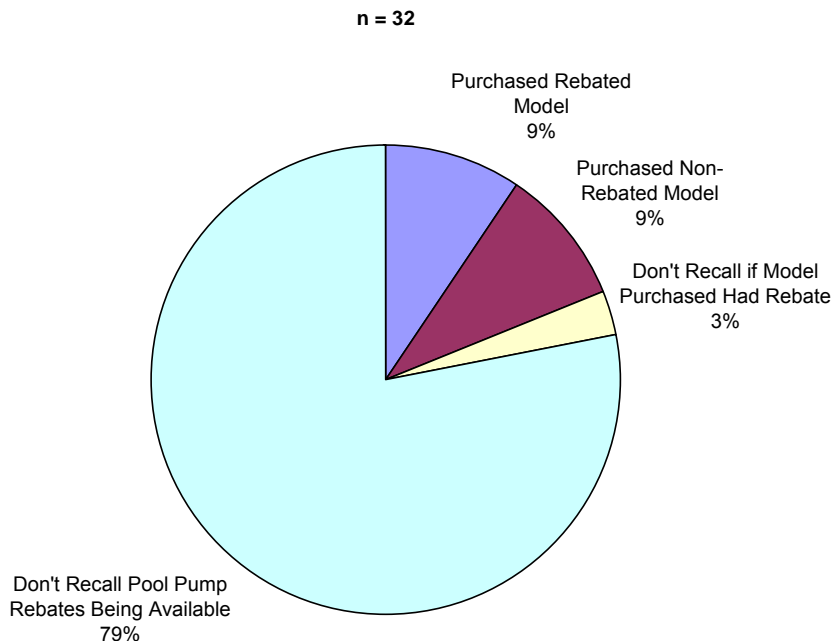
**Figure 5-59**  
**Energy Star Status of Purchased Pool Pump**



Base = those who purchased a pool pump in the past two years.

When asked about rebates (Figure 5-60), recent buyers were evenly split between those who had purchased a rebated model (9%) and those who knowingly bought a non-rebated model (9%). The vast majority (78%) were not aware that pool pump rebates were available.

**Figure 5-60**  
**Rebate Status of Purchased Pool Pump**



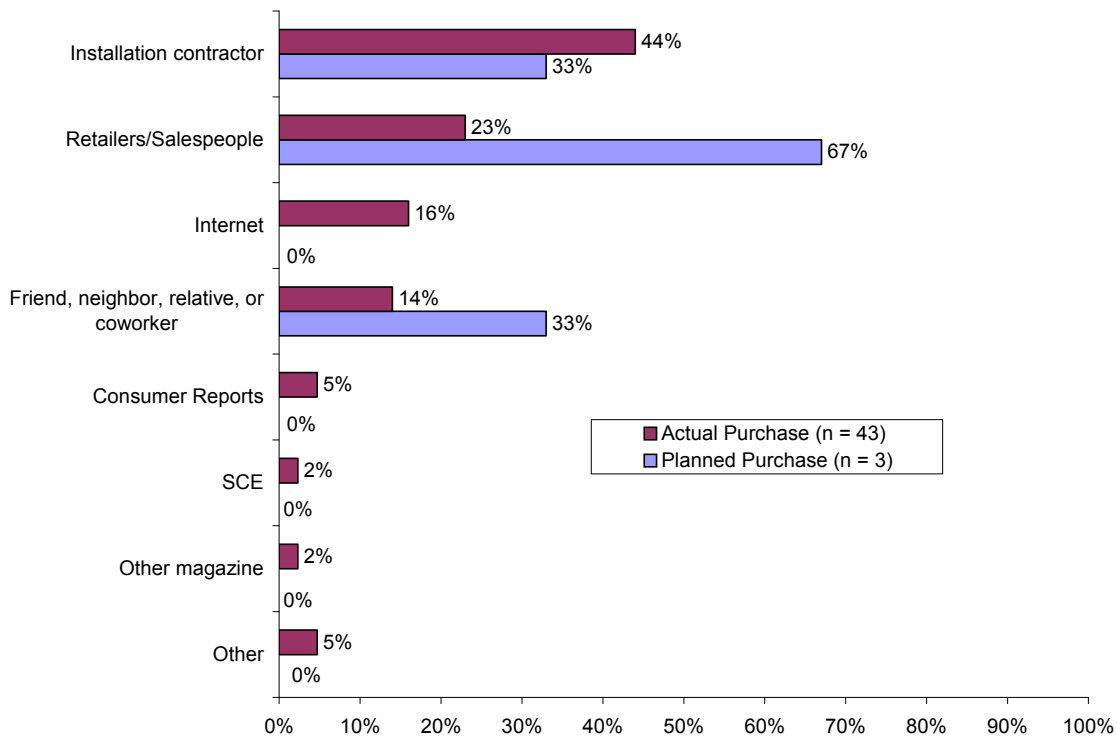
Base = those who purchased a pool pump in the past two years.

Of the relatively few buyers who were aware of rebates, most (68%) recalled them being offered by SCE; the rest thought they were manufacturer rebates. Two of the three respondents who received a rebate said they would have been very likely to have bought the same model without the rebate, but the other said they would have been “not very likely” to do so. Of the three respondents who were aware of rebates but did not receive one, two could not recall why they chose to buy the non-rebated model and one said it was too much work to file for the rebate.

#### 5.4.4.7 Roofs

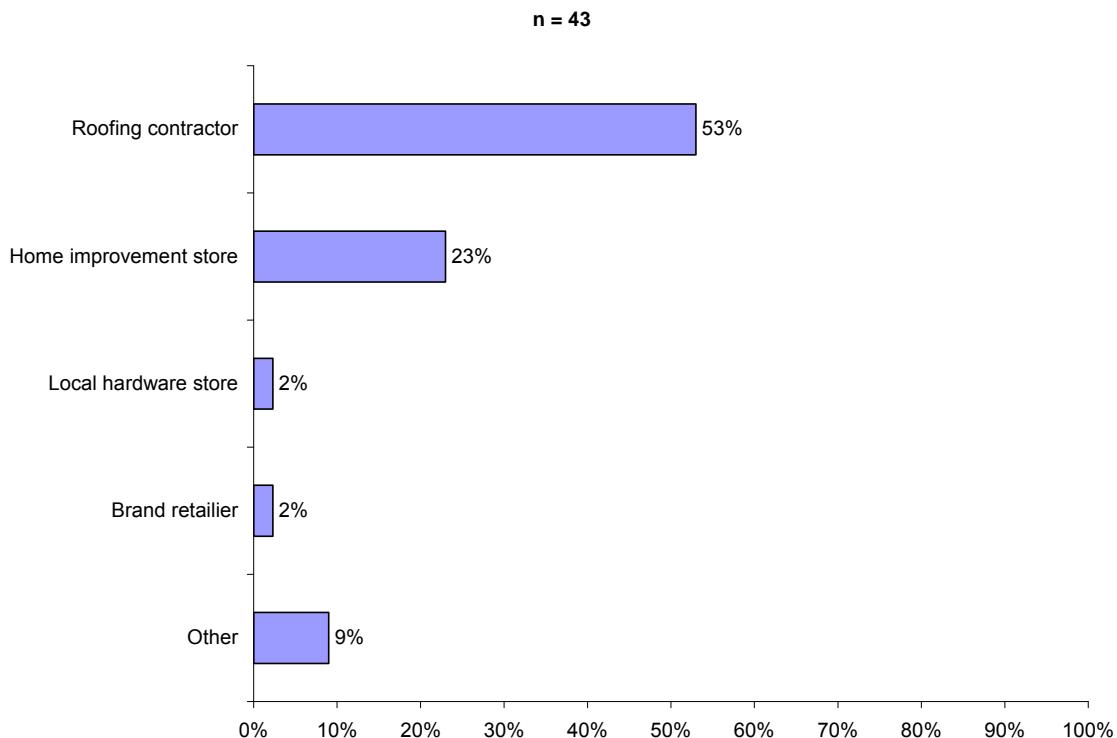
Figure 5-61 shows the information sources used by recent purchasers of roofs – and the sources prospective purchasers expect to use – to decide what type of roof to buy. Recent purchasers relied on installation contractors, retailers, the Internet, and friends/neighbors/relatives for input. Prospective buyers were more likely to think they would rely on retailers and less likely to expect to go to the Internet, Consumer Reports, or miscellaneous “other” sources. The “other” sources mentioned by recent buyers included local building officials and General Electric.

**Figure 5-61**  
**Information Sources for Actual/Planned Roof Purchase**



As shown in Figure 5-62, most recently purchased roofs were purchased from a roofing contractor. Most of the rest were bought from a home improvement store. “Other” responses included insurance contractors and appliance stores.

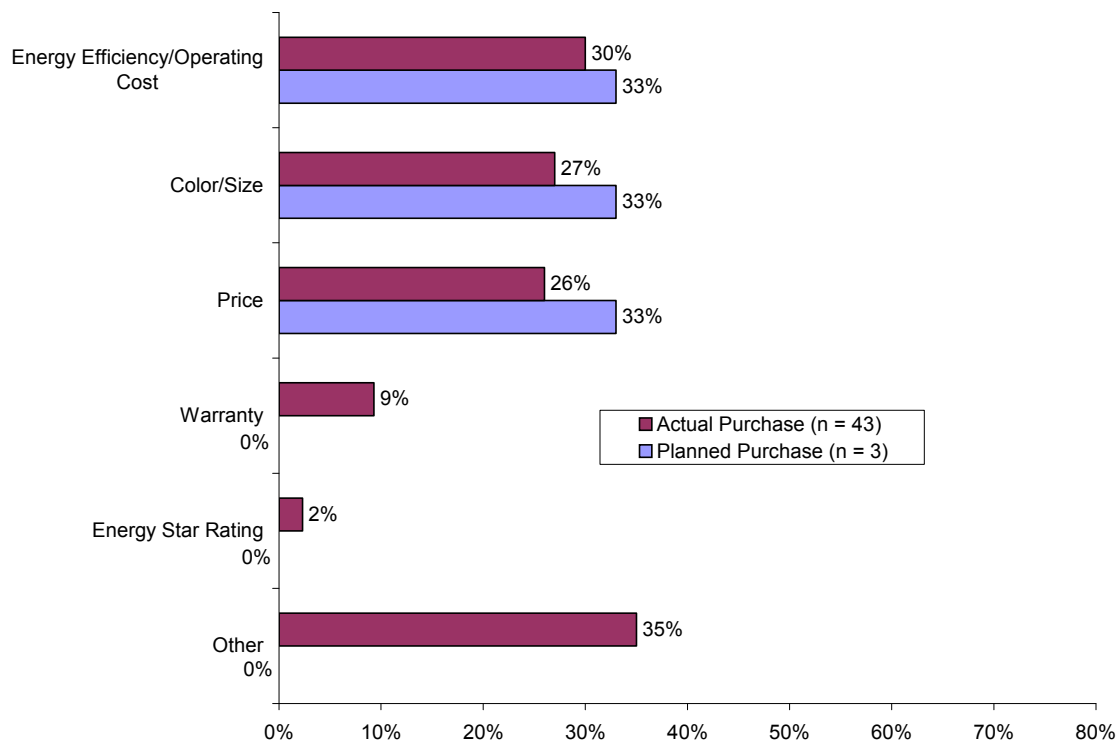
**Figure 5-62**  
**Where Roof Was Purchased**



Base = those who purchased a roof in the past two years.

Figure 5-63 shows the features most commonly considered by recent roof buyers, as well as those most commonly-cited as likely focuses of attention by prospective buyers. Energy efficiency was the most frequently mentioned factor by recent purchasers, followed closely by color, price, and miscellaneous “other” responses. The latter included fire resistance, overall quality, and life expectancy. The only differences between the responses of recent and prospective buyers that were statistically significant were that prospective buyers did not mention any of these “other” categories, nor did they mention warranties.

**Figure 5-63  
Features Considered When Purchasing Roof**



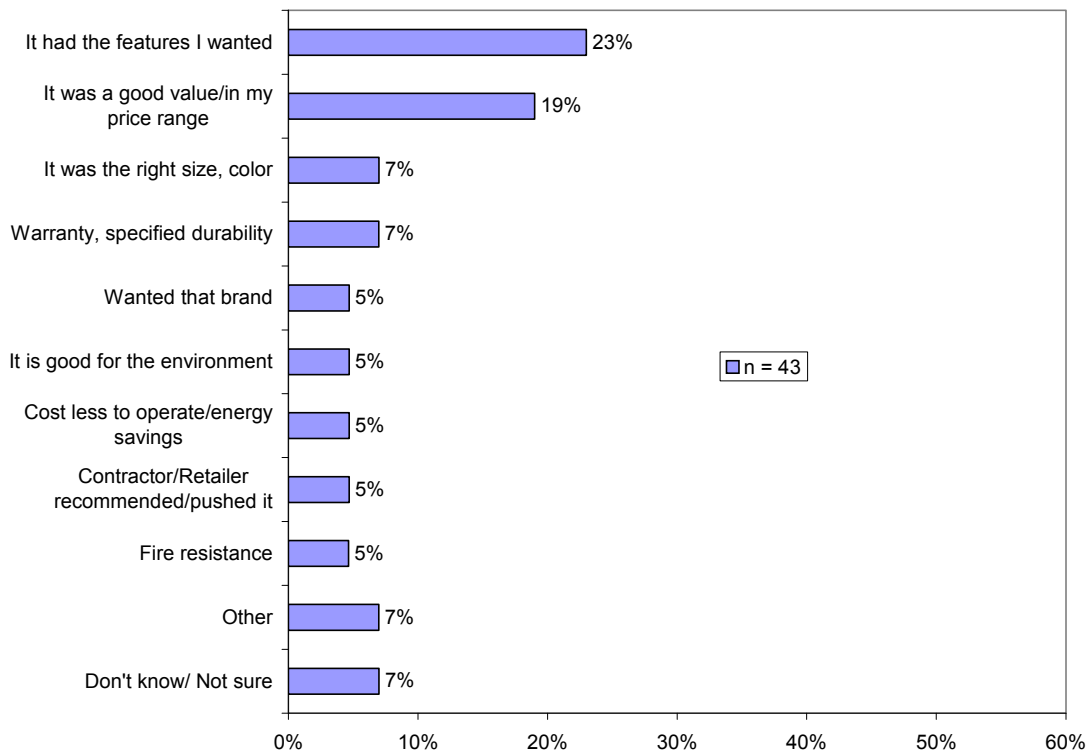
The three prospective buyers differed in how important they thought energy efficiency would be as a selection criterion for their new roof. One said it would be very important (rating of 5 on a 5 point scale), one said “important” (rating of 4), and one indicated it would be neither important nor unimportant (rating of 3). One prospective buyer said that nothing could prevent him from buying an energy efficient roof, but the other two said that high prices might override their desire for efficiency.

Figure 5-64 shows what recent roof purchasers said were their decision factors in choosing their roof. The most common responses were that it had the features they wanted and it was a good value in their price range. The latter included life expectancy and the requirements of their neighborhood owners association.

Only five percent cited energy efficiency as the deciding factor, and no one mentioned either Energy Star status or rebates as the most important factor.



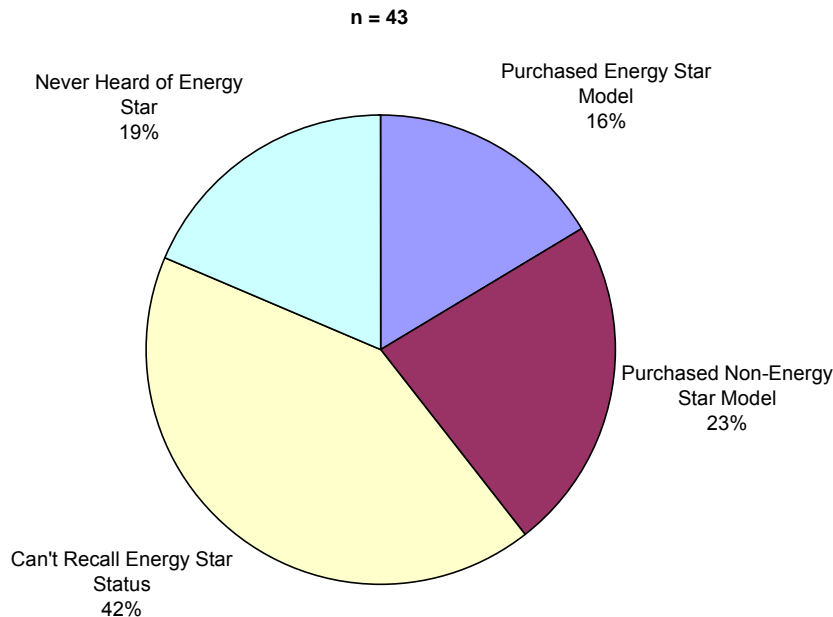
**Figure 5-64**  
**Reasons for Choosing Specific Type of Roof**



Base = those who purchased a roof in the past two years.

As seen in Figure 5-65, 16 percent of recent roof purchasers said they had purchased and Energy Star rated roof, while 23 percent said they had knowingly purchased a non-Energy Star roof. The largest group of respondents could not recall whether their roof was Energy Star rated or not.

**Figure 5-65**  
**Energy Star Status of Purchased Roof**



Base = those who purchased a roof in the past two years.

Out of 43 recent roof buyers, only one was aware that rebates were available for roofs. This respondent said that both manufacturer rebates and rebates from retailers were available, but was unaware that SCE offered any roofing rebates. This one respondent did, in fact, purchase a rebated roof, but said they would have been very likely to buy the same roof even without the rebate.

## 5.5 Conclusions

Prior marketing and customer education efforts have been successful in raising awareness of energy efficiency and the HEER program in general. Eighty-five percent of single-family households were aware of one or more HEER rebates. Half of these customers recalled energy efficiency messages from SCE (although vaguely in many cases). Most believed that the information SCE has been providing them has increased their awareness of energy efficiency programs and their knowledge of how to save energy, and has changed their attitudes towards energy. In fact, those who recall messages from SCE are more likely to display environmentally

focused attitudes than those who do not. SCE is the most trusted source of information on energy efficiency and one of the first places customers turn when they want to lower their bills or help the environment.

The findings of this study point to several fruitful ways of building on this success. The first can be summarized as “do more of what works.” Bill inserts and direct mail appear to be succeeding as channels to residential customers. As mentioned above, a new billing format has made it more difficult for SCE to provide program information through the bill. However, direct mail should continue to be the backbone of customer education efforts. They, along with traditional channels like television (and to a lesser extent radio), should continue to be used to increase overall awareness of energy efficiency and the available SCE programs to help customers be more efficient.

Moreover, these marketing and education efforts should be used to increase customers’ awareness of the link between home energy use and climate change. The survey data show that this is a weak link in customers’ knowledge of energy issues, and, as climate change continues to take center stage in the news, strengthening this connection in customers’ minds becomes vital to promoting energy efficient behaviors.

Next the results point to opportunities to increase the effectiveness and recall of bill inserts, direct mailings, and ads by developing separate messages tailored to different attitudinal triggers. Although a full analysis of message targeting was beyond the scope of this study, there are enough correlations between demographics and attitudes in the data to suggest the possibility of target marketing different messages to different customers. Having messages that speak to environmental concerns, budget concerns, and other issues will increase the odds of at least one message resonating with each customer even if for practical reasons all of the messages are distributed through mass channels.

Finally, the data on the role of energy efficiency and rebates in the purchasing of different technologies, summarized in Table 5-4, can be used to develop technology-specific strategies. For example, consider room air-conditioners, whole house fans, and pool pumps. For all these technologies, but especially whole-house fans and room air-conditioners, energy efficiency plays a major role in customers’ choices. This implies that increasing customers’ awareness of which models are most efficient (perhaps through further education on the Energy Star rating system) might have a significant impact. Furthermore, in both cases rebates (when customers are aware of them) have a real impact on purchase decisions. This means that increasing awareness of SCE’s room air-conditioning, whole house fan, and pool pump rebates should help influence consumer purchase decisions.

Contrast this with the case of refrigerators, where rebate awareness is already high but the importance of energy efficiency on decisions is lower. Increased marketing around this product category can be expected to have less of an impact on purchase choices. Consideration of these and similar factors should enable SCE to more efficiently target its marketing resources to create the greatest increase in energy efficient behavior at the least cost.

**Table 5-4  
Considerations for Marketing**

Appliance/ Equipment Type	Awareness of Technology	Importance of EE in Purchase Decisions	Awareness of Rebates	Importance of Rebates in Purchase Decisions	Key Channels
Refrigerators	High	Low	High	Low	Sears
Electric water heaters	High	Moderate	Moderate	Low	Home improvement stores; HVAC contractors
Room AC	High	High	Moderate	Low	Home improvement, HVAC, or big box
Whole house fans	High	High	Low	Low	Home improvement stores; HVAC contractors
Evaporative Coolers	Moderate	Low	Low	Low	Home improvement stores; HVAC contractors
Pool pumps	High	High	Low	Low	Pool contractors
Cool roofs	Low	Low	Low	Low	Roofing contractors

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## **6 Detailed Findings from the Survey of SCE Customers Who Participated in the HEER Program**

### **6.1 Introduction**

This report summarizes the findings from a telephone survey of 296 single-family residential customers of Southern California Edison (SCE). The survey was conducted in February and March 2009 and was intended to gauge the effectiveness of the Home Energy Efficiency Rebate (HEER) Program's marketing and customer education efforts; measure participant satisfaction with the Program's staff and processes; establish baseline measures of customers' awareness, knowledge, and attitudes toward energy efficiency; and learn what barriers might prevent them from purchasing energy-efficient appliances in the future.

### **6.2 Program Description**

The 2006-2008 HEER Program offered rebates on a number of energy-efficient measures for SCE residential customers. These measures included:

- Energy Star refrigerators;
- Energy Star room air conditioners;
- Electric storage water heaters with Energy Factors of 93 or greater;
- Whole house fans;
- Energy-efficient ducted evaporative cooling systems;
- Energy-efficient pumps;
- Insulation; and
- Cool roofs.

HEER Program participants can apply for the rebates through mail-in or online application forms. With some participating retailers they can also receive instant point-of-sale (POS) rebates in which the discount is applied automatically at the cash register. Table 6-1 shows which rebate types were available for which measures.

**Table 6-1**  
**Measures Rebated Through PY2006-2008 HEER Program**

Measures	Mail	Online	POS
Evaporative Cooler	X	X	
Insulation	X		
Roof	X	X	
Room AC	X	X	X
Whole House Fan	X	X	X
Water Heater	X	X	
Pool Pump/Motor	X	X	X
Refrigerator	X	X	X

The POS rebates accounted for the large majority of the 2006-2008 HEER Program's installed measures and claimed (*ex ante*) gross and net energy savings. Table 6-2, Figure 6-1, Figure 6-2, and Figure 6-3 show how the number of measures installed and claimed energy savings were distributed across the various rebate types.<sup>33</sup> Subsection 6.4.5 provides similar breakdowns by measure type.

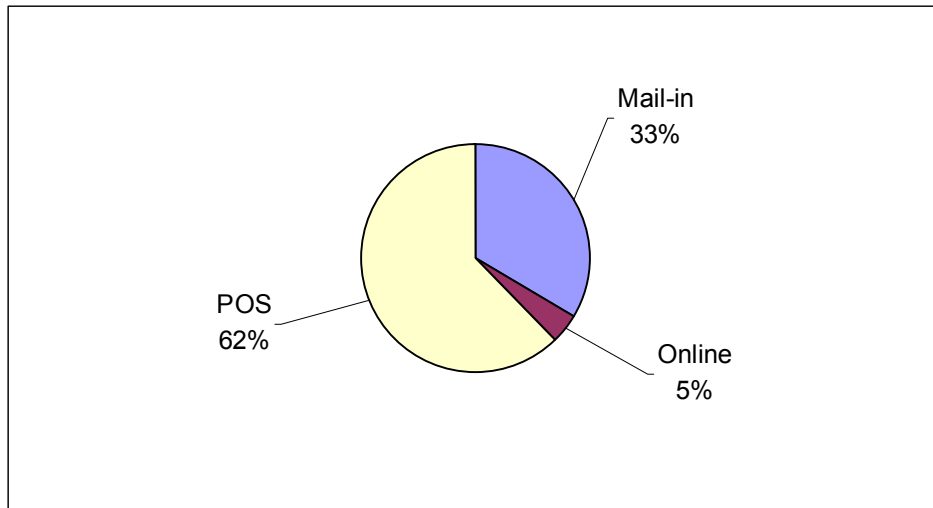
**Table 6-2**  
**Program Installations and Savings\* by Program Source**  
**PY2006-2008**

	Measures Installed**	Gross KWh Savings	Net KWh Savings	Gross KW Reduction	Net KW Reduction
Mail-in	113,929	16,131,941	12,905,553	7,184	5,748
Online	15,704	2,841,165	2,272,932	1,202	961
POS	212,414	42,557,968	34,042,894	23,363	18,688
<b>Total</b>	<b>342,047</b>	<b>61,531,074</b>	<b>49,221,380</b>	<b>31,749</b>	<b>25,397</b>

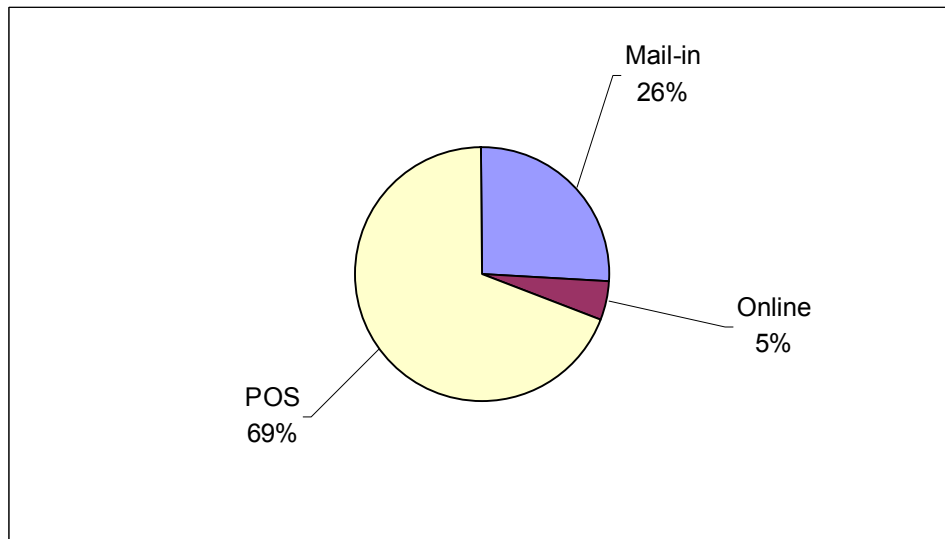
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<sup>33</sup> These tables and figures were not produced by KEMA but by another member of the evaluation team: Katherine Randazzo of Fielding Graduate University.

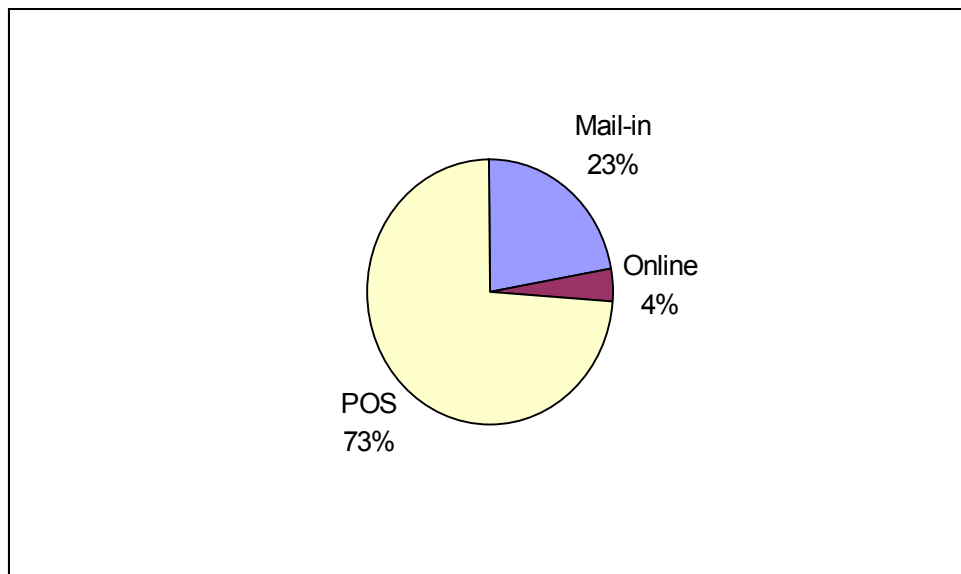
**Figure 6-1**  
**# of Measures Installed by Rebate Type**



**Figure 6-2**  
**Claimed kWh Savings by Rebate Type**



**Figure 6-3**  
**Claimed kW Savings by Rebate Type**



## 6.3 Methodology

This section describes our sampling plan and our survey instrument.

### 6.3.1 Sampling Plan

SCE requested that our target number of completed surveys include an equal balance of the different HEER Program rebate types. Since our total target number of completed surveys was 300, this meant that we would have to complete 100 surveys with mail-in rebate participants, 100 surveys with online rebate participants, and 100 surveys with point-of-sale rebates.

#### 6.3.1.1 Developing the Mail-in and Online Rebate Sample Frame

We began with files containing all residential customers who received a HEER rebate via mail-in or online application for a measure purchased in 2007 and 2008. The tracking database supplied by SCE covered program participants through March 31, 2008. After combining these files we dropped records for which the purchase date fell outside of the desired timeframe (pre



April 1, 2007).<sup>34</sup> We also dropped records where SCE was listed as the account holder, where a retailer (e.g., Wal-Mart) was listed as the payee, and those for pool pump incentives that were received by contractors rather than residential customers. Next we compared the account numbers of the remaining records with the account numbers that PA Consulting had already surveyed for the impact evaluation. Records that matched were excluded from our sample frame to avoid over-surveying the same customers.

The resulting file contained 43,405 records. Of these, 500 records shared an account number with at least one other record in the file. Closer inspection of these records identified 93 records for which not only the account number matched another record in the file, but so did the measure type and purchase date. These 93 records were eliminated.<sup>35</sup> Finally because there were too few (3) insulation rebates, we removed these from the sample frame. This is how we came up with the final mail-in/online rebate sample frame of 43,309.

### **6.3.1.2 Developing the Point-of-Sale Rebate Sample Frame**

Due to the nature of point-of-sale (POS) rebates we did not have access to a complete list of customers who received these rebates. We were able to obtain a list of those POS rebate recipients who subsequently applied for and received a Starbucks gift card from SCE.<sup>36</sup> Because these “bounce back” cards would have been received shortly after the date of purchase, we included all successful applications for Starbucks cards received between April 30, 2007 and May 31, 2008.

It is important to note that this sample frame does not constitute a random, representative sample of all POS rebate recipients. Presumably those who bothered to send in the application for a Starbucks card differed in various respects from those who did not. Nonetheless, this was the only possible source for sampling POS rebate recipients and should provide some insight into the experiences of these program participants.

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<sup>34</sup> We did this because we questioned whether participants who participated earlier than this would have a reliable memory of their program experience.

<sup>35</sup> Undoubtedly some of these were true duplications (i.e., only one rebate application was processed) and others reflected a single customer purchasing (for example) two room air-conditioners on the same day and applying for rebates on both. For sampling purposes this distinction did not matter.

<sup>36</sup> A postcard application for this gift card was available at the point-of-sale.

The original POS sample file contained 1,624 records that met these criteria. None of these records included customer account numbers. Two pairs of these records had the same participant name and address but with two different dates and two different measures. Within each pair we randomly selected one of the two records to delete from the sample frame.

Next we compared the POS records with the file containing online and mail-in rebate recipients. We found three records in the POS file that matched one or more records in the online/mail-in rebate file on both name and address. We deleted those three records from the POS file. Finally we compared the POS records with the survey participants from the PA Consulting study. We identified four records that were in both files and deleted them from the POS sample frame. This left us with a sample frame of 1,615 POS rebate recipients.

### 6.3.1.3 The Sampling Design

Table 6-3 shows this Q2 2007 – Q2 2008 sampling frame that we developed, as described above.

**Table 6-3**  
**Sample Frame of Q2 2007 – Q2 2008 Participants**

Rebated Equipment Type	POS Rebates	On-line Rebates	Mail-in Rebates	Total
Refrigerators	1,294	5,990	31,118	<b>38,402</b>
Room AC	193	415	1,517	<b>2,125</b>
Whole House Fans	128	740	896	<b>1,764</b>
Evaporative Coolers		90	608	<b>698</b>
Pool Pumps		436	1,278	<b>1,714</b>
Cool Roofs		1	189	<b>190</b>
Electric Water Heaters		13	18	<b>31</b>
<b>Total</b>	<b>1,615</b>	<b>7,685</b>	<b>35,624</b>	<b>44,924</b>

Our sampling plan was difficult because we were trying to satisfy three different needs including:

- SCE's request that we sample equally from each of the three rebate types;
- The need to get sufficient sample size for each one of the appliance/equipment types; and
- The desire to, as much as possible, make the number of sample points in each cell proportional to the number of participants in that cell.

Of course it was impossible to fully satisfy all these needs so we had to make some compromises in allocating the sample points. Table 6-4 shows the sampling plan we devised.

**Table 6-4**  
**HEER Program Participant**  
**Sample Design**

<b>Rebated Equipment Type</b>	<b>POS Rebates</b>	<b>On-line Rebates</b>	<b>Mail-in Rebates</b>	<b>Total</b>
Refrigerators	60	25	15	<b>100</b>
Room AC	20	11	9	<b>40</b>
Whole House Fans	20	11	9	<b>40</b>
Evaporative Coolers	0	25	15	<b>40</b>
Pool Pumps	0	25	15	<b>40</b>
Cool Roofs	0	0	35	<b>35</b>
Electric Water Heaters	0	3	2	<b>5</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>300</b>

The final disposition of completed surveys was somewhat different than this due to difficulty of obtaining the desired number of completes for some of the cells and the need to take the survey out of the field to meet reporting deadlines. The final disposition is shown in Table 6-5. Our original plan was to weight the survey results back up to the sample frame with individual weights for each cell. However, the small number of completed surveys for the refrigerator mail-in rebates was a concern since only eight survey responses would have been used to represent a large number of rebates – leading to an extremely large expansion weight. To avoid this problem, we chose to weight the responses of all three categories of refrigerator participants together. In this way the large refrigerator weight would be based on 100 survey responses rather than just eight. All other HEER program responses, however, were weighted up to the population using the cell weights.

**Table 6-5  
HEER Program Participant  
Sample Disposition**

<b>Rebated Equipment Type</b>	<b>POS Rebates</b>	<b>On-line Rebates</b>	<b>Mail-in Rebates</b>	<b>Total</b>
Refrigerators	61	31	8	<b>100</b>
Room AC	10	19	11	<b>40</b>
Whole House Fans	8	23	10	<b>41</b>
Evaporative Coolers	0	8	30	<b>38</b>
Pool Pumps	0	18	22	<b>40</b>
Cool Roofs	0	0	32	<b>32</b>
Electric Water Heaters	0	2	3	<b>5</b>
<b>Total</b>	<b>79</b>	<b>101</b>	<b>116</b>	<b>296</b>

### 6.3.2 Survey

The survey instrument, which can be found in the appendix, was designed to address the following questions:

- Program/Rebate Awareness and Participation
  - Awareness/knowledge of the HEER rebates and program.
  - Familiarity with less common rebated technologies.
  - How they heard about the program.
  - Their familiarity with Energy Guide and Energy Star labels.
- Energy Efficiency Awareness, Knowledge, and Attitudes
  - Baseline measurements for each of these.
- Marketing and Customer Education Efforts
  - Preferred sources of program information.
  - If they recently shopped for or purchased a major appliance or piece of energy-using equipment, what kind of promotional information or sales pitch they experienced when shopping.

- Whether the retail store displays or promotions they witnessed changed their energy-efficiency awareness, knowledge and attitudes.
- Whether any changes in energy efficiency awareness, knowledge, or attitudes due to program information is likely to influence their future purchasing behavior.
- Their level of satisfaction with various aspects of the program.
- Future Appliance Purchasing and Market Barriers
  - Whether they plan to purchase any major appliances or other energy-using equipment in the near future and which appliances/equipment they are planning to purchase.
  - What barriers might prevent or delay the purchase of energy-efficient versions of this equipment.
- Miscellaneous
  - Customer demographics

## **6.4 Findings**

### **6.4.1 Program Awareness**

This section discuss the respondents' level of awareness of the HEER rebates, how their awareness of the HEER rebates compares with their awareness of other SCE programs, and how they heard of the HEER program.

#### **6.4.1.1 Awareness of HEER Rebates**

For the HEER Program participants we measured awareness of the HEER rebates slightly differently than we did for the general population of SCE single-family customers in a previous section of the report. As with the general population survey, we assessed participants' awareness of the various HEER program rebates both with and without prompting. First we asked respondents to identify any SCE programs or services to help customers save energy in their homes that they had heard of. For each HEER-rebated technology that a given respondent

failed to mention, we asked them if they were aware that SCE offered a rebate for that technology – unless they had actually received a rebate for the technology, in which case we inferred awareness.<sup>37</sup>

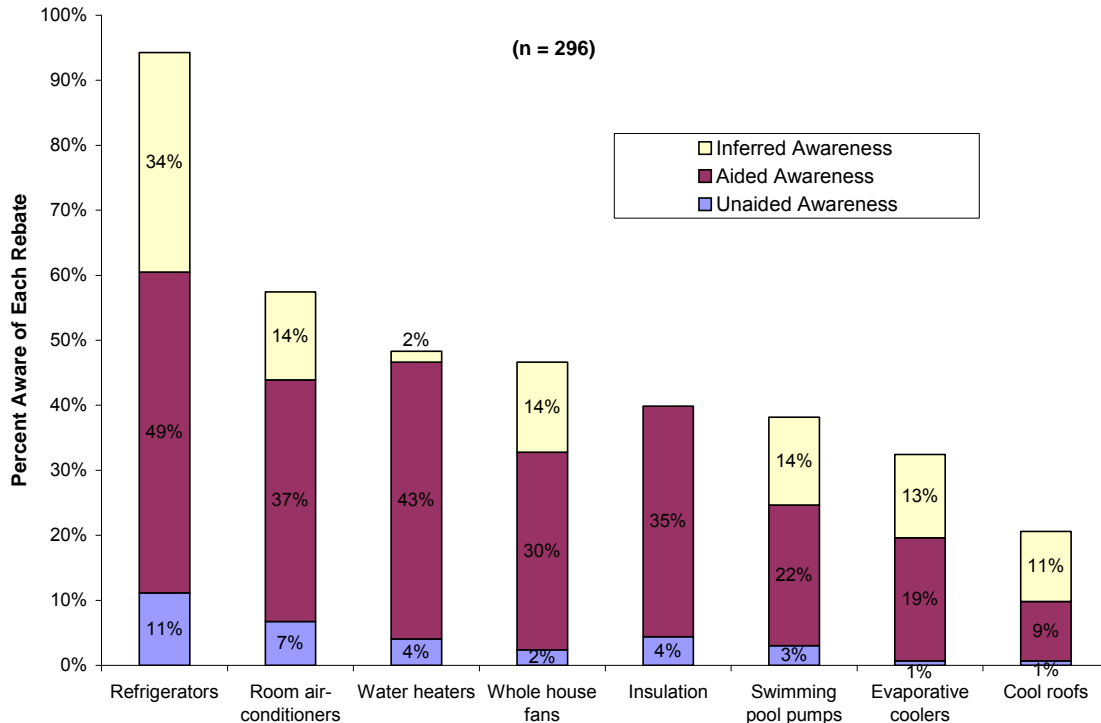
A participant who mentioned a given rebate in response to the open-ended question demonstrated *unaided awareness* of that rebate. Participants who did not mention a given rebate in response to the open-ended question but said that they were aware the rebate was available when asked directly about it demonstrated *aided awareness*. Finally, we assumed that those who had received a rebate from the HEER Program were aware of such rebates. Therefore we *inferred* their awareness of the rebates. When we simply use the terms “aware” or “awareness” in this report we are referring to the sum of unaided, aided, and inferred awareness.<sup>38</sup> Figure 6-4 shows the total percent of participants who were aware of each rebate, with unaided, aided, and inferred awareness broken out separately.

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<sup>37</sup> We concede that it’s possible that the recipient of a given rebate from the SCE HEER Program may not be aware that SCE gives out such rebates. However, we decided that this remote possibility did not justify lengthening the survey.

<sup>38</sup> Because the unaided awareness question was asked open-ended of all respondents, many participants who had received a particular rebate mentioned that rebate, demonstrating unaided awareness of it. To avoid double counting in the overall awareness numbers, we counted those respondents in the inferred awareness category but not in the unaided category.

**Figure 6-4**  
**Awareness of HEER Program Rebates**



Base = all respondents.

The chart shows that refrigerator rebates were, by far, the most widely-recognized HEER rebate. Nearly all the participants (94%) either demonstrated awareness, claimed awareness, or had their awareness inferred. The room air conditioner rebates were a distant second with 58 percent of participants being aware of them. Fewer than half of the HEER Program participants were aware that SCE offers rebates on water heaters, whole house fans, insulation, and pool pumps. Less than a third were aware that SCE offers rebates on evaporative coolers and cool roofs.

The relatively low awareness of rebates for evaporative coolers and cool roofs is not surprising given that many respondents had not even heard of these technologies. Only 71 percent of participants had heard of evaporative coolers (which were also described as swamp coolers in the survey), and only 18 percent had heard of cool roof technology. Even those respondents who had heard of cool roof technology were not very familiar with it. When asked to rate their familiarity with cool roof technology on a five point scale (with 1 being “Not at all familiar” and 5

being “Very familiar”) the average familiarity rating was only 2.2. Only three percent of those who had heard of cool roof technology said that they were very familiar with it.

#### **6.4.2 Awareness of HEER Compared with Other SCE Programs**

Figure 6-5 compares the unaided awareness of the various HEER rebates with unaided awareness of other SCE programs for residential customers.<sup>39</sup> HEER rebates are highlighted with the darker bars.

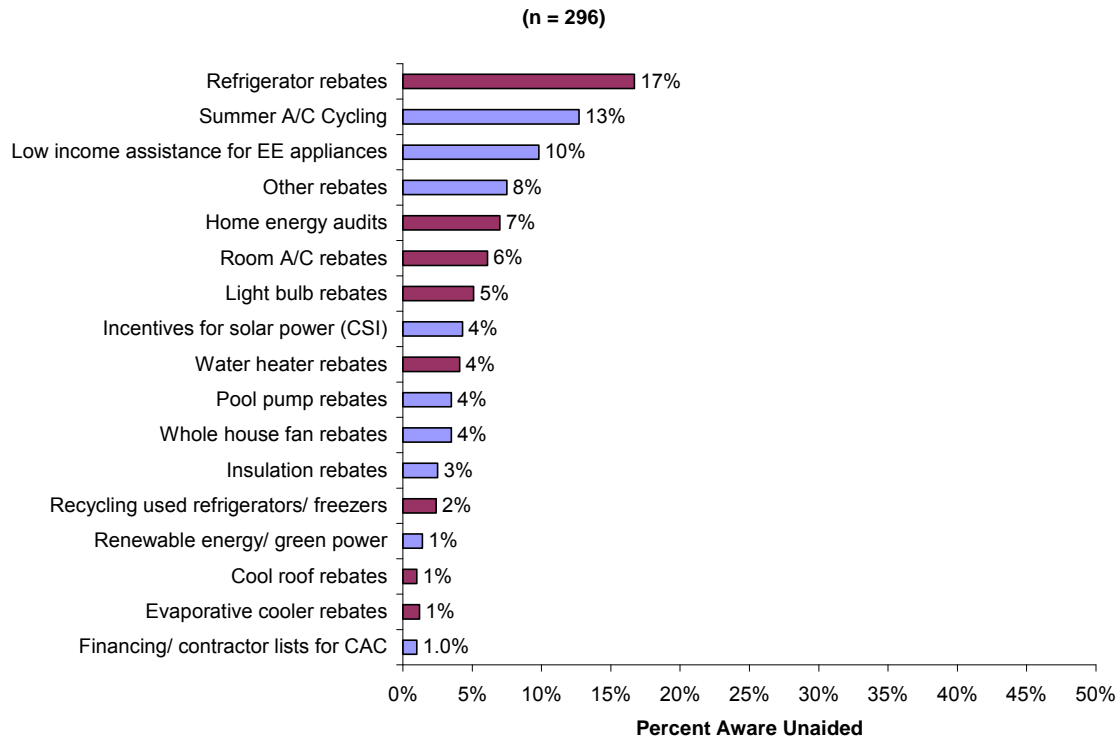
Refrigerator rebates were the most frequently mentioned SCE offering, but several other programs were mentioned more frequently than the other HEER rebates. These included assistance for low-income customers to purchase energy efficient appliances (Energy Management Assistance), miscellaneous other rebates, and A/C cycling (Summer Discount Program). Of the 17 programs covered, only three (refrigerator rebates, low income assistance, and summer A/C cycling) had unaided awareness levels among residential customers of 10 percent or greater.

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<sup>39</sup> For non-HEER programs we only captured unaided awareness.



**Figure 6-5**  
**Unaided Awareness of HEER Rebates and Other SCE Programs**

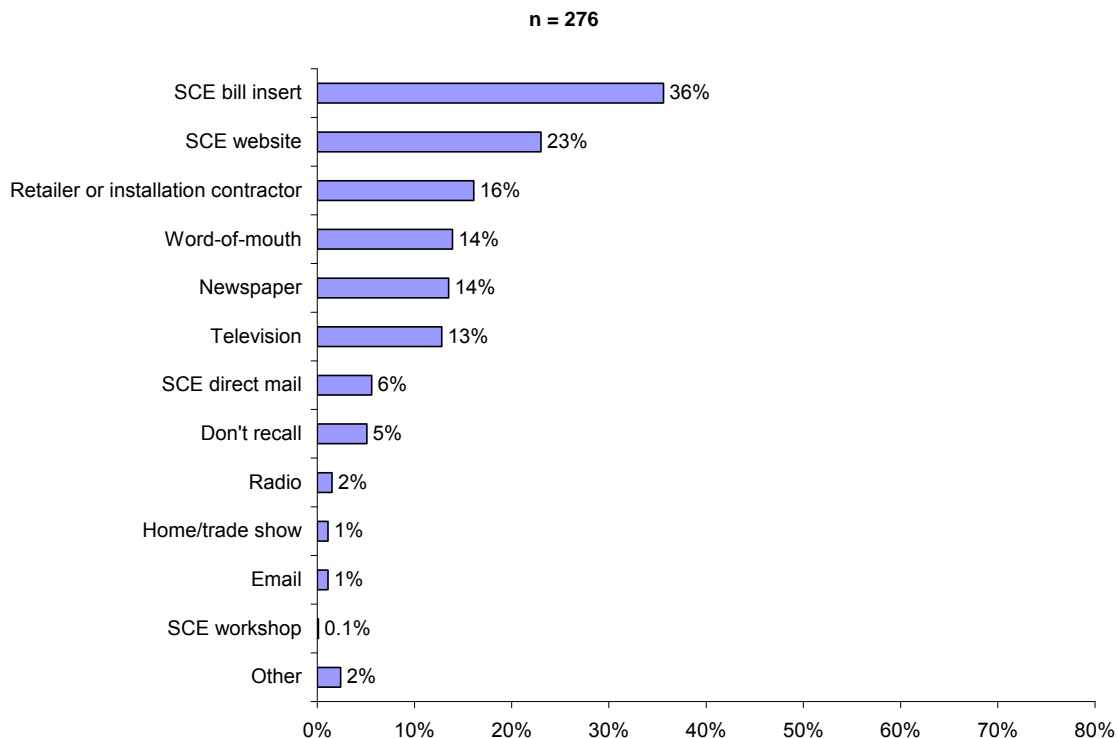


Base = all respondents.

### 6.4.3 Sources of Program Awareness

We asked all respondents who were aware of at least one SCE program (HEER or otherwise) where they had heard about these programs. Figure 6-6 shows the percent of respondents who said they learned of SCE programs through different sources.

**Figure 6-6**  
**Where Customers Heard About SCE Programs**



Base = respondents who had heard of at least one SCE program. Percents may not sum to 100% because multiple responses were allowed.

Bill inserts were the most common way (36% of respondents) that HEER participants reported learning about SCE programs. Sources mentioned by at least 10 percent of respondents also included retailers and installation contractors, the SCE website, newspapers, word-of-mouth, and television.

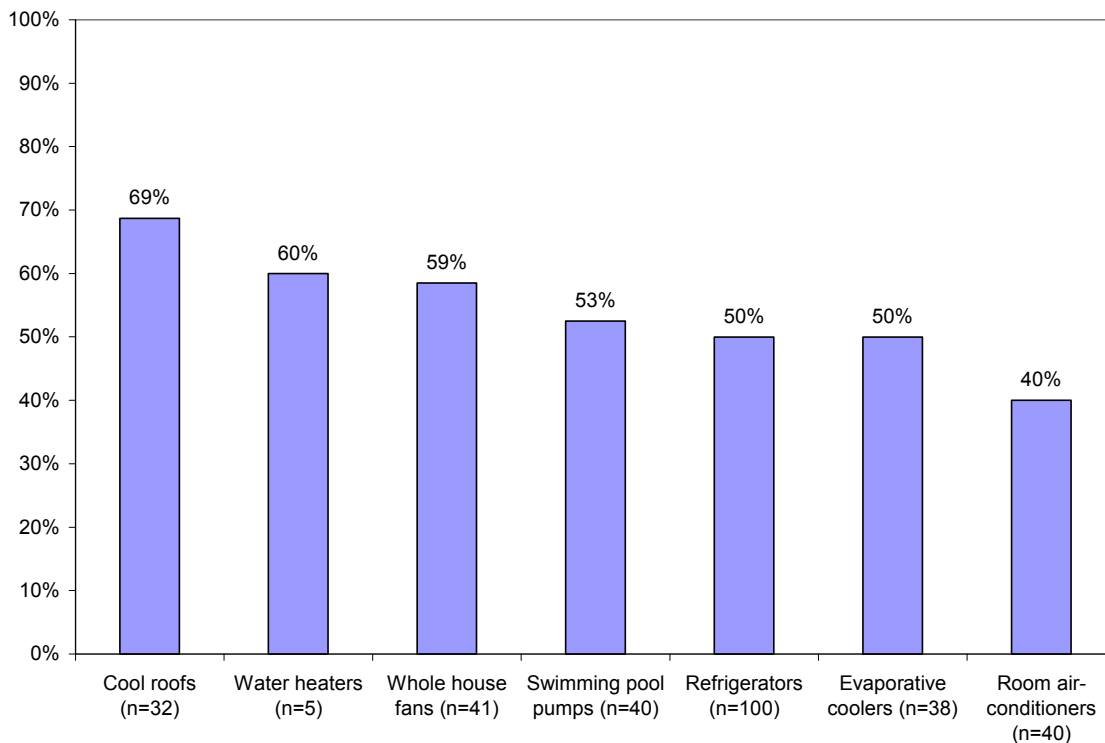
#### **6.4.4 Marketing and Customer Education**

This section discusses to what degree HEER Program participants recalled messages from SCE concerning energy savings or energy savings programs and services, what information that participants used when choosing their appliances/equipment, whether they would like to receive additional energy efficiency Information from SCE, and what would be their preferred means of receiving this information.

### 6.4.4.1 Recalling SCE Energy Marketing/Informational Messages

Exactly half of the participating residential customers recalled seeing or hearing at least one message from SCE in the past 12 months that focused on how to manage home energy use, the energy efficiency of specific products, or SCE programs to help customers save energy. The level of recall varied somewhat depending on the type of HEER-rebated equipment that the participant received, as Figure 6-7 shows. However, there were no statistically significant differences in level of recall among participants based on demographic characteristics such as age, gender, education or income.

**Figure 6-7**  
**% of HEER Program Participants**  
**Recalling SCE Energy Marketing/Informational Messages**  
**by Type of HEER-Rebated Equipment**



When asked to recall the subject of these messages, there were a wide variety of responses with “how to save energy at home” (15% of respondents) and adjusting/programming the thermostat (11%) being the two most-recalled messages (Figure 6-8).

**Figure 6-8**  
**Types of SCE Energy Marketing/Informational Messages**  
**Recalled by HEER Program Participants**

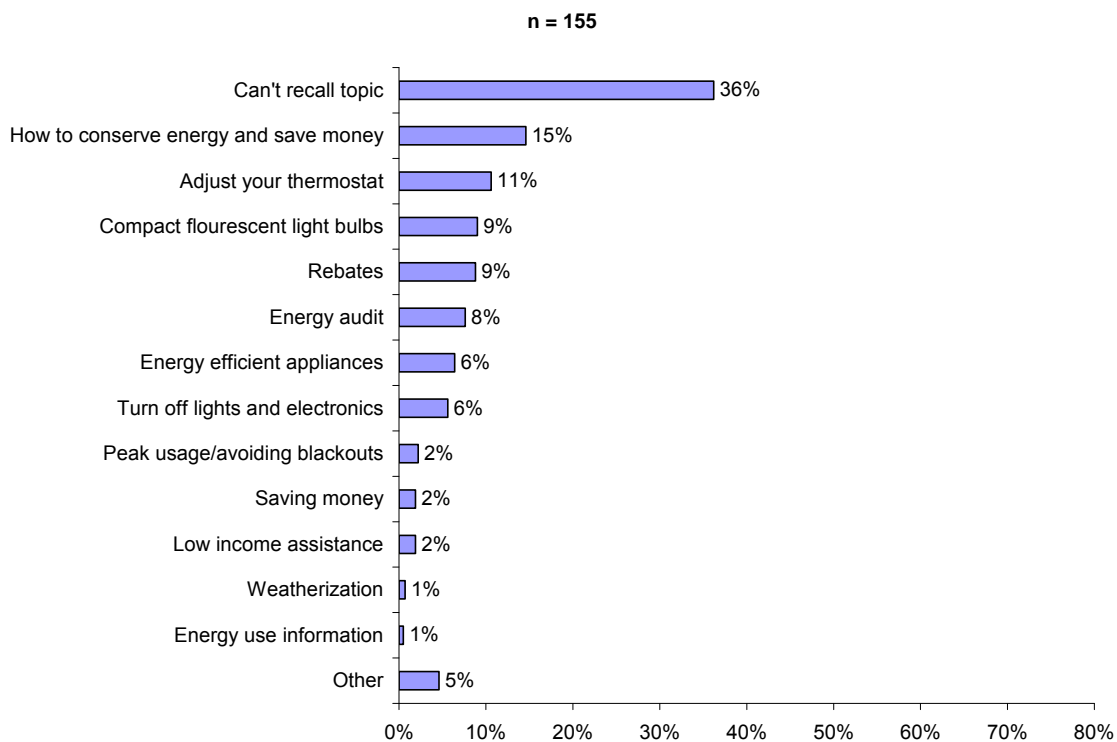
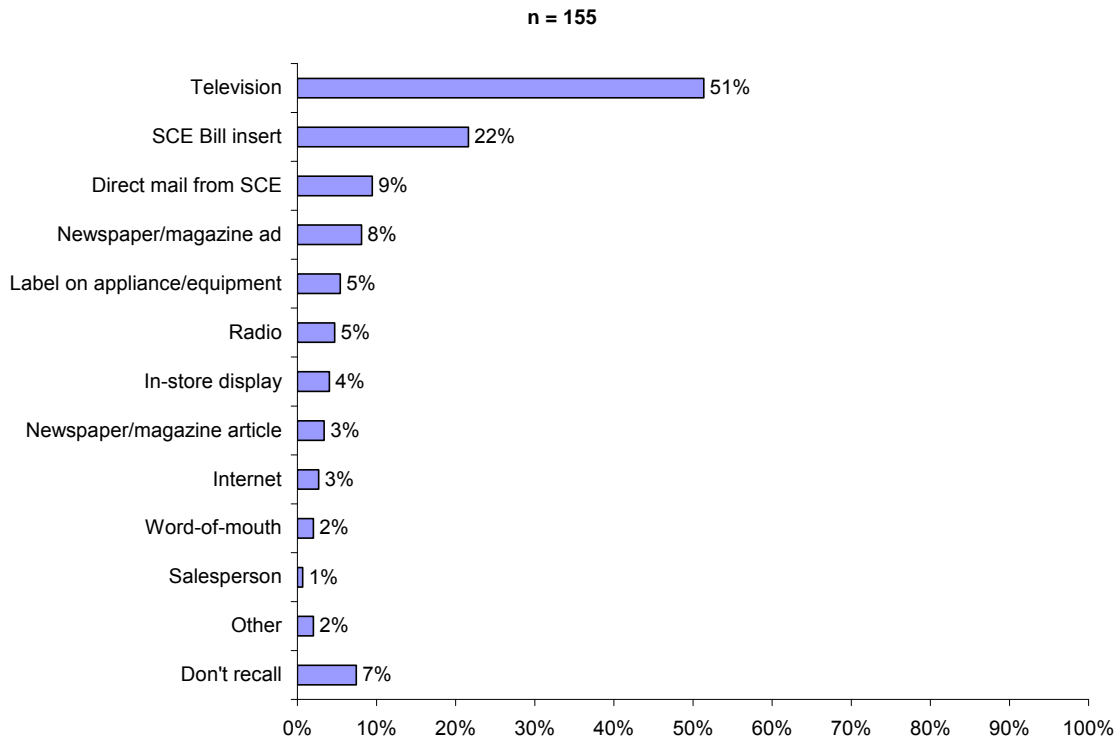


Figure 6-9 shows that television was by far the most common channel cited for receiving these SCE messages (51% of respondents) followed by SCE bill inserts (22%) and other SCE direct mail (9%). For the most part, there were no significant differences among the HEER participants in terms of the types of channels they cited based either on their equipment type or their demographics.

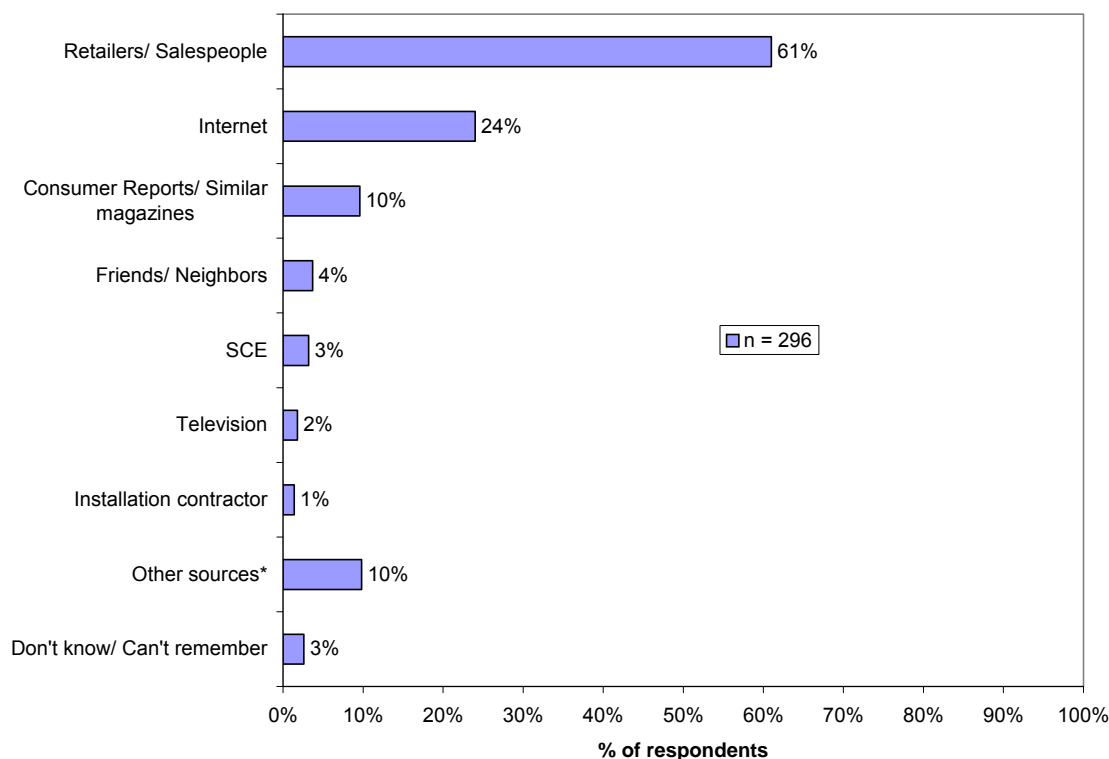
**Figure 6-9**  
**Sources of SCE Energy Marketing/Informational Messages**  
**Recalled by HEER Program Participants**



#### 6.4.4.2 Information Sources for Choosing Appliances/Equipment

We asked the HEER Program participants where they got information about what to buy when they were purchasing their appliances or other energy-using equipment. Figure 6-10 shows that the most-cited information sources were the retailer/salesperson (61%), followed by Internet (24%), and Consumer Reports or other similar magazines (10%). Only three percent mentioned SCE as an information source for their research.

**Figure 6-10**  
**Where HEER Participants Got Information**  
**About What Appliances/Equipment to Buy**



Note: Total exceeds 100% because multiple responses were permitted. \*Other sources included newspapers, other magazines besides consumer magazines, other gas/electric utilities besides SCE, et al.

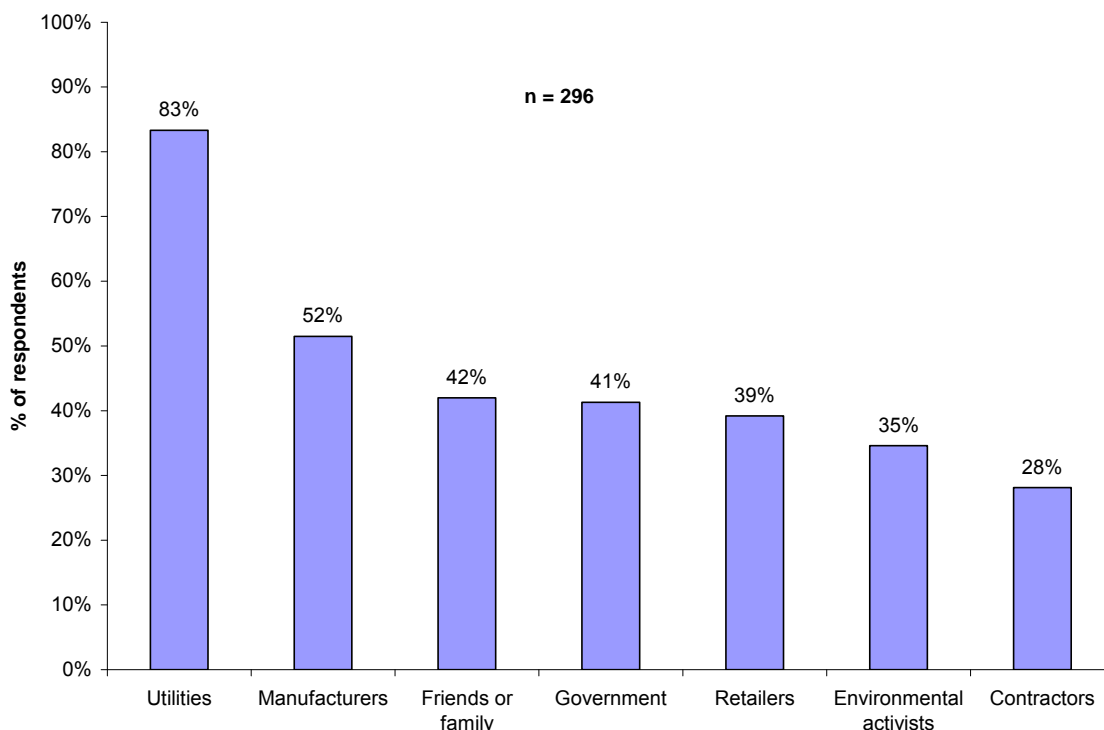
How frequently the HEER participants cited these information sources varied somewhat depending on the type of HEER-rebated appliance/equipment they had purchased. When asked what information sources they used in purchasing their appliances/equipment, nearly two thirds (65%) of the refrigerator purchasers cited retailers or salespersons. This was also the primary information source for room air conditioner purchasers (58%) and water heater purchasers (60%). However, the purchasers of HEER-rebated evaporative coolers, whole house fans, and pool pumps were about as likely to cite the Internet (32%, 32%, and 23% respectively) as an information source as they were a retailer or salesperson (32%, 34%, and 25% respectively). Later in this report we present the full range of information sources for each appliance/equipment purchaser type.

The types of information sources used by HEER participants did vary somewhat by customer demographics. Participants with at least some college education were much more likely to use

the Internet (28% of respondents) and Consumer Reports-type magazines (11%) than those without any college education (5% and 4% respectively). Males were much more likely (14%) to use Consumer Reports-type magazines (14%) than females (5%). Participants in the middle-income group were much less likely to cite Consumer Reports-type magazines as an information source than those in the lower- and upper-income groups (19% and 16% respectively).

While only three percent of the HEER participants reported using SCE as an information source for their appliance/equipment-purchasing decisions, they did identify SCE as being, by far, the most trusted source for information about energy efficiency (Figure 6-11). The second-most-trusted source was equipment manufacturers (52%), followed by friends or family (42%), and government (41%). Fewer than 40 percent of the respondents identified retailers, environmental activists or contractors as trustworthy sources of energy efficiency information.

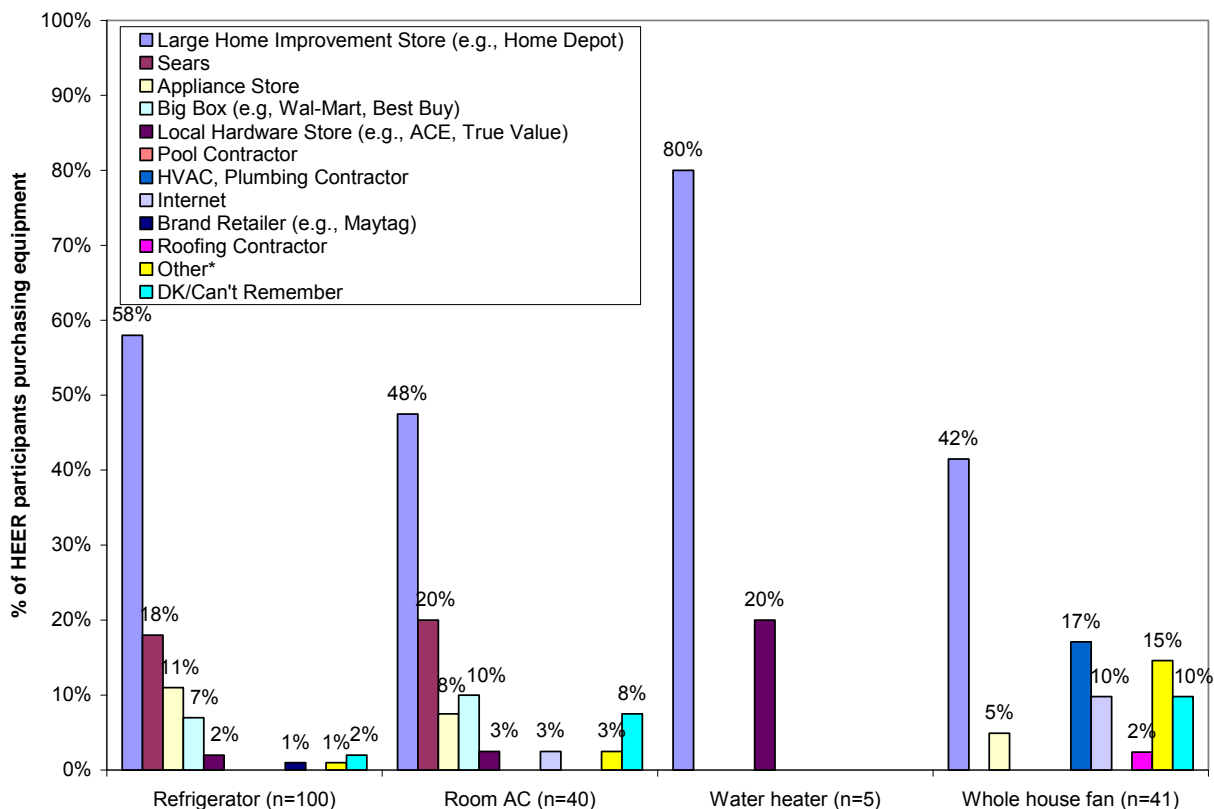
**Figure 6-11**  
**The Most Trusted Sources for Energy Efficiency Information**  
**According to HEER Participants**



As shown in Figure 6-10, retailers and salesperson were the most-cited way that the HEER participants got information about what appliance/equipment to buy. We asked the HEER

participants where they bought their appliances/equipments. Figure 6-12 and Figure 6-13 show that large home improvement stores were the most-cited sources for refrigerators, room air conditioners, water heaters, and whole house fans. Much of this was driven by the fact that SCE offers point-of-sale rebates in these stores. HVAC contractors were the most-cited source for evaporator coolers, pool contractors were the most-cited source for pool pumps, and roofing contractors were the most-cited source for cool roofs.

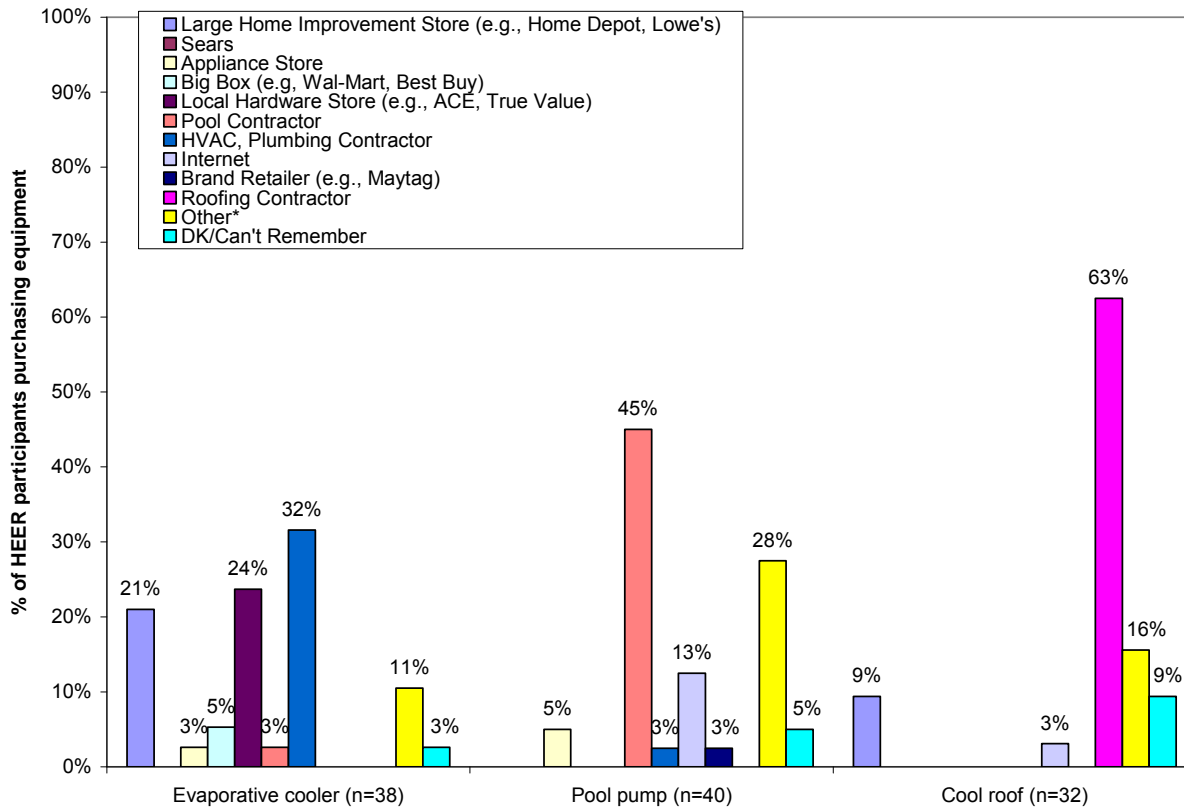
**Figure 6-12**  
**Where HEER Participants**  
**Purchased Their Appliances/Equipment**  
**Refrigerators, Room ACs, Water Heaters and Whole House Fans**



Note: \*Other included unnamed “contractors,” “private contractors” or “wholesalers.”



**Figure 6-13**  
**Where HEER Participants**  
**Purchased Their Appliances/Equipment**  
**Evaporative Coolers, Pool Pumps, Cool Roofs**



Note: \*For the pool pumps the most common “other source” was the pool retailer Leslie’s Pool Supply. For the other equipment the most common “other sources included unnamed “contractors,” “private contractors” or “wholesalers.”

We also asked the HEER participants what characteristics of their HEER-rebated appliances/equipment they had discussed with their salespersons or contractors. Figure 6-14 presents the responses of the refrigerator, room air conditioner, and water heater participants. It shows that efficiency and size were among the two most-cited discussion topics for all these appliances. Eleven percent of the refrigerator purchasers cited Energy Star, but only three percent of the room air conditioner purchasers did and none of the water heater purchasers did. A fifth of the water heater purchasers mentioned rebates but only 5-7 percent of the refrigerator and room air conditioner purchasers did.

**Figure 6-14**  
**What Appliance/Equipment Characteristics**  
**HEER Participants Discussed with Their Salespersons/Contractors**  
**Refrigerator, Room Air Conditioner, Water Heater Purchasers**

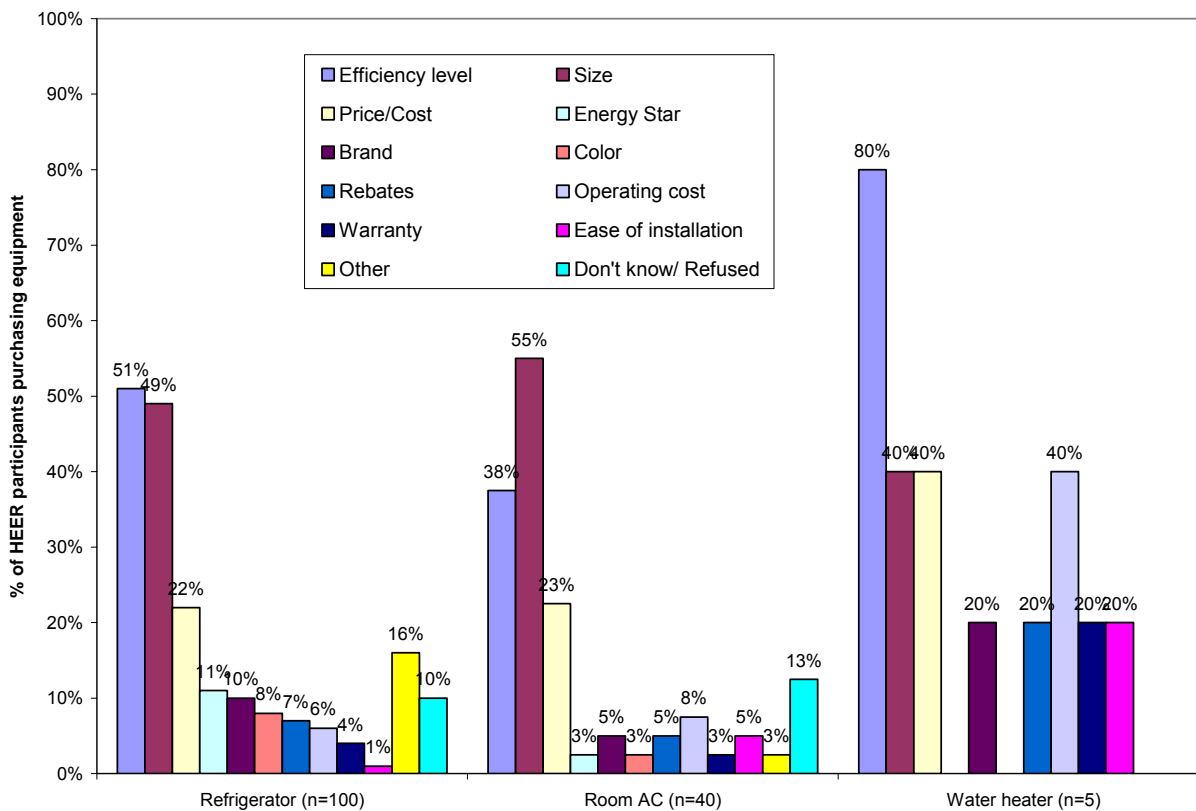
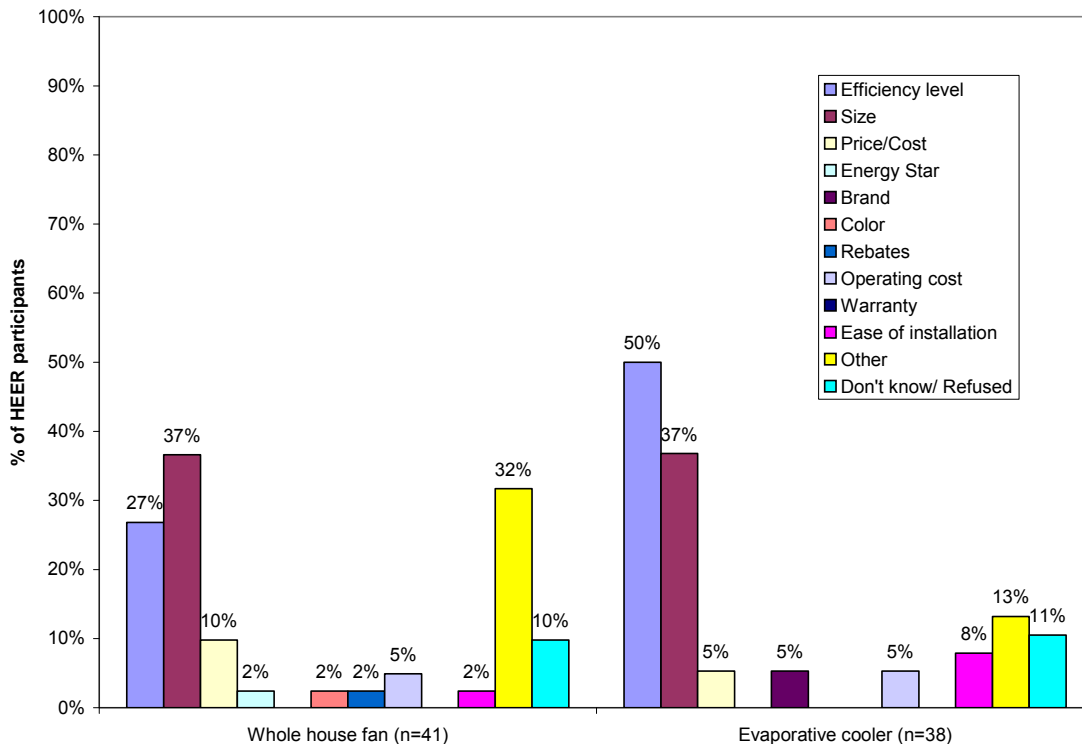


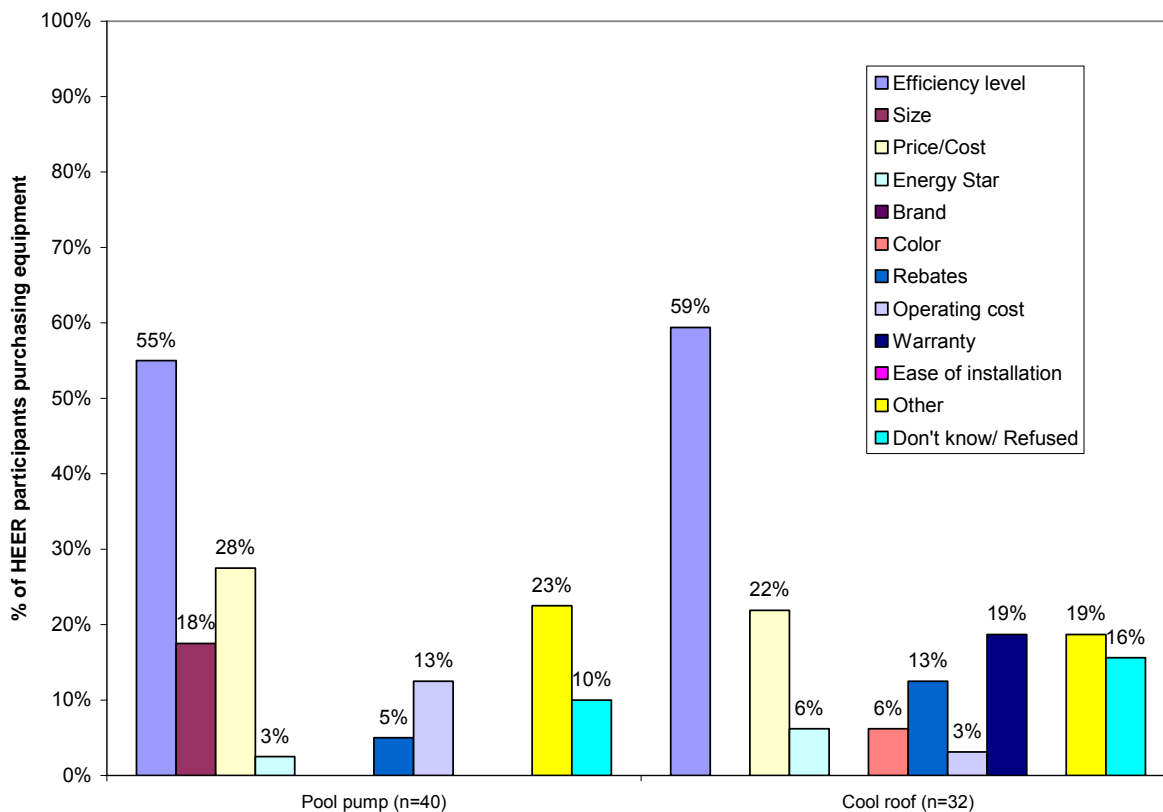
Figure 6-15 shows what the whole house fan and evaporative cooler participants discussed with their salespersons or contractors. Once again efficiency and size were the among the most-cited discussion topics. However, Energy Star or rebates were scarcely mentioned.

**Figure 6-15**  
**What Appliance/Equipment Characteristics**  
**HEER Participants Discussed with Their Salespersons/Contractors**  
**Whole House Fan, Evaporative Cooler Purchasers**



Finally Figure 6-16 shows what the pool pump and cool roof participants discussed with their salesperson/contractors. Efficiency was the most-cited discussion topic for both these measures and 13 percent of the roof purchasers mentioned rebates, but Energy Star was only cited by a handful of the participants.

**Figure 6-16**  
**What Appliance/Equipment Characteristics**  
**HEER Participants Discussed with Their Salespersons/Contractors**  
**Pool Pumps and Cool Roofs**

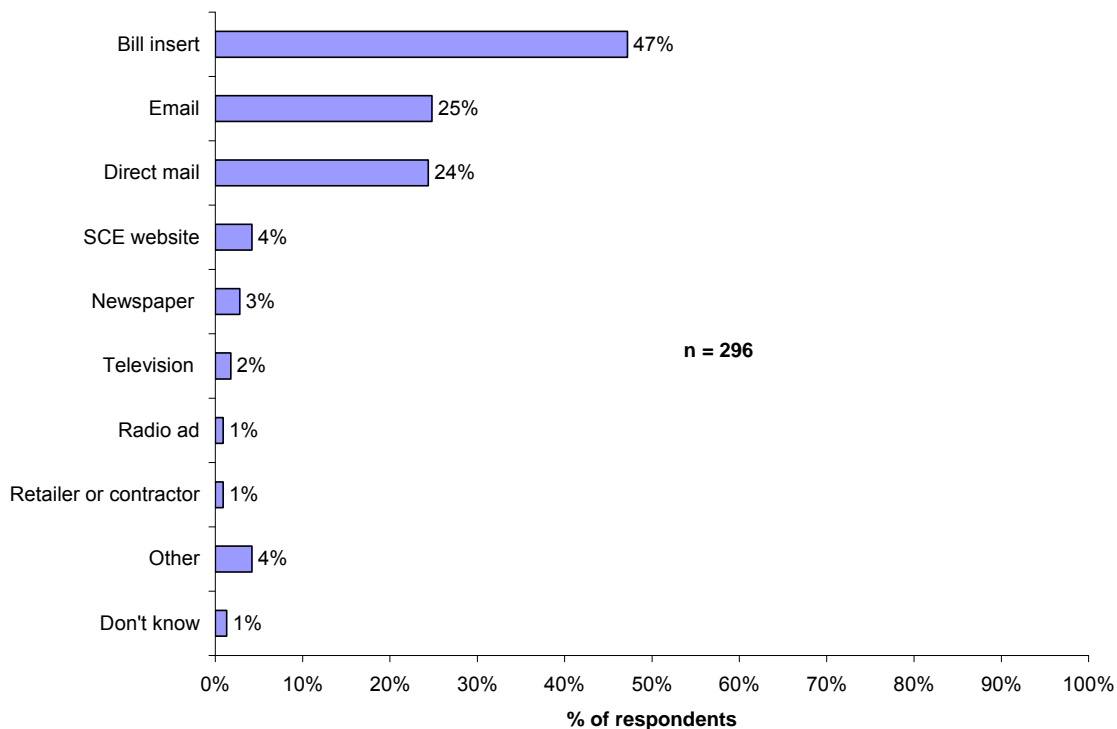


#### 6.4.4.3 Whether/How to Receive Additional EE Information from SCE

We asked the HEER participants if they would like to receive additional information from SCE concerning home appliance rebates. Respondents were fairly evenly split with 48 percent answering “yes” and 52 percent “no.” When asked what would be the best way for SCE to contact them about its programs and services to help save energy, most customers preferred

bill inserts (47%), email (25%), or direct mail (24%). Figure 6-17 shows the full range of responses.<sup>40</sup>

**Figure 6-17**  
**Preferred Ways to Receive Information About**  
**SCE Energy-Saving Programs/Services**



### 6.4.5 Program Activity Density and Potential

This subsection starts by showing the distribution of measure types and associated savings within each program component.<sup>41</sup> Then the analysis focuses on weather-related concentrations of program activity.

<sup>40</sup> As noted previously, SCE has recently switched from bill inserts to windows on the billing form for key messaging. This new format reduces the amount of program information that can be conveyed.

<sup>41</sup> The analysis in this subsection was not conducted by KEMA but by another member of the evaluation team: Katherine Randazzo of Field State Univeristy

Analyzing by weather areas was accomplished by mapping zip codes into CEC climate zones. Program activity figures are shown for each climate zone represented in this program. Eight of the 16 CEC zones are represented in the tables below. The tables are all organized so that the cooler zones are shown on the left side, and the hot zones are shown to the right. Hot zones are defined by the average high temperature in the month of August. This is based on the city that is listed as the representative of each of the CEC climate zones. Those that have an average high temperature of over 90 degrees Fahrenheit in August are shown in the hot zone area. There are five of these, and three cool zones. The analyses will be presented separately for each program component.

#### **6.4.5.1 Mail-In Component**

We can see from Table 6-6 that for this program component, refrigerators dominated purchases rebated by the program. This was true overall, but especially for climate zones 6, 8, and 9, followed by 10. The other zones saw very few refrigerator purchases. Most of these are not very populous areas, although not all. Thus, some of the dramatic differences in refrigerator purchases can be accounted for by differences in population density. However, not all can be explained in this way. When number of purchases is put in ratio to the density of housing in these zones, the ratios of purchases to housing density for zones 13, 14, 15 and 16 is about half of zones 6, 8, 9, and 10 (figures not shown). This implies that there is a good deal of room for increased program activity in these less populous climate zones. Figure 6-18 summarizes how strongly the PY2006-2008 program cycle was dominated, in terms of units installed, by refrigerators. About 86 percent of total items purchased under this program were refrigerators.

Table 6-7 and Figure 6-19 show a very different picture. Here we can see that when net kWh savings are considered, refrigerators were not so dominant. Specifically, refrigerators accounted for only 40 percent of savings, followed by pool pumps/motors at 28 percent and evaporative coolers at 20 percent. Pool pumps and motors were highly concentrated in climate zones 9 and 10, and evaporative coolers were very concentrated in zone 14, represented by China Lake. This is a very hot and dry area, which partially accounts for why there is such a heavy concentration of evaporative coolers there. However, there are other areas that could be described in this way, and thus could also provide strong savings through this measure, including the rest of the “hot zones.”

Table 6-8 and Figure 6-20 portray a very dramatic picture of what an important part of this program evaporative coolers are in terms of kW reduction. Over 70 percent of the program’s achieved kW reduction during this program cycle came from evaporative coolers. This

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compares to only one percent from refrigerators, and 14 percent from pool pumps, which played an important role in kWh savings.

**Table 6-6  
Number of Installations and Savings Overall and Installations by Measure Type  
by Climate Zone: Mail-In**

CEC Climate Zone									
Cool Zones			Hot Zones						
6 Los Angeles	8 El Toro	16 Mount Shasta	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total	
<b>All Measure Types</b>									
Number Installed	22,786	29,197	1,090	30,181	21,459	1,900	4,903	2,413	113,929
Gross KWh	2,088,320	2,899,951	109,105	3,785,211	2,505,352	331,893	3,230,233	1,181,876	16,131,941
Net KWh	1,670,656	2,319,961	87,284	3,028,169	2,004,281	265,515	2,584,186	945,501	12,905,553
Gross KW	260	393	212	760	356	69	4,923	212	7,184
Net KW	208	314	169	608	285	55	3,938	170	5,748
<b>Number Installed by Measure Type</b>									
Room AC	585	1,304	45	2,817	649	177	115	64	5,756
Refrigerator	21,339	26,285	871	24,631	17,377	1,427	2,687	1,504	96,121
Insulation	-	-	3	2	5	2	1	-	13
Water Heater	29	12	11	10	20	7	23	6	118
Whole House Fan	118	627	8	755	2,077	79	86	6	3,756
Roof	94	19	1	233	25	5	9	344	730
Evap Cooler	-	3	144	15	44	11	1,779	157	2,153
Pool Pump	621	947	7	1,718	1,262	192	203	332	5,282



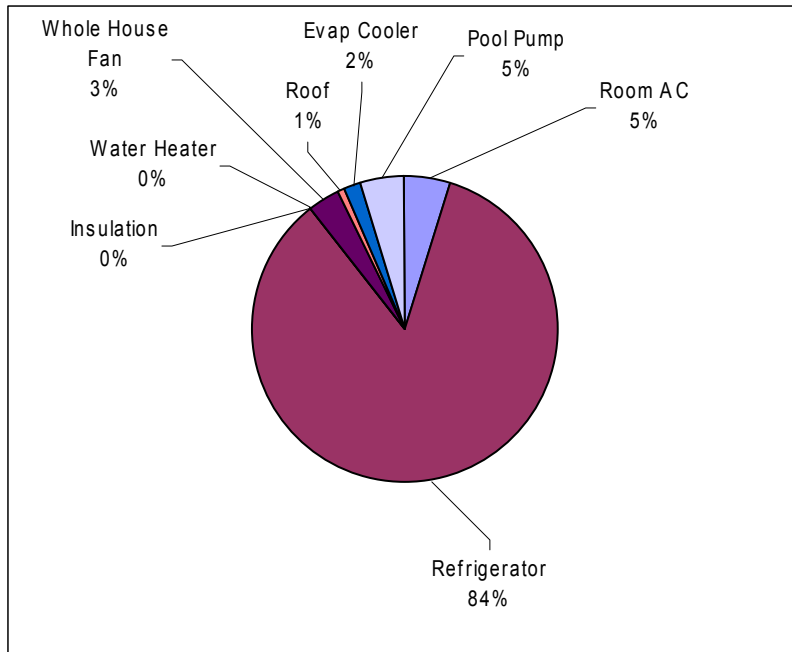
**Table 6-7  
Gross and Net KWh by Measure Type  
by Climate Zone: Mail-In**

CEC Climate Zone									
Cool Zones			Hot Zones						
6 Los Angeles	8 El Toro	16 Mount Shasta	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total	
<b>Gross KWh by Measure type</b>									
Room AC	115,753	321,353	7,119	654,404	142,650	38,568	23,150	18,784	1,321,781
Refrigerator	1,397,705	1,721,668	57,051	1,613,331	1,138,194	93,469	175,999	98,512	6,295,926
Insulation	-	-	1,214	1,077	5,595	3,405	2,926	-	14,218
Water Heater	4,322	1,802	1,970	1,623	3,246	1,136	3,732	974	18,805
Whole House Fan	23,998	73,835	478	45,004	74,398	3,100	3,835	111	224,759
Roof	26,110	9,315	495	77,860	19,610	4,230	9,456	402,538	549,615
Evap Cooler	-	1,117	34,707	9,883	44,386	11,381	2,821,248	364,145	3,286,866
Pool Pump	520,432	770,862	6,072	1,382,030	1,077,272	176,604	189,887	296,813	4,419,972
<b>Net KWh by Measure Type</b>									
Room AC	92,602	257,082	5,695	523,523	114,120	30,855	18,520	15,027	1,057,425
Refrigerator	1,118,164	1,377,334	45,640	1,290,664	910,555	74,775	140,799	78,810	5,036,740
Insulation	-	-	971	861	4,476	2,724	2,341	-	11,374
Water Heater	3,458	1,441	1,576	1,298	2,596	909	2,986	779	15,044
Whole House Fan	19,198	59,068	382	36,003	59,519	2,480	3,068	89	179,807
Roof	20,888	7,452	396	62,288	15,688	3,384	7,565	322,030	439,692
Evap Cooler	-	893	27,765	7,906	35,509	9,105	2,256,998	291,316	2,629,493
Pool Pump	416,346	616,690	4,858	1,105,624	861,818	141,283	151,910	237,450	3,535,978

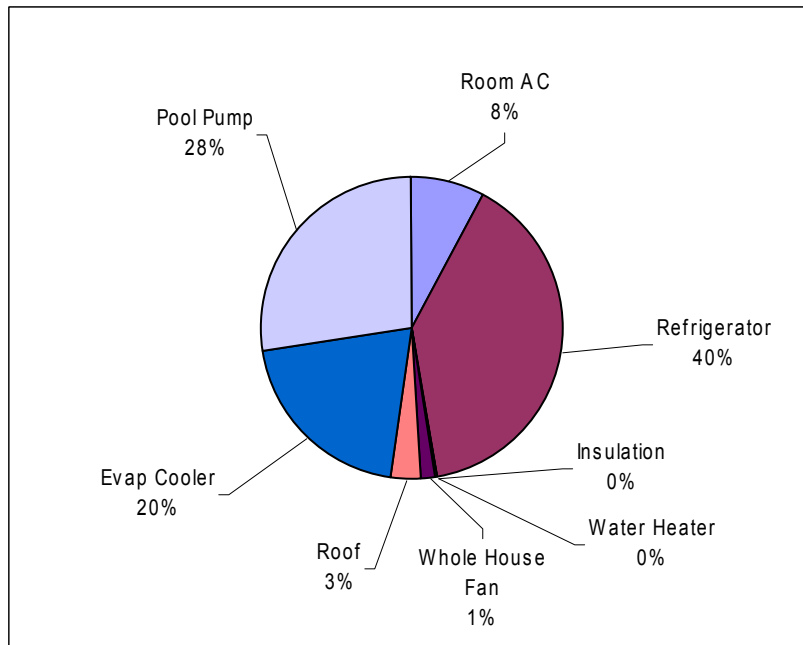
**Table 6-8  
Gross and Net KW Reduction by Measure Type  
by Climate Zone: Mail-In**

CEC Climate Zone									
Cool Zones			Hot Zones						
6 Los Angeles	8 El Toro	16 Mount Shasta	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total	
<b>Gross KW by Measure Type</b>									
Room AC	77	172	6	372	86	23	15	8	760
Refrigerator	24	29	1	27	19	2	3	2	107
Insulation	-	-	2	0	2	1	3	-	7
Water Heater	1	0	0	0	1	0	1	0	4
Whole House Fan	21	1	0	1	6	0	1	-	30
Roof	18	8	0	43	10	2	4	130	216
Evap Cooler	-	-	201	4	2	-	4,850	12	5,069
Pool Pump	120	182	2	311	230	41	46	60	992
<b>Net KW Reduction by Measure Type</b>									
Room AC	62	138	5	297	69	19	12	7	608
Refrigerator	19	23	1	22	15	1	2	1	86
Insulation	-	-	1	0	2	1	2	-	6
Water Heater	1	0	0	0	1	0	1	0	3
Whole House Fan	17	1	0	1	5	0	0	-	24
Roof	14	7	0	35	8	2	4	104	173
Evap Cooler	-	-	160	3	2	-	3,880	10	4,055
Pool Pump	96	145	1	249	184	33	37	48	793

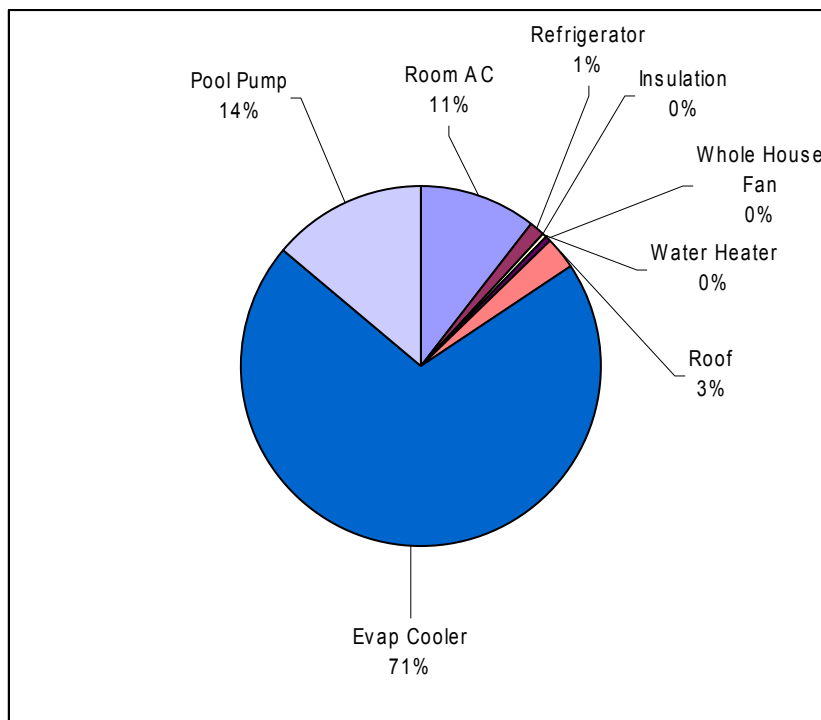
**Figure 6-18**  
**Percent Installed by Measure Type: Mail-In**



**Figure 6-19**  
**Percent of Net KWh Savings from Measures Installed: Mail-In**



**Figure 6-20**  
**Percent of Net KW Reduction from Measures Installed: Mail-In**



#### 6.4.5.2 Online Component

Table 6-9 and Figure 6-21 show the number of measures rebated. As with the mail-in component, the number of units rebated was heavily weighted toward refrigerators, especially in zones 9, 8, 6, and 10. Overall, refrigerators accounted for 78 percent of measures during this program cycle (Table 6-10 and Figure 6-22). However, savings were more concentrated in pool pumps at 44 percent. Refrigerators accounted for 28 percent of kWh savings and evaporative coolers account for 18 percent. As before, the picture changes again when considering kW reduction (Table 6-11 and Figure 6-23). For this important outcome, evaporative coolers accounted for 64 percent of program results and pool pumps for 25 percent.

Evaporative coolers were rebated through the online component primarily in climate zone 14, represented by China Lake. Pool pumps were less concentrated, being spread out across zone 9 (Pasadena), 10 (Riverside), and 8 (El Toro).

**Table 6-9  
Number of Installations and Savings Overall and Installations by Measure Type  
by Climate Zone: Online**

CEC Climate Zone									
	6 Los Angeles	8 El Toro	16 Mount Shasta	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total
<b>All Measure Types</b>									
Number Installed	2,593	3,636	161	4,079	3,150	444	1,251	390	15,704
Gross KWh	326,338	514,024	16,534	647,454	515,635	64,824	552,607	203,750	2,841,165
Net KWh	261,071	411,219	13,227	517,963	412,508	51,859	442,085	163,000	2,272,932
Gross KW	59	92	24	128	98	16	750	34	1,202
Net KW	47	74	19	102	79	13	600	27	961
<b>Number Installed by Measure Type</b>									
Room AC	117	222	9	231	143	52	44	15	833
Refrigerator	2,302	2,980	130	3,262	2,094	334	836	250	12,188
Insulation	-	-	-	-	-	-	-	-	-
Water Heater	5	4	2	5	8	1	3	3	31
Whole House Fan	41	231	2	261	642	29	36	3	1,245
Roof	-	-	-	1	-	-	-	1	2
Evap Cooler	-	-	17	6	10	3	276	32	344
Pool Pump	128	199	1	313	253	25	56	86	1,061

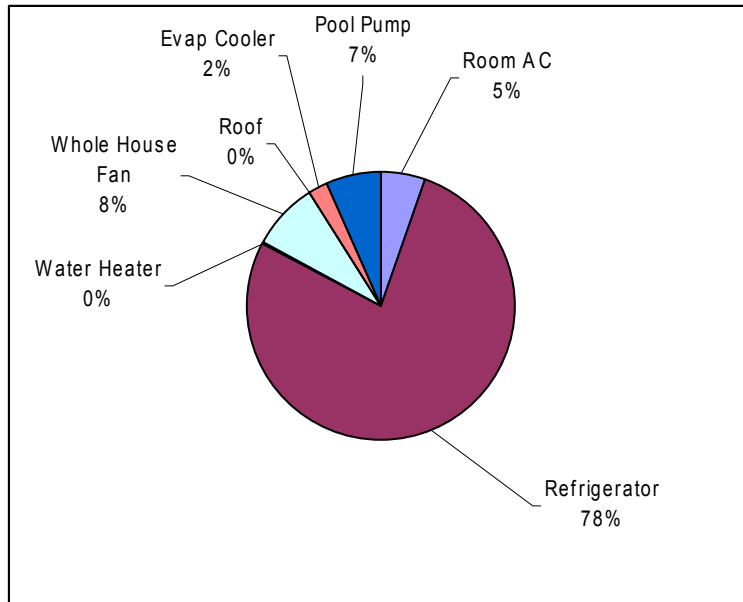
**Table 6-10**  
**Gross and Net KWh Savings by Measure Type**  
**by Climate Zone: Online**

CEC Climate Zone									
	6 Los Angeles	8 El Toro	16 Mount Shasta	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total
<b>Gross KWh by Measure type</b>									
Room AC	23,131	54,805	1,424	53,661	31,431	11,331	8,857	4,403	189,043
Refrigerator	150,781	195,190	8,515	213,661	137,157	21,877	54,758	16,375	798,314
Insulation	-	-	-	-	-	-	-	-	-
Water Heater	745	609	358	811	1,298	162	487	487	4,959
Whole House Fan	8,253	27,190	120	15,537	22,996	1,138	1,605	56	76,895
Roof	-	-	-	447	-	-	-	1,144	1,591
Evap Cooler	-	-	4,806	3,964	9,067	1,761	419,597	78,391	517,586
Pool Pump	143,428	236,230	1,311	359,372	313,685	28,555	67,302	102,895	1,252,778
<b>Net KWh by Measure Type</b>									
Room AC	18,505	43,844	1,139	42,929	25,145	9,065	7,086	3,522	151,234
Refrigerator	120,625	156,152	6,812	170,929	109,726	17,502	43,806	13,100	638,651
Insulation	-	-	-	-	-	-	-	-	-
Water Heater	596	488	287	649	1,039	130	389	389	3,967
Whole House Fan	6,603	21,752	96	12,430	18,397	910	1,284	44	61,516
Roof	-	-	-	357	-	-	-	915	1,273
Evap Cooler	-	-	3,845	3,171	7,254	1,408	335,678	62,713	414,069
Pool Pump	114,742	188,984	1,049	287,498	250,948	22,844	53,842	82,316	1,002,222

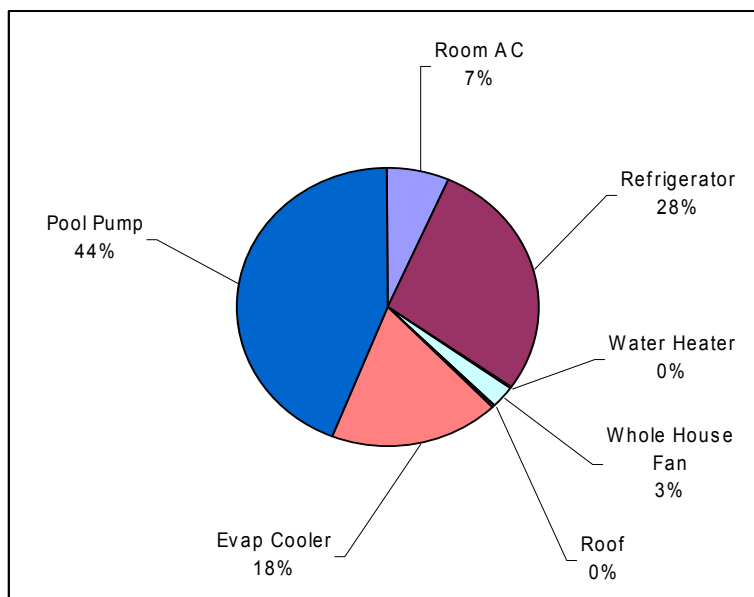
**Table 6-11  
Gross and Net KW Reduction by Measure Type  
by Climate Zone: Online**

CEC Climate Zone									
	6 Los Angeles	8 El Toro	16 Mount Shasta	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total
<b>Gross KW by Measure Type</b>									
Room AC	15	29	1	30	19	7	6	2	110
Refrigerator	3	3	0	4	2	0	1	0	14
Insulation	-	-	-	-	-	-	-	-	-
Water Heater	0	0	0	0	0	0	0	0	1
Whole House Fan	7	0	0	0	2	0	0	-	10
Roof	-	-	-	0	-	-	-	0	1
Evap Cooler	-	-	22	-	2	-	729	8	761
Pool Pump	34	59	0	93	73	8	14	23	305
<b>Net KW Reduction by Measure Type</b>									
Room AC	12	23	1	24	15	5	5	2	88
Refrigerator	2	3	0	3	2	0	1	0	11
Insulation	-	-	-	-	-	-	-	-	-
Water Heater	0	0	0	0	0	0	0	0	1
Whole House Fan	6	0	0	0	1	0	0	-	8
Roof	-	-	-	0	-	-	-	0	1
Evap Cooler	-	-	18	-	1	-	583	6	609
Pool Pump	27	47	0	74	59	7	11	18	244

**Figure 6-21**  
**Percent Total Measures Installed Accounted for**  
**by Each Measure Type: Online**

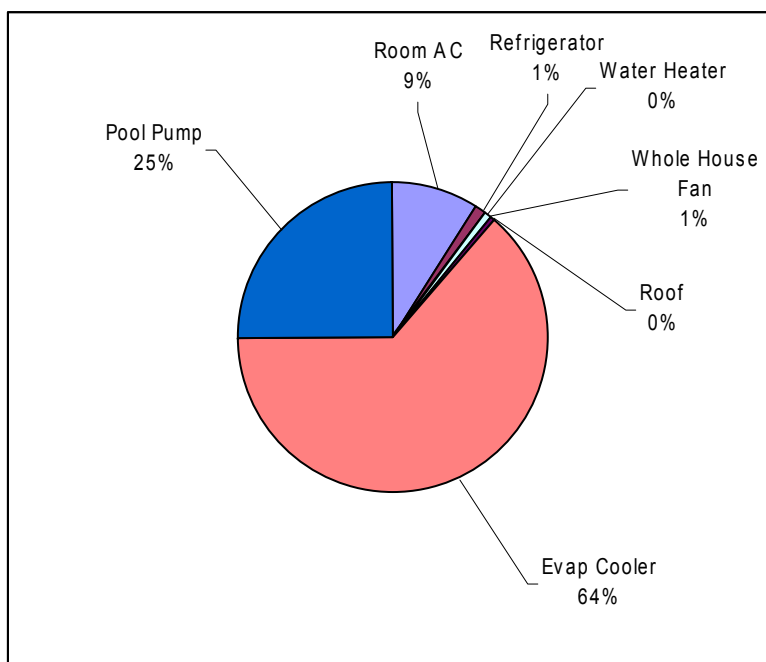


**Figure 6-22**  
**Percent of Net KWh Savings from Measures Installed: Online**





**Figure 6-23**  
**Percent of Net KW Reduction from Measures Installed: Online**



### 6.4.5.3 POS Component

The Point-of-Sale component offered only four measures: room air conditioners, refrigerators, whole house fans, and pool pumps. Of those, room air conditioners were, by far, the most frequently purchased (Table 6-12 and Figure 6-24), composing 82 percent of POS purchases. Room air conditioners accounted for an even higher proportion of net kWh savings at 94 percent (Table 6-13 and Figure 6-25), and more yet from kW reduction, at 99 percent (Table 6-14 and Figure 6-26). Refrigerators were the next most heavily purchased measure, but they were not even close to room air conditioners in terms of frequency.

Room air conditioners were concentrated most heavily in climate zone 9 at almost twice the rate in zone 8, the zone where room air conditioners were next most frequently rebated. A great deal of potential seems to exist in the other climate zones. The cooler zones could have potential due to a lower prevalence of central air conditioners, and because room air conditioners could be more efficient on those occasions when air conditioning is needed. There could also be potential in the hotter zones for homes where cooling a smaller area could save a lot on the electric bill. The ratios of units sold to housing density (not shown here) indicate that the next highest ratios (in zones 8 and 10) are less than a third of that seen in zone 9.

**Table 6-12**  
**Number of Installations and Savings Overall and Installations by Measure Type**  
**by Climate Zone: POS**

CEC Climate Zone								
	6 Los Angeles	8 El Toro	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total
<b>All Measure Types</b>								
Number Installed	25,034	45,800	95,510	34,168	2,168	7,015	2,719	212,414
Gross KWh	4,619,062	10,331,147	18,947,599	6,428,529	361,368	1,243,452	626,810	42,557,968
Net KWh	3,691,770	8,264,918	15,158,079	5,142,824	289,094	994,762	501,448	34,042,894
Gross KW	2,977	5,288	10,290	3,606	194	751	256	23,363
Net KW	2,379	4,231	8,232	2,885	155	601	205	18,688
<b>Number Installed by Measure Type</b>								
Room AC	22,086	39,772	77,131	26,991	1,432	5,594	1,880	174,886
Refrigerator	2,617	5,012	13,604	5,217	468	1,267	795	28,980
Insulation	-	-	-	-	-	-	-	-
Water Heater	-	-	-	-	-	-	-	-
Whole House Fan	312	935	4,686	1,881	262	131	22	8,229
Roof	-	-	-	-	-	-	-	-
Evap Cooler	-	-	-	-	-	-	-	-
Pool Pump	19	81	89	79	6	23	22	319

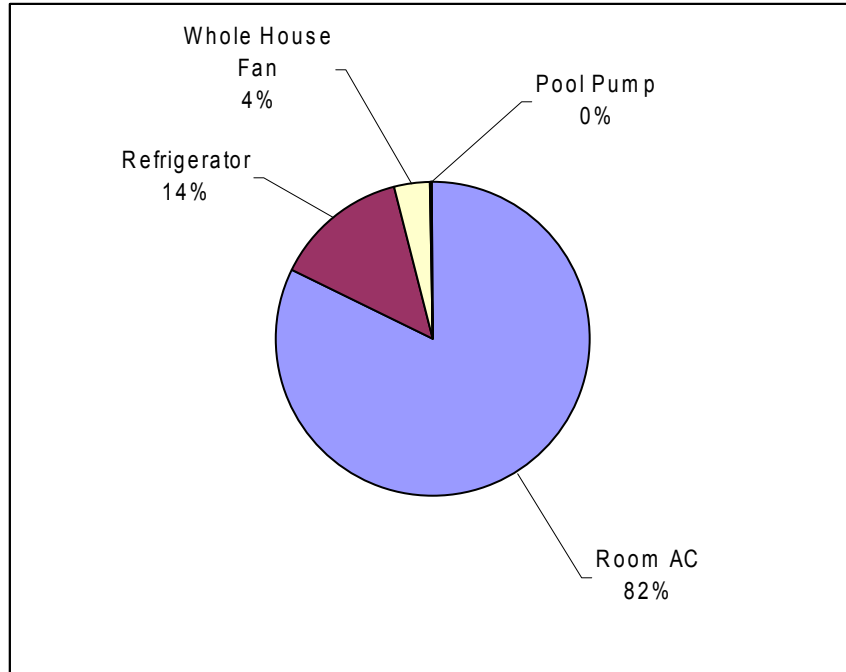
**Table 6-13  
Gross and Net KWh Savings by Measure Type  
by Climate Zone: POS**

CEC Climate Zone								
	6 Los Angeles	8 El Toro	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total
<b>Gross KWh by Measure type</b>								
Room AC	4,366,679	9,801,672	17,625,052	5,927,489	312,033	1,126,072	551,780	39,710,777
Refrigerator	171,414	328,286	891,062	341,714	30,654	82,989	52,073	1,898,190
Insulation	-	-	-	-	-	-	-	-
Water Heater	-	-	-	-	-	-	-	-
Whole House Fan	61,869	109,539	350,385	67,377	10,281	5,841	408	605,701
Roof	-	-	-	-	-	-	-	-
Evap Cooler	-	-	-	-	-	-	-	-
Pool Pump	19,100	91,650	81,100	91,950	8,400	28,550	22,550	343,300
<b>Net KWh by Measure Type</b>								
Room AC	3,489,864	7,841,338	14,100,042	4,741,991	249,626	900,858	441,424	31,765,142
Refrigerator	137,131	262,629	712,850	273,371	24,523	66,391	41,658	1,518,552
Insulation	-	-	-	-	-	-	-	-
Water Heater	-	-	-	-	-	-	-	-
Whole House Fan	49,495	87,631	280,308	53,902	8,225	4,673	326	484,561
Roof	-	-	-	-	-	-	-	-
Evap Cooler	-	-	-	-	-	-	-	-
Pool Pump	15,280	73,320	64,880	73,560	6,720	22,840	18,040	274,640

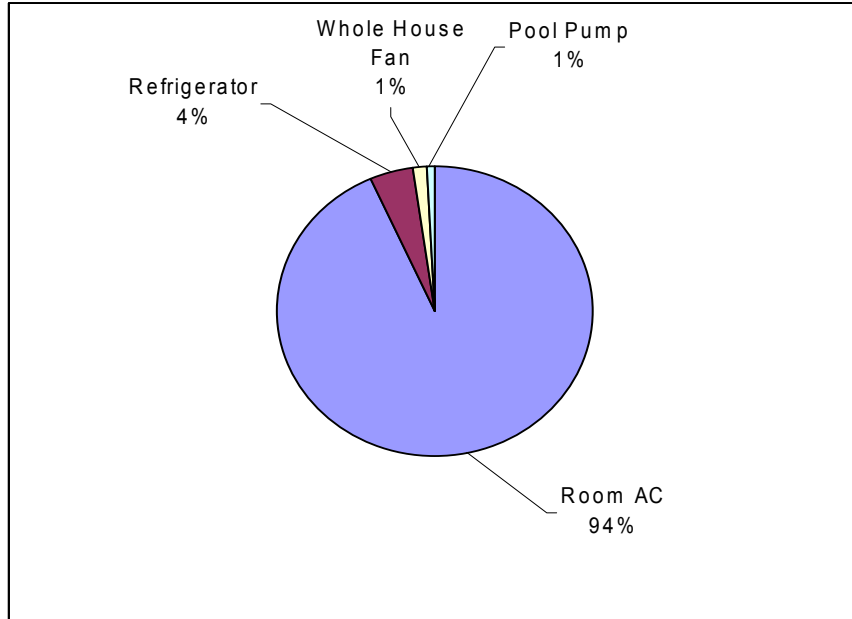
**Table 6-14**  
**Gross and Net KW Reduction by Measure Type**  
**by Climate Zone: POS**

CEC Climate Zone								
6 Los Angeles	8 El Toro	9 Pasadena	10 Riverside	13 Fresno	14 China Lake	15 El Centro	Total	
<b>Gross KW by Measure Type</b>								
Room AC	2,915	5,250	10,181	3,563	189	738	248	23,085
Refrigerator	3	6	15	6	1	1	1	32
Insulation	-	-	-	-	-	-	-	-
Water Heater	-	-	-	-	-	-	-	-
Whole House Fan	53	2	71	5	1	1	-	133
Roof	-	-	-	-	-	-	-	-
Evap Cooler	-	-	-	-	-	-	-	-
Pool Pump	6	31	23	32	3	11	7	113
<b>Net KW Reduction by Measure Type</b>								
Room AC	2,330	4,200	8,145	2,850	151	591	199	18,466
Refrigerator	2	4	12	5	0	1	1	26
Insulation	-	-	-	-	-	-	-	-
Water Heater	-	-	-	-	-	-	-	-
Whole House Fan	42	1	57	4	1	1	-	106
Roof	-	-	-	-	-	-	-	-
Evap Cooler	-	-	-	-	-	-	-	-
Pool Pump	5	25	18	26	3	8	6	90

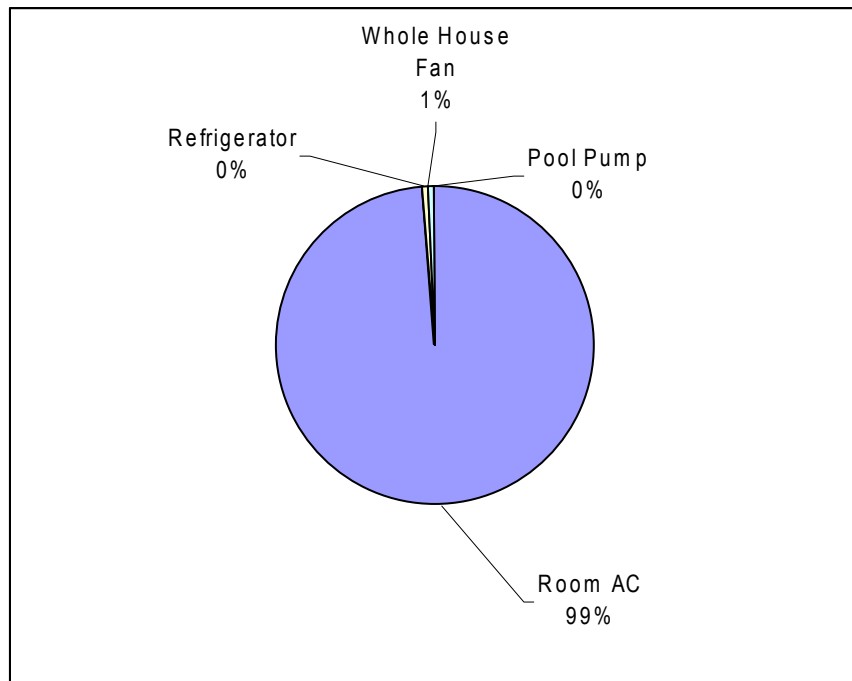
**Figure 6-24**  
**Percent Installed by Measure Type: POS**



**Figure 6-25**  
**Percent of Net KWh Savings from Measures Installed: POS**



**Figure 6-26**  
**Percent of Net KW Reduction from Measures Installed: POS**



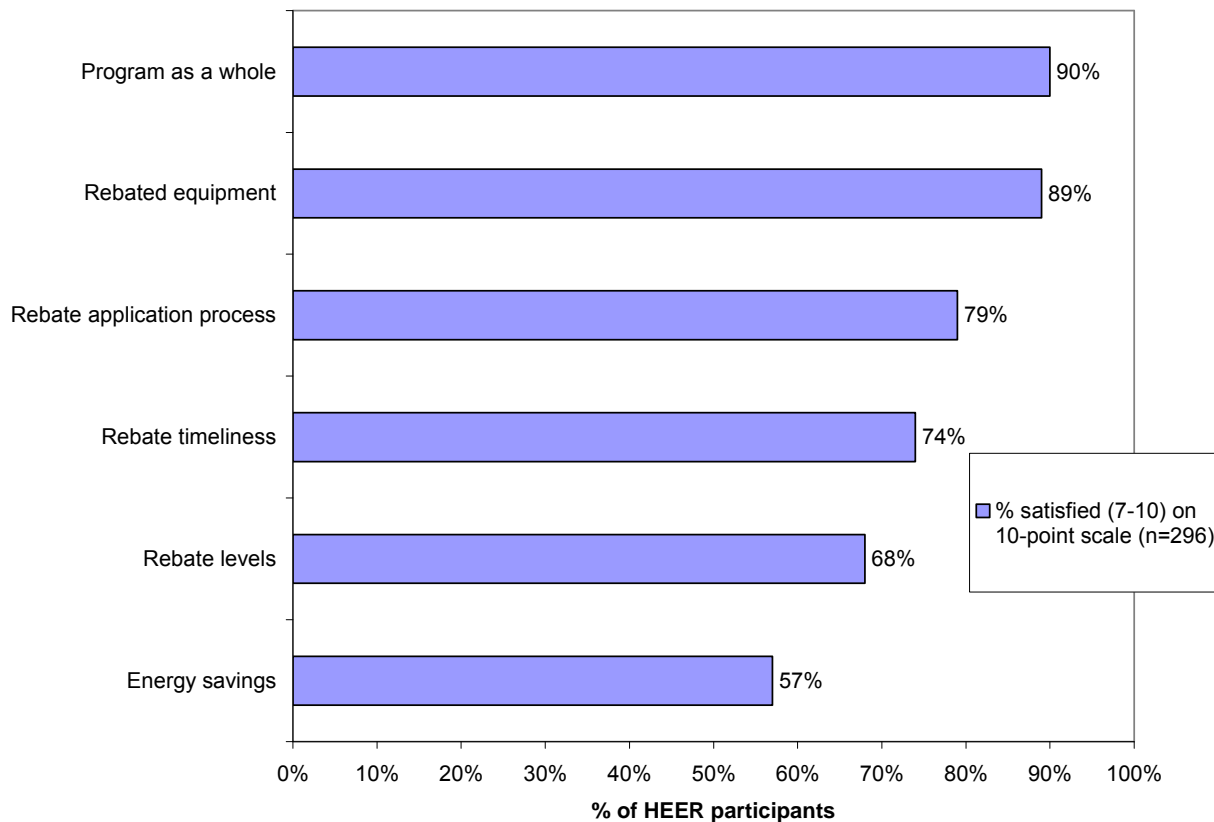
## **6.4.6 Program Satisfaction**

This section discusses participant satisfaction with the HEER Program as a whole as well as with the various program processes and with the rebated equipment. In addition to presenting total participant satisfaction levels, this section also breaks out these satisfaction levels by various participant subgroups such as by HEER rebate type, by HEER-rebated appliance/equipment types, by demographics, and by energy efficiency attitudes and knowledge. This section also compares the satisfaction levels for the 2006-2008 HEER participants with those of HEER participants from previous program years.

### **6.4.6.1 Overall satisfaction**

We asked the participating residential customers a number of questions about their satisfaction with the HEER program and its various attributes. We asked them about their satisfaction with the rebated equipment, the rebate application process, rebate timeliness, rebate levels, energy savings, and the Program as a whole. Figure 6-27 shows that participant satisfaction was very high for the Program as a whole and for the rebated equipment, but satisfaction declined when they were asked about the rebate processes/levels or the energy savings they realized from the new equipment.

**Figure 6-27**  
**HEER Participant Satisfaction**  
**with the Program and Its Processes**



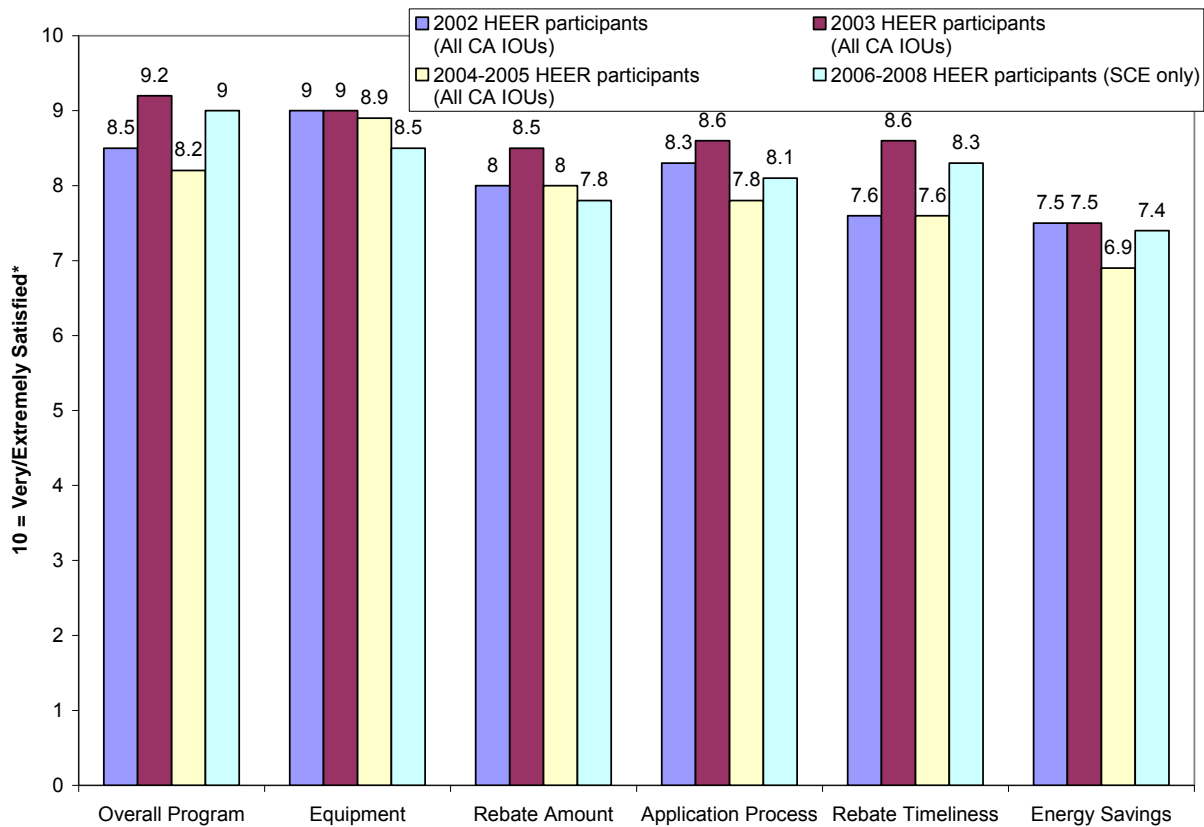
We compared the average satisfaction levels of the 2006-2008 HEER participants with the average satisfaction levels of previous HEER participants. Figure 6-28 and Figure 6-29 show that 2006-2008 HEER participants had higher overall program satisfaction levels than their 2004-2005 counterparts. In terms of program processes and outcomes, the 2006-2008 HEER participants showed greater satisfaction than the 2004-2005 participants with the rebate application process, the timeliness of rebate payments, and the energy savings. However, the 2006-2008 participants reported lower satisfaction with the rebated equipment and the rebated levels.

It should be noted, however, that the 2006-2008 HEER participants we surveyed were for SCE only, while the satisfaction levels for 2002-2005 are for all three IOUs (PG&E, SCE, SDG&E) that participated in the HEER program. Although great effort was made to administer the HEER program uniformly across the state during this 2002-2005 period, differences in program



delivery among the various IOUs, or even differences in their underlying customer populations, could lead to differences in participant satisfaction.

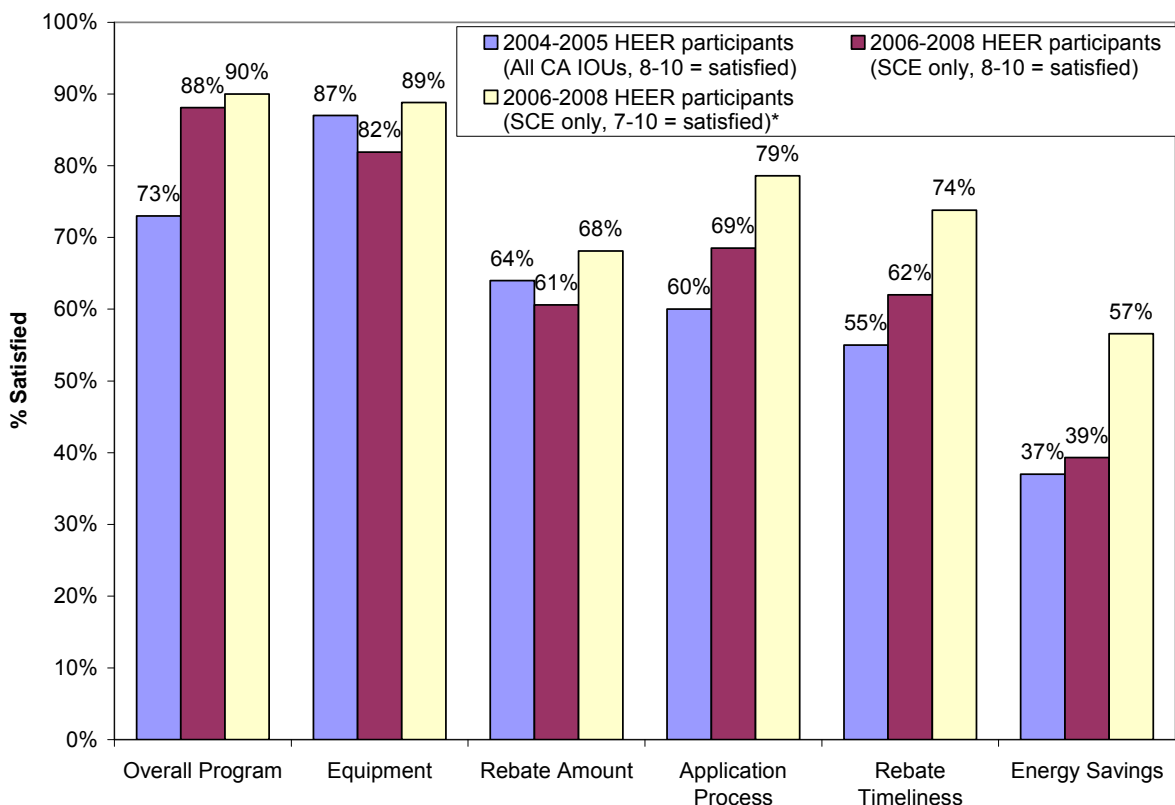
**Figure 6-28**  
**Average HEER Program Satisfaction Ratings**  
**2002 – 2008**



Note: The source for the 2002-2005 satisfaction ratings is: *2004/2005 Statewide Residential Retrofit Single-Family Energy Efficiency Rebate Evaluation, CPUC-ID#:1115-04*, Prepared by Itron and KEMA, October 2, 2007, p. 8-26.

\*The 10-point rating was defined as “extremely satisfied” in the survey of 2006-2008 participants and “very satisfied” in the survey of 2004-2005 participants. We do not know how it was defined for the 2002-2003 participants.

**Figure 6-29**  
**% of HEER Program Participants Satisfied**  
**2004 – 2008**



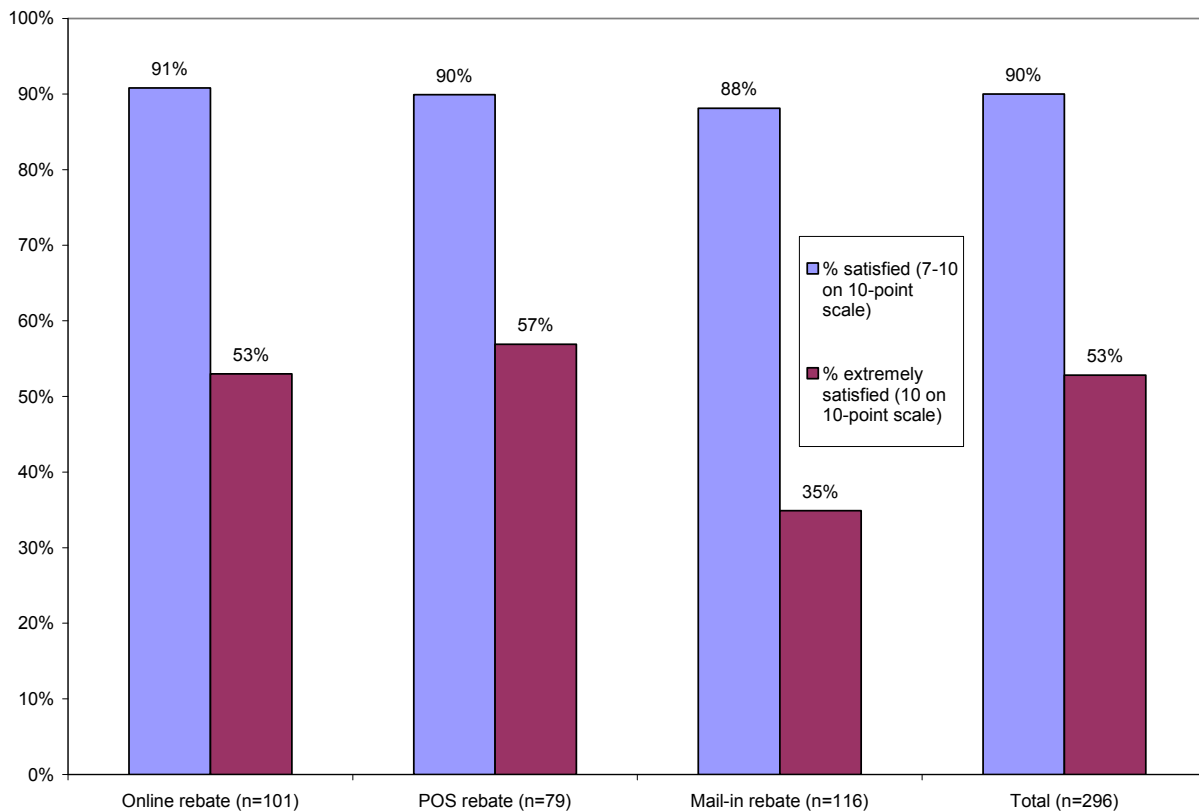
Note: The 2002-2003 HEER program ratings do not appear in this figure because they were only available in terms of average satisfaction ratings and not in the “percent satisfied format. \*In this report we have chosen to define “satisfied” as ratings of 7-10 on the 10-point satisfaction scale. The evaluation of the 2004-2005 HEER Program chose to define “satisfied” as ratings of 8-10 on this 10-point scale. Since the 2004-2005 evaluation did not show how many participants gave ratings of 7, to allow an “apples to apples” comparison between 2004-2005 and 2006-2008 participant satisfaction, we show the 2006-2008 participant satisfaction using both definitions of satisfaction.

#### 6.4.6.2 Overall satisfaction by rebate type

The SCE HEER Program staff was interested in knowing whether Program satisfaction varied with the type of rebate that the participant received – whether it was a point-of-sale (POS) rebate, an online rebate, or a mail-in rebate. They theorized that participants that had received the point-of-sale rebates would be most satisfied due to the absence of paperwork, that online participants would be the next-most satisfied, and the mail-in rebate participants would be the least satisfied. Figure 6-30 shows that if one just looks at the participants who were “extremely

satisfied” (10 on the 10-point satisfaction scale), this theory holds true. However, once one groups those participants who gave satisfaction ratings of 7 or higher together, these differences largely disappear. The average satisfaction rating of the participants for the Program overall was 9.0 with online participants reporting an average rating of 9.2, POS participants reporting an average rating of 9.0, and mail-in rebate recipients reporting an average rating of 8.5.

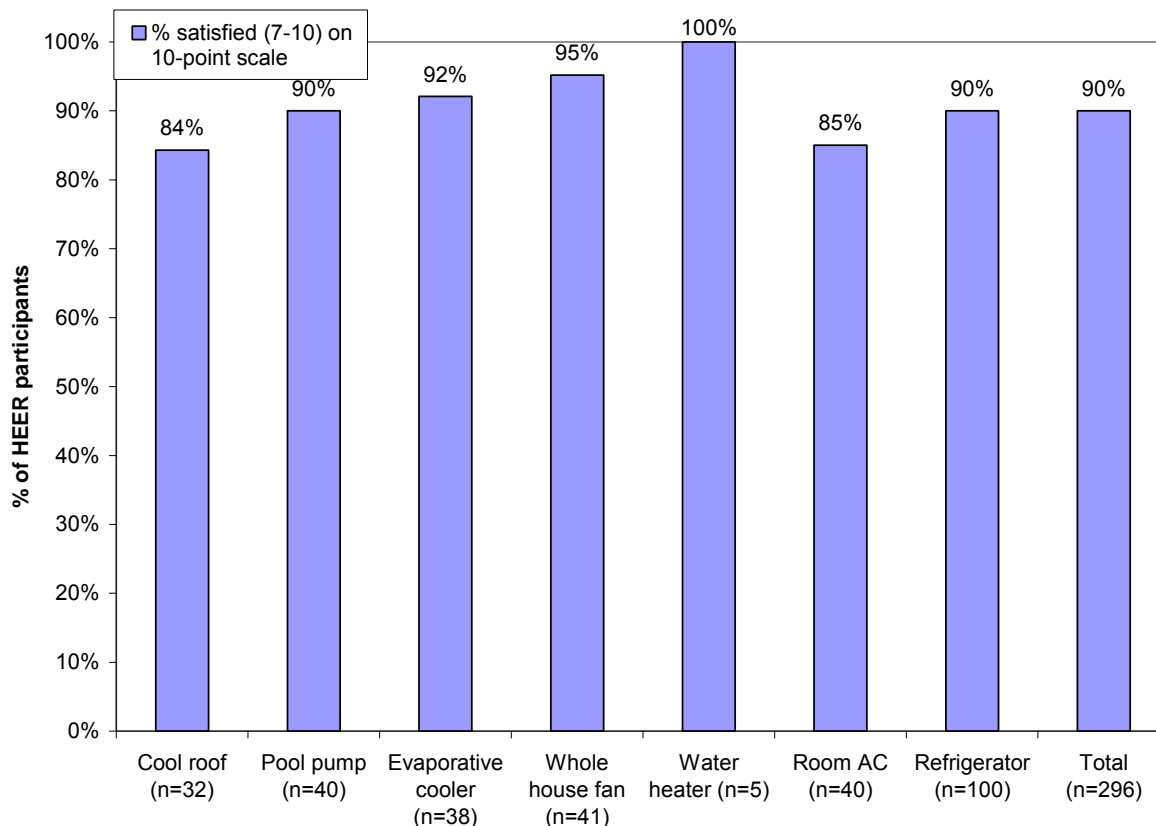
**Figure 6-30**  
**HEER Participant Satisfaction with the Program**  
**by Participant Rebate Type**



#### 6.4.6.3 Overall satisfaction by appliance/equipment type

We looked at how satisfaction with the HEER Program as a whole varied by the type of HEER-rebated appliance/equipment the participants received. Figure 6-31 shows that the percentage of participants who were satisfied (7-10 points on a 10-point satisfaction scale) were all in the 90–100% range with the exception of the cool roof and room air conditioner participants (84–85%).

**Figure 6-31**  
**% of Participants Satisfied with the HEER Program as a Whole**  
**by Appliance/Equipment Type**

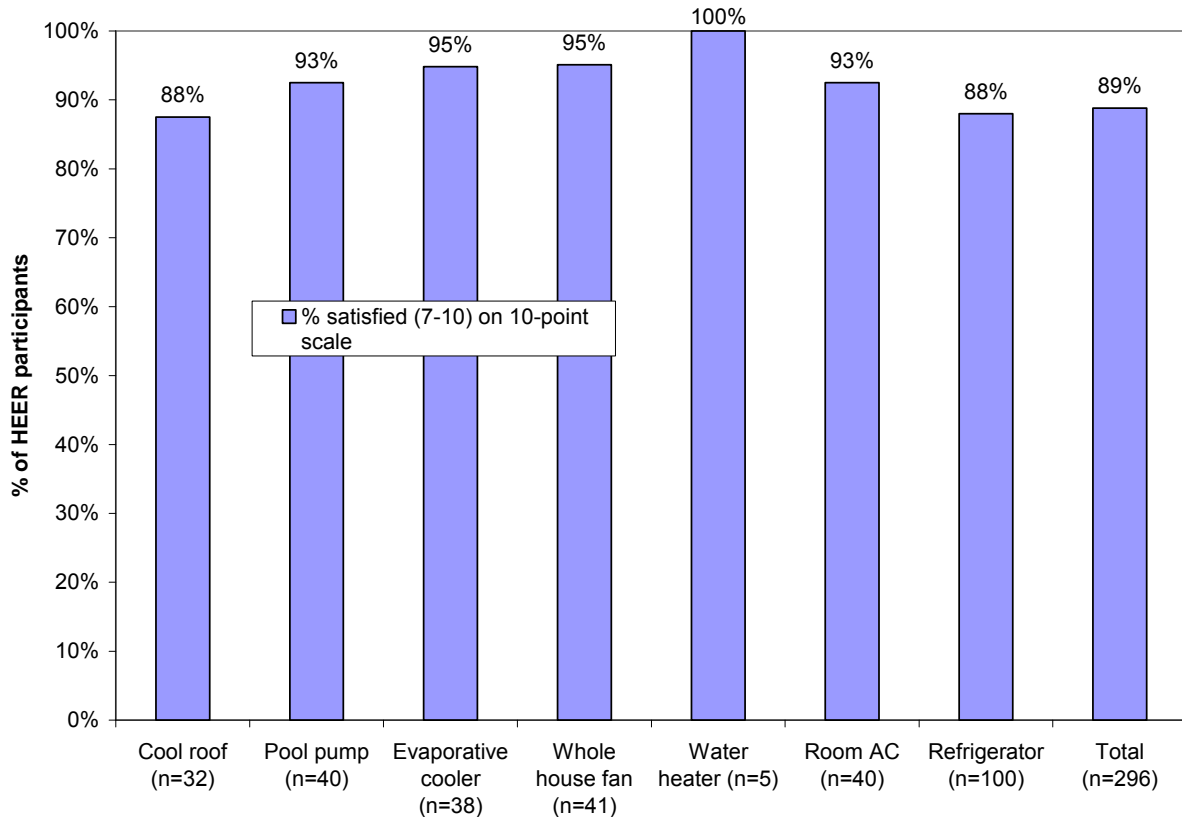


#### 6.4.6.4 Satisfaction with the rebated equipment

We asked the HEER participants how satisfied they were with the HEER-rebated appliances they purchased. Figure 6-32 shows that the highest average satisfaction ratings (93-100% of respondents were satisfied) were for water heaters, whole house fans, evaporative coolers, and pool pumps. Slightly lower average satisfaction ratings (88-89%) were reported for refrigerators and cool roofs.

When we looked at the participant responses by demographics or energy efficiency attitudes, there were only a few statistically-significant differences. Non-senior (< 65 years of age) participants were more likely (7% of respondents) to be dissatisfied (1-4 on 10 point satisfaction scale) than senior participants (0% dissatisfied). Renters were more frequently satisfied (100% of respondents) than homeowners (88%), although the renter sample was very small (n=9).

**Figure 6-32**  
**% of Participants Satisfied with the HEER-Rebated Equipment**  
**by Appliance/Equipment Type**



#### 6.4.6.5 Satisfaction with rebate processes

As noted, SCE HEER Program staff theorized that point-of-sale rebate participants would be more satisfied than other participant types since they would not have to deal with the rebate application process and would receive rebates instantly. We asked the HEER participants how satisfied they were with the process of applying for the rebate and any forms they had to fill out. Figure 6-33 shows some support for the Program staff's theory with the percentage of POS rebate participants who were satisfied with the rebate application process being much higher than the percentage of satisfied mail-in participants. However, considering that the POS rebates involved *no paperwork*, we were expecting higher satisfaction levels than this. It is possible that lower satisfaction levels with other aspects of the rebates – such as the rebate levels discussed below – may be diluting the satisfaction scores for the rebate application process.

**Figure 6-33**  
**% of Participants Satisfied with the HEER Rebate Application Processes**  
**by Rebate Type**

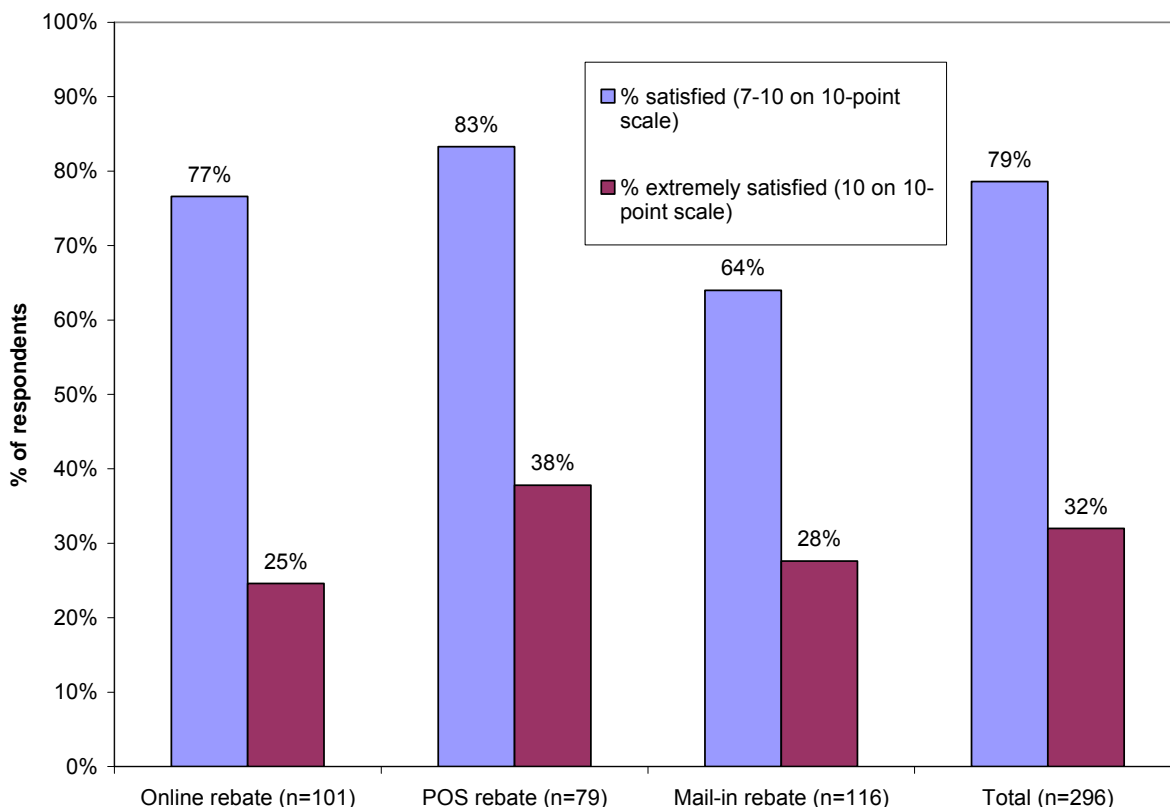
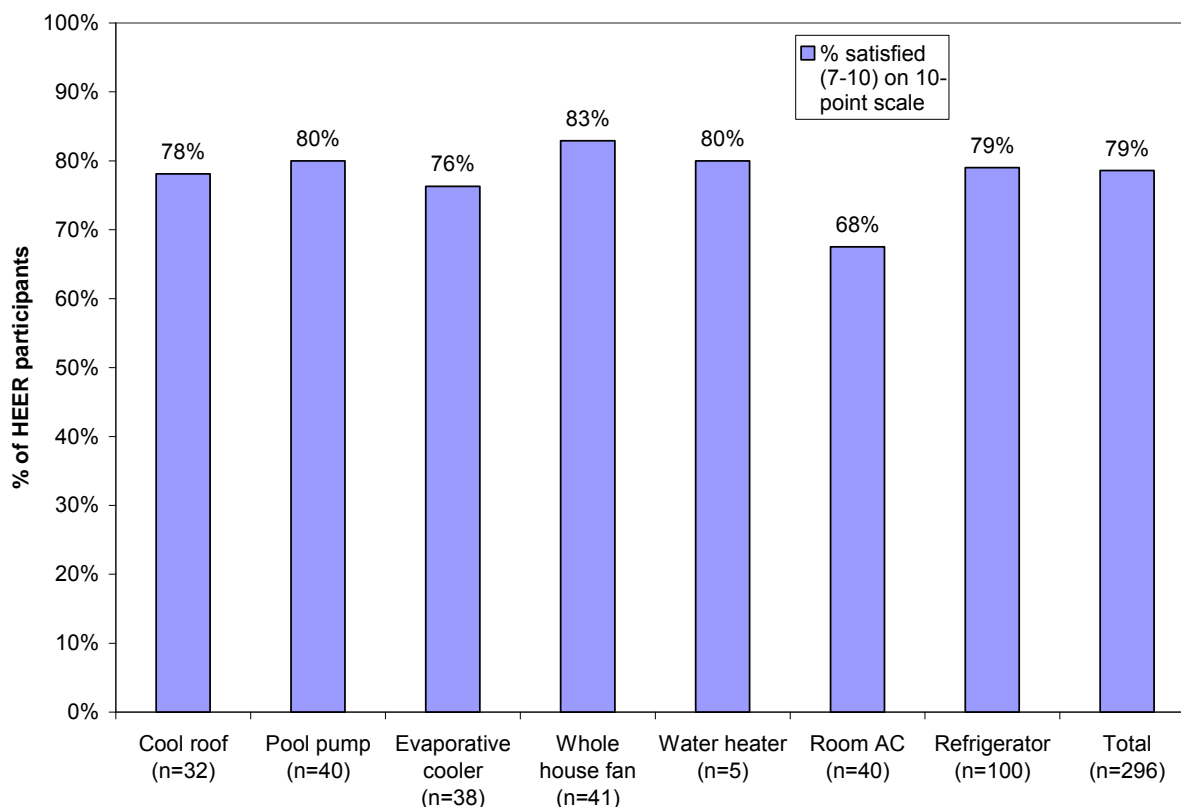


Figure 6-34 shows the percentage of HEER participants that were satisfied with the rebate application process broken down by the appliance/equipment they purchased. It shows that average satisfaction ratings were in the same general range (76-83% of respondents were satisfied) for all the appliance/equipment groups except the room air conditioner recipients who only had a 68 percent average satisfaction rating for this process.

**Figure 6-34**  
**% of Participants Satisfied with the HEER Rebate Application Processes**  
**by Appliance/Equipment Type**



We also asked the HEER participants how satisfied they were with how soon they received their rebate. Figure 6-35 shows their responses based on what type of rebates the participant received. Once again there is some evidence that POS rebate participants were more satisfied than mail-in rebate participants – they were more likely to be “extremely satisfied.” However, considering that the POS rebates were received *instantly*, one would expect the satisfaction of the POS rebate participants with the timeliness of the rebates to be much higher than this. One possible explanation for this, as noted earlier, is that participants have lower satisfaction levels with other aspects of the rebates – such as the rebate levels – and these may be diluting the satisfaction scores for other rebate attributes such as timeliness. Another possible explanation is that because the POS rebate process is somewhat invisible to the recipients (they do not fill out any forms and they do not receive checks) the participants may not be aware that they received the POS rebates and may be reporting on some other rebate experience they had with the HEER Program (e.g., for a mail-in rebate).

**Figure 6-35**  
**% of Participants Satisfied with Timeliness of HEER Rebates**  
**by Rebate Type**

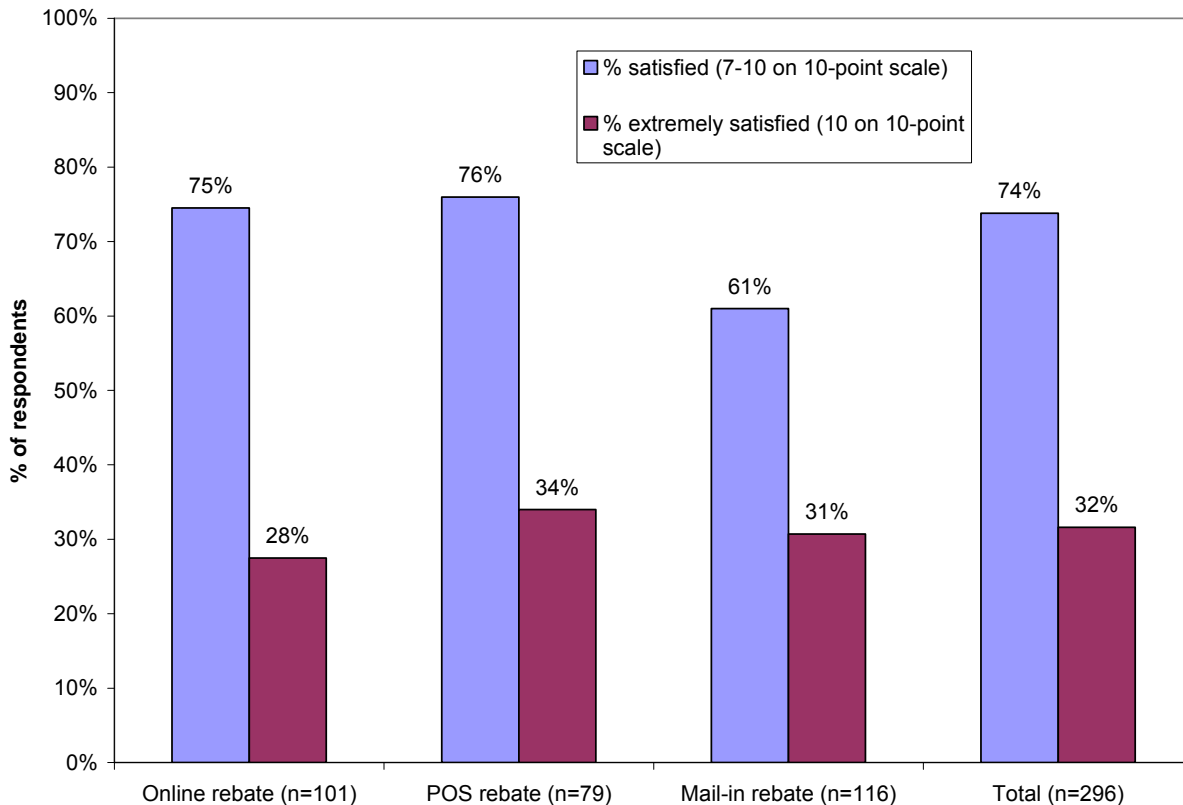
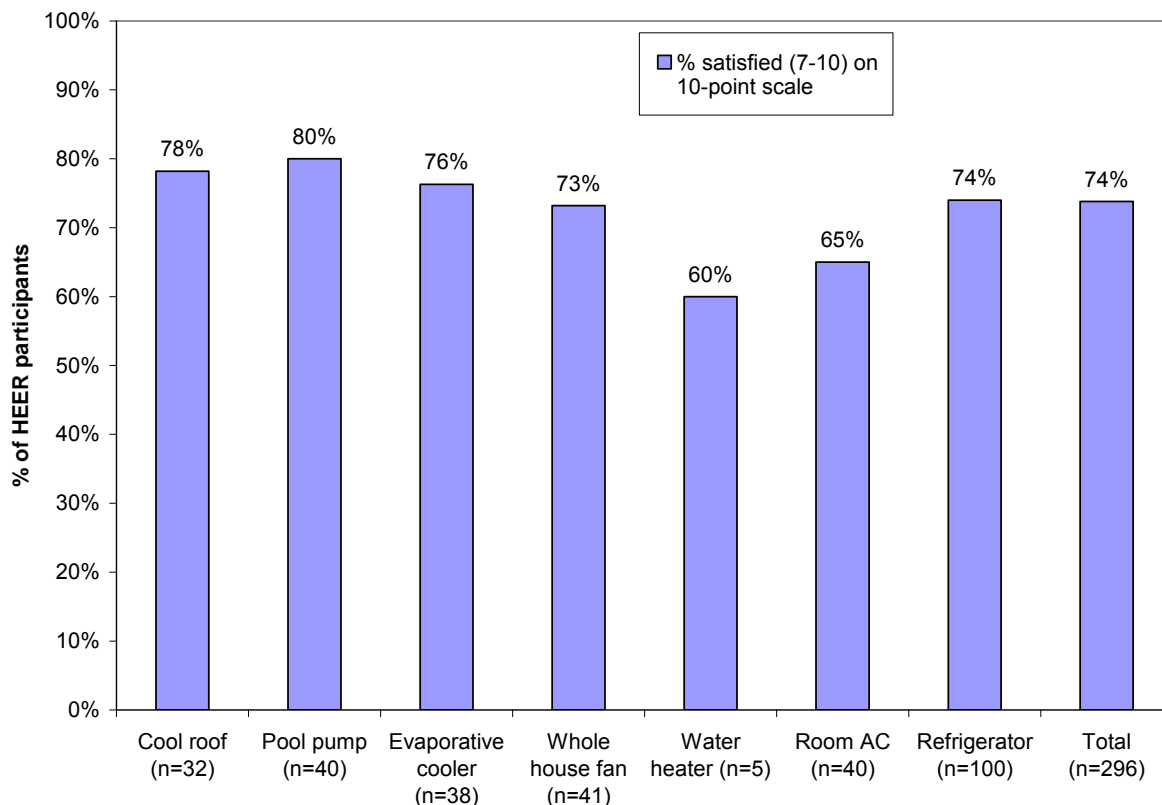


Figure 6-36 shows the percentage of HEER participants that were satisfied with the timeliness of the rebate payments broken down by the appliance/equipment they purchased. It shows that average satisfaction ratings were in the same general range (73-80% of respondents were satisfied) for all the participant groups except the room air conditioner (65%) and water heater (60%).

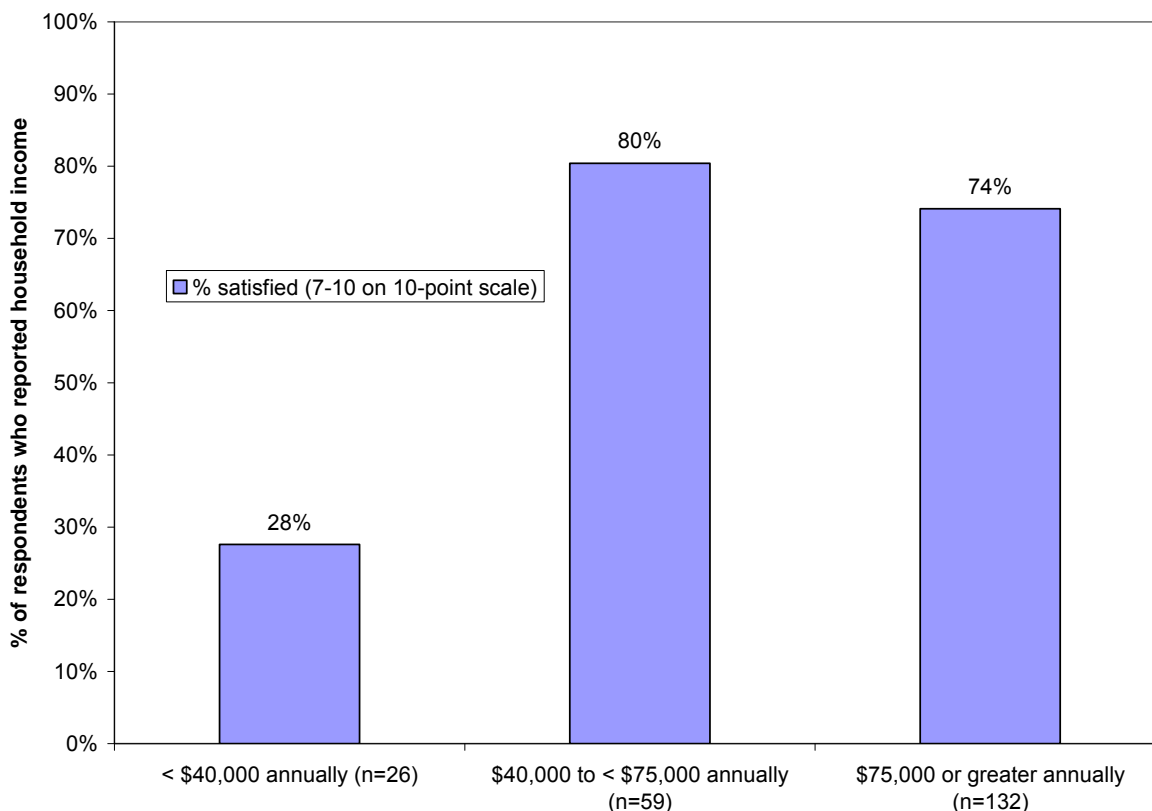


**Figure 6-36**  
**% of Participants Satisfied with Timeliness of HEER Rebates**  
**by Appliance/Equipment Type**



The lower the household incomes of the participants, the less satisfied they were with the timeliness of the HEER rebates. Figure 6-37 shows that the middle-income and upper-income participants were almost three times as likely to be satisfied with the timeliness of the rebates as the lower-income participants.

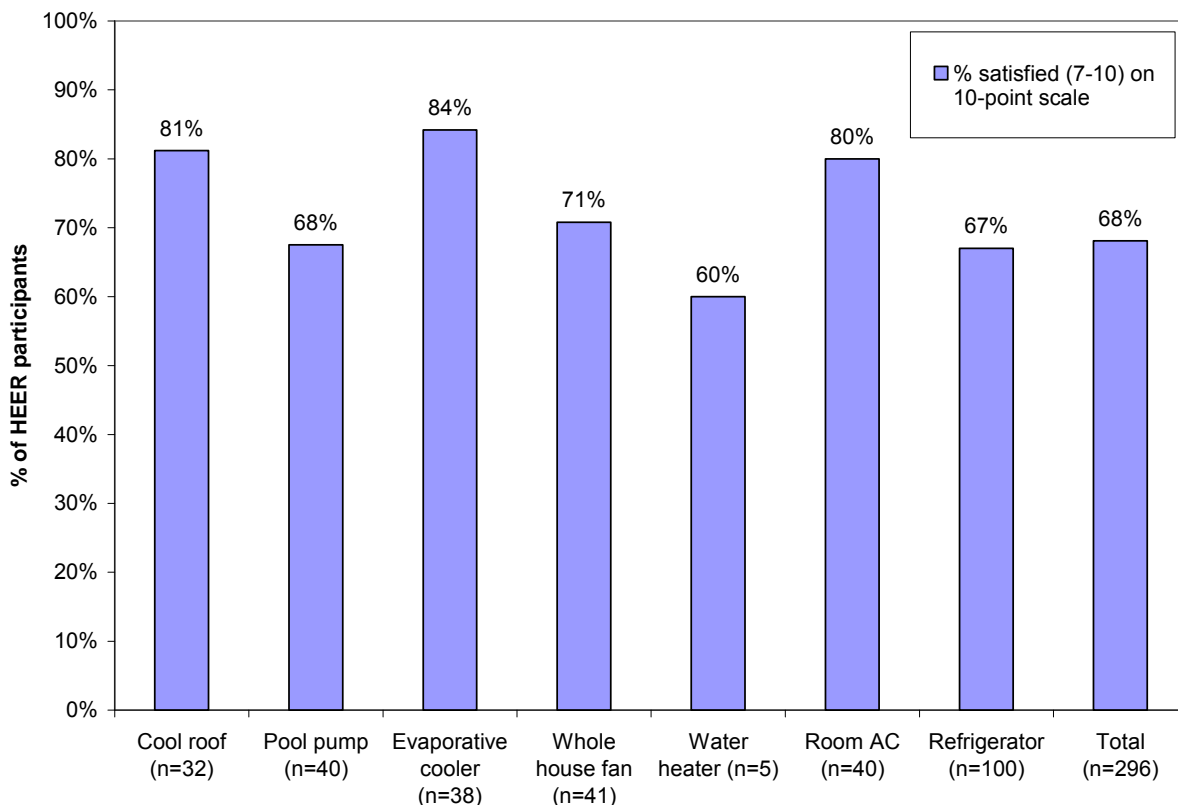
**Figure 6-37**  
**% of Participants Satisfied with the Timeliness of HEER Rebates**  
**by Appliance/Equipment Type**



#### 6.4.6.6 Satisfaction with rebate levels

There was a lot of variation in the average levels of satisfaction with the rebate levels depending on the participants' appliance/measure type (Figure 6-38). Evaporative cooler, cool roof, and room air conditioner participants were most satisfied (80-84% of respondents were satisfied) with their rebate levels. Refrigerator, pool pump, and whole house fan participants had lower average satisfaction ratings (67-71%). The water heater participants had the lowest average satisfaction rating (60%), but the sample was very small (n=5).

**Figure 6-38**  
**% of Participants Satisfied with the Rebate Levels**  
**by Appliance/Equipment Type**



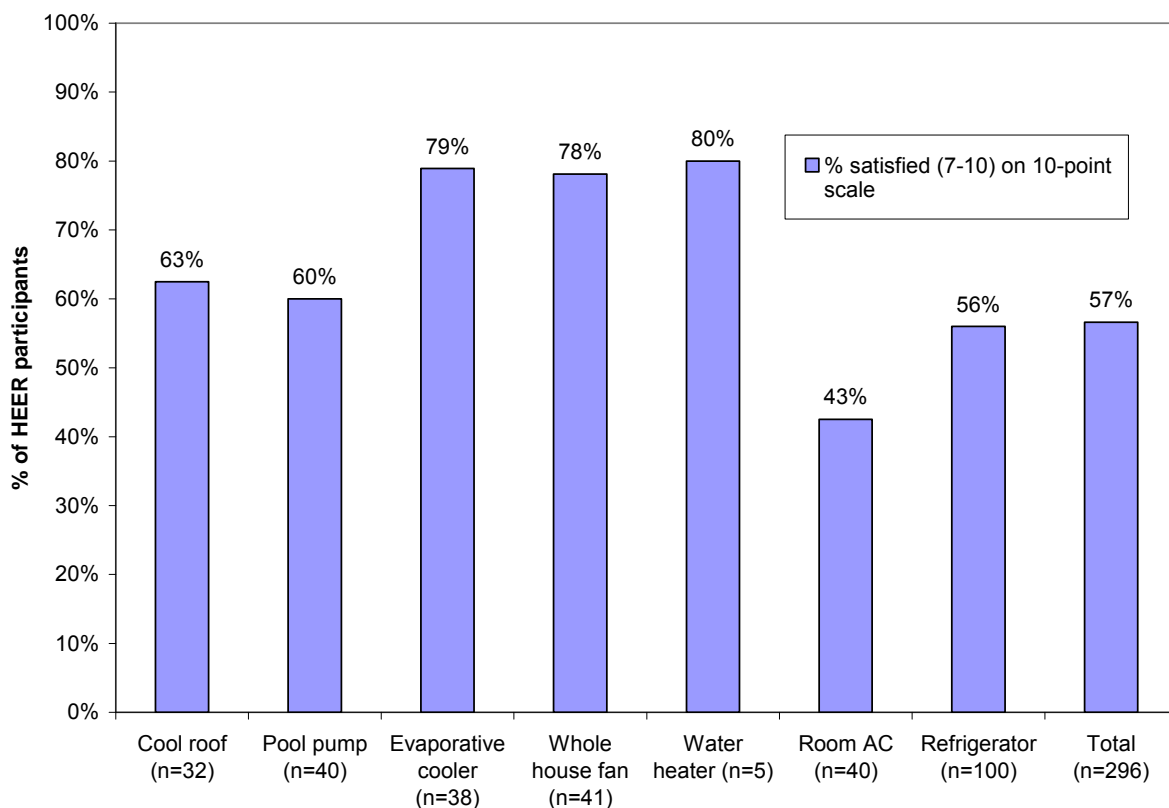
#### 6.4.6.7 Satisfaction with energy savings

We asked the HEER participants how satisfied they were with the savings on their utility bills as a result of installing the HEER-rebated equipment. Figure 6-39 shows that there were three tiers of average satisfaction ratings for the energy savings realized by the rebated equipment. Water heater, evaporative cooler, and whole house fan participants reported the highest average satisfaction (78-80% of respondents were satisfied) with their energy savings. The cool roof, refrigerator, and pool pump participants were much less satisfied with their energy savings (56-63%). The room air conditioner participants were the least satisfied with their energy savings with an average satisfaction rating of 43 percent.

When we looked at the participant responses by demographics or energy efficiency attitudes, there were only a few statistically-significant differences. HEER participants with at least some college education were more likely (8% of respondents) to be dissatisfied (1-4 on the 10-point

satisfaction scale) with the energy savings than those with no college education (1%). Curiously those who *disagreed* with the statement: “I feel guilty if I use too much electricity” were more likely (13% of respondents) were more likely to be dissatisfied with their level of utility bill savings than those who agreed with this statement (2%).

**Figure 6-39**  
**% of Participants Satisfied with the Utility Bill Savings**  
**from the HEER-Rebated Equipment**  
**by Appliance/Equipment Type**



#### 6.4.6.8 Satisfaction with salesperson knowledge of energy efficiency

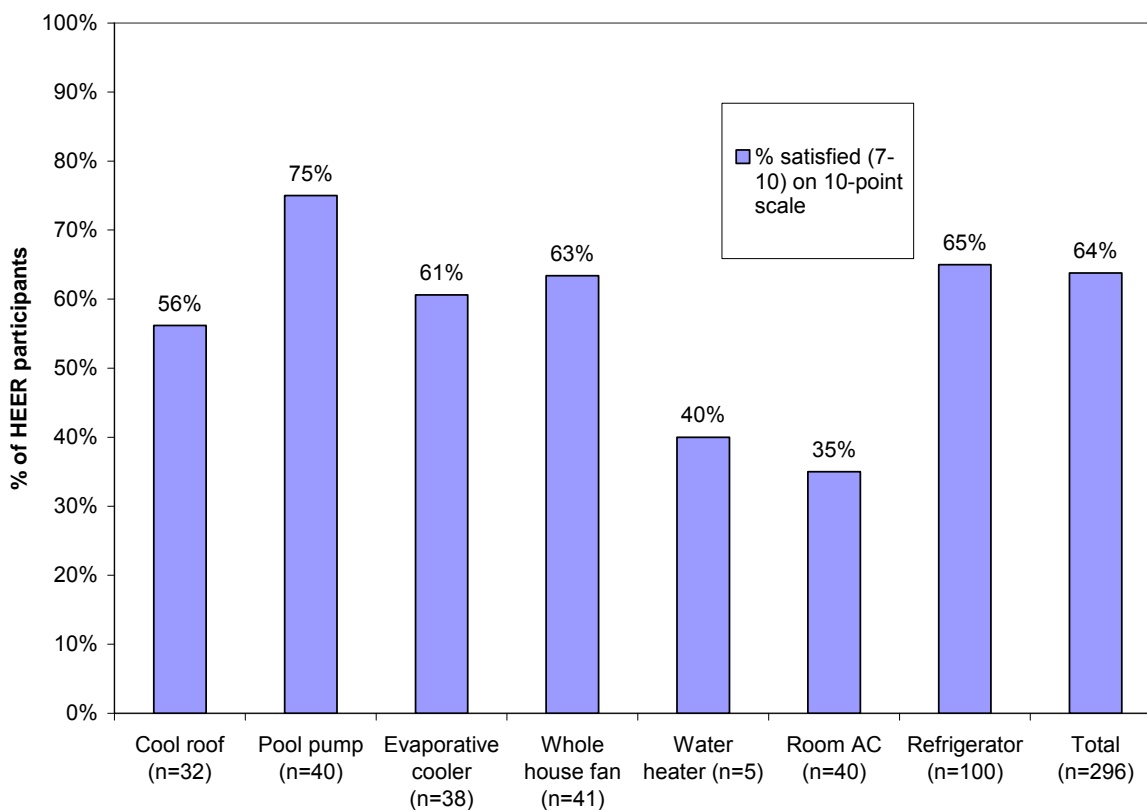
We asked the HEER participants how satisfied they were with the knowledge that their salesperson had about the energy efficiency of the appliance/equipment they purchased.

Figure 6-40 shows that the frequency of satisfied participants varied a lot depending on the type of appliance/equipment they had purchased. The pool pumps purchasers were the most satisfied (75% of respondents) with the knowledge of their salespersons/contractors while the

room air conditioner and water heater purchasers were least satisfied (35% and 40% respectively). The satisfaction levels with salesperson/contractor knowledge for other equipment purchasers were also fairly poor – in the 56-65 percent range. This suggests a need for more salesperson training.

There were only a couple of statistically-significant differences based on participant demographics. Female respondents were more frequently (72% of respondents) satisfied with the energy efficiency knowledge of the salespersons than male respondents (56%). Higher-income participants were less likely to be satisfied (59%) than participants in the middle-income and lower-income groups (85% and 90% respectively).

**Figure 6-40**  
**% of Participants Satisfied with**  
**the EE Knowledge of Their Appliance/Equipment Salesperson**



#### 6.4.6.9 Inspection Results

While program participants can purchase equipment and receive a rebate, the equipment would not be effective if it were not installed or if it were installed incorrectly. Regulators require inspections of installed measures. There are complex rules to govern what is inspected and how many, but the bulk of the inspections are to be done randomly for the mail-in component at a rate of 10 percent. Additional inspections are mandatory under specified conditions. Thus, without doing a complete audit of all measures, we would expect to see over 10 percent of the mail-in participants receiving inspections. Table 6-15 shows the number and percent of mail-in applications that were included in the inspection sample. For all program years, the inspection sample exceeds 10 percent by a considerable margin, especially for the 2007 and 2008 years.

**Table 6-15  
Number of Mail-in Applications in Inspection Sample  
as a Proportion of Applications Rebated**

Category	Program Year		
	2006	2007	2008
Applications in Inspection Sample	5091	6055	5657
Applications Rebated	44,555	34,785	33,203
Percent of Applications Included in Inspection Sample	11.4%	17.4%	17.0%

Table 6-16 reveals the results of the inspections based on individual measures (there can be multiple measures for an application). Overall, the pass rate was over 97 percent, consistently over the three years. The failure rate was a little over two percent in each year. A very few cases each year were categorized in other conditions.

**Table 6-16**  
**Inspection Results by Program Year**

Result	Program Year			Total
	2006	2007	2008	
Accepted	1	0	0	1
%	0.02	0.00	0.00	0.01
Cannot Get In	0	1	0	1
%	0.00	0.02	0.00	0.01
Closed	2	5	3	10
%	0.04	0.08	0.05	0.06
Failed	113	151	145	409
%	2.16	2.44	2.49	2.37
Not Indicated	20	3	6	30
%	0.38	0.05	0.10	0.17
Passed	5,095	6,017	5,664	16,780
%	97.40	97.41	97.35	97.38
Total	5,231	6,177	5,818	17,231

Routine inspections of POS sites are also required, but data pertaining to those inspections are not available. Similarly, there are rules for inspecting online participant sites as well, but they were not available for analysis.

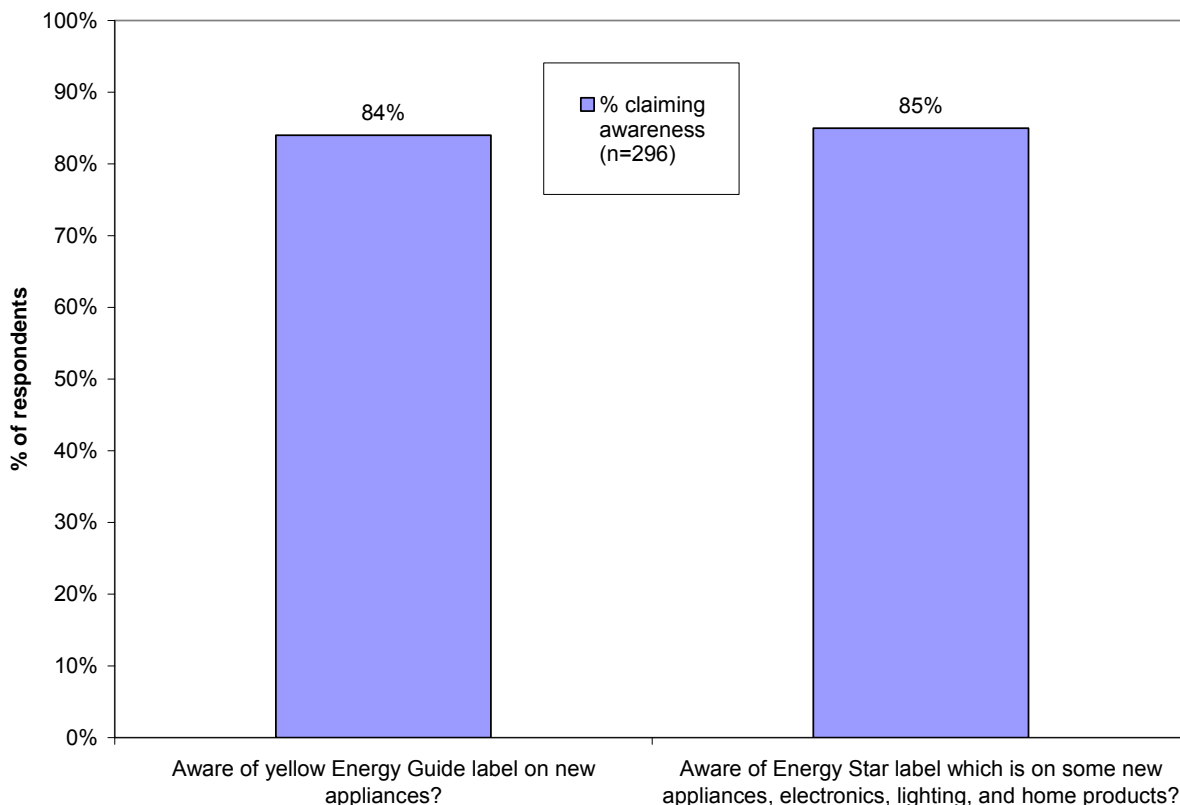
### 6.4.7 Awareness, Knowledge, and Attitudes (AKA)

An underlying assumption of many energy efficiency program process evaluations is that the impact of programs on customer behavior is mediated by customers' awareness of energy saving tools, their knowledge of how to use such tools, and their attitudes toward saving energy. These three concepts are often abbreviated AKA in the literature. In the interest of establishing a baseline for future studies, we included several AKA measures in the survey.

#### 6.4.7.1 Energy Efficiency Awareness

We asked the HEER participants a number of questions to assess their energy efficiency awareness. We have already discussed their awareness of the HEER Program rebates, of other energy-saving SCE programs and services, and of the SCE energy-saving informational messages. We also asked the HEER participants whether they were aware of the yellow Energy Guide stickers or the Energy Star labels on appliances and other consumer products. Figure 6-41 shows that the large majority of HEER participants claimed awareness of these two types of stickers.

**Figure 6-41**  
**HEER Participants'**  
**Claimed Awareness of Energy Guide and Energy Star Stickers**



There were a few statistically-significant differences among subgroups of the HEER participants. Seniors were much less likely (68% of respondents) than non-seniors (86%) to claim awareness of the Energy Star label. HEER participants in the middle-income range (\$40,000 - \$75,999 in annual income) were less likely (78%) to recall the Energy Guide stickers than those in other income classes (92-96% claiming awareness). Participants who agreed with the statement: “My energy use is too small to worry about in the grand scheme of things,” were less likely (77%) to claim awareness of the Energy Guide label than those (88%) who disagreed with this statement.

#### 6.4.7.2 Energy Efficiency Knowledge

To measure customers’ knowledge of energy efficiency and related issues, we included a five-item energy quiz in the survey. The questions focused on how much a typical customer would save by replacing an old refrigerator, whether SCE will haul away old refrigerators at no charge



to the customer, whether incandescent light bulbs produce more heat or light, whether all Energy Star certified air conditioners are equally efficient, and whether homes emit insignificant amounts of greenhouse gasses compared with cars.<sup>42</sup> A majority of respondents answered every question correctly as Table 6-17 shows.

**Table 6-17**  
**Energy Efficiency Knowledge Statements and Answers**  
**Percent Correct by HEER Participants**

Energy Efficiency Statement	Correct Answer	Percent Answering Correctly
Replacing an old refrigerator with a new Energy Star refrigerator will save the typical household more than \$150 a year.	TRUE	85%
Edison will haul away your old refrigerator or freezer at no cost to you.	TRUE	86%
Standard incandescent light bulbs generate more heat than light.	TRUE	72%
All air conditioners that are Energy Star certified are equally efficient.	FALSE	70%
Homes emit insignificant amounts of greenhouse gasses compared with cars.	FALSE	54%

Table 6-18 summarizes the cases where there were statistically-significant differences in the responses based on the demographics or energy efficiency attitudes of the participants. It shows that seniors, those with no college education, and lower-income participants were more likely to answer the questions incorrectly.

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<sup>42</sup> Questions and answers were taken from SCE’s website and from the Flex Your Power Challenge Cheat Sheet ([www.fypower.org/pdf/challenge\\_cheatsheet0806.pdf](http://www.fypower.org/pdf/challenge_cheatsheet0806.pdf)). The answers were (in the order questions were presented above) more than \$150 a year, yes, heat, no, and no.

**Table 6-18  
Energy Efficiency Knowledge Statements  
and Differences in Responses  
Among HEER Participant Subgroups**

<b>Energy Efficiency Statement</b>	<b>Statistically-Significant Differences in Responses Based on Demographics, AKA</b>
Replacing an old refrigerator with a new Energy Star refrigerator will save the typical household more than \$150 a year.	<ul style="list-style-type: none"> <li>o Seniors were much less likely (67% of respondents) to get this question right than non-seniors (93%).</li> <li>o Participants who agreed with the statement: "I feel guilty if I use too much electricity" were more likely (91%) than those who disagreed with this statement (77%) to answer this question correctly.</li> </ul>
Edison will haul away your old refrigerator or freezer at no cost to you.	Female respondents were more likely (92%) to get this question right than male respondents (81%)
Standard incandescent light bulbs generate more heat than light.	Participants who had at least some college education were more likely (77%) than those with no college education (57%) to get this question right.
All air conditioners that are Energy Star certified are equally efficient.	<ul style="list-style-type: none"> <li>o Male respondents were much more likely (81%) to get this question right than female respondents (58%).</li> <li>o Higher-income participants were more likely to get this question right (81%) than middle-income participants (50%) or lower-income participants (12%).</li> </ul>
Homes emit insignificant amounts of greenhouse gasses compared with cars.	<ul style="list-style-type: none"> <li>o Participants who had at least some college education were more likely (59%) than those with no college education (34%) to get this question right.</li> <li>o Seniors were much less likely (42%) to get this question right than non-seniors (61%).</li> <li>o Participants who disagreed with the statement: "My energy use is too small to worry about in the grand scheme of things" were more likely to answer this question correctly (61%) than those who agreed with this statement (41%).</li> </ul>

### 6.4.7.3 Energy Efficiency Attitudes

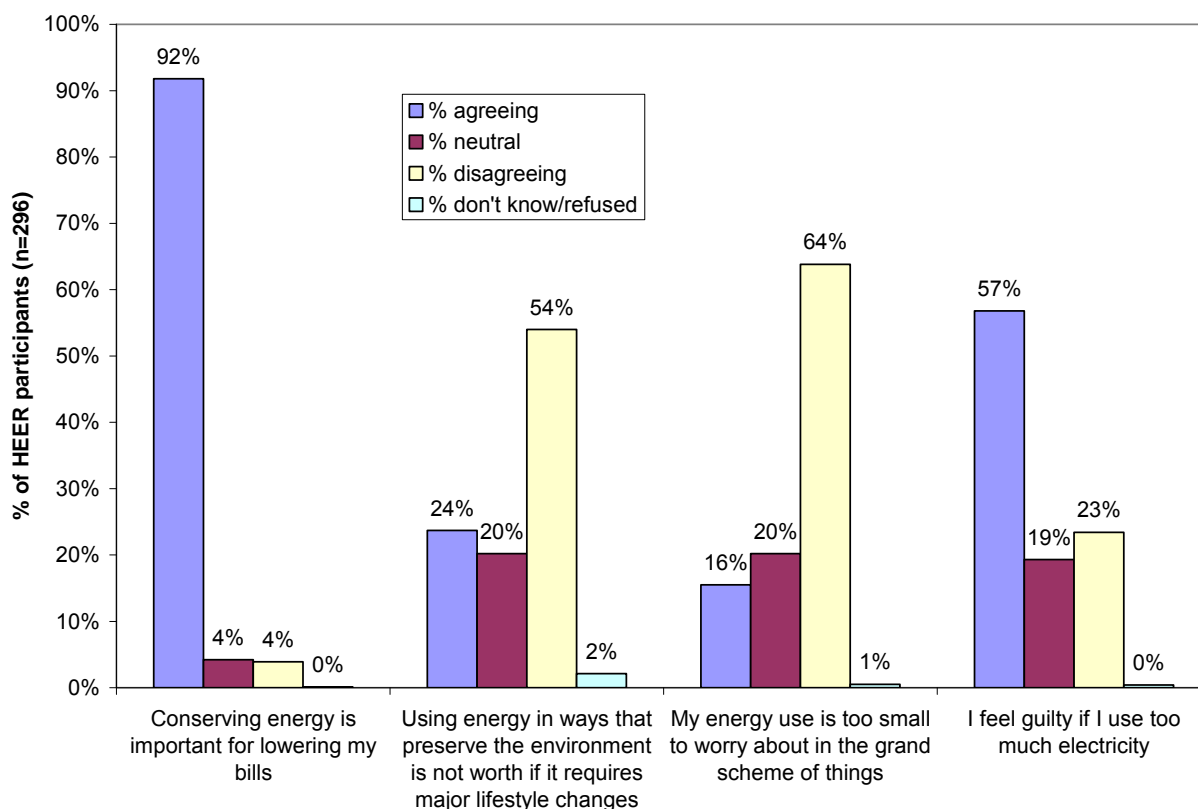
We included four statements in the survey that reflected possible attitudes towards energy efficiency. In response to each statement the participants were asked to provide their level of

agreement using a five-point scale in which five indicated “agree completely” and one indicated “disagree completely.” The four statements included:

- *Self-focus on energy efficiency statement:* “Conserving energy is important for lowering my bills.” Agreement with the first statement indicated a self focus on energy efficiency.
- *Environmental focus statement:* “Using energy in ways that preserve the environment is not worth it if it requires major lifestyle changes.” Disagreement with this statement reflected an environmental focus.
- *Ascription of responsibility statement:* “My energy use is too small to worry about in the grand scheme of things.” Ascription of responsibility refers to individuals believing that they have a personal responsibility for saving energy, and is related to how significant they believe their energy consumption is.
- *Personal norm statement:* “I feel guilty if I use too much electricity.” Having a personal norm around energy efficiency means being emotionally affected by one’s energy use.

Figure 6-42 shows the responses of the HEER participants to these attitudinal statements. The subsequent subsections provide more information on the participant responses.

**Figure 6-42**  
**HEER Participants' Responses to**  
**Energy Efficiency Attitudinal Statements**



#### 6.4.7.3.1 Self focus on energy efficiency

Agreement with the self focus statement: “Conserving energy is important for lowering my bills” was very high. The average agreement rating was 4.7 on a five-point scale with 92 percent either saying 4 or 5 (Figure 6-42). There were a few statistically-significant differences among participant subgroups. Female respondents were more likely (97% of respondents) to agree with this statement than male respondents (87%). Non-seniors were more likely to agree with this statement (96%) than seniors (81%). Lower-income (100%) and middle-income (99%) participants were more likely to agree with this statement than higher-income participants (89%).

#### **6.4.7.3.2 Environmental focus statement**

Opinions were more mixed on the environmental focus statement: “Using energy in ways that preserve the environment is not worth it if it requires major lifestyle changes.” The average agreement rating across all participants was 2.5 on a five-point scale. Non-seniors were more likely (58% of respondents) than seniors (41%) to disagree with this statement. Participants with at least some college education were more likely (58%) to disagree with this statement than those with no college education (40%).

#### **6.4.7.3.3 Ascription of responsibility statement**

Figure 6-42 shows that nearly two thirds (64%) of the participants disagreed with the statement: “My energy use is too small to worry about in the grand scheme of things.” The average rating was 2.2 on the five-point agreement scale. Participants with no college education were more likely (27% of respondents) to agree with this statement than those with at least some college (12%).

#### **6.4.7.3.4 Personal norm statement**

More than half (57%) of the participants agreed with the statement: “I feel guilty if I use too much electricity.” The average agreement rating was 3.5. Renters were much more likely to agree with this statement (92% of respondents) than homeowners (55%) although the sample size for the renters (9) was very small. Non-seniors were more likely to completely agree with this statement (34%) than seniors (14%).

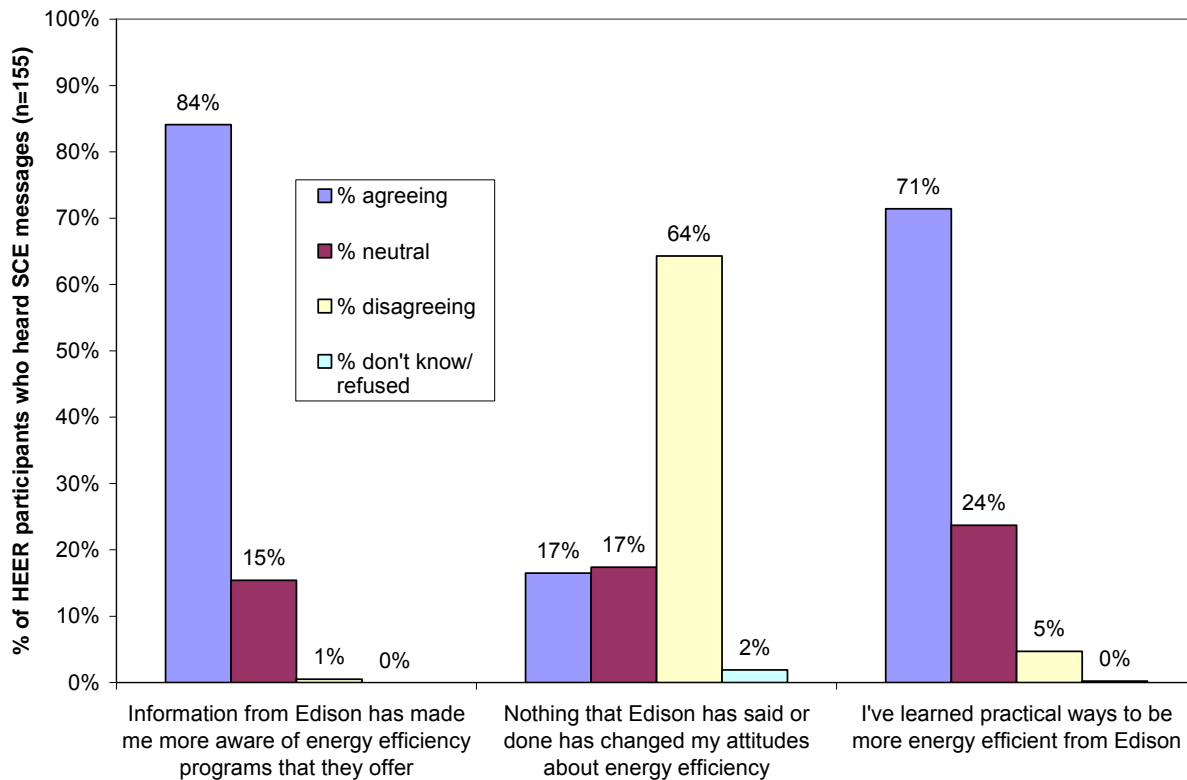
#### **6.4.7.4 Impact of SCE Messages on AKA and Behavior**

We asked respondents who recalled seeing or hearing energy efficiency messages from SCE how much they agreed or disagreed with three statements concerning the impact of those messages on their awareness, knowledge, and attitudes. These statements included:

- *Awareness impact statement:* “Information from Edison has made me more aware of energy efficiency programs that they offer.”
- *Attitudes impact statement:* “Nothing that Edison has said or done has changed my attitudes about energy efficiency.”
- *Knowledge impact statement:* “I’ve learned practical ways to be more energy efficient from Edison.”

Figure 6-43 shows that the large majority of HEER participants agreed with the first and third statements and almost two-thirds disagreed with the second statement.

**Figure 6-43**  
**HEER Participants' Responses to**  
**Statements About Impact of SCE Messages on Energy Efficiency AKA**



There were a few statistically-significant differences in the levels of agreement with these statements among the participant subgroups including:

- SCE effects on EE program awareness:* Higher-income participants were much less likely (46% of respondents) than participants from other income groups (72 -80%) to agree completely that SCE had increased their awareness of SCE programs. Homeowners were much more likely (85% of respondents) than renters (28%) to agree with this statement.
- SCE effects on EE attitudes:* Lower-income participants were much more likely (76%) than middle-income (25%) or higher-income (8%) participants to agree with the

statement: “Nothing that Edison has said or done has changed my attitudes about energy efficiency.”

- *SCE effects on EE knowledge:* Participants who disagreed with the statement: “Conserving energy is important for lowering my bills” were more likely (36%) than participants who disagreed with this statement (1%) to also disagree with the statement: ““I’ve learned practical ways to be more energy efficient from Edison.”

We also asked the HEER participants (n=79) who said that SCE had an impact on their EE program awareness, attitudes, and knowledge: “Do you believe that what you’ve learned from Edison will change what appliances or energy-using equipment you purchase for your home?” Ninety-six percent of the participants in this group said “yes.”

#### **6.4.7.5 Comparing the AKA of HEER participants vs. SCE general population customers**

This subsection compares the responses of the HEER participants and the responses from the general population survey of SCE single-family customers to the awareness, knowledge, and attitudes (AKA) questions. Table 6-19 shows that the HEER participants claimed a higher awareness of the Energy Guide and Energy Star labels. The fact that all the HEER participants were recent purchasers of appliances/equipment while only some of the general population SCE customers were may explain some of this difference in awareness levels. However, it does not explain all the difference. For example, if one only looks at the responses of the general population SCE customers who had recently purchased appliances, the Energy Guide awareness level only increases from 68 percent to 73 percent. Another possible explanation is that the HEER participants are simply more attuned to the energy efficiency of their appliances/equipment and this caused them to notice the Energy Guide/Star stickers as well as the availability of the HEER rebates.

**Table 6-19**  
**Claimed Awareness of Energy Guide and Energy Star Stickers**  
**HEER Participants vs. SCE General Population Customers**

<b>Energy Efficiency Awareness Questions</b>	<b>% of HEER Participants Claiming Awareness (n=296)</b>	<b>% of General Pop. SCE Customers Claiming Awareness (n=658)</b>
Aware of yellow Energy Guide label on new appliances?	84%	68%
Aware of Energy Star label which is on some new appliances, electronics, lighting, and home products?	85%	69%

Table 6-20 compares responses of the HEER participants to the energy efficiency knowledge statements with the responses obtained from the survey of SCE general population customers. It shows that the general population customers were as accurate as the HEER participants in responding to the first three knowledge questions, but were less accurate for the last two.

**Table 6-20**  
**Energy Efficiency Knowledge Statements**  
**SCE HEER Participants vs. SCE General Population Customers**

<b>Energy Efficiency Statement</b>	<b>Correct Answer</b>	<b>% of HEER Participants Answering Correctly (n=296)</b>	<b>% of SCE General Population Customers Answering Correctly (n=658)</b>
Replacing an old refrigerator with a new Energy Star refrigerator will save the typical household more than \$150 a year.	TRUE	85%	89%
Edison will haul away your old refrigerator or freezer at no cost to you.	TRUE	86%	81%
Standard incandescent light bulbs generate more heat than light.	TRUE	72%	71%
All air conditioners that are Energy Star certified are equally efficient.	FALSE	70%	60%
Homes emit insignificant amounts of greenhouse gasses compared with cars.	FALSE	54%	38%



Table 6-21 compares responses of the HEER participants to the energy efficiency attitudinal statements with the responses obtained from the survey of SCE general population customers. It shows that the general population customers had similar attitudes to those of the HEER participants.

**Table 6-21  
Responses to Energy Efficiency Attitudinal Statements  
HEER Participants vs. SCE General Population Customers**

Energy Efficiency Attitudinal Statement	Respondent Type	% Agreeing	% Neutral	% Disagreeing	% Don't Know/Refused	Avg. Level of Agreement (5 = Agree Completely)
Conserving energy is important for lowering my bills	HEER participants	92%	4%	4%	0%	4.7
	SCE general pop.	89%	7%	4%	0%	4.5
Using energy in ways that preserve the environment is not worth if it requires major lifestyle changes	HEER participants	24%	20%	54%	2%	2.5
	SCE general pop.	29%	22%	49%	1%	2.6
My energy use is too small to worry about in the grand scheme of things	HEER participants	16%	20%	64%	1%	2.2
	SCE general pop.	23%	22%	54%	1%	2.4
I feel guilty if I use too much electricity	HEER participants	57%	19%	23%	0%	3.5
	SCE general pop.	53%	22%	24%	1%	3.5

Note: The sample size for the HEER participants was 296 and the sample size for the SCE general population was 658.

Table 6-22 compares the responses of the HEER participants and the SCE general population customers concerning the impacts of SCE messages on energy efficiency awareness, knowledge, and attitudes. These questions were only asked of respondents who said that they recalled SCE information or messages concerning saving energy or energy-savings programs and services. The table shows that the general population customers were less likely to give SCE credit for changing their awareness, knowledge, and attitudes than the HEER participants were.

**Table 6-22**  
**Responses to Statements**  
**About Impact of SCE Messages on Energy Efficiency AKA**  
**HEER Participants vs. SCE General Population Customers**

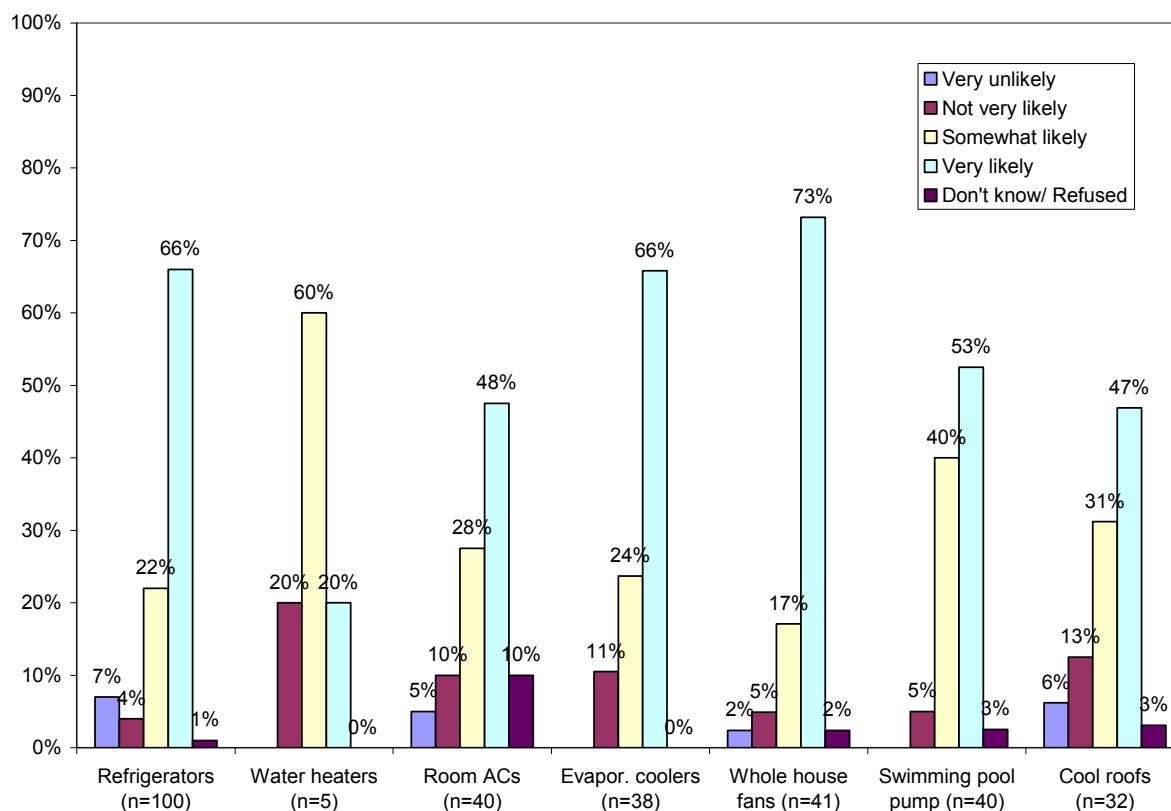
SCE Information Impact Statement	Respondent Type	% Agreeing	% Neutral	% Disagreeing	% Don't Know/ Refused	Avg. Level of Agreement (5 = Agree Completely)
Information from Edison has made me more aware of energy efficiency programs that they offer	HEER participants	84%	15%	1%	0%	4.4
	SCE general pop.	70%	19%	10%	1%	4.0
Nothing that Edison has said or done has changed my attitudes about energy efficiency	HEER participants	17%	17%	64%	2%	2.2
	SCE general pop.	24%	19%	57%	0%	2.5
I've learned practical ways to be more energy efficient from Edison	HEER participants	71%	24%	5%	0%	4.1
	SCE general pop.	61%	26%	13%	1%	3.8

Note: The sample size for the HEER participants was 155 and the sample size for the SCE general population was 328.

### 6.4.8 Free Ridership Indicators

In order to guide their program planning efforts, SCE EM&V staff also wanted us to collect some preliminary information on free ridership. So we asked the appliance purchasers how likely they would have purchased the HEER-rebated equipment if the rebate had not been available. Figure 6-44 shows that 66–73% of the refrigerator, whole house fan, and evaporative cooler respondents said that they were “very likely” to have purchased the equipment without the rebates. The levels were lower (47 – 53%) for the room air conditioner, pool pump, and cool roof participants.

**Figure 6-44**  
**Likelihood of Purchasing the HEER-Rebated Equipment**  
**if the HEER Rebates Had Not Been Available**



However, while the responses to this question are useful as one piece of evidence to consider when trying to assess free ridership for the HEER program, it is important to bear in mind two considerations. First this was only one question and the question batteries that are used to officially calculate net-to-gross ratios for the CPUC impact analysis are much more extensive and are based on protocols that are designed to have participants think more carefully about how a program or rebate may have influenced their decision-making. Second the responses that appear in Figure 6-44 only reflect the perspective of the end users and do not reflect the retailer's or contractor's perspective on how frequently they would have sold the energy efficient equipment in the absence of the HEER rebate. These retailer/contractor estimates of free ridership are discussed elsewhere in the report.

A third consideration in interpreting these responses is that since many HEER Program participants received their rebates instantly through a point-of-sale deduction at the cash register, it is possible that they were less aware of the rebate amount than those who

participated in the Program through the mail-in or online channels and received a check in the mail. However, the evidence for this is mixed. The mail-in rebate participants most frequently (17% of respondents) said that they were “not very likely” or “very unlikely” to have bought the appliance/equipment without the HEER rebate – compared to 10 percent for the online rebate participants and point-of-sale rebate participants. Yet if the “check in the mail” was indeed contributing to greater program attribution (e.g., lower free ridership), then one would expect to also see differences in the likelihood scores between the online and point-of-sale rebate participants.<sup>43</sup>

#### **6.4.9 Information, Selection Criteria and Barriers for Future Equipment Purchases**

We asked the HEER Program participants who were planning to buy another piece of energy-using equipment in the next 12 months a series of questions about this purchase decision. We asked them where they were planning to get their information, what product attributes/features would be important to them, how important energy efficiency would be in their purchase decision, and what barriers might prevent them from purchasing an energy-efficient model. The sample sizes were generally small – probably because the participants had just recently purchased a piece of equipment through the HEER program. The following subsections summarize their responses to these questions.

##### **6.4.9.1 Refrigerators**

Eighteen (6%) of the HEER participants had plans to purchase a refrigerator in the next 12 months. We asked them: “From where do you expect to get information about what refrigerator to buy?” Figure 6-5 compares their responses to the responses of the shows that participants who planned to purchase a refrigerator cited SCE more often as an information source and cited retailers/salespersons less as an information source than those who had recently purchased a refrigerator. There a number of possible explanations for this. It may because the planned

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<sup>43</sup> It is possible that because mail-in rebate participants have to do more work than other participants to get their rebates that they are more proactive than other participants about making sure that they receive the rebate check as compensation for their labors. If this was true, then this might lead to higher recall of the rebate amount and higher program attribution (lower free ridership). Unfortunately we did not ask the participants what their rebate amount was to determine whether rebate recall was better for mail-in participants vs. point-of-sale participants or online participants.

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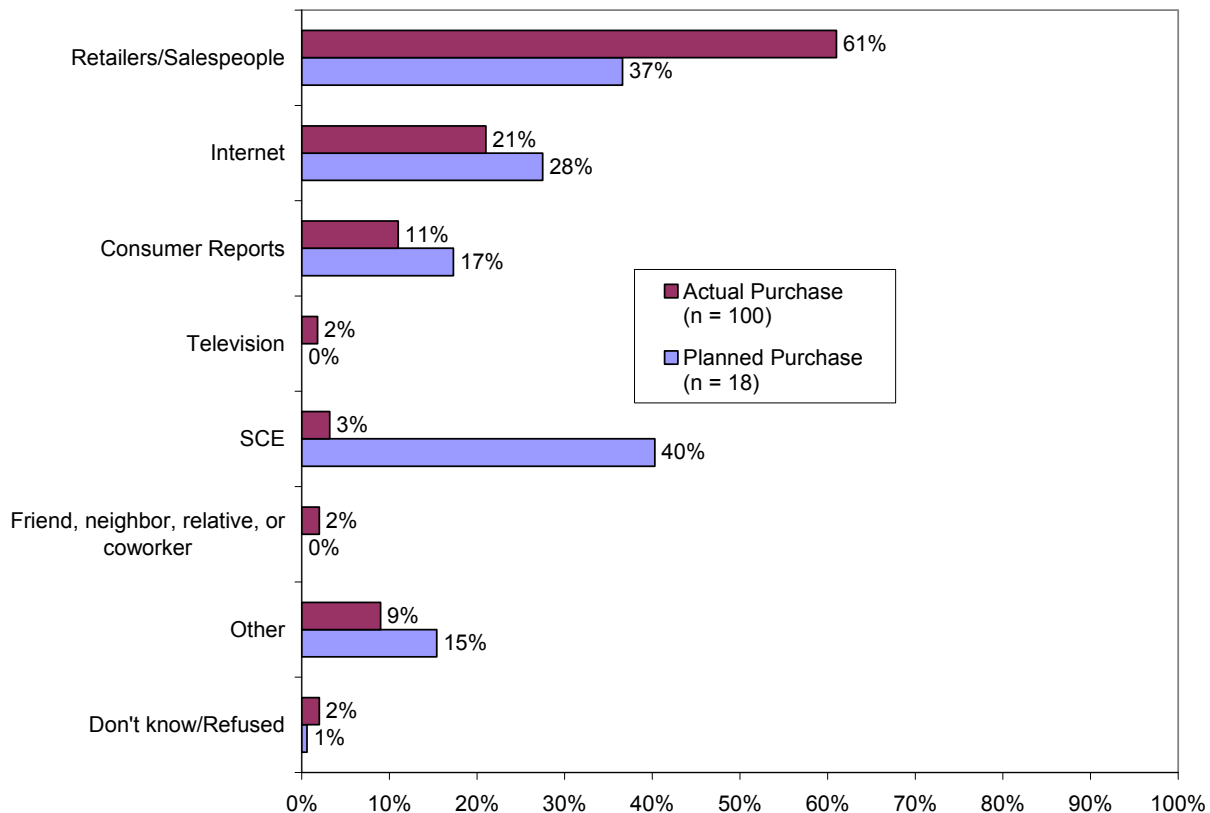
purchasers had a positive experience with SCE information when they purchased their other HEER-rebated equipment (only one of the 18 planned purchasers had already purchased a refrigerator through the HEER Program). It may be because these planned purchasers are overestimating the availability of SCE information on refrigerators.<sup>44</sup> Another possibility is that the planned purchasers were purposely exaggerating the likely influence of the SCE information in order to please the interviewers. Of course, the actual refrigerator purchasers could display a similar bias, although not likely to the same degree.<sup>45</sup>

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<sup>44</sup> We did ask the 18 HEER participants who were planning to purchase a refrigerator in the next 12 months: “Have you already started shopping or researching options for the purchase of a new refrigerator?” Eighty percent of them said that they had.

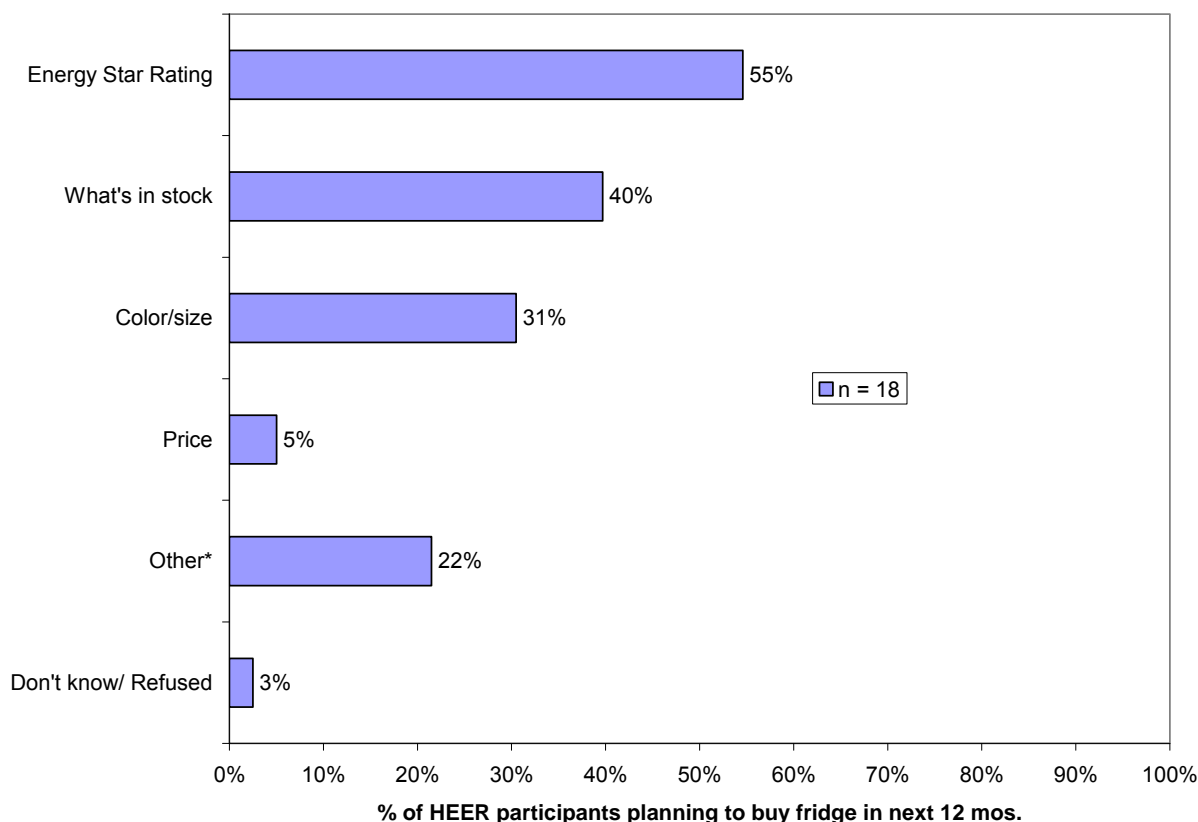
<sup>45</sup> For example, if the recent refrigerator purchasers did not use SCE information for making their decision, one would assume that most respondents would be reluctant to say that they did use this information merely to please the interviewer. In the case of a potential purchase, however, respondents would likely have fewer qualms about saying that they plan to use SCE information even if they did not seriously plan to do so, since they are speculating about their future shopping behavior.

**Figure 6-45**  
**Information Sources for Refrigerator Purchases**  
**Actual, Planned Purchases**



We asked the prospective refrigerator purchasers: “What features will be important to you when deciding what refrigerator to buy?” Figure 6-46 shows that the most important features they were looking for included an Energy Star label, size/color, and operating cost or energy use (28%). Forty percent also mentioned that which models of refrigerators were in stock would also influence their decision.

**Figure 6-46**  
**Important Features**  
**That Planned Refrigerator Purchases Will Be Looking For**



When asked how important it was that they purchase an energy-efficient refrigerator, 95 percent of the planned purchasers said it was important (4 or 5 on a five-point importance scale). When asked what might prevent them from purchasing an energy-efficient refrigerator, the most common response was price (39% of respondents), followed by “lacking other features I want” (10%), and “wrong size or color” (9%).

#### 6.4.9.2 Water Heaters

Eleven (4%) of the HEER participants had plans to purchase a water heater in the next 12 months. The majority of these water heater purchasers (52%) said that they were planning to rely on the Internet for information to help them choose which model, with retailers/salespeople being a distant second (19%) as an information source. The most important attributes/features they were looking for included an Energy Star label (35%), operating cost or energy use (22%), and price (14%). Forty-three percent were not sure which features were important for them.

When asked how important it was that they purchase an energy-efficient water heater, 61 percent of the planned purchasers said it was important (4 or 5 on a five-point importance scale). When asked what might prevent them from purchasing an energy-efficient water heater, the most common response was price being too high (49% of respondents) with no other barrier cited by more than five percent of respondents.

#### **6.4.9.3 Room Air-Conditioners**

Eleven (4%) of the HEER participants had plans to purchase a room air conditioner in the next 12 months. They cited with equal frequency: installation contractors (23%), SCE (23%), the Internet (23%), and Consumers Reports or similar magazines (23%) as information sources for helping them to make a choice. The most important attributes/features they were looking for included operating cost or energy use (74%), price (50%), size/color (46%), brand (23%), and Energy Star label (23%).

When asked how important it was that they purchase an energy-efficient room air conditioner, all 11 of them said it was important (4 or 5 on a five-point importance scale). When asked what might prevent them from purchasing an energy-efficient room air conditioner, the most-cited response was the price being too high (26% of respondents).

#### **6.4.9.4 Whole House Fans**

Fourteen (5%) of the HEER participants had plans to purchase a whole house fan conditioner in the next 12 months. These participants said that they planned to get information for their purchase decisions from retailers/salespersons (47% of respondents), the Internet (29%), and installation contractors (20%). The most important attributes/features they were looking for included size/color (23%), an Energy Star label (22%), and “environmentally friendly” (20%).

When asked how important it was that they purchase an energy-efficient whole house fan, 73 percent of them said it was important (4 or 5 on a five-point importance scale). When asked what might prevent them from purchasing an energy-efficient whole-house fan, the most-cited response was the price being too high (73% of respondents) followed by wrong size/color (22%).

#### **6.4.9.5 Pool Pumps**

Nine (3%) of the HEER participants had plans to purchase a pool pump in the next 12 months. These participants said that they planned to get information for their purchase decisions from the Internet (51% of respondents) and retailers/salespersons (39%). The most important



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attributes/features they were looking for included availability of rebates (79%), operating cost and energy use (47%), price (45%), Energy Star label (41%), and brand (39%). Thirty-nine percent also mentioned that what models of pool pumps were in stock would also influence their decision.

When asked how important it was that they purchase an energy-efficient pool pump, all but one of the nine participants said it was important (4 or 5 on a five-point importance scale). When asked what might prevent them from purchasing an energy-efficient pool pump, the most-cited response was the price being too high (67% of respondents).

#### **6.4.9.6 Other Measures**

The number of HEER participants who said that they were planning to purchase roofs (n=7) or evaporative coolers (n=3) was too small to be worth summarizing in this Executive Summary. The responses of these participants can be found in the main body of the report.

## 7 Detailed Findings from the Survey of Appliance Retailers Who Participated in the HEER Program

### 7.1 Methodology

KEMA conducted a telephone survey of appliance retailers who participated in SCE's Home Energy Efficiency Rebate (HEER) Program from 2006-2008. SCE provided contact info for 191 retailers. KEMA attempted to contact all retailers on the list, and they were considered unreachable after six failed calls. This resulted in a final sample of 79 retailers, for a response rate of 41 percent. Most of the calls were completed in late January or early February.

Most of the sampled retailers (89%) were large home improvement stores such as Home Depot or Lowe's. The remainders (11%) were membership stores such as Costco. KEMA asked respondents which types of appliances they sold through the HEER Program. Almost all of the respondents (99%) sold refrigerators. Most of the respondents (54%) sold room air conditioners. Whole house fans, electric storage water heaters, and ducted evaporative coolers were each sold by less than half of the respondents (Table 7-1).

**Table 7-1  
Types of Appliances Sold**

Type of Appliance	% of Respondents (n = 79)
Refrigerators	99%
Room air conditioners	54%
Electric storage water heaters	32%
Whole house fans	30%
Ducted evaporative coolers	20%

Note: Total exceeds 100% because multiple responses were permitted.

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Large home improvement stores were more likely to sell room air conditioners than membership stores ( $p < .05$ ).<sup>46</sup> Fifty-nine percent of the large home improvement stores reported that they sold room air conditioners versus 22 percent of the membership stores. Large home improvement stores were also slightly more likely to sell whole house fans ( $p < .10$ ).<sup>47</sup> Thirty-three percent of the large home improvement stores said that they sold whole house fans. In contrast, only 11 percent of the membership stores said that they sold whole house fans.

## 7.2 Program Awareness

### 7.2.1 Communication About HEER Program

All of the respondents said they were aware of SCE's Home Energy Efficiency Rebate (HEER) Program prior to the survey. SCE mailings or brochures were the most common means through which retailers heard about the HEER Program (30%). Retailers also commonly heard about the Program via word of mouth (21%) and from equipment manufacturers (19%; Table 7-2). Retailers with high volumes of ENERGY STAR™ refrigerator sales (80% or more of sales) were less likely to hear about Program changes via word of mouth than retailers with lower volumes of ENERGY STAR™ refrigerator sales.

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<sup>46</sup> A p-value represents the probability that the observed difference is due only to chance. Thus, " $p < .05$ " means that there is a less than 5% probability that the difference in proportions of home improvement stores and membership stores that sell refrigerators is due only to chance.

<sup>47</sup> There is a less than 10% probability that the difference in the proportion of home improvement stores and membership stores that sell whole house fans is due only to chance.

**Table 7-2**  
**Sources of Information About SCE HEER Program**

<b>Information Source</b>	<b>% of Respondents (n = 79)</b>
SCE mailings / Brochures	30%
Word of mouth	21%
Equipment manufacturer / Retailer	19%
SCE website	14%
Coupons	13%
SCE / California utility meeting	6%
SCE (format unspecified)	4%
SCE email	3%
Internet (non-SCE)	3%
Trade conference / Trade association	1%
Other	6%
Don't know	3%

Note: Total exceeds 100% because multiple responses were permitted.

KEMA asked the participating retailers to identify the best method for SCE to send them information about the HEER Program. Most (71%) respondents said that direct mail or brochures were the best method of communication (Table 7-3).

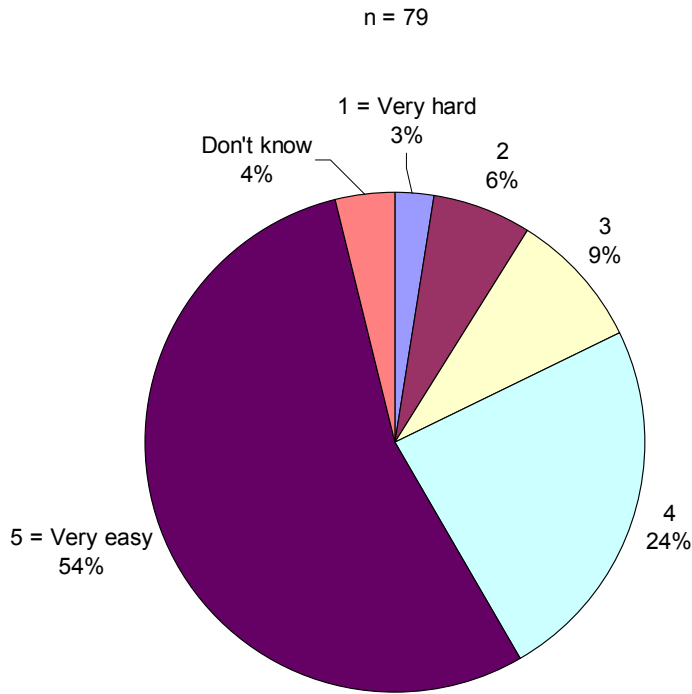
**Table 7-3**  
**Best Method to Update Retailers about HEER Program**

Communication Method	% of Respondents (n = 79)
Direct mail / Brochures	72%
SCE website	13%
Email	9%
Phone call	8%
Visit from utility rep	8%
Internet other than SCE website	3%
Not interested in information	1%
Other	4%
Don't know	5%

Note: Total exceeds 100% because multiple responses were permitted.

KEMA asked the participating retailers how easy or difficult it was to keep up with HEER Program changes. Most respondents (78%) said that it was easy to keep up with Program changes (4 or 5 on a 5-point scale where 1 = "Very hard" and 5 = "Very easy"; Figure 7-1). Retailers most commonly reported that it was difficult to keep up with Program changes because they do not get enough information from utilities (50%). They also said that the Program changes too often (14%).

**Figure 7-1**  
**Ease/Difficulty of Keeping up with HEER Program Changes**



Only eight retailers (10%) said that it was hard to find out which appliances were eligible for rebates. KEMA asked those eight respondents for which appliances it was hardest to determine rebate eligibility. Table 7-4 shows their responses (refrigerators were mentioned most often, probably because they were also the most-sold appliance).

**Table 7-4  
Appliances That Were Most Difficult to Determine Rebate Eligibility**

<b>Appliance</b>	<b>% of Respondents (n = 8)</b>
Refrigerators	50%
Electric storage water heaters	25%
Whole house fans	13%
Evaporative coolers	13%
Don't know	25%

Note: Total exceeds 100% because multiple responses were permitted.

### **7.2.2 Familiarity, Satisfaction with Rebate Processes**

KEMA asked participating retailers whether they were familiar with each of the three options for submitting rebates: point-of-sale, mail-in, and online. Most (70%) of the respondents said they were familiar with point-of-sale option. Slightly less than half (48%) of the respondents claimed familiarity with the mail-in process. Fewer respondents (39%) said they were familiar with the online rebate process.

KEMA asked the 55 retailers who said they were familiar with the point-of-sale process how satisfied they were with that process. Forty-six of these retailers (84%) reported being satisfied with the process (4 or 5 on a 5-point satisfaction scale). A few respondents elaborated on why they were not satisfied. Their reasons included that they do not receive the rebate forms on a regular basis and that they need more awareness.

KEMA asked the 38 retailers who were familiar with the mail-in rebate process whether they had filled out any of the mail-in rebate forms for their customers. Only nine (24%) of these retailers reported that they had filled out these forms. All nine of these retailers found the mail-in rebates to be reasonable in terms of length and level of detail.

KEMA asked the 31 retailers who claimed familiarity with the online rebate process whether they had filled out online forms for any of their customers. Only nine (29%) of these retailers reported that they had filled out these forms. Eight out of those nine found the online forms to be reasonable in terms of length and level of detail.

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### 7.3 Satisfaction with Program Processes

KEMA asked participating retailers how satisfied they were with the HEER Program in general. Almost all (94%) of the respondents reported that they were satisfied with the Program (4 or 5 on a 5-point scale satisfaction scale; Figure 7-2). This level of satisfaction increased from 2005 levels, when 84 percent of the respondents reported that they were satisfied with the Program as a whole<sup>48</sup>.

Several categorical differences in general satisfaction emerged. Retailers with greater knowledge of ENERGY STAR™ reported greater satisfaction with the Program (M = 4.7)<sup>49</sup> than those with less knowledge (M = 4.3;  $p < .05$ ). Respondents who were satisfied with specific aspects of the Program (marketing and timeliness of the rebates) reported greater satisfaction with the Program in general (M = 4.7) than those who were less satisfied with specific aspects of the Program (M = 4.2;  $p < .05$ ). Participants who found it easy to keep up with Program changes reported more satisfaction (M = 4.7) than those who did not find it easy (M = 4.0;  $p < .05$ ).

KEMA asked the less-than-satisfied participants why they were dissatisfied. Most (80%) of these respondents said they needed more information. One respondent said that there was no comprehensive source of information about the Program. Another respondent asked for a utility representative to come to the store and speak directly to the sales staff. One respondent said that it takes too long for customers to receive the rebates.

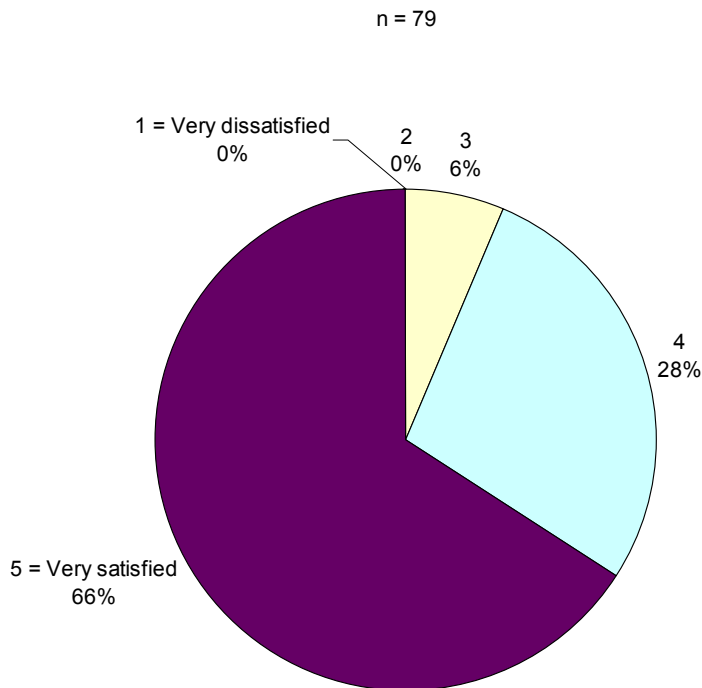
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<sup>48</sup> Question wording was slightly different between 2005 and 2008 survey. In 2005, the wording was "How satisfied have you been with the Program as a whole?" In 2008, the wording was "How satisfied have you been with the rebate Program in general?"

<sup>49</sup> "M" refers to the mean.



**Figure 7-2**  
**Satisfaction with Program in General**

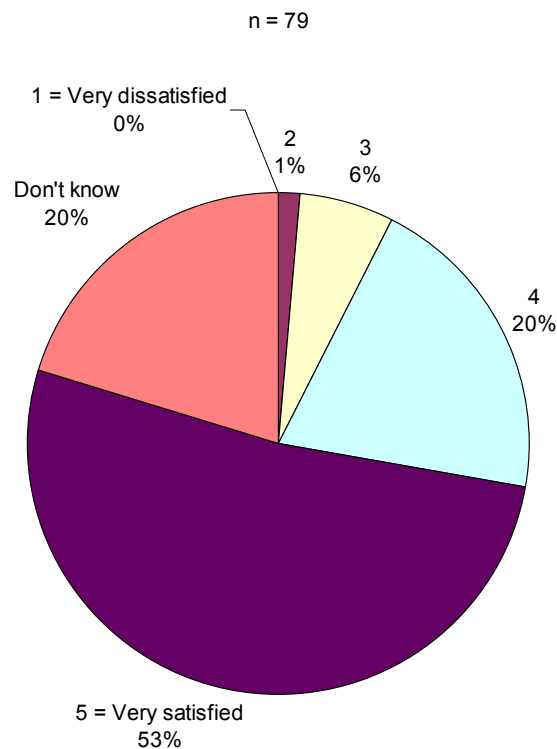


KEMA asked participating retailers how satisfied they were with their interactions with the Program's staff. Most of the respondents (73%) said they were satisfied with these interactions (4 or 5 on a 5-point satisfaction scale; Figure 7-3). This level of satisfaction is an improvement over levels reported in 2005<sup>50</sup>. In 2005, 64 percent of the respondents said they were satisfied with their interactions with Program staff. It should be noted that the percentage of respondents that were dissatisfied did not change much (8% in 2005 vs. 7% in 2008), but the number of respondents who said that they did not know did decrease (from 28% to 20%). Thus, the increase in satisfaction level in 2008 may indicate that a larger proportion of the 2008 sample

<sup>50</sup> Question wording was slightly different between 2005 and 2008 survey. In 2005, the wording was "How satisfied have you been with the way that the utility staff has responded to any questions you have about the energy efficient equipment?" In 2008, the wording was, "How satisfied have you been with your interactions with the rebate Program's staff?"

interacted with Program staff. Less than satisfied respondents identified that they were dissatisfied because of a lack of information about the Program.

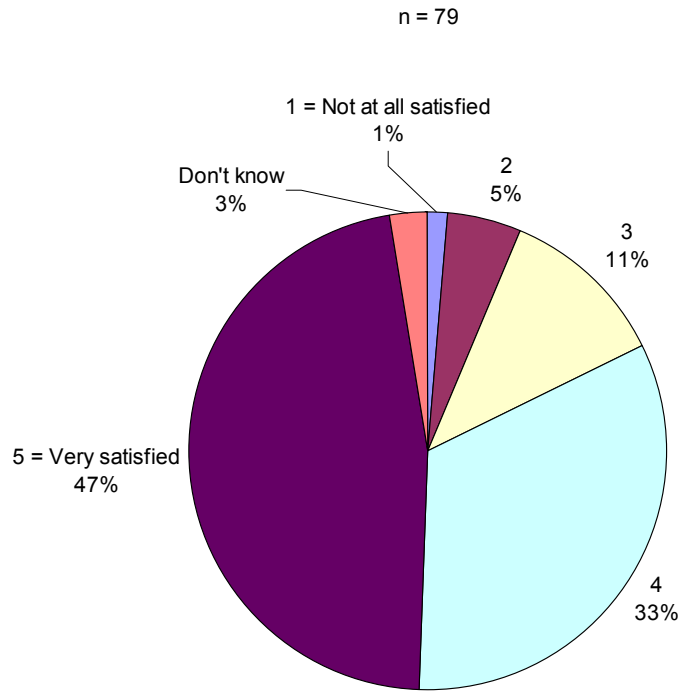
**Figure 7-3**  
**Satisfaction with Interactions with Program Staff**



KEMA asked participating retailers how satisfied they were with the way the utilities market the rebates for energy-efficient appliances. Most of the respondents (80%) said that they were satisfied (4 or 5 on a 5-point satisfaction scale; Figure 7-4). This level of satisfaction represents a substantial increase over 2005 levels (60%). Retailers who found it easy to keep up with Program changes reported greater levels of satisfaction with Program marketing ( $M = 4.4$ ) than those who did not find it easy to keep up with changes ( $M = 3.5$ ;  $p < .05$ ).

KEMA asked the less than satisfied respondents to elaborate on their reasons for dissatisfaction. Respondents most commonly cited that they needed more (unspecified) information (21%). Respondents also commonly said that the utilities do not provide enough brochures (14%) or signage (14%; Table 7-5).

**Figure 7-4**  
**Satisfaction with Utility Marketing of Program**



**Table 7-5  
Reasons for Dissatisfaction with HEER Program Marketing**

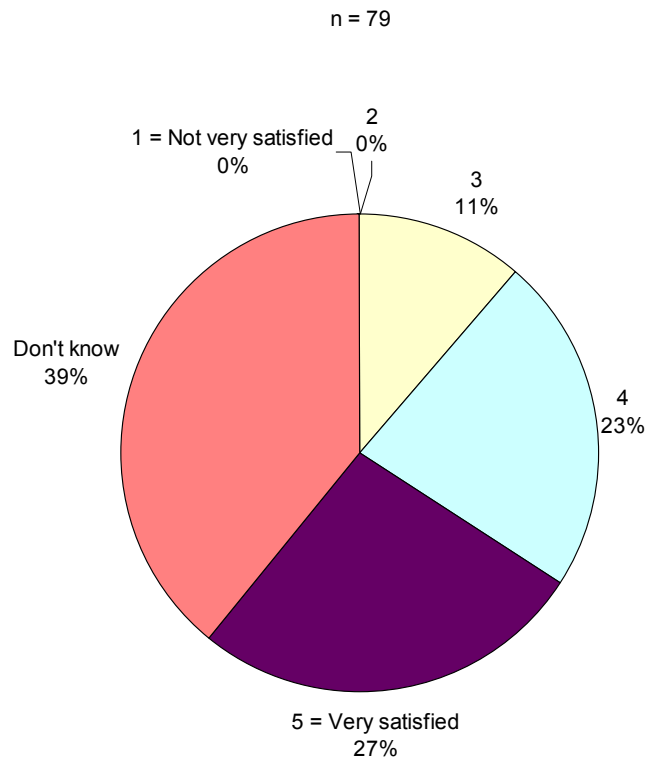
<b>Reason for Dissatisfaction</b>	<b>% of Respondents (n = 14)</b>
Need more information	21%
Utility does not provide brochures/literature	14%
Utilities do not provide signage	14%
Info in utility brochures/literature is unclear	7%
Info in utility brochures/literature is unconvincing	7%
Info in utility brochures/literature is incomplete	7%
Need more benefits	7%
Other	14%
Don't know	14%

Note: Total exceeds 100% because multiple responses were permitted.

KEMA asked participating retailers how satisfied they were with the way that the utilities promoted the Program on their websites. Slightly less than half (49%) of the retailers said they were satisfied (4 or 5 on a 5-point satisfaction scale; Figure 7-5). This level of satisfaction is slightly decreased from 2005 levels (54%). However, the level of dissatisfaction (1, 2, or 3 on the same scale) decreased from 31 percent in 2005 to 11 percent in 2008. In addition, there were many more respondents who said they did not know in 2008 (39%) than in 2005 (15%). This increase in respondents who did not know suggests that the satisfaction-level changes between 2005 and 2008 may be due to a decreased use of the utility websites. In addition, the 2005 survey included PG&E and SDG&E whereas 2008 only included SCE. It is possible that in 2005 more respondents used utility websites because they had two other utilities' websites to reference.

Several categorical differences in satisfaction with the Program website emerged. Home improvement stores reported greater satisfaction (M = 4.3) than membership stores (M = 3.7;  $p < .05$ ). Likewise, retailers with high levels of ENERGY STAR™ refrigerator sales (80% or more) reported greater satisfaction with the Program website (M = 4.5) than those with lower levels of ENERGY STAR™ sales (M = 3.9;  $p < .05$ ). Retailers who found it easier to keep up with Program changes reported greater satisfaction (M = 4.3) than those who found it more difficult to keep up with Program change (M = 3.8;  $p < .05$ ). The most common reasons for dissatisfaction with the website were that it was difficult to understand and difficult to navigate.

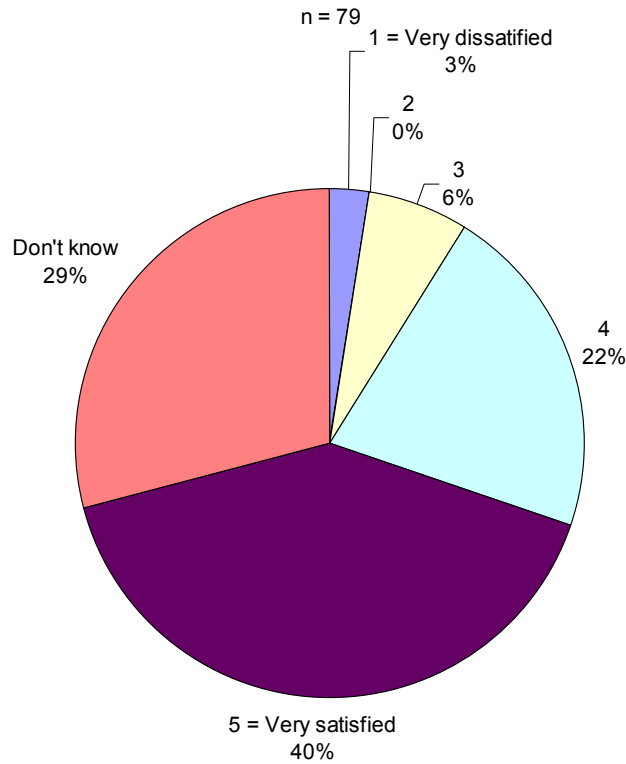
**Figure 7-5**  
**Satisfaction with Utility Websites' Promotion of HEER Program**



KEMA asked participating retailers how satisfied they were with the timeliness of the downstream rebate payments. Most retailers (62%) said they were satisfied (4 or 5 on a 5-point satisfaction scale; Figure 7-6). Retailers who were satisfied with the HEER Program in general were more satisfied with the timeliness of the rebate payments than those who were less than satisfied with the Program in general ( $p < .05$ ).

Several respondents gave specific reasons why they were less than satisfied. They most commonly said that it takes too long for customers to receive their rebate (60%). Some also said that the process is too complicated (20%), and that customers never received the rebate (20%).

**Figure 7-6**  
**Satisfaction with Timeliness of Rebate Payments**



KEMA asked the participating retailers how SCE could improve the effectiveness of its marketing efforts. Retailers most commonly suggested increasing advertising in non-television media (23%), increased television advertising (14%), and giving retailers more information or training (14%; Table 7-6).

**Table 7-6  
Participating Retailer Suggestions for Improving HEER Marketing**

Suggestion	% of Respondents (n = 44)
Increase non-TV advertising	23%
Increase TV advertising	14%
Give retailers more information or training	14%
More POS rebates or in-store application forms	11%
Increase rebate levels	9%
Simplify/ Improve signage	7%
Organize all program information in single place	7%
More brochures / Signage	7%
Use more coupons	5%
Send utility reps to stores	5%
No improvements necessary	5%
Other	9%

Note: Total exceeds 100% because multiple responses were permitted.

KEMA asked the participating retailers to suggest ways to improve the HEER Program in general. Most (71%) of the respondents said they did not know or did not provide suggestions. Table 7-7 shows the other suggestions respondents made.

**Table 7-7  
Participating Retailer Suggestions for Improving HEER Program**

Suggestion	% of Respondents (n = 79)
No suggestions for improvement	71%
More advertising / Public information	5%
Increase or expand rebates	5%
Use coupons	4%
Improve signage or brochures	4%
Make process easier for consumer	4%
Give retailers more info	3%
Organize all program info in one place	1%
Increase utility-retailer interaction	1%
Other	5%

## **7.4 Rebates Awareness, Rebate Adequacy, and Retailer Marketing – by Appliance Type**

KEMA asked the participating retailers a similar set of questions for each type of appliance. If a retailer indicated that they did not sell a particular type of appliance, that section was skipped. Results are presented here broken out by each type of appliance.

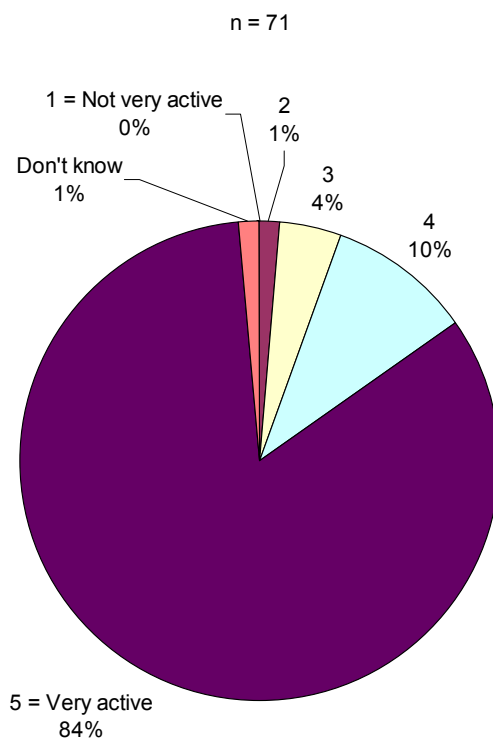
### **7.4.1 Refrigerators**

Seventy-eight (99%) of the participating retailers reported that they sold refrigerators. Seventy-seven of the respondents indicated that they were the correct person to talk to about refrigerators and answered the survey questions about refrigerators. KEMA asked these respondents whether they were aware of the \$50 rebate SCE offers for ENERGY STAR™ refrigerators. Almost all (94%) of these respondents were aware of the SCE refrigerator rebates.

KEMA asked participating retailers how actively they promoted the SCE refrigerator rebates. Most of the respondents (88%) reported that they actively promote the rebates (4 or 5 on a 5-point scale where 1 = “not very active” and 5 = “very active”; Figure 7-7). The respondents who did not actively promote the refrigerator rebates said that they did not have enough information in their stores to do so.



**Figure 7-7**  
**How Actively Retailers Promoted Refrigerator Rebates**



KEMA asked participating retailers whether they thought that the \$50 rebate was sufficient to move consumer demand for ENERGY STAR™ refrigerators. Most respondents (78%) said that \$50 was enough. Home improvement stores (82%) were more likely than membership stores (44%) to say that the \$50 rebate was sufficient ( $p < .05$ ). Retailers who were satisfied with the information they received from manufacturers (93%) and those who were satisfied with the timeliness of the rebate payments (100%) were more likely than their less satisfied counterparts (73% and 75%, respectively) to say that \$50 was enough rebate ( $p < .05$ ). Retailers reporting high knowledge of ENERGY STAR™ certification (84%) were also more likely than those reporting low knowledge (54%) to say that \$50 was enough ( $p < .05$ ).

If a respondent indicated that \$50 was not enough, KEMA asked them to estimate what rebate level would be sufficient to move consumer demand. Most of these respondents said \$100 and the average response was \$95.

KEMA also asked the refrigerator retailers to estimate the average price difference between ENERGY STAR™ and comparable non-ENERGY STAR™ refrigerators. Responses varied (Table 7-8), with an average of just over \$225. Membership (89%) stores were more likely than home improvement stores (12%) to report that they did not know the difference.

**Table 7-8**  
**Estimated Price Difference Between**  
**ENERGY STAR™ and**  
**Comparable Non-ENERGY STAR™ Refrigerators**

Price Difference	% of Respondents (n = 77)
Less than \$100	8%
\$100	23%
\$150	8%
\$200-\$299	22%
\$300-\$999	16%
\$1,000+	3%
Don't know	21%

Almost all of the respondents (95%) said that they actively promote ENERGY STAR™ refrigerators. The most commonly mentioned means of promotion was to use the signage and promotional materials provided by the manufacturers (40% of respondents). Using utility-provided signage and promotional materials (30%) and prominent product placement (27%) were also common methods of promotion (Table 7-9).

**Table 7-9**  
**Methods of Promoting ENERGY STAR™ Refrigerators**

Promotion Method	% of Respondents (n = 73)
Use manufacturer signage / promotional materials	40%
Use utility signage / promotional materials	30%
Prominent product positioning	27%
10% Discount	12%
Salesmen get extra commission	8%
Use corporate signage / promotional materials	8%
Same as non-ENERGY STAR™ refrigerators	7%
Other	12%

Note: Total exceeds 100 because multiple responses were permitted.

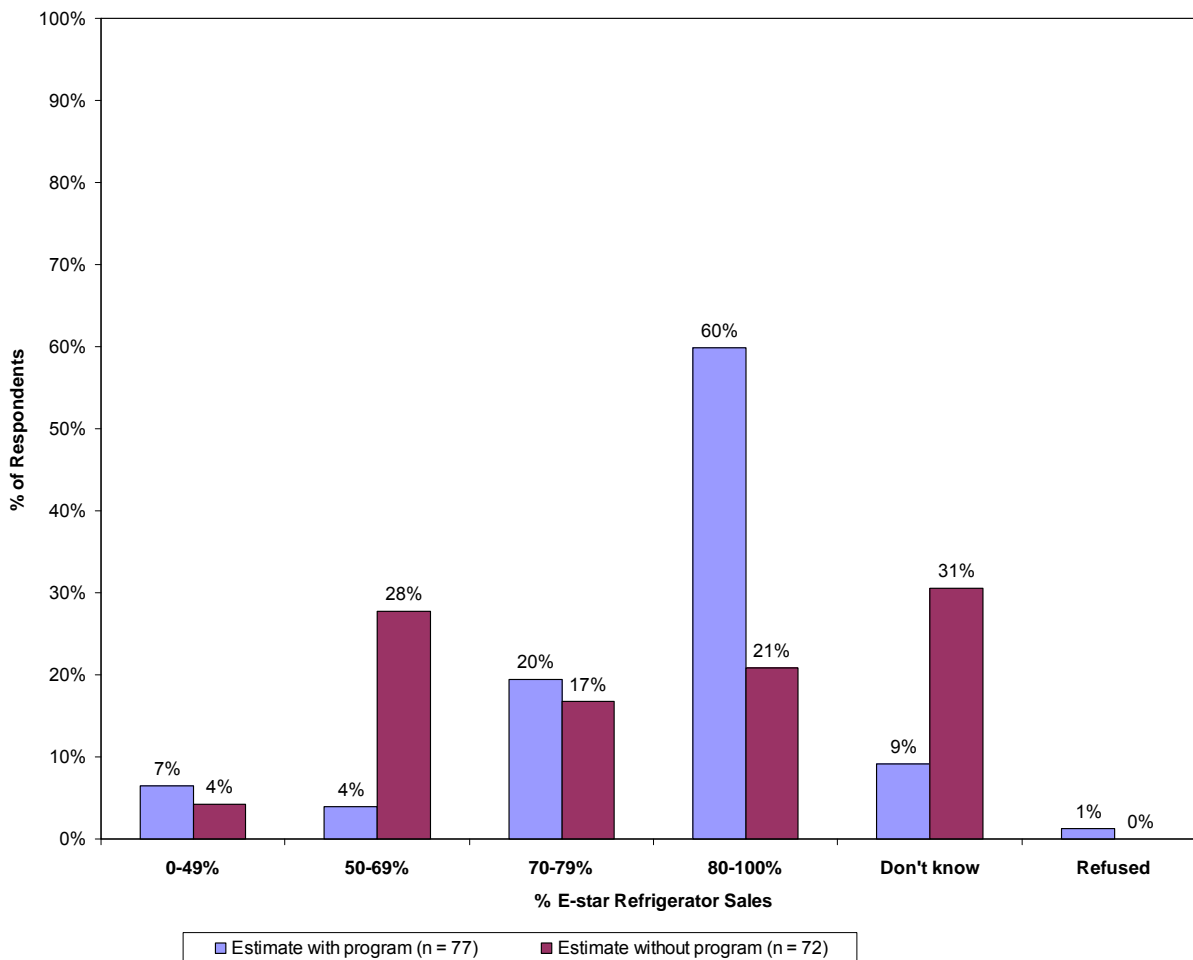
KEMA asked participating retailers to estimate what percentage of their refrigerators qualified as ENERGY-STAR™. Almost all (83%) of the respondents estimated at least 50 percent and most (60%) estimated at least 80 percent (Table 7-10). The average estimate was 80 percent of sales. Three categorical differences emerged. First, home improvement stores made significantly higher estimates of ENERGY STAR™ sales (81%) than membership stores (67%;  $p < .05$ ). Second, retailers who found it easy to keep up with Program changes (4 or 5 on a 5-point scale) made higher estimates of ENERGY STAR™ sales (83%) than those who did not find it easy to keep up with Program changes (65%). Finally, retailers who reported having knowledge of ENERGY STAR™ standards (4 or 5 on a 5-point scale), also made higher estimates of ENERGY STAR™ sales (82%) than those retailers with less knowledge of ENERGY STAR™ (67%,  $p < .05$ ).

**Table 7-10**  
**Percentage of Refrigerator Sales that were ENERGY STAR™ Qualified**

<b>Percent of Refrigerator Sales that were ENERGY STAR™</b>	<b>% Respondents (n = 77)</b>
0-49%	7%
50-69%	4%
70-79%	20%
80-89%	21%
90-99%	35%
100%	4%
Don't know	9%
Refused	1%

KEMA also asked participating retailers to estimate what percentage of their refrigerator sales would have been ENERGY-STAR-qualified if the Program did not exist. Only 21 percent of the respondents estimated at least 80 percent of sales, and the mean estimate dropped to 68 percent. However, the percentage of respondents who could not provide an estimate increased to 31 percent. Figure 7-8 compares retailers' actual sales estimates (with the Program) to their estimates of their sales if there was no Program.

**Figure 7-8**  
**Retailer Estimates of ENERGY STAR™ Qualified Refrigerators**  
**With and Without the HEER Program**

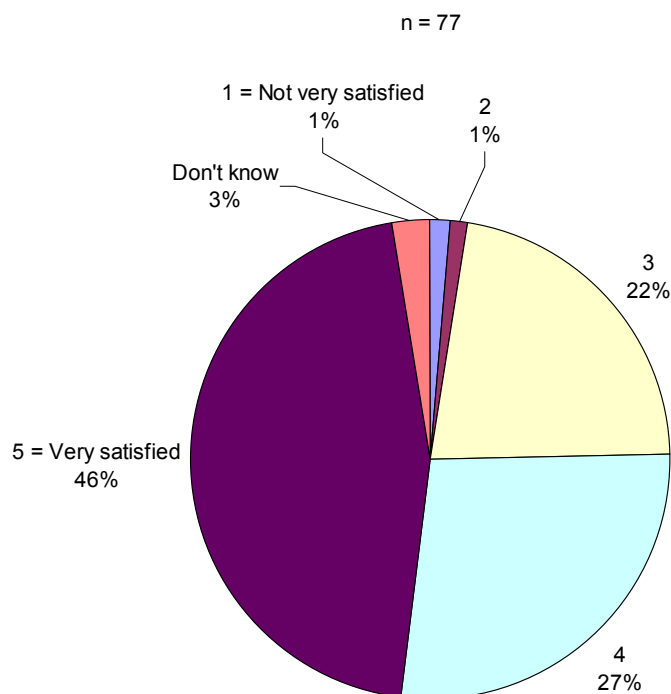


KEMA asked the participating retailers whether there were any barriers that prevented sales of ENERGY STAR™ refrigerators. Only eight respondents (10%) reported that there were. The most common barrier cited by respondents was that ENERGY STAR™ refrigerators are more expensive. Other barriers included not being able to keep enough ENERGY STAR™ refrigerators in stock, not having enough coupons, insufficient salesperson knowledge, and that customers don't see the difference between ENERGY STAR™ and non-ENERGY STAR™ units.

Most (73%) of the respondents said that they were satisfied with the information from manufacturers about ENERGY STAR™ refrigerators (4 or 5 on a 5-point satisfaction scale; Figure 7-9). The most common reason for dissatisfaction was that retailers did not receive

enough information (42%). Some retailers (16%) also said that they only used the Energy Guide and it is not really sufficient to explain energy savings to customers.

**Figure 7-9**  
**Satisfaction with Information from Refrigerator Manufacturers**

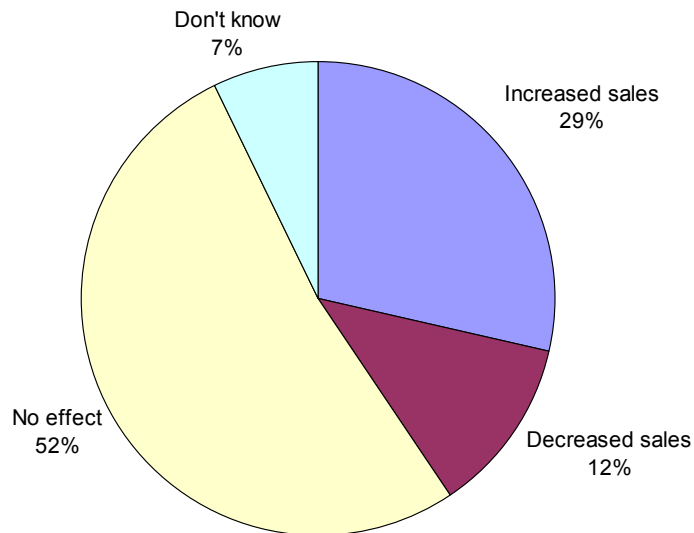


ENERGY STAR™ refrigerator standards changed in April 2008. KEMA asked the participating retailers if they were aware of these changes. Most (55%) of the respondents said that they were aware of these changes. Home improvement stores (60%) were more likely to say they were aware of these changes than membership stores (11%).

KEMA asked the retailers who were aware of the ENERGY STAR™ changes how those changes affected their refrigerator sales (Figure 7-10). Most respondents (52%) said that the changes did not affect their sales. Respondents who reported having difficulty keeping up with Program changes (50%) were more likely than those who did not report difficulty (6%) to say that the ENERGY STAR™ changes decreased their sales ( $p < .05$ ).

**Figure 7-10**  
**Effect of ENERGY STAR™ Changes on Refrigerator Sales**

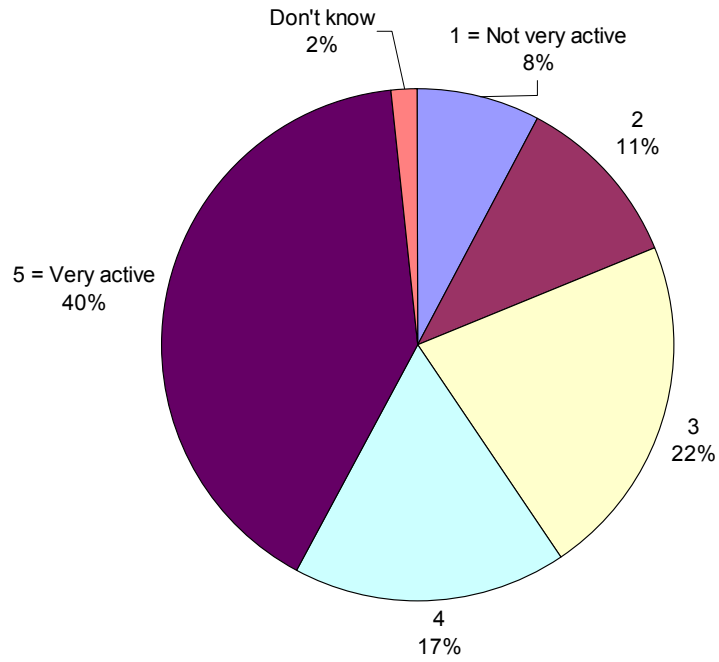
n = 42



Most of the respondents (83%) said that they were aware of the SCE's refrigerator and freezer recycling program. KEMA asked these respondents how actively they promoted the recycling program. Most (57%) said that they actively promoted it (4 or 5 on a 5-point satisfaction scale; Figure 7-11). Several categorical differences in recycling program promotion activity emerged (Table 7-11). Reasons for not actively promoting the recycling program varied (Table 7-12), and the most common responses were that the recycling program did not affect sales (19%) or that the respondent did not know (19%).

**Figure 7-11**  
**Retailers' Promotion of Refrigerator/Freezer Recycling Program**

n = 64





**Table 7-11**  
**Average Recycling Promotion Activity Level by Category**

<b>Category</b>	<b>Sub-Category</b>	<b>Average Promotion Activity</b>
Type of store*	Home Improvement Store (n=57)	4
	Membership Store (n=7)	2
Satisfaction with HEER Program*	Satisfied (4-5 out of 5) (n=59)	4
	Less than Satisfied (1-3) (n=4)	3
Satisfaction with info. from manufacturers*	Satisfied (4-5 out of 5) (n=45)	4
	Less than Satisfied (1-3) (n=18)	3
Ease of keeping up with Program changes*	Easy (4-5 out of 5) (n=51)	4
	Not Easy (1-3) (n=11)	3
Knowledge of Energy Star™ certification*	High (4-5 out of 5) (n=50)	4
	Not High (1-3) (n=13)	3

\*p < .05

**Table 7-12**  
**Reasons Why Retailers Did Not Promote Recycling Program**

<b>Reason</b>	<b>% of Respondents (n = 26)*</b>
Recycling Program doesn't affect sales	19%
Not enough information about recycling Program	15%
Incentive is too small	12%
Marketing budget is too small	12%
Don't promote refrigerators at all	12%
It is up to the customer	12%
Retailer has other options (e.g. 1-penny haul away)	8%
Other (e.g. customers don't qualify)	8%
Don't know	19%

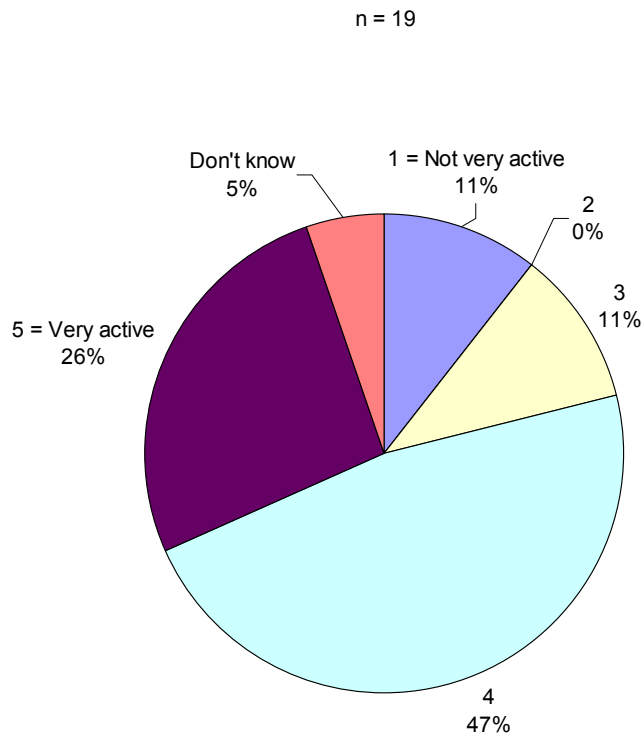
\*Total exceeds 100% because multiple responses were permitted.

### 7.4.2 Room Air Conditioners

Forty-three (54%) of the participating retailers said that they sold room air conditioners. However, only 26 of the respondents indicated that they were the correct person to talk to about room air conditioners (RACs) and answered the survey questions about RACs. Most (79%) of these respondents said that they were aware of the rebates.

Most (73%) of the respondents reported actively promoting the rebates (4 or 5 on a 5-point scale; Figure 7-12). Retailers who were more satisfied with the HEER Program as a whole reported higher promotion activity (M = 4.2) than those who were less than satisfied (M = 2.5;  $p < .05$ ). Likewise, retailers who were satisfied with SCE marketing efforts reported higher promotion activity (M = 4.2) than those who were not satisfied (M = 1;  $p < .05$ ). Reasons for not actively promoting the RAC rebates included that the rebates were too much hassle to process, that they do not affect sales, or that the retailer's marketing budget was too small.

**Figure 7-12**  
**How Actively Retailers Promoted RAC Rebates**



KEMA asked the participating retailers if the \$50 rebate offered by SCE was sufficient to move consumer demand for RACs. Most (85%) of the respondents said that \$50 was enough. If a respondent said that \$50 was not enough, KEMA asked them how much rebate would move consumer demand. The average response from these participants was \$92.

KEMA asked the RAC retailers to estimate the average price difference between an ENERGY-STAR™-rated RAC and a comparable, but less efficient unit. Most (58%) of the retailers said that they did not know. The average price difference provided by those who made an estimate was \$211. However, this average was pulled upwards by two responses that were unusually high: each was over \$600. Based on this range of responses, it appears that retailers did not have a good idea how different ENERGY STAR™ and non-ENERGY-STAR™ RACs cost.

Most (85%) of the RAC retailers reported that they actively promoted ENERGY STAR™ RACs. The most commonly reported marketing strategy (used by 46% of the retailers) was to use signage and promotional materials provided by the manufacturers. Using signage or

promotional materials provided by utilities (27%) and prominent product placement (18%) were also common strategies (Table 7-13).

**Table 7-13**  
**ENERGY STAR™ RAC Promotion Strategies**

<b>Marketing strategy</b>	<b>% Respondents (n = 22)</b>
Use manufacturer signage / promotional materials	46%
Use utility signage / promotional materials	27%
Prominent product positioning	18%
Explain energy savings	9%
Salesmen get extra commission	5%
Same as non-ENERGY STAR™ RACs	5%
Other	23%
Don't know	5%

Note: Total exceeds 100% because multiple responses were permitted.

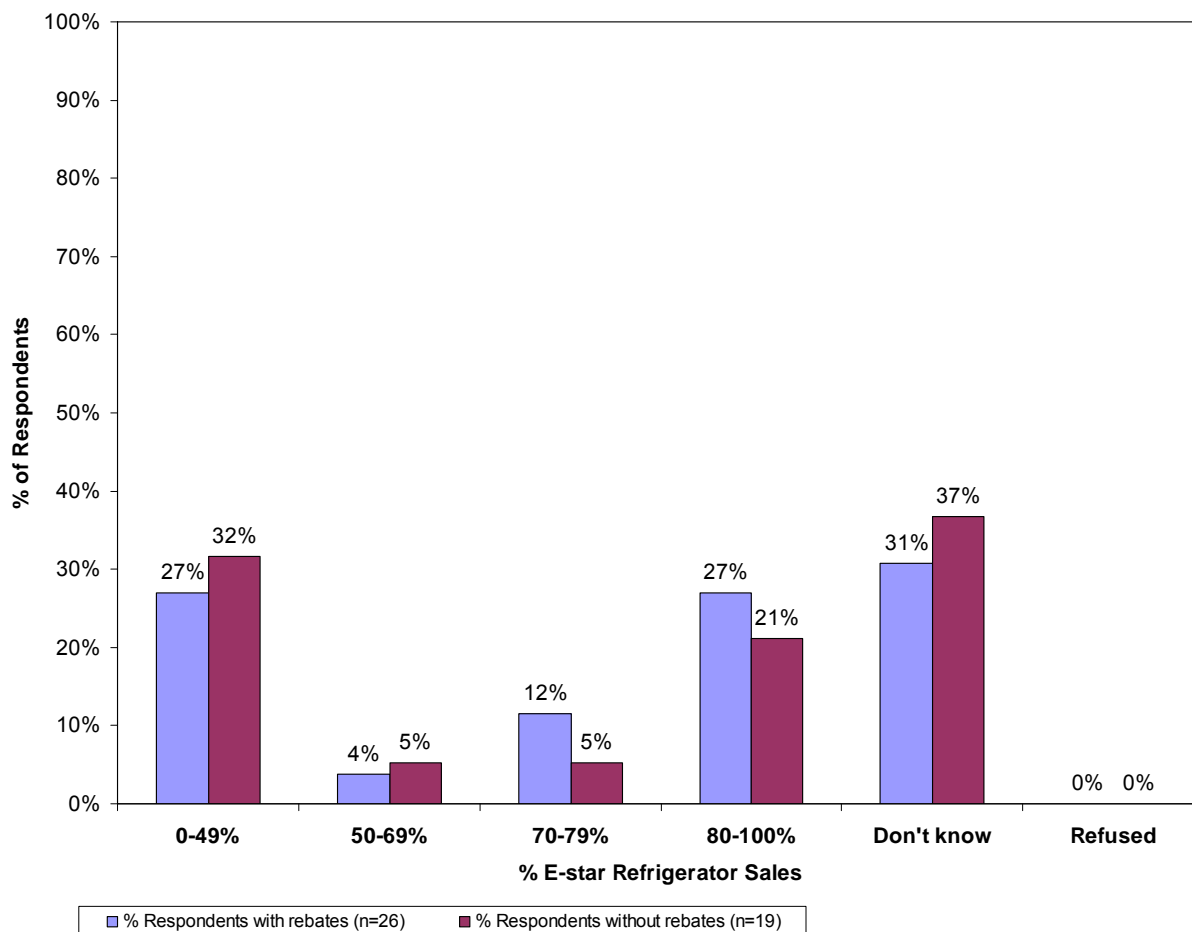
KEMA asked the participating retailers to estimate what percentage of their RAC sales were ENERGY STAR™ qualified. Many (31%) of the respondents said they did not know, 27 percent estimated less than 50 percent, and 27 percent estimated 80 percent or more (Table 7-14). The average estimate was 61 percent of sales.

**Table 7-14**  
**Estimated Percentage of RAC Sales**  
**that were ENERGY-STAR™-Qualified**

<b>Percent of Sales that were Energy Star™</b>	<b>% Respondents (n = 26)</b>
0-49%	27%
50-69%	4%
70-79%	12%
80-89%	0%
90-99%	8%
100%	19%
Don't know	31%

KEMA asked participating retailers to estimate what percentage of their RAC sales would have been ENERGY STAR™ qualified if the Program had not been in place. Thirty-seven percent of the respondents said they did not know, 32 percent estimated less than 50 percent, and 21 percent estimated 80 percent or more (Figure 7-13). The average estimate was 54 percent of sales. Retailers who were satisfied with the information they received from manufacturers made higher estimates (74% of sales) than those who were not satisfied (16%;  $p < .05$ ).

**Figure 7-13**  
**Retailer Estimates of ENERGY STAR™ Qualified RACs**  
**with and without Program**

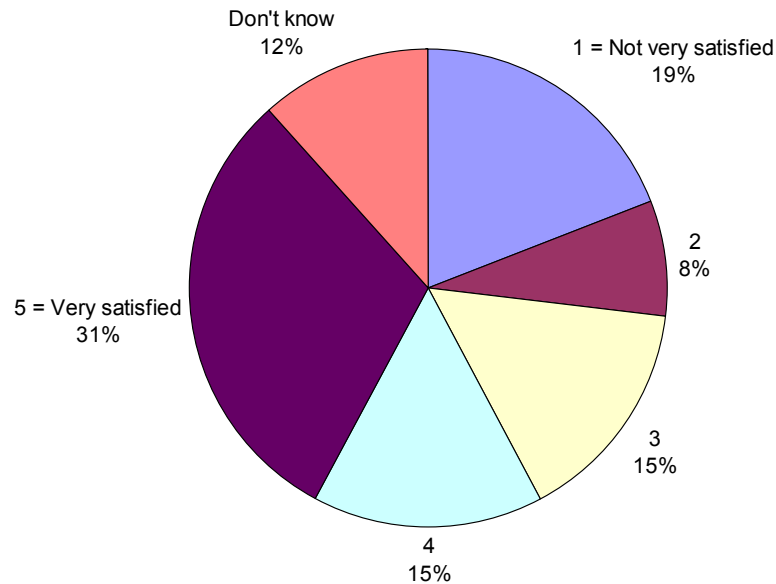


KEMA asked the participating retailers whether there were any barriers to the sale of ENERGY STAR™ RACs. Most (77%) of the respondents did not report any barriers. The three respondents who reported barriers said that they lacked stock, lacked model varieties, and that qualified RACs were large, hard to sell models.

KEMA asked the participating retailers how satisfied they were with the information they received from manufacturers about ENERGY STAR™ RACs. Less than half (46%) of the respondents reported that they were satisfied with this information (4 or 5 on a 5-point satisfaction scale; Figure 7-14). The only cited reason for dissatisfaction was that the retailers do not get enough information from the manufacturers.

**Figure 7-14**  
**Satisfaction with Information from RAC Manufacturers**

n = 26



### 7.4.3 Electric Storage Water Heaters

Twenty-five (32%) of the participating retailers said that they sold electric storage water heaters. However, only nine respondents said that they were the correct person to speak to about electric storage water heaters (WHs) and answered the survey questions about them. Because of the small number of respondents, any results in this section should be interpreted with caution. Most (56%) of these respondents said they were aware of the SCE rebates for energy-efficient units.

KEMA asked the respondents who said they were aware of the rebates how actively they promoted them. Most (80%) of the respondents reported that they actively promoted the rebates (4 or 5 on a 5-point scale). Only one respondent reported not actively promoting the rebates, because there was no market for energy-efficient water heaters.

KEMA asked the participating retailers whether the current \$30 SCE rebate was enough to move consumer demand for energy-efficient water heaters. Less than half (44%) of the respondents said that the rebate level was high enough. If a respondent said that \$30 was not enough, KEMA asked them how much was needed to move consumer demand. The average response was \$60, and most (80%) of these respondents said \$50 was enough.

KEMA asked the participating retailers to estimate the average price different between an energy-efficient (energy factor of 0.93 or higher) water heater and a comparable water heater that was not energy efficient. Many (44%) of the respondents said they did not know. The most common estimate was \$100 (44%), and the average was \$82.

Most (78%) of the respondents reported that they actively promote energy-efficient electric storage water heaters. The most commonly reported promotion strategy was to use signage and promotional materials that were provided by the manufacturer (43%; Table 7-15). Respondents also used signage and promotional materials that were provided by the utilities (14%). Other strategies included advertising, displaying information, and putting the coupons on the aisles.

**Table 7-15**  
**Marketing Strategies for Energy Efficient Water Heaters**

Marketing Strategy	% of Respondents (n = 7)
Use manufacturer signage / promotional materials	43%
Use utility signage / promotional materials	14%
Other	43%
Don't know	14%

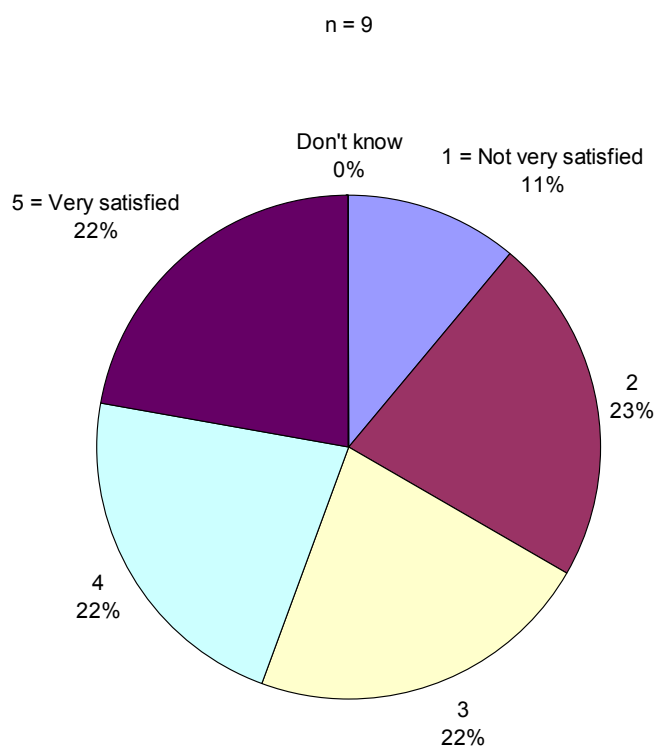
Note: Total exceeds 100% because multiple responses were permitted.

KEMA asked the participating retailers to estimate how much lower their energy-efficient water heater sales would have been without the rebates. Estimates ranged from four to 25 percent lower, with an average estimate of 14 percent. The only reported barrier to the sale of energy-efficient water heaters was that not many people qualify for the rebate.



KEMA asked the participating retailers how satisfied they were with the information they received from manufacturers about energy-efficient water heaters. Less than half (44%) of the respondents reported that they were satisfied with the information they received from manufacturers (4 or 5 on a 5-point satisfaction scale; Figure 7-15). Most of the dissatisfied respondents said they never talk to the vendor about this kind of information.

**Figure 7-15**  
**Satisfaction with Manufacturer Information about**  
**Energy-Efficient Water Heaters**

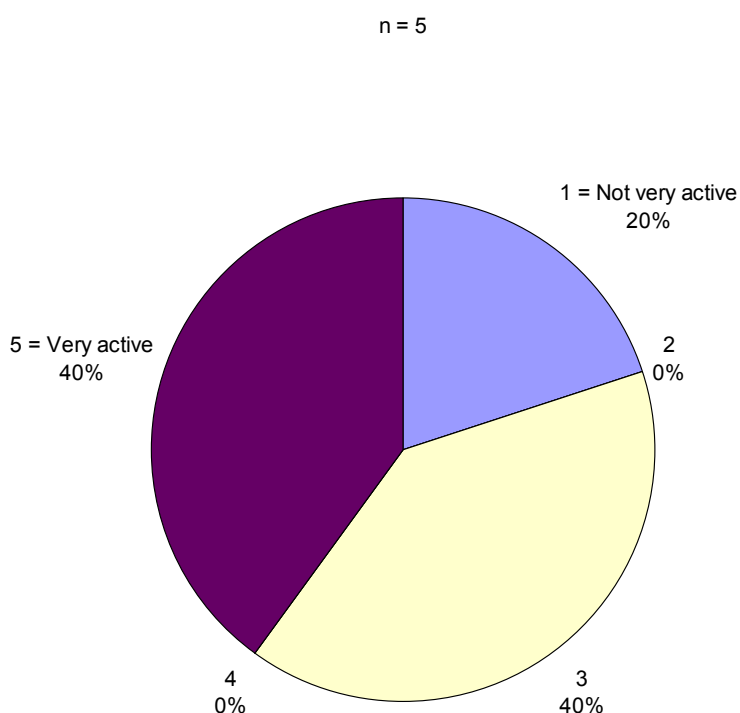


#### 7.4.4 Whole House Fans

Twenty-four (30%) of the participating retailers reported that they sold whole house fans. However, only 12 of the respondents said that they were the correct person to talk to about whole house fans and answered the survey questions about them. Because of the small number of respondents, any results in this section should be interpreted with caution.

Fewer than half of the respondents (42%) said they were aware of the SCE rebates for whole house fans. KEMA asked the respondents who said they were aware of the rebates how actively they promoted them. Forty percent of the respondents said that they actively promoted the rebates (4 or 5 on a 5-point scale; Figure 7-16). Respondents who did not actively promote the rebates reported that the rebates were too much hassle, did not affect sales, or were too small to bother with.

**Figure 7-16**  
**Participating Retailer Promotion of Whole House Fan Rebates**



KEMA asked the retailers who sold whole house fans whether the \$50 SCE rebate was sufficient to move consumer demand. Most (67%) of the respondents said that it was. KEMA asked any respondent who did not think \$50 was sufficient what rebate level would be. The average response was \$92.

Seventy-five percent of the retailers who sold whole house fans reported that they actively marketed them. The most common marketing strategy was to use signage and promotional materials from the manufacturers (56%; Table 7-16).

**Table 7-16  
Marketing Strategies for Whole House Fans**

Marketing Strategy	% of Respondents (n = 9)
Use manufacturer signage / promotional materials	56%
Use utility signage / promotional materials	11%
Salesmen get extra commission	11%
Other	22%
Don't know	11%

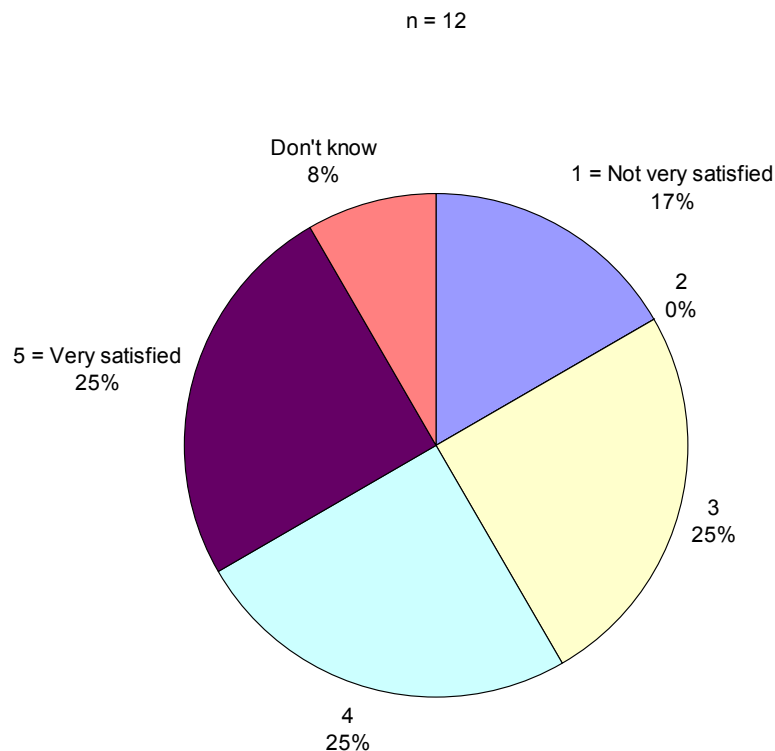
Note: Total exceeds 100% because multiple responses were permitted.

KEMA asked the retailers who were aware of the whole house fan rebates to estimate how much lower their sales of whole house fans would have been if the rebates were not available. On average, these respondents estimated that their sales would have been 60 percent lower without the rebates.

Only one (8%) of the respondents reported any barriers to the sale of whole house fans. This respondent said that the inconvenience of installation of whole house fans was a barrier to sales.

KEMA asked the retailers who sold whole house fans how satisfied they were with the information they received from manufacturers. Half (50%) of the respondents reported that they were satisfied with this information (4 or 5 on a 5-point scale; Figure 7-17). The respondents who were not satisfied said that they did not get enough information or product support from the manufacturers.

**Figure 7-17**  
**Participating Retailer Satisfaction with**  
**Whole House Fan Manufacturer Information**



### 7.4.5 Evaporative Coolers

Sixteen (20%) of the participating retailers reported that they sold energy-efficient ducted evaporative coolers. However, only six of the respondents indicated that they were the correct person to talk to about evaporative coolers and answered the survey questions about them. Because of the small number of respondents, any results in this section should be interpreted with caution. Two (33%) of these respondents said that they were aware of SCE’s rebates for evaporative coolers.

KEMA asked these two respondents how actively they promoted the rebates for evaporative coolers. One respondent reported that they actively promoted the rebates (4 or 5 on a 5-point scale where 1 = “not very active” and 5 = “very active”). The other respondent said that their store does not sell ducted evaporative coolers.

All six of the respondents who KEMA spoke to about evaporative coolers said that they thought the \$300 to \$600 SCE rebates were sufficient to move consumer demand. Three (50%) of the respondents said that they didn't know the average price difference between energy-efficient and standard-efficiency evaporative coolers. The other three (50%) respondents said \$200.

Three of the six respondents reported that their stores actively promoted energy-efficient ducted evaporative coolers. All three said that their marketing strategy was to use signage and promotional materials provided by the manufacturers.

KEMA asked the respondents to estimate how much lower their sales of energy-efficient evaporative coolers would have been without the rebates. Only two respondents answered. One respondent said 10 percent. The other said that he/she didn't know.

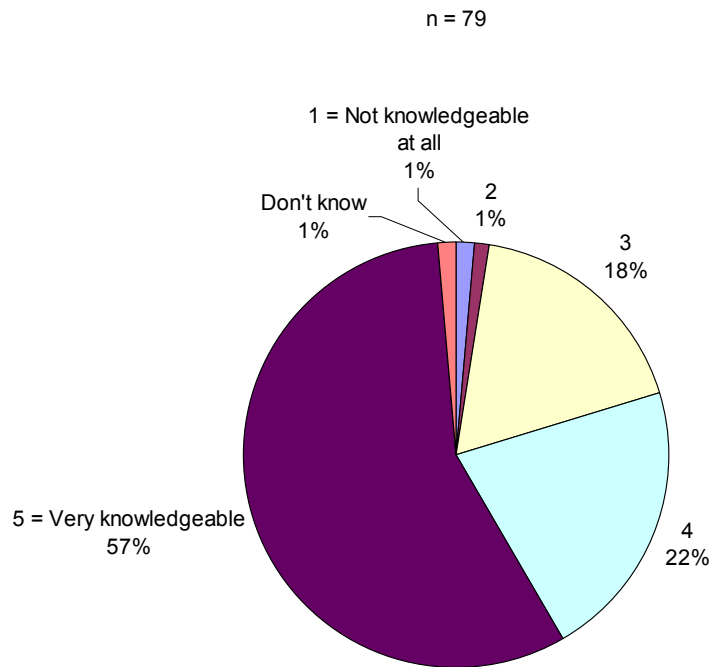
Only one of the six respondents reported that there were barriers to sales of energy-efficient evaporative coolers. This respondent said that they did not sell them at his location.

KEMA asked the participating retailers how satisfied they were with the information they received from manufacturers about energy-efficient evaporative coolers. Only one of the six (17%) respondents said he/she was satisfied (4 or 5 on a 5-point scale where 1 = "not very satisfied" and 5 = "very satisfied"). Reasons for dissatisfaction included lack of information, that they did not know about the rebates, and that they receive seasonal items.

## **7.5 Sales Staff Knowledge/Training, Pros/Cons of Consumer Electronic Rebates**

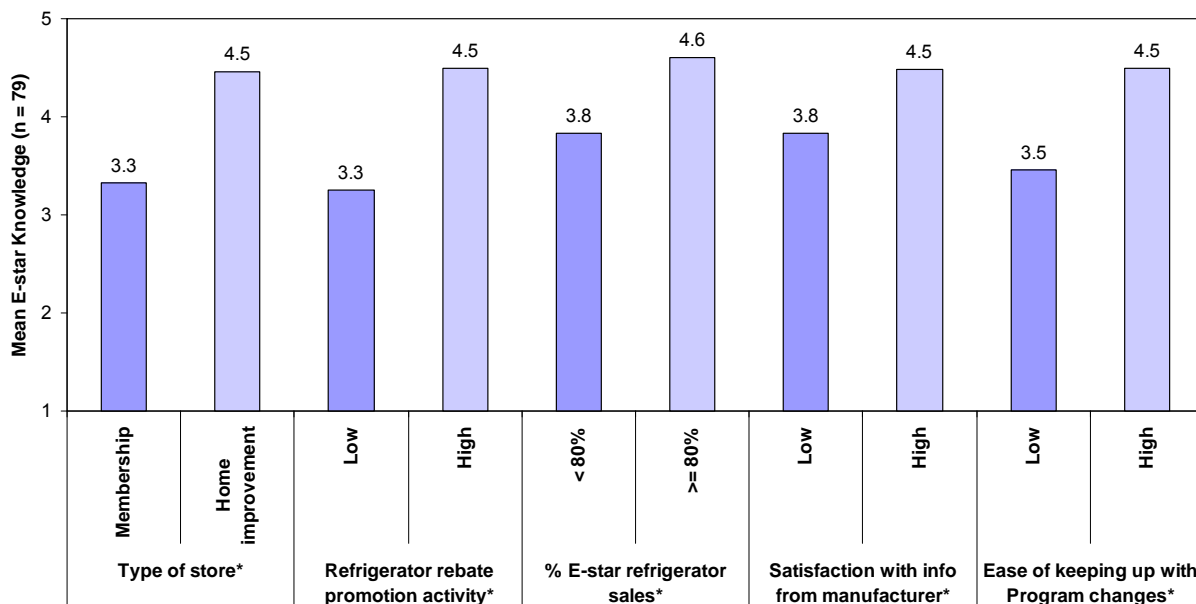
KEMA asked the participating retailers how knowledgeable their appliance sales staff were about what ENERGY STAR™ certification means. Most of the respondents (79%) said that their sales staff were knowledgeable (4 or 5 on a 5-point scale where 1 = "not knowledgeable at all" to 5 = "very knowledgeable"; Figure 7-18).

**Figure 7-18**  
**Sales Staff Knowledge of**  
**Meaning of ENERGY STAR™ Certification**



There were several categorical differences in staff knowledge about ENERGY STAR™ certification (Figure 7-19). Home improvement stores, stores that had high rebate promotion activity, stores with high volumes of ENERGY STAR™ refrigerator sales (80% or more), stores that were satisfied with information from manufacturers (4 or 5 on a 5-point scale), and stores that found it easy to keep up with Program changes (4 or 5 on a 5-point scale) all reported higher average levels of knowledge about ENERGY STAR™ certification than their respective counterparts.

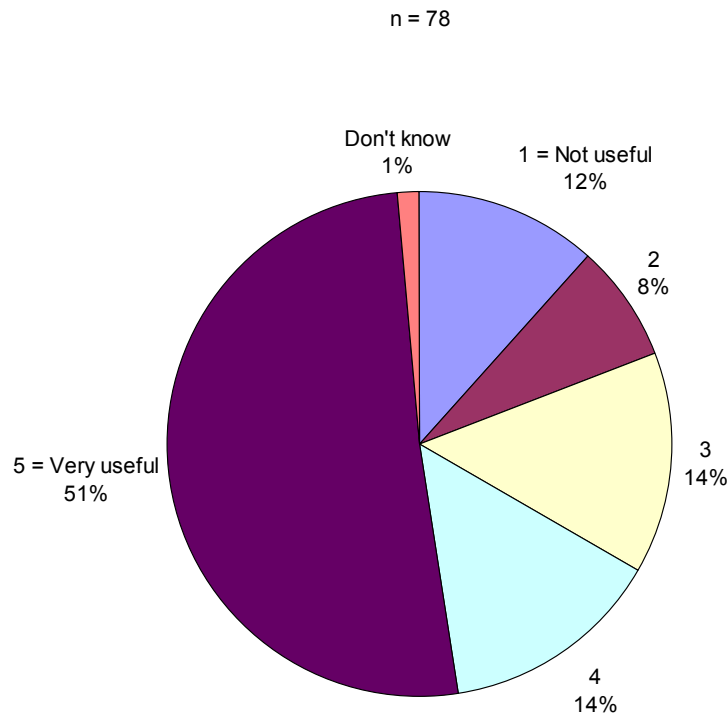
**Figure 7-19**  
**Mean Sales Staff Knowledge of ENERGY STAR™ Certification**  
**by Category**



\*p < .05

KEMA also asked the participating retailers to what extent additional training about ENERGY STAR™ would help their sales staff sell energy-efficient appliances. Most (65%) of the respondents said that additional training would be useful (4 or 5 on a 5-point scale from 1 = “not useful” to 5 = “very useful”; Figure 7-20). If a respondent said that additional training would not be useful (3 or less on the 5-point scale), KEMA asked them why. Most (54%) of these respondents indicated that their sales staff were already educated, and some (12%) said that the public is already educated. Many (31%) reported some other reason, such as that they need more written materials or that customers do not know what they want.

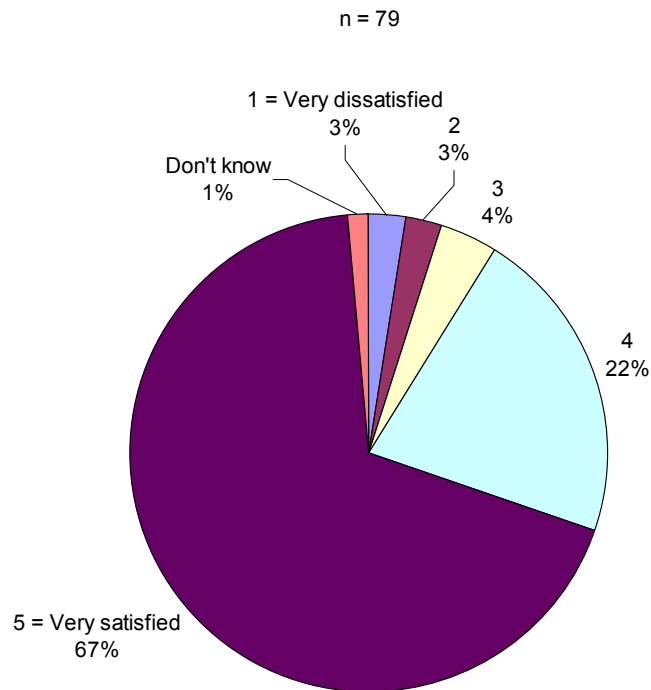
**Figure 7-20**  
**Usefulness of Additional Training About ENERGY STAR™**



KEMA asked the participating retailers how satisfied they were with the availability of appliances that qualified for rebates. The large majority (89%) of respondents said they were satisfied (4 or 5 on a 5-point satisfaction scale; Figure 7-21). Retailers with high volumes of ENERGY STAR™ refrigerator sales (80% or more of sales were ENERGY STAR™) were more satisfied (M = 4.7) than those with lesser volumes of ENERGY STAR™ refrigerator sales (M = 4.3,  $p < .05$ ). Retailers who reported more ease at keeping up with Program changes (4 or 5 on a 5-point scale) were more satisfied (M = 4.7) than those who had difficulty keeping up with Program changes (M = 3.9,  $p < .05$ ). Retailers who were satisfied with SCE's marketing of the Program (4 or 5 on a 5-point satisfaction scale) were more satisfied with the availability of qualifying appliances (M = 4.7) than retailers who were dissatisfied with SCE's marketing efforts (M = 3.9,  $p < .05$ ).



**Figure 7-21**  
**Participating Retailer Satisfaction with Availability of Qualifying Appliances**



Finally, KEMA asked the participating retailers to identify advantages and disadvantages of extending rebates to some consumer electronics. Forty-six (58%) of the respondents provided an answer. The most common answer was that rebates would increase sales (39%). Other answers varied (Table 7-17). Some retailers made suggestions for how to implement consumer electronics rebates. One retailer said to keep them simple, and another suggested point-of-sale rebates. Other suggestions included promoting the rebates and sending flyers to the stores. Only three respondents mentioned any potential disadvantages. One said that the rebates had the potential to be confusing. Another said that a potential disadvantage would be if the consumer electronics rebate took money away from appliance rebates. Finally, one respondent suggested that if consumers had to return the electronics, it might be difficult to get the rebate money back.

**Table 7-17**  
**Potential Advantages of Consumer Electronics Rebates**

<b>Advantage</b>	<b>% of Respondents (n = 46)</b>
Increase sales	39%
Save energy	15%
General positive statement	11%
Save money	11%
Increase consumer understanding of energy efficiency	4%
Other	24%

Note: Total exceeds 100% because multiple responses were permitted.

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## 8 Detailed Findings from the Survey of Swimming Pool Contractors and Retailers Participating in the HEER Program

This section discusses, in much more detail, the findings that are summarized in the Executive Summary above. The sections that make up these detailed findings include:

- Methodology,
- Characteristics of the pool contractors/retailers,
- Awareness of the rebate program and its marketing efforts,
- General promotion of energy-efficient pool pumps,
- Training opportunities, and
- Satisfaction with program processes.

### 8.1 Background and Purpose

An important purpose of the participating pool contractor/retailer survey was to assess participant satisfaction with the pool equipment rebate part of the 2006-2008 HEER Program. The 2006-2008 HEER Program offered \$200 rebates for SCE residential customers who had a two-speed or variable speed pool pump installed to replace an existing single-speed pump. The Program also offered an additional \$100 rebate to contractors who installed variable-speed pool pumps. In addition to asking the pool contractors/retailers about their satisfaction with the Program processes, we asked them about their awareness of the Program marketing efforts, how they promote energy-efficient pool pumps, and whether they were aware of any training opportunities concerning energy-efficient pool practices.

Another objective of the pool contractor/retailer survey was to collect information on SCE residential pools and pool maintenance practices. KEMA also administered the survey to contractors who participated in PG&E's pool rebate program. Results from the PG&E contractor/retailer survey are included in the charts and tables for comparison. The results of an

on-site monitoring program of 152 pools conducted by SCE (ETCC report) are also included in portions of this report.

## 8.2 Methodology

The findings in this report come primarily from an in-depth survey of a stratified random sample of 30 participating SCE pool contractors/retailers. These included contractors who had signed up to be eligible for a \$100 SCE upstream rebate for installing energy-efficient pool pumps as well pool retailers who were offering SCE's instant point-of-sale rebates for energy-efficient pool pumps.

Our sampling plan included the following components:

- *Sampling the Leslie's Pool Supply stores:* About two thirds of the HEER-rebated pool pumps were sold through 136 stores belonging to a single pool retailer – Leslie's Pool Supply. However we chose not to allocate a proportionate number of sample points (e.g. 20 out of the 30) to Leslie's because we did not want to complete too many surveys with store managers that all worked for the same retailer. We were uncertain how much variation there would be in their responses and SCE wanted to hear the perspectives of participating pool installation contractors as well. After consulting with SCE, we decided to allocate 15 of the 30 sample points to the 136 Leslie's Pool Supply stores and allocated the remainder of the sample to other contractors and retailers. Because we had no information on the relative sales volumes or rebate volumes of the Leslie's stores we surveyed a random sample of them.
- *Sampling the other pool contractors/retailers:* As noted, we decided to allocate 15 of the 30 sample points to the participating pool retailers/contractors that were not owned by Leslie's Pool Supply. We divided this group into three strata:
  - *Stratum 1:* Four sample points were allocated to the 13 contractors/retailers who each accounted for at least two percent of the 2006-2008 SCE pool pump rebates that were not offered through Leslie's Pool Supply. Together these retailers accounted for about 15 percent of the participating contractors/retailers and 54 percent of the SCE pool pump rebates that were not offered through Leslie's Pool Supply.
  - *Stratum 2:* Six sample points were allocated to the 35 contractors/retailers who each accounted for anywhere from 0.9 to 1.9 percent of the 2006-2008 SCE pool

pump rebates that were not offered through Leslie's Pool Supply. Together these retailers accounted for about 44 percent of the SCE pool pump rebates that were not offered through Leslie's Pool Supply.

- *Stratum 3*: The remaining five sample points were allocated to the 40 contractors/retailers who accounted for 0 to 0.5 percent of the 2006-2008 SCE pool pump rebates that were not offered through Leslie's Pool Supply. Together these retailers accounted for about 34 percent of the SCE pool pump rebates that were not offered through Leslie's Pool Supply.

Trained KEMA staff administered this survey during the September/October 2008 period. During this period, KEMA also administered the survey to contractors who participated in Pacific Gas and Electric's (PG&E's) pool rebate program. Results from the PG&E contractor/retailer survey are included in the charts and tables for comparison. The results of a recent on-site monitoring program of 152 pools conducted by SCE (ETCC report) are also included in portions of this report. SCE provided KEMA with a list of these participating pool contractors/retailers and we completed surveys with a random sample of 30 of them. In addition to this survey we also collected information about the HEER Program efforts to promote the pool pump rebates from interviews we conducted with HEER Program staff in March 2008 and November 2008. We also reviewed program documents such as the rebate application forms and the participation agreement for pool contractors/retailers seeking the \$100 upstream rebate.

## **8.3 Characteristics of the Pool Contractors/Retailers**

KEMA asked the contractors/retailers a series of background questions to get a basic understanding of their business structure and practices.

### **8.3.1 Company Size**

KEMA asked the pool contractors/retailers how many full-time employees they had. We then used these employee numbers to categorize the companies into different size groups. Table 8-1 shows that among the participating SCE pool contractors/retailers, there was a fairly normal distribution of small, medium, and large companies. Most of the companies are medium-sized, and there are equal numbers of small- and large-sized companies. The average number of full-time employees per contractor/retailer was 5.6, with a median of 3 employees.

KEMA also asked the contractors/retailers about the number of part-time employees. Almost half (43%) of the companies had no part-time employees. Overall the average number of part-time employees was 1.2 with a median of one.

**Table 8-1  
PG&E/SCE Surveyed Pool Contractors/Retailers  
by # Full-Time Employees**

Company size by # full-time employees	PG&E participating contractors/retailers (n=29)	PG&E general population contractors/retailers (n=31)	SCE participating contractors/retailers (n=30)
Small (1)	28%	35%	17%
Medium (2-9)	41%	42%	63%
Large (10+)	31%	16%	17%
Refused/ Missing data	0%	6%	3%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Another way to measure company size is through the estimated number of pools that pool contractors/retailers service on an annual basis. Table 8-2 shows that SCE participating contractors/retailers include a higher proportion of medium than large companies. Across all of the SCE contractors/retailers, the average number of pools serviced annually was 518 pools with a median of 200 pools.

**Table 8-2  
PG&E/SCE Pool Contractors/Retailers  
by # Pools Service Annually**

Company size by # of pools serviced annually	PG&E participating contractors/retailers (n=29)	PG&E general population contractors/retailers (n=31)	SCE participating contractors/retailers (n=30)
Small (0-99)	24%	32%	10%
Medium (100-499)	38%	42%	47%
Large (500+)	21%	19%	40%
Don't service pools	10%	6%	0%
Refused/ Don't know	7%	0%	3%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

### 8.3.2 Company Services and Qualifications

To better understand the types of pool contractors/retailers we were interviewing, we also asked a wide variety of questions about the types of pool services they offer, the types of markets they serve, and their qualifications. Table 8-3 summarizes the responses to these questions. It shows a relatively large retailer representation in the SCE participant sample. This was likely

due to the fact that the program offers point-of-sale pool pump rebates (the PG&E pool rebate program does not) and causes the program to recruit and attract more pool retailers. Due to this higher retailer representation, the SCE participants are less likely to do in-field pool services such as regular pool service and maintenance, pool cleaning, and pool construction. Yet these SCE pool retailers do install pool pumps and perform maintenance on an as-needed basis.

**Table 8-3  
PG&E/SCE Pool Contractors/Retailers  
Company Services and Qualifications**

Company services, qualifications	PG&E participating contractors/retailers (n=29)	PG&E general population contractors/retailers (n=31)	SCE participating contractors/retailers (n=30)
<b>Do pool service, maintenance?</b>			
Yes, on regular basis	28%	16%	7%
Yes, both on regular/as needed basis	31%	32%	33%
Yes, on as-needed basis	24%	45%	60%
No	17%	6%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Do pool cleanings?</b>			
Yes, on regular basis	52%	65%	27%
Yes, both on regular/as needed basis	10%	6%	10%
Yes, on as-needed basis	0%	3%	0%
No	38%	26%	63%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Install/replace pool pumps?</b>			
Yes	97%	97%	100%
No	3%	3%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Avg. estimated % of pump installations that are residential	95%	96%	92%
<b>Build swimming pools?</b>			
Yes	41%	68%	33%
No	59%	32%	67%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Are you a C53 licensed contractor?</b>			
Yes	76%	68%	33%
No	24%	32%	67%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Have a retail store or showroom?</b>			
Yes	28%	23%	70%
No	72%	77%	30%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Avg. estimated % of retail pump sales that are residential	99%	95%	90%

KEMA also asked these contractors/retailers if they belong to an organization of pool professionals or builders. Thirty-three percent of the SCE participating contractors/retailers claimed that that they do. This modest figure was once again likely due to the higher proportion of pool retailers – with many of these retailers belonging to a single chain, Leslie’s Pool Supplies. When asked to name the trade organization they belonged to, the majority cited either the Independent Pool and Spa Association or the Association of Pool and Spa Professionals.



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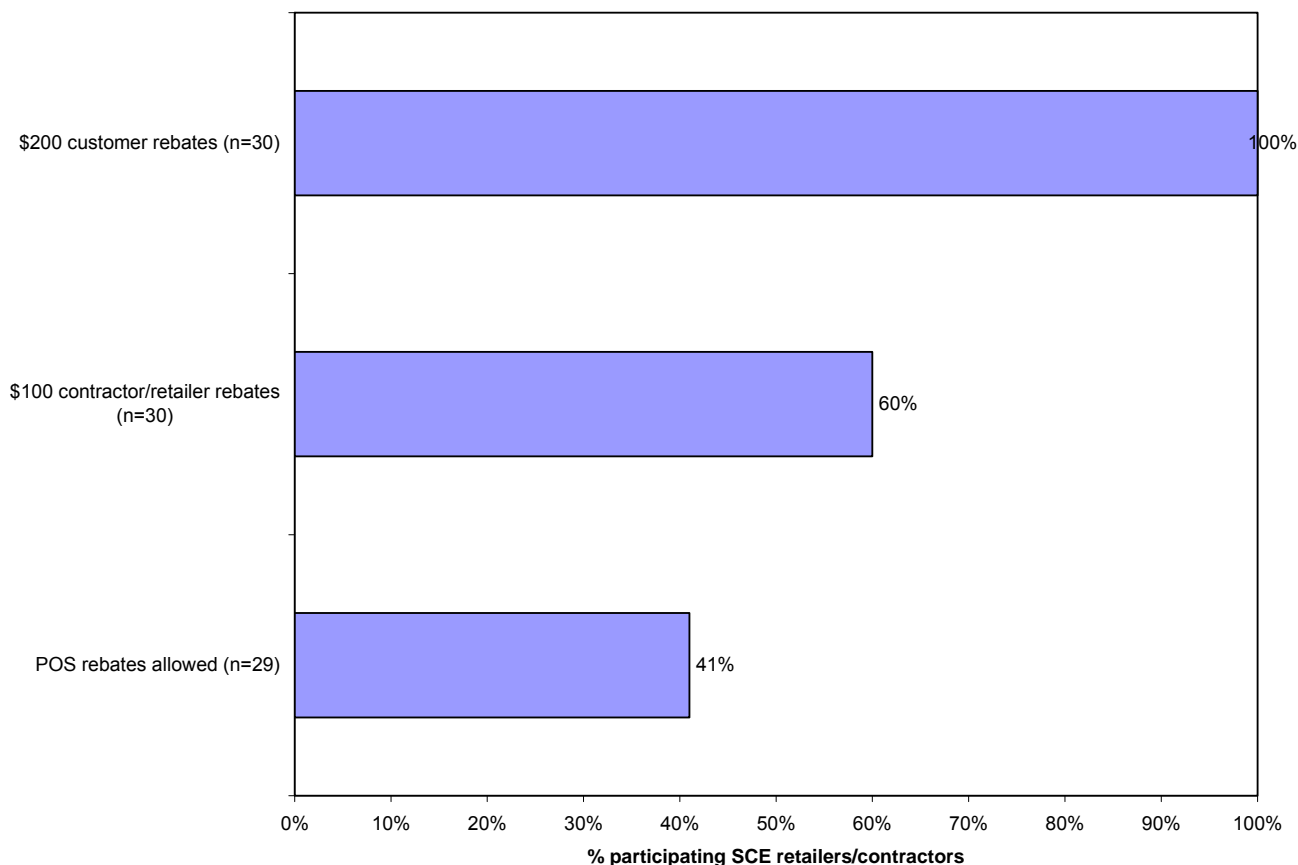
## **8.4 Awareness of the Rebate Program and Its Marketing Efforts**

This section discusses to what degree pool contractors/retailers were aware of the utility pool rebates and the rebate program's promotional efforts and resources.

### **8.4.1 Awareness of the rebates**

In the survey of pool contractors/retailers, KEMA asked them whether they were aware of SCE's rebates for multi-speed pool pumps. As Figure 8-1 shows, all of the participating contractors/retailers claimed awareness of SCE's \$200 customer rebate for multi-speed pumps. Only 60 percent of the contractor/retailers claimed awareness of SCE's \$100 contractor/retailer rebate for multi-speed pool pumps. Only 41 percent of the contractors/retailers said that they realized a point-of-sale rebate was allowed. KEMA asked SCE participating contractors/retailers how they first became aware of the rebates. The most cited source of information about the rebates was the corporate office, probably because many of the respondents were from the same company (Leslie's). Other common sources of information about the rebates included manufacturers and SCE.

**Figure 8-1**  
**Percent of Pool Contractors/Retailers**  
**Aware of Rebates**

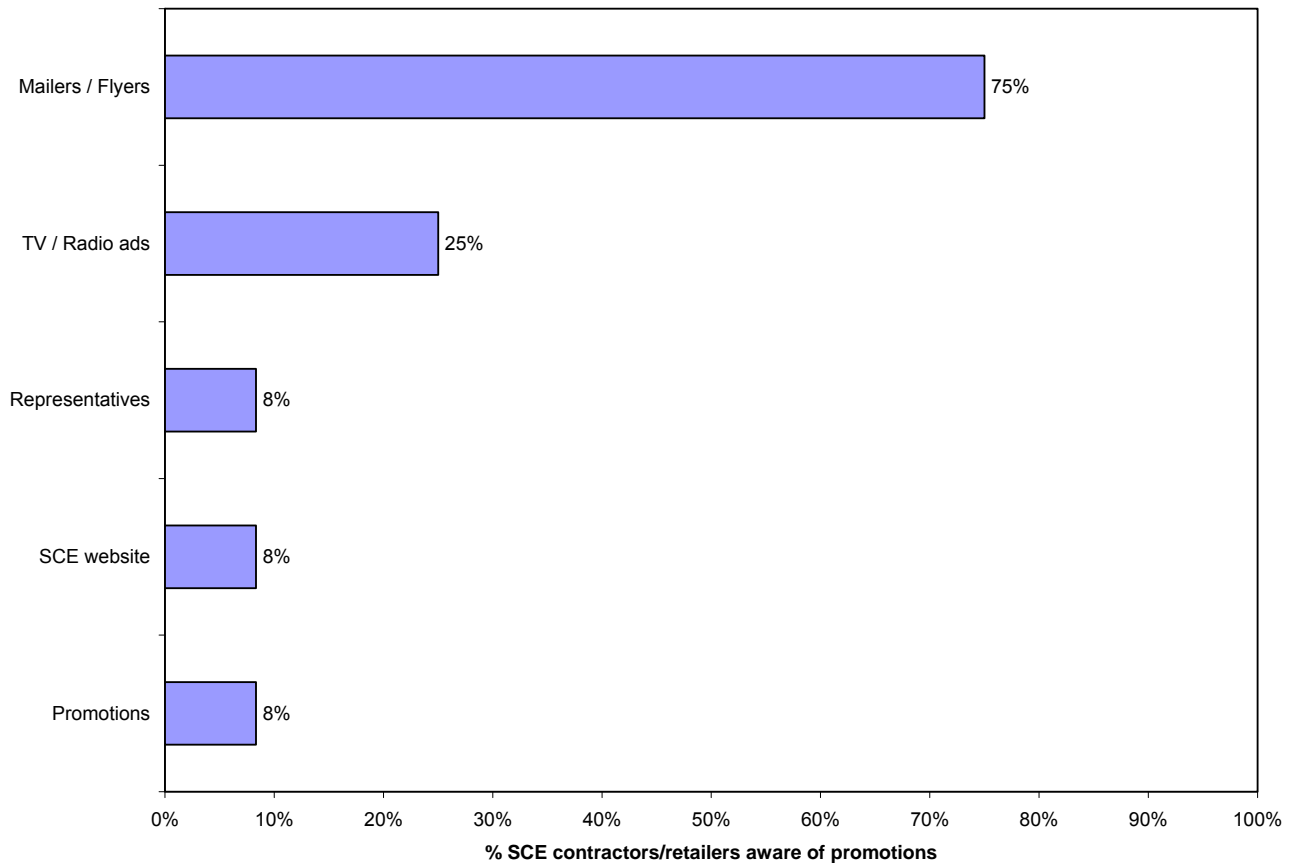


### 8.4.2 Awareness of program marketing efforts

To determine the effectiveness of program marketing for multi-speed pool pump motors, we asked the participating pool contractors/retailers if they were aware of anything that SCE was doing to promote greater use of multi-speed pool pump motors. Forty percent of the participating contractors/retailers (n=30) claimed to be aware of such promotional efforts.

We then asked the contractors/retailers who claimed awareness to name the promotional and education activities they were aware of. They most commonly named mailers or flyers (75%), followed by TV or radio advertising (25%). Promotions, the SCE website, and representatives were also each named by eight percent of the contractors/retailers who claimed awareness of promotional activities (Figure 8-2).

**Figure 8-2**  
**SCE Pool Rebate Promotions**  
**Recalled by Contractors/Retailers**



KEMA inquired whether the participating contractors/retailers were aware that some utilities provide point-of-purchase signs for pool pump retailers that advertise the utility rebate for energy efficient models. Half of the SCE participating contractors/retailers said they knew of the signage. This awareness level is likely due to the fact that SCE has a point-of-sale rebate program for pool pumps.

## 8.5 General Promotion of Energy-Efficient Pool Pumps

In addition to finding out how aware pool contractors/retailers were of the pool rebate program offerings, we were also interested in knowing more about how they promote energy-efficient pool pumps in general. We explored with these contractors/retailers the key factors that influenced the energy efficiency of the pool pumps they install. We also found out whether they

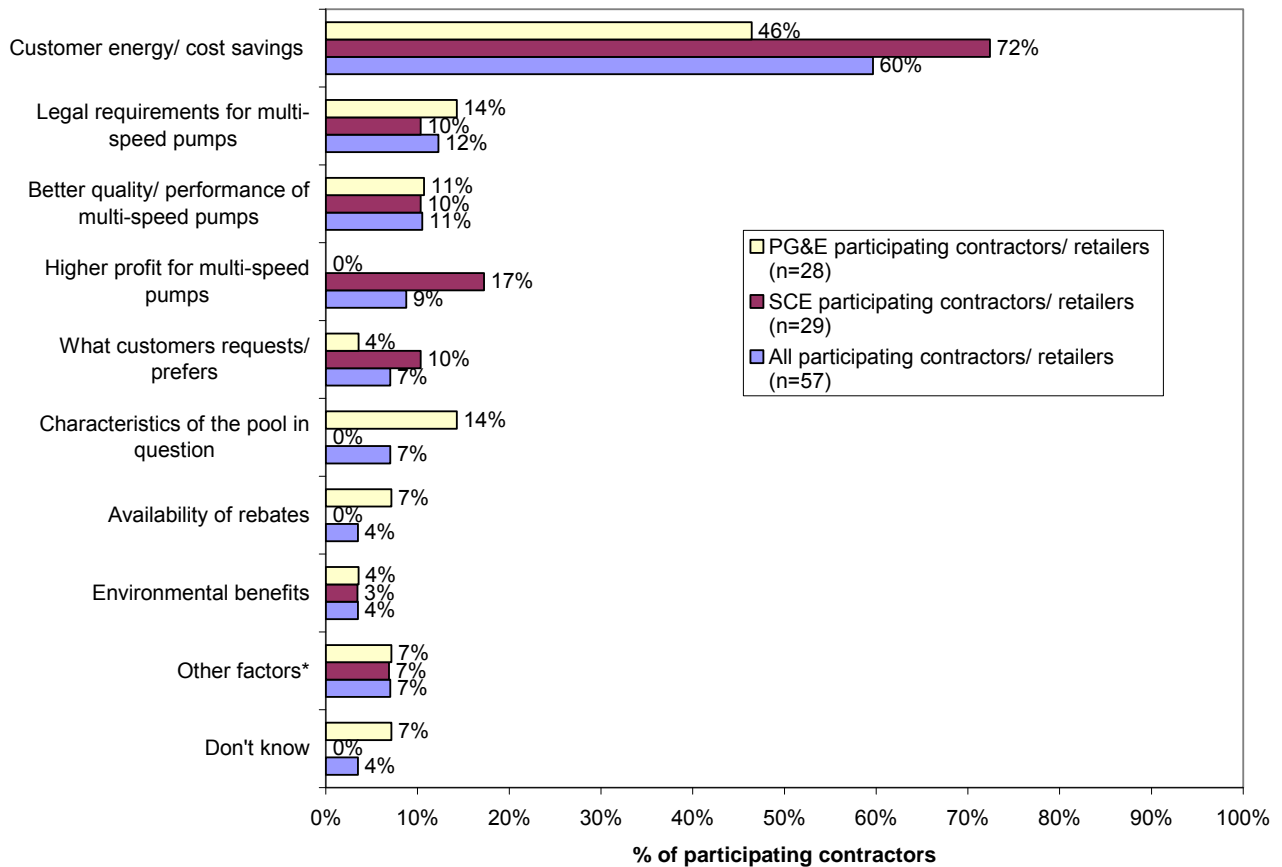
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promote multi-speed pool pumps differently than single-speed pumps and which promotional practices were more effective than others.

### **8.5.1 Key Factors Influencing the Energy Efficiency of Pool Pumps**

We asked all the pool contractors/retailers what were the key factors that influenced the energy efficiency of the pool pumps they installed. For the participating contractors/retailers the most-cited factors were the energy or cost savings that customers could potentially receive by getting a multi-speed pool pump. Nearly three quarters (72%) of the SCE participating contractor/retailers cited these as factors in their decision-making (Figure 8-3). Other less-cited factors included higher profit margins for multi-speed pumps, legal requirements for multi-speed pumps (California's Title 20 requires multi-speeds for pump motors over 1 horsepower), claims of better quality or performance for multi-speed pumps (e.g., greater longevity, quieter performance than single-speed pumps), customer preferences, the particular characteristics of the pool in question, rebates, and environmental benefits.

**Figure 8-3**  
**Key Factors Influencing the Energy Efficiency**  
**of Pool Pumps Installed by**  
**Participating PG&E/SCE Contractors/Retailers**



Note: \*Other factors include the desire of the contractor/retailer to separate itself from its competition, the requirements of the product manufacturer, price, and the contractor's claimed knowledge of what's in the best interest of the customer.

### 8.5.2 Pool Pump Promotional Practices

KEMA asked only those participants who had retail store or showroom a number of questions about their pool pump promotional practices. We asked all 21 SCE participating pool retailers whether multi-speed pool pump motors were marketed or promoted any differently than other pool pump motors they sell. Fourteen of them (67%) said that they were. They mentioned pool pump signs and displays and brochures as ways the promoted these multi-speed pool pumps. When asked about their promotions for pool pumps in general, they cited similar methods as for the multi-speed pumps (e.g., signs and displays), as well as some new ones (customer

mailings). The similarity in the promotional methods for multi-speed pumps and single-speed pumps suggest that the differences may lie in messaging, although the surveys did not probe for how specifically the sales pitches and point-of-purchase signs for multi-speed pumps differed from those for single-speed pumps.

To learn more about the timing of these promotions, we also asked the 21 SCE participating pool pump retailers who said they had marketing strategies for pool pumps whether their promotions were seasonal or tied to other promotions such as the availability of utility or manufacturer rebates. Eight of the 21 (38%) said they did seasonal promotions and 11 of the 21 (52%) said that they tied their promotions to utility or manufacturing rebates.

We asked the twenty-one SCE participating pool pump retailers about the most effective strategies for promoting energy efficient pool pumps. They pointed to direct mail, in-store promotions and demonstrations – especially those showing the cost/energy savings from multi-speed pumps, and conversations with customers. The relatively large number of participating pool retailers likely was because the SCE pool pump rebate program had a point-of-sale rebate component. The SCE pool retailers made particular mention of the rebates as part of an effective promotional strategy.

We were also interested in learning which marketing strategies that pool retailers or the utilities might want to avoid. So we asked the pool pump retailers which approaches for promoting energy-efficient pool pumps had proved less effective. The most frequently-cited (four respondents) approach – although it should be more accurately described as part of the full disclosure process rather than as part of a sale pitch -- was mentioning to customers that the two-speed pool pumps required a digital timer which raised the cost of the pumps. Other less effective promotional approaches – each cited by only a single respondent -- included aggressive sales pitches and mail-in rebates (in terms of being inferior to the instant rebates).

## **8.6 Training Opportunities**

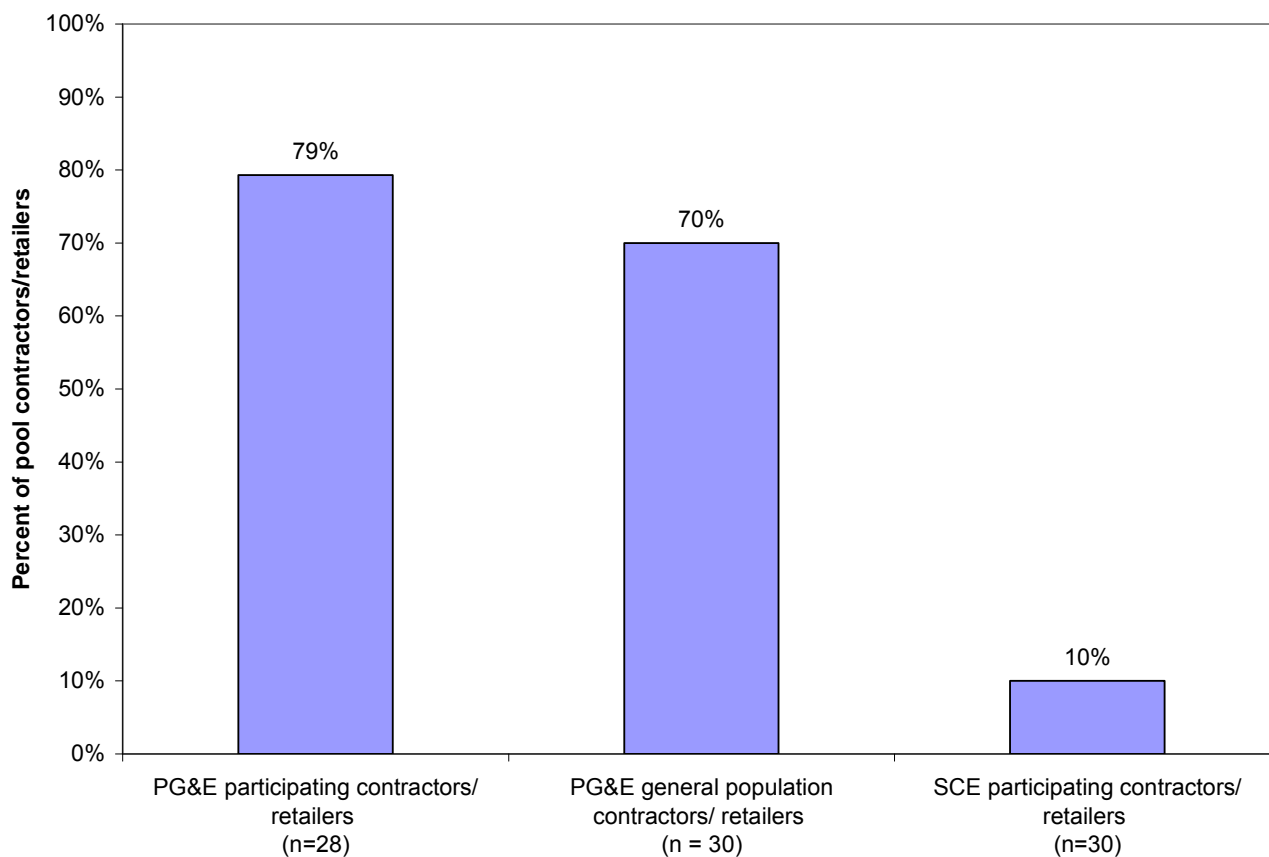
This section discusses how aware the contractors/retailers were of the energy-efficient pool pump training opportunities, to what extent they participated in these trainings or seminars, and whether they found these trainings useful. It also explores why certain contractors/retailers have not participated in these trainings and whether those who were unaware of these trainings have any interest in participating in them.

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### **8.6.1 Awareness of Training Opportunities**

We asked all the pool contractors/retailers whether they were aware of any education and training events or demonstrations that were offered by California utilities regarding high efficiency pool pumps. Only ten percent of SCE's participating contractors/retailers were aware of the education and training events offered by California utilities (Figure 8-4). There are two likely explanations for this relatively low figure. First, SCE has not offered energy-efficiency training courses for pool pumps in recent years. Second other utilities such as PG&E require that contractors must take a PG&E training course to be eligible for upstream rebates while SCE does not, so this likely increases contractor awareness of these rebates in other jurisdictions. As a historical comparison, in early 2007 we surveyed 24 participating pool contractors from the service territories of all three California IOUs and only a third of these were aware the education and training events offered by the California IOUs.

**Figure 8-4**  
**Awareness of Utility Pool Efficiency Training Opportunities**  
**PG&E/SCE Participating Contractors/Retailers**



KEMA asked the 27 contractors/retailers who were not aware of training opportunities if they were interested in training. Most (59%) of these contractors/retailers indicated interest in training.

## 8.7 Satisfaction with Program Processes

This section contains the findings from several questions we asked participating pool contractors/retailers about their satisfaction with program processes. The program processes we asked them about included program rebate applications and product eligibility determination, communication about program changes, incentive levels, program websites and marketing efforts, and the responsiveness of program staff to questions. We also asked them to rate their satisfaction with the rebate programs in general and to suggest ways that the program could be



improved. Table 8-4 summarizes the 2006-2008 satisfaction ratings and compares them to satisfaction ratings from the 2004-2005 HEER Program.

**Table 8-4**  
**Summary of Participating Pool Contractor/Retailer**  
**Satisfaction with the HEER Program**  
**2004-2005 vs. 2006-2008**

Program component	2004-2005 Statewide HEER % of Participating Appliance Retailers Satisfied with Program (n=25-26)	2006-2008 SCE HEER % of Participating Appliance Retailers Satisfied with Program (n=79)
Program as a whole	84%	94%
Interactions with Program staff	64%	73%
Way utility markets Program	60%	80%
Program promotion on utility websites	54%	49%

### 8.7.1 Rebate Applications and Eligibility Determination

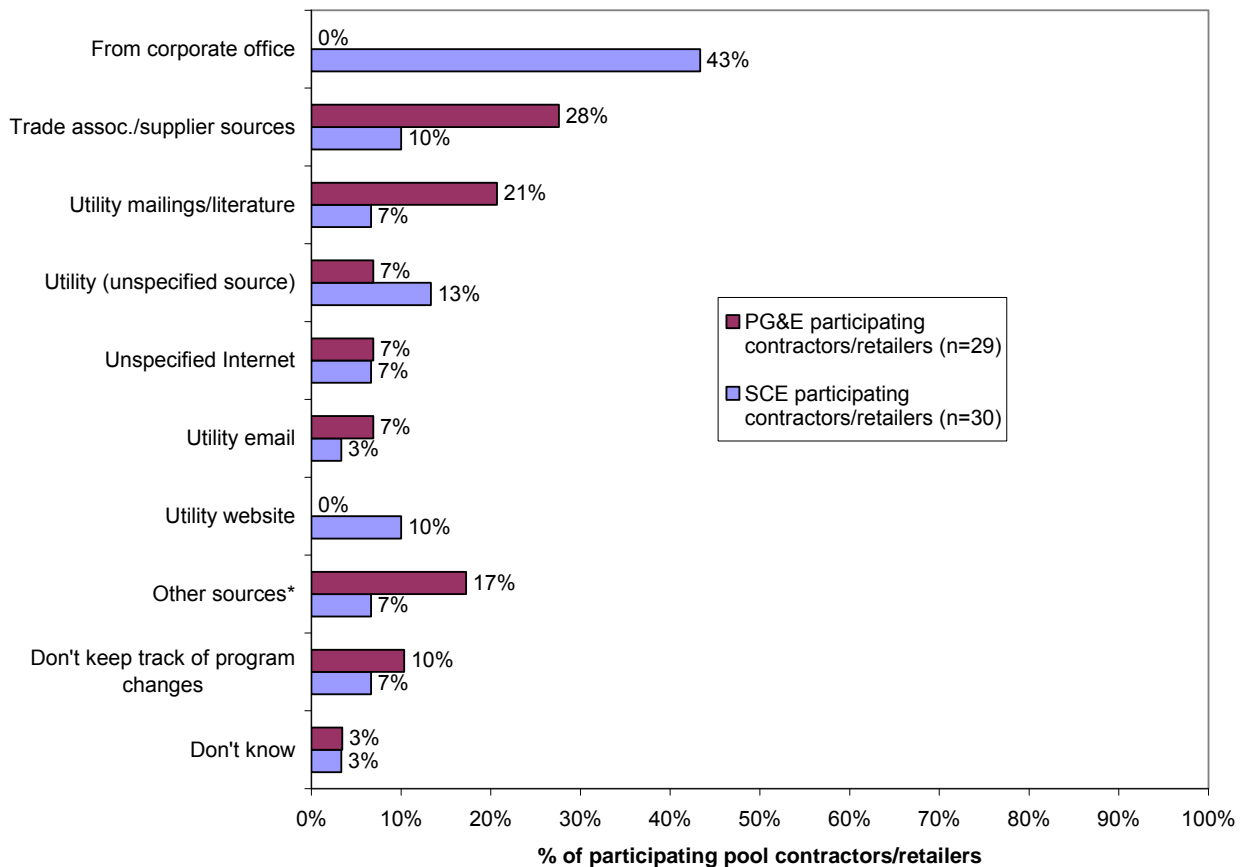
KEMA inquired if any of the participating pool contractors/retailers filled out any rebate applications on behalf of the company's residential customers during the 2006-2008 period. Forty-five percent of the SCE participating contractors/retailers (n=29) said that they did. Of the 13 SCE participating contractors/retailers that claimed to be working with the application forms, 92 percent found the forms to be reasonable in terms of length and level of detail. As a historical comparison, the early 2007 survey found that 89 percent of the participating pool contractors/retailers (across all California IOUs) that were familiar with the rebate applications (n=18) found them reasonable in length and level of detail.

We also asked the participating contractors/retailers if they knew of any rebate applications submitted by them or their customers being rejected by the utilities. Twenty-two percent of the SCE participating contractors/retailers (n=27) said they were aware of at least one application being rejected. More than half of the participating contractors with rejected applications said they were for two-speed pumps while others mentioned variable-speed pumps or pumps of unspecified type. The two most common reasons for rejected applications included the particular pump not being listed as rebate-eligible and errors or missing information on the application forms. Four of the six contractors/retailers also reported that their rejected applications were eventually approved. When asked if it was difficult to find out whether a given pool pump was eligible for the rebates, only four percent of the SCE contractors/retailers (n=28) said that this was difficult.

## 8.7.2 Keeping Track of Program Changes

KEMA asked participating contractor/retailers how they keep track of changes in the rebate program. Figure 8-5 shows that there was a wide variety of methods with the most common being corporate offices, trade association or supplier sources, and utility mailings or literature. As a comparison to these 2008 results, the early 2007 survey found that the most popular ways for participating pool contractors/retailers (across all California IOUs, n=24) to track program changes were program mailings (25%), suppliers/industry word-of-mouth (25%), corporate offices (25%), and visits from utility representatives (17%).

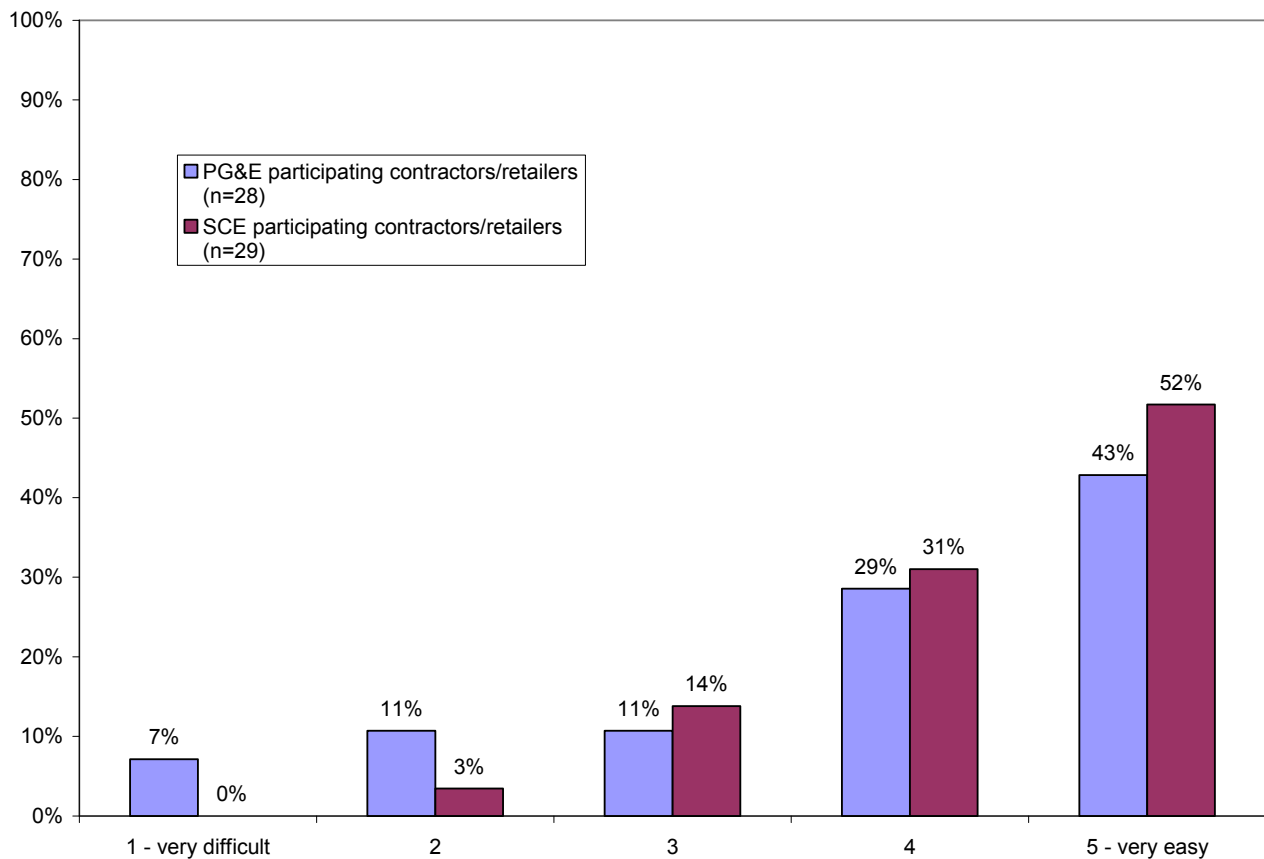
**Figure 8-5**  
**How Participating PG&E/SCE Pool Contractors/Retailers**  
**Keep Track of Rebate Program Changes**



Note: \*Other sources included through utility contractor meetings, utility phone calls, unspecified word of mouth, and company internal tracking systems

We asked the participating pool contractors/retailers how hard or easy it was to keep track of program changes. Figure 8-6 shows that 83 percent of the SCE participating pool contractors/retailers found tracking program changes to be at least somewhat easy (4 or 5 on the 5-point scale). The five pool contractors/retailers who found it difficult to track program changes said that the SCE website was difficult to navigate, that the SCE representatives no longer visit their stores, or that while they had good interactions with SCE representatives at trade shows, this was all the personal interaction they had with SCE.

**Figure 8-6**  
**Easy/Difficulty of Tracking Program Changes**  
**for PG&E/SCE Participating Pool Contractors/Retailers**

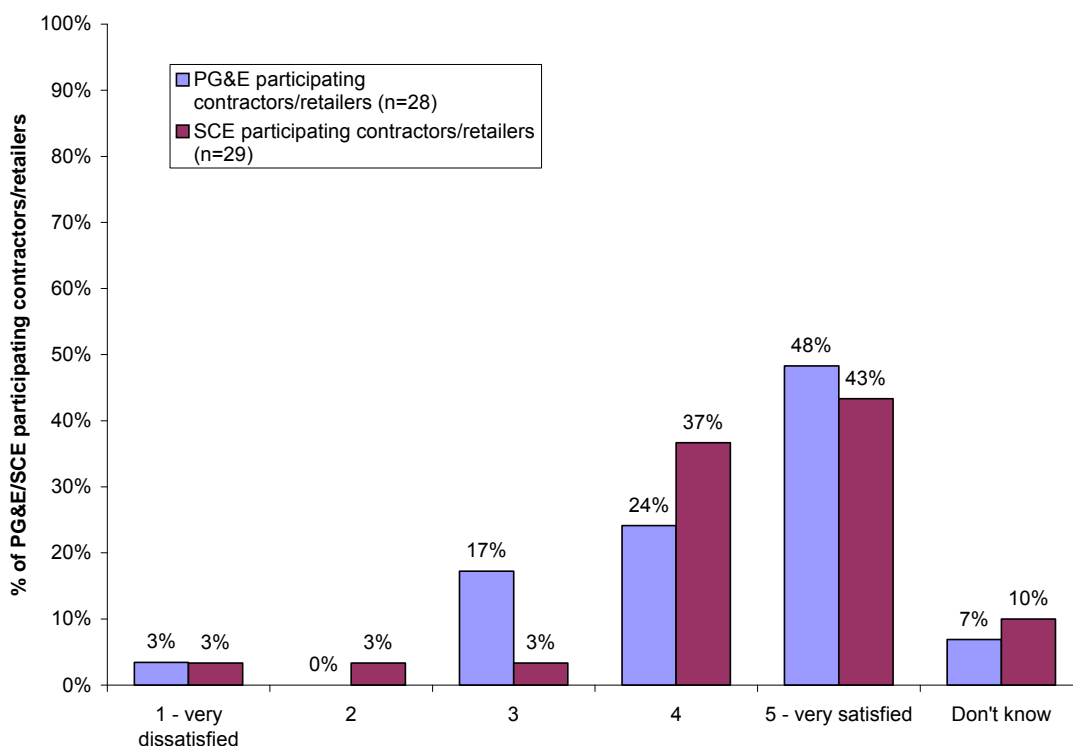


### 8.7.3 Satisfaction with Program Incentives

Forty-three percent of the SCE participating contractors/retailers were dissatisfied with the level of the multi-speed pool pump rebates (\$200 for customers and \$100 for retailers/installers). We

also asked those who said the rebate levels were inadequate what they thought would be an adequate level of rebate. Their responses ranged from \$300 to \$500, with an average estimate of \$381. The participating contractors/retailers were more satisfied with the availability of rebates for multi-speed pool pumps. Figure 8-7 shows that 80 percent of the SCE participating contractors/retailers were satisfied (4 or 5 on a 5-point satisfaction scale) with rebate availability.

**Figure 8-7**  
**Satisfaction of PG&E/SCE Participating Contractors/Retailers**  
**with Rebate Availability**



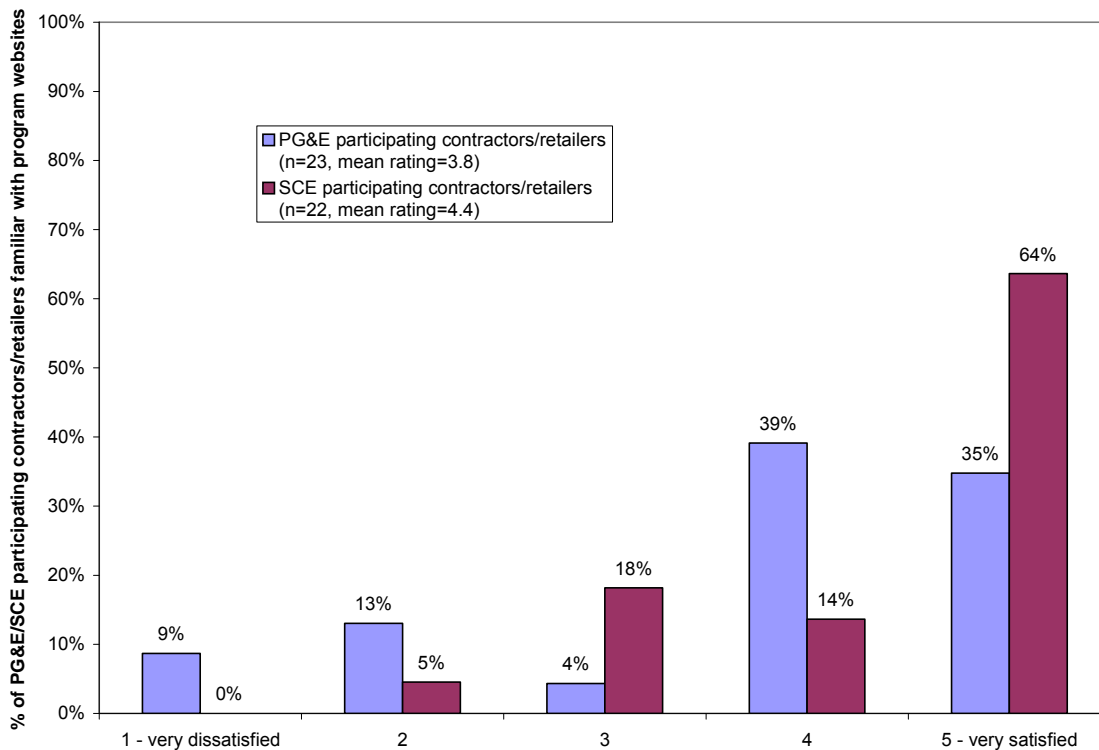
Starting in 2006 the SCE rebates for pool pumps were split between the customer and the pump installer where before the rebates had primarily gone to the pool owners. We asked the participating pool contractors/retailers what they thought were the advantages and disadvantages of this new split rebate structure. Forty-two percent of the SCE contractors/retailers said that the new split rebate structure motivates contractors/retailers to promote more of the multi-speed pumps. Thirteen percent of the SCE contractors/retailers thought that the whole rebate should go to the end user. They argued that the larger customer rebates would increase the chance that the pool owners would opt for the multi-speed pumps and the installers would still make money from the profit on the increased sales. Other

disadvantages cited by the contractors/retailers included slow rebate processing times, cumbersome rebate tracking processes, and the rebate amounts not being as large as they used to be. About a third of the SCE contractors/retailers had no opinion on this issue.

### 8.7.4 Satisfaction with the Program Websites and Marketing Efforts

Participating contractors/retailers were generally satisfied with the program websites. We asked the SCE participating contractors/retailers who were familiar with the pool rebate program websites how satisfied they were with these websites. Figure 8-8 shows that 78 percent of the SCE participating contractors/retailers were satisfied (4 or 5 on a 5-point satisfaction scale) with the rebate program websites.

**Figure 8-8**  
**Satisfaction of PG&E/SCE Participating Contractors/Retailers**  
**with the Rebate Program Websites**

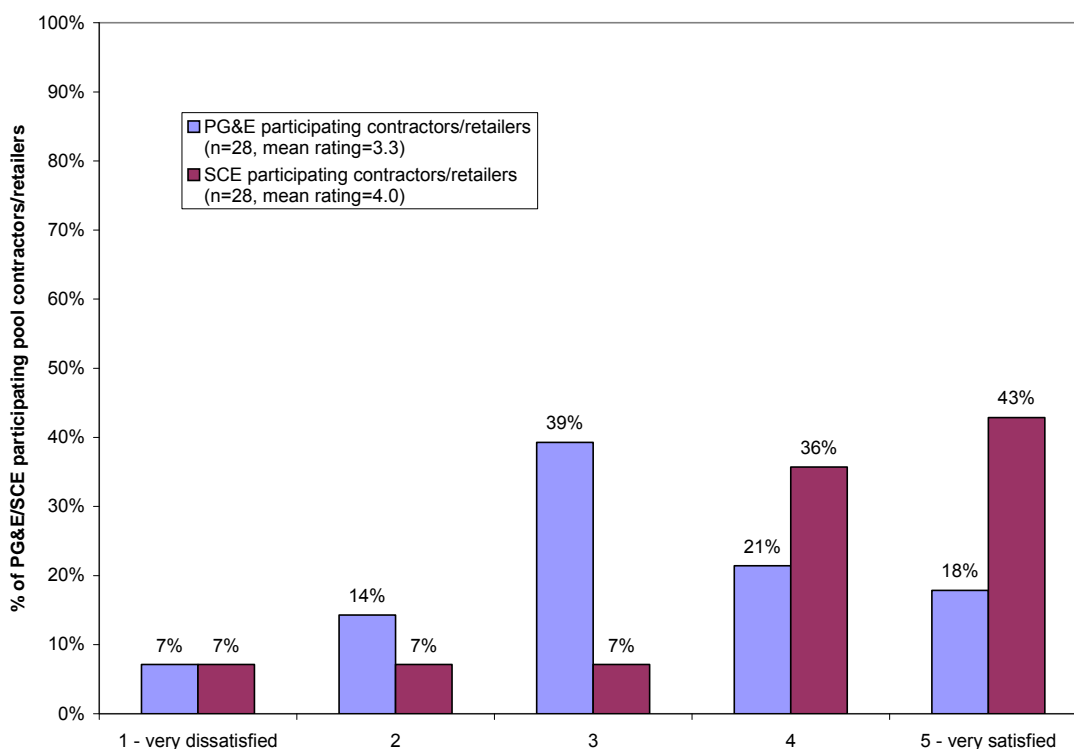


The five contractors/retailers who were dissatisfied with the SCE website said that the layout was confusing, the content was too lengthy and confusing, and there was not enough information on which pool pumps were eligible for the rebates. One of the SCE

contractors/retailers suggested that the SCE staff look at the Pentair website as an example of a more clearly-designed website.

We asked these participating contractors/retailers to rate their satisfaction with the way that the utilities promote and explain the rebates for energy-efficient pool pumps. Seventy-nine percent of the SCE respondents were satisfied with these promotional and education efforts (Figure 8-9).

**Figure 8-9**  
**Satisfaction of PG&E/SCE Participating Contractors/Retailers**  
**with Utility Efforts to Promote and Explain the Pool Pump Rebates**

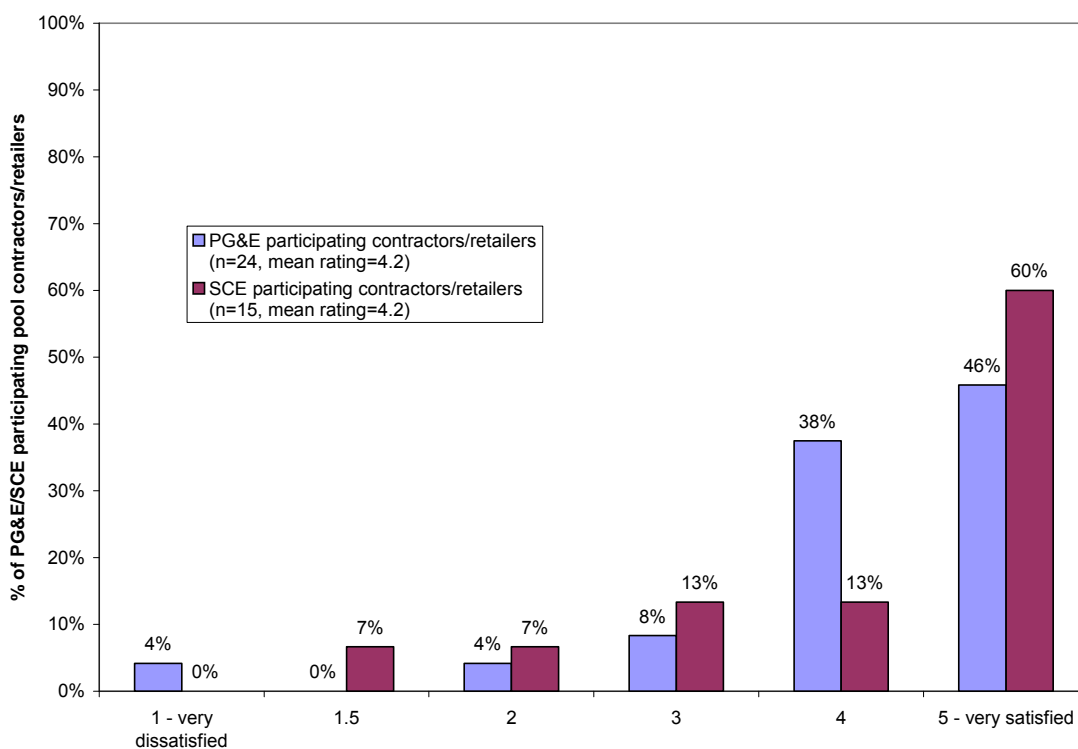


The two most common statements of the respondents who were less than satisfied with the utility promotional efforts was that they had not seen any evidence of program marketing and that their customers were unaware of the rebates. They suggested ways to promote the programs more including mailings to pool owners, mailings to installers, use of radio or television advertising -- including featuring pool pumps in Flex Your Power ad campaigns, and utility representative visits to pool stores.

### 8.7.5 Satisfaction with Program Staff and the Programs in General

The participating pool contractors/retailers were generally satisfied with the program staff. We asked the participating pool contractors/retailers who had posed questions to program staff how satisfied they had been with the way that these questions had been handled. Figure 8-10 shows that the average satisfaction rating was 4.2 on a 5-point satisfaction scale where 5 equaled “very satisfied.” The four SCE contractors/retailers who were less than satisfied with the program staff complained about getting the run-around and about utility staff not having enough expertise about the pool pumps. One of these contractors/retailers suggested that it would be helpful to have a direct phone number for reaching the staff that handles the rebates.

**Figure 8-10**  
**Satisfaction of PG&E/SCE Participating Contractors/Retailers**  
**with How Utility Program Staff Handled Questions**



We asked the participating contractors/retailers how satisfied they were with the pool rebate program as a whole. Figure 8-11 shows that 80 percent of the SCE participating contractors/retailers were satisfied (4, 4.5, or 5 on a 5-point satisfaction scale) with the rebate programs a whole. The six SCE participating contractors/retailers that were less than satisfied with the rebate programs cited a wide variety of reasons. These included difficulty getting the

rebates approved, difficulty with the rebate paperwork, waiting too long to receive rebate payments, and improvements needed for the program staff and marketing materials.

**Figure 8-11**  
**Satisfaction of PG&E/SCE Participating Contractors/Retailers**  
**with the Pool Rebate Programs as a Whole**

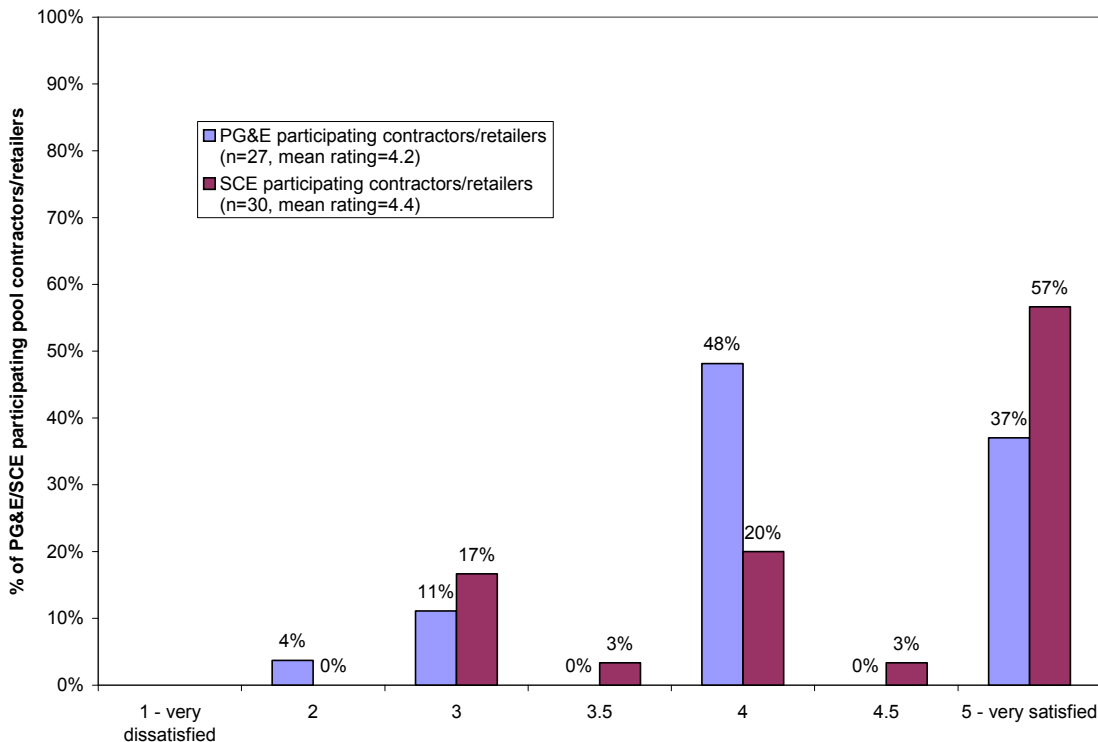
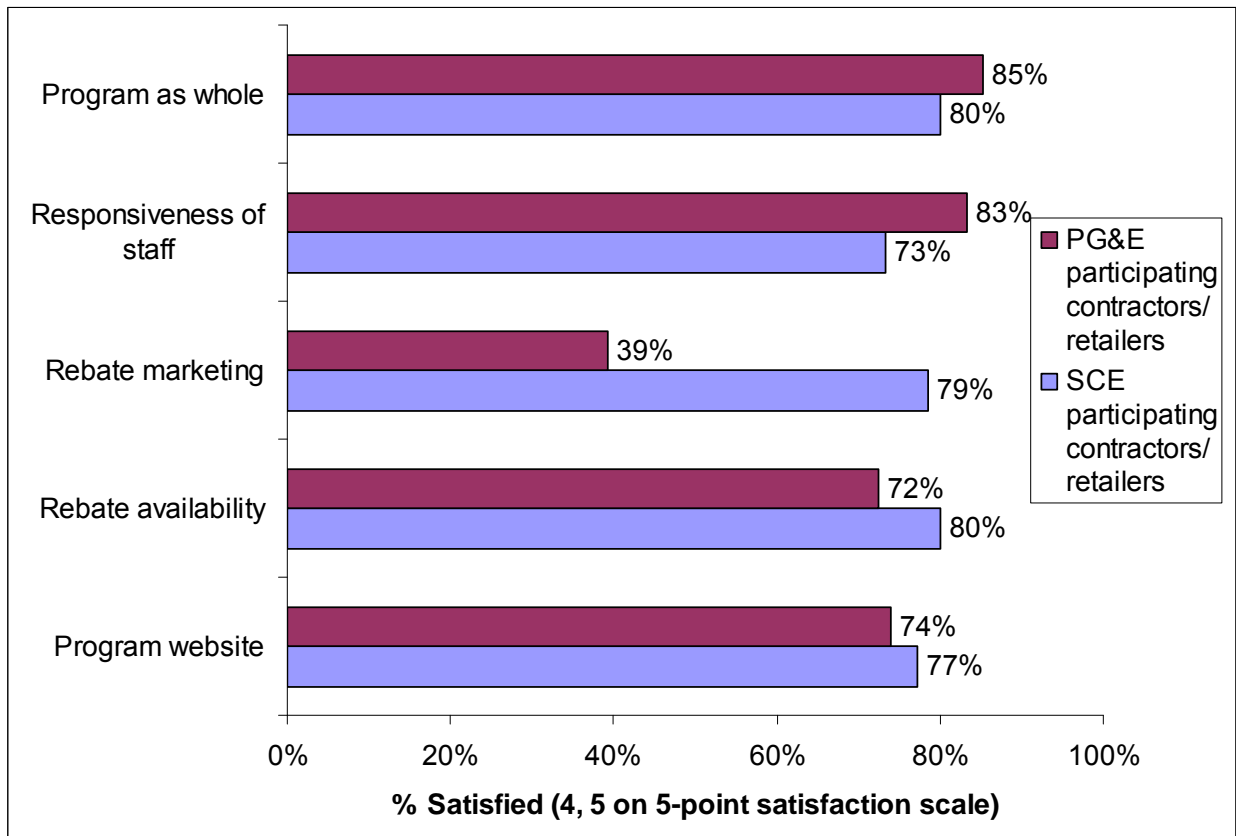


Figure 8-12 brings together the average satisfaction ratings for many of the program processes in one chart.



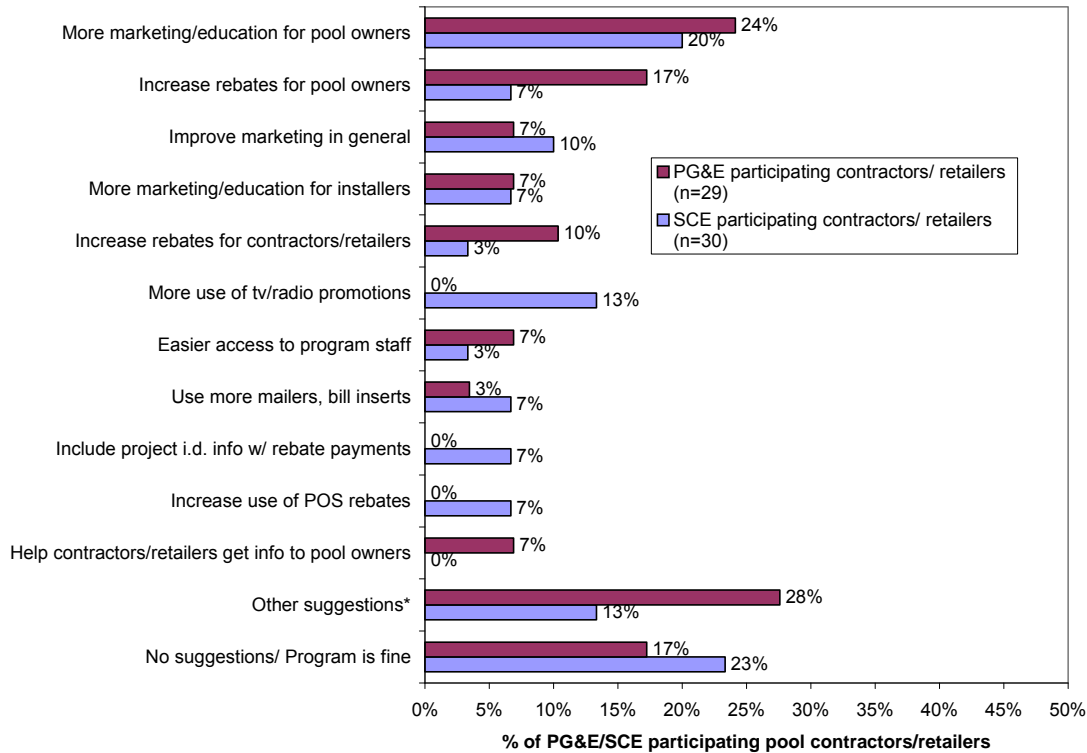
**Figure 8-12**  
**Summary of Participating Pool Contractor Satisfaction Levels**  
**for PG&E/SCE Rebate Program Processes**



### 8.7.6 Suggestions for Program Improvements from Pool Contractors/Retailers

We asked the SCE participating pool contractors/retailers for suggestions as to how to improve the pool rebate programs. Figure 8-13 shows that they provided a wide variety of suggestions. The most-cited suggestions concerned increasing marketing of the program and increase the rebate levels. However, the most cited response was either no response or that the program was fine as is.

**Figure 8-13**  
**Suggestions for Pool Rebate Program Improvements**  
**from PG&E/SCE Participating Contractors/Retailers**



Note: \*Other suggestions, each cited by only one respondent, include allowing above-ground pools to be eligible, listening more to the Independent Pool and Spa Service Association (IPSSA) and less to builders, providing higher rebates for remodeling vs. new construction, encouraging better multi-speed pumps and better controllers, stop requiring contractors/retailers from having to sign up every year, improving the program website, sending more flyers to pool stores, and allowing toggle switches rather than requiring electric controllers.

## 8.8 Pool Characteristics, Pool Equipment Types, and Pool Maintenance Practices in the SCE Service Territory

### 8.8.1 Introduction

One of the most important purposes of these surveys was to collect information on the typical pool characteristics, pool equipment types, and pool maintenance practices that currently exist in the SCE service territory. Although the California Residential Appliance Saturation Study (RASS) will provide some information about pool equipment, this information is not expected to be available until 2010 and will not contain a high enough level of detail.

There are advantages and disadvantages to the type of survey that provides information for this section. One advantage of the contractor/retailer survey is that the contractors/retailers have the technical expertise to accurately and precisely identify the pools, pool equipment, and pool maintenance practices that they encounter in the field. One disadvantage of the survey of SCE’s participating pool contractors/retailers, however, is there a possibility that these contractors/retailers might be servicing pool owners that may be different – e.g., more environmentally conscious – than the larger population of SCE pool owners.

### 8.8.2 Pool Sizes

We asked the SCE pool contractors/retailers for the breakdown of the pools they service in terms of size. Table 8-5 shows that contractors/retailers said that 84-88 percent of the pools they service are smaller than 30,000 gallons. The table also shows that the SCE participating and general population contractors/retailers were pretty close in their estimates of the distribution of pool sizes. SCE pool owners estimated a higher proportion of larger pools, but otherwise their pool size estimates were not significantly different than those provided by the contractors/retailers.

**Table 8-5**  
**Distribution of Pool Sizes**  
**As Estimated by PG&E/SCE Contractors/Retailers and Pool Owners**

Pool size (gallons)*	PG&E participating contractors/retailers (n=29)	SCE participating contractors/retailers (n=30)
< 20,000	44%	36%
20,000 - < 30,000	44%	38%
30,000 - < 40,000	10%	21%
> 40,000	2%	5%
<b>Total</b>	<b>100%</b>	<b>100%</b>

Note: \* We asked the contractors/retailers the question: “Of the pools you service what % are the following sizes? ....

### 8.8.3 Pool Filtration Pumps

We asked the SCE pool contractors/retailers about the prevalence of pool filtration pumps, the speed options and horsepower of these pumps. Nearly all the pools were estimated to have working, single-speed filtration pumps (Table 8-6). Of the 152 sites surveyed in the ETCC report, only one had a multi-speed pump. The rest had single-speed pumps.

**Table 8-6**  
**Distribution of Residential Pool Filtration Pump Speed Options**  
**As Estimated by PG&E/SCE Contractors/Retailers**

Pool filtration pump characteristics	PG&E participating contractors/retailers (n=19)	SCE participating contractors/retailers (n=7)
% of pools w/ working pool filtration pumps?	99.7%	98.4%
<b>Pool filtration pump types</b>		
% of single-speed	76%	90%
% of two-speed	11%	3%
% of variable-speed	12%	6%
<b>Total</b>	<b>99%</b>	<b>99%</b>

Note: The “totals” are the sums of average proportions and inconsistent responses (e.g., missing data or surveyor did not check that total % of responses = 100%) may cause these totals to not equal 100%.

Table 8-7 shows SCE contractor/retailer estimates for the proportion of residential single-speed pumps that fall into various horsepower bins. Table 8-8 shows the proportion of residential single-speed pumps that fell into various horsepower bins observed in the ETCC report.

**Table 8-7**  
**Distribution of Horsepower Levels**  
**for Residential Single-Speed Pool Pumps**  
**As Estimated by PG&E/SCE Contractors/Retailers**

Horsepower of single-speed pool pumps	PG&E participating contractors/retailers (n=18)	SCE participating contractors/retailers (n=7)
< 1 hp	25%	33%
1-1.5 hp	59%	28%
2-2.5 hp	18%	39%
3 hp	1%	0%
<b>Total</b>	<b>103%</b>	<b>100%</b>

Note: The “totals” are the sums of average proportions and inconsistent responses (e.g., missing data or surveyor did not check that total % of responses = 100%) may cause these totals to not equal 100%.

**Table 8-8**  
**Distribution of Horsepower Levels**  
**for Residential Single-Speed Pool Pumps**  
**As Observed in ETCC Report**

Horsepower of single-speed pool pumps	ETCC Report (n=152)
< 1 hp	16%
1-1.5 hp	62%
2-2.5 hp	21%
> 2.5 hp	1%
<b>Total</b>	<b>100%</b>

Table 8-9 shows SCE contractor/retailer estimates for the proportion of residential multi-speed pumps that fall into various horsepower bins. These horsepower estimates are generally less reliable than those for single-speed pool pumps because the surveyors did not clarify whether the horsepower estimates were for the pool pumps' maximum settings. The one multi-speed pump observed in the ETCC report was rated at 3 horsepower.

**Table 8-9**  
**Distribution of Horsepower Levels**  
**for Residential Multi-Speed Pool Pumps**  
**As Estimated by PG&E/SCE Contractors/Retailers**

Horsepower of multi-speed pool pumps	PG&E participating contractors/retailers (n=18)	SCE participating contractors/retailers (n=7)
< 1 hp	3%	0%
1-1.5 hp	61%	20%
2-2.5 hp	3%	21%
3 hp	28%	59%
<b>Total</b>	<b>95%</b>	<b>100%</b>

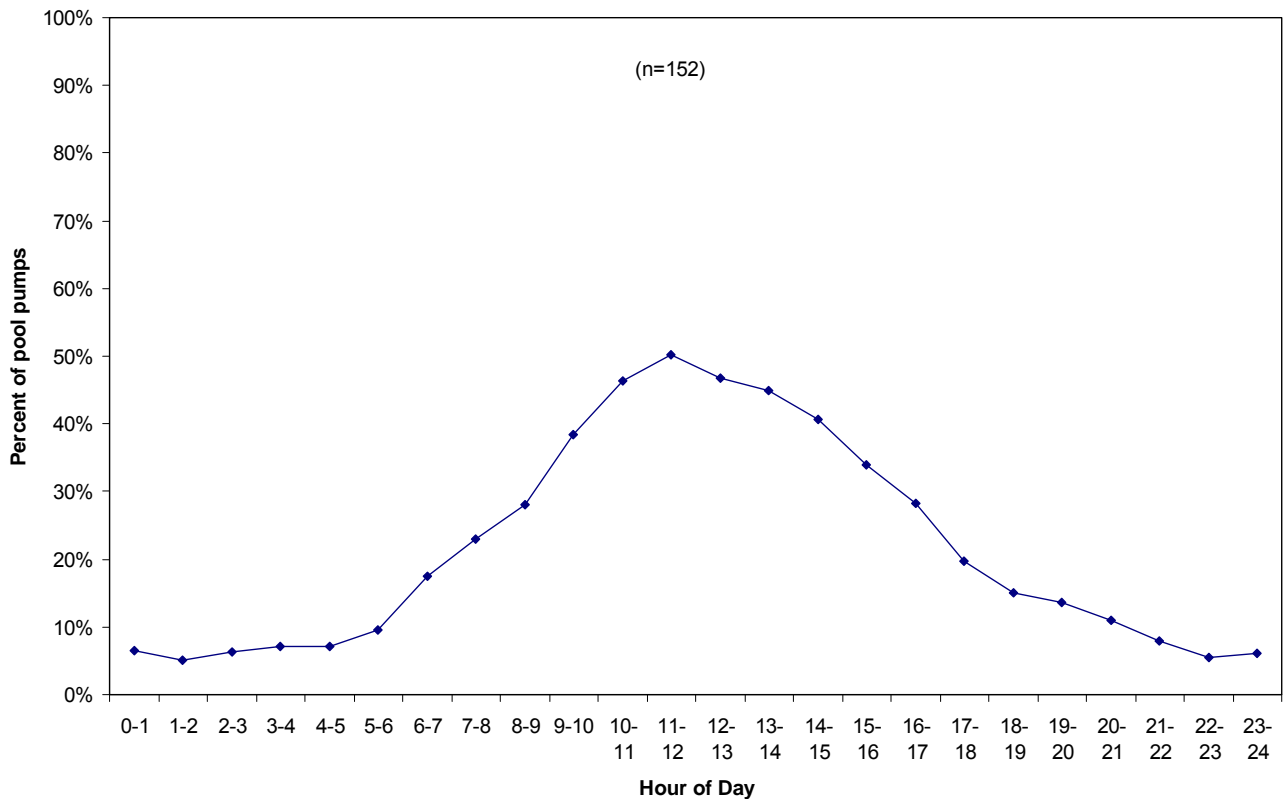
Note: The "totals" are the sums of average proportions and inconsistent responses (e.g., missing data or surveyor did not check that total % of responses = 100%) may cause these totals to not equal 100%.

Table 8-10 shows the SCE pool contractors/retailer estimates for the typical operating periods for pool pumps. The ETCC report stated an average operating time of 5.2 hours per day for single-speed pumps (n=146). Pool pumps were usually operated between the hours of 6 am and 7pm, with a peak during the 11am hour (Figure 8-14).

**Table 8-10**  
**Length of Operating Period**  
**for Residential Pool Pumps**  
**As Estimated by PG&E/SCE Contractors/Retailers**

Pool pump operating periods	PG&E participating contractors/retailers (n=17, 15, 15)	SCE participating contractors/retailers (n=7)
Average of typical single-speed pool pump operating periods (# hours)*	6.9	7.1
Average of typical multi-speed pool pump operating periods (# hours)*	9.3	13.6
Average % of time that multi-speed pumps operate at lowest speed**	83%	75%

**Figure 8-14**  
**Percentage of Pool Pumps**  
**Operating During Given Hour of Day**  
**As Observed in ETCC Report**



### 8.8.4 Automatic Pool Cleaning Systems

We asked the SCE pool contractors/retailers about the prevalence of automatic pool cleaning systems and which systems were more common than others. Table 8-11 shows that the SCE contractors/retailers reported that the majority of pool owners have suction-side cleaners with presser-side systems with booster pumps being a distant second in terms of frequency. These contractors/retailers reported that other types of cleaners like presser-side systems without booster pumps, in-floor cleaners, and robotic cleaners were relatively uncommon.

**Table 8-11**  
**Distribution of Residential Automatic Pool Cleaning Systems**  
**As Estimated by PG&E/SCE Contractors/Retailers**

<b>Automatic Pool Cleaning Systems</b>	<b>PG&amp;E participating contractors/retailers (n=18)</b>	<b>SCE participating contractors/retailers (n=7)</b>
<b>% of pools w/ working automatic cleaning system?</b>	89%	50%
<b>Reported frequency of automatic cleaning system types</b>		
<b>Suction side</b>	27%	75%
<b>Presser side w/ booster pump</b>	64%	14%
<b>Presser side w/o booster pump</b>	9%	7%
<b>In-floor</b>	3%	2%
<b>Robotic</b>	0%	1%
<b>Other</b>		
<b>Total</b>	<b>103%</b>	<b>99%</b>

Note: The "totals" are the sums of average proportions and inconsistent responses (e.g., missing data or surveyor did not check that total % of responses = 100%) may cause these totals to not equal 100%.

We also asked the pool contractors/retailers about how many hours per day these automatic pool cleaning systems typically operated. Table 8-12 shows that the both contractor/retailers surveys estimated the daily operating times for the presser side systems with booster pumps to be much shorter (2.1 – 3 hours) than those for the other pool cleaning systems (4.2 – 5.7 hours).



**Table 8-12**  
**Length of Operating Period**  
**for Residential Automatic Pool Cleaning Systems**  
**As Estimated by PG&E/SCE Contractors/Retailers**

Automatic Pool Cleaning Systems	PG&E participating contractors/retailers	SCE participating contractors/retailers
<b>Average daily operating hours</b>		
<b>Suction side (n=14, 4)</b>	5.5	4.6
<b>Presser side w/ booster pump (n=18, 6)</b>	3.0	3.4
<b>Presser side w/o booster pump (n=10, 3)</b>	5.3	5.2
<b>In-floor (n=3, 2)</b>	4.2	7.0
<b>Robotic (n=0, 1)</b>	n/a	0.3

Note: The contractors/retailers were only asked for average daily operating hours if the type of automatic pool cleaning system was one that they had encountered somewhat frequently. This is why the sample sizes decrease with the decreasing frequency of the cleaning systems (see previous table).

### 8.8.5 Pool Timers

We asked the SCE pool contractors/retailers and pool owners a number of questions about pool timers including their prevalence, whether they have a digital time clock, how they are controlled, and the percentage of timers that are set by pool professionals vs. pool owners.

Table 8-13 summarizes their responses. The table shows that contractors/retailers reported that only about 23 percent of the timers are controlled by indoor computer pad or wireless remote control and that pool professionals set almost all of the timers. However, a number of the pool professionals observed that while they will set the timer initially, some homeowners will change the settings after they leave. According to the ETCC report, 60 percent of all customers control the pool pump timer themselves (n=114).

**Table 8-13**  
**Residential Pool Timer Saturation, Control Features/Responsibilities**  
**As Estimated by PG&E/SCE Contractors/Retailers and Pool Owners**

Pool Timers	PG&E participating contractors/retailers (n=18)	SCE participating contractors/retailers (n=7)
<b>% of residential pools w/ pool timers</b>	96%	86%
<b>Location of timer control?</b>		
<b>% of timers located w/ pool equipment</b>	79%	77%
<b>% wireless or computer-controlled</b>	19%	23%
<b>Total</b>	<b>98%</b>	<b>100%</b>
<b>Who sets timer?</b>		
<b>% set by pool professional</b>	70%	94%
<b>% set by pool owner</b>	30%	6%
<b>Total</b>	<b>100%</b>	<b>100%</b>

### 8.8.6 Pool Heaters

We asked the SCE pool contractors/retailers and pool owners about the prevalence of pool heaters in residential pools and the fuel sources for these heaters. The three surveys indicated that incidence of heaters in residential pools is in the 41-45% range (Table 8-14). The contractors/retailers estimated about a fifth of these pool heaters to be solar, while the pool owners estimated the solar share to be nearly a third. Only 23 percent of the SCE pool owners (n=300) said that they use a pool cover. The ETCC report observed that 44 percent of the pools had heaters, most of which were gas-powered (Table 8-15).

**Table 8-14**  
**Residential Pool Heater Prevalence and Fuel Sources**  
**As Estimated by PG&E/SCE Contractors/Retailers and Pool Owners**

Pool Heaters	PG&E participating contractors/retailers (n=18)	SCE participating contractors/retailers (n= 7)
<b>% of residential pools w/ pool heaters</b>	42%	76%
<b>Residential pool heater fuel source</b>		
<b>% of gas/propane heaters</b>	92%	86%
<b>% of solar heaters</b>	20%	11%

Note: The total % of pool heater fuel sources can exceed 100% because some pool owners have multiple pool heaters (e.g., they may use the solar heater as an auxiliary heater). Seven percent of the pool owners also reported that they had pool heaters that used electricity/heat pumps as a fuel source.

**Table 8-15**  
**Residential Pool Heater Prevalence and Fuel Sources**  
**As Observed in ETCC Report**

Pool Heaters	ETCC Report (n=152)
<b>% of residential pools w/ pool heaters</b>	44%
<b>Residential pool heater fuel source</b>	
<b>% of gas/propane heaters</b>	95%
<b>% of solar heaters</b>	5%



# Appendix A: Survey Instrument for General Population of SCE Customers

## Introduction

May I please speak with <FIRST\_NAME> <LAST\_NAME>? Hello; my name is \_\_\_\_\_ calling on behalf of Southern California Edison. We are conducting a BRIEF study with California residents to learn about your experiences purchasing appliances.

Can I verify that you would be able to answer questions about your appliance purchases and where you get information about energy using equipment?

IF NO: Then may I please speak to the person who would know the most about energy savings and the way you purchase appliances

IF NEEDED: It will take less than 15 minutes.

IF NEEDED: I'm calling from Discovery Research Group, an independent research firm, who has been contracted to conduct the study.

- Spoke to contact ..... 1
- Spoke to someone else ..... 2
- No such person..... 3           TERMINATE SURVEY
- Refused ..... 4           TERMINATE SURVEY

IF RIGHT PERSON: I have a few questions about your appliance purchases and where you go for information.

## Awareness and Sources of Information

### A1.

First, if you were looking for information on energy conservation or ways to lower your energy bill, where would you look or who would you talk to? [FOLLOW UP WITH:] Anywhere or anyone else?

[ALLOW MULTIPLE RESPONSES]

- [Utility bill or utility bill flyer/insert] ..... 1
- [Call utility]..... 2
- [Go to utility office]..... 3
- [Attend utility workshop]..... 4
- [Utility website] ..... 5
- [Other website]..... 6
- [Friend or relative] ..... 7
- [Television]..... 8
- [Trades person (contractor, electrician, builder)]..... 9
- [Home/trade show]..... 10
- [Product manufacturer] ..... 11
- [Library]..... 12
- [Government agency]..... 13
- [Advertising]..... 14

[Mail] .....	15
[Newspaper].....	16
[Other].....	17
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**A2.**

What, if any, Southern California Edison programs or services to help customers save energy in their homes have you heard of? Any others? [ALLOW MULTIPLE RESPONSES]

[Rebates on refrigerators] .....	1
[Rebates on water heaters] .....	2
[Rebates on room air conditioners].....	3
[Rebates on evaporative coolers/swamp coolers] .....	4
[Rebates on whole house fans].....	5
[Rebates on pool pumps] .....	6
[Rebates on roofing] .....	7
[Rebates on light bulbs] .....	8
[Other rebates] .....	9
[Home energy audits/energy survey] .....	10
[Financing or approved contractor lists for central air-conditioning (A/C Quality)].....	11
[Recycling used refrigerators or freezers].....	12
[Interrupting or cycling the central air conditioner (Summer Discount Plan)].....	13
[Paying for energy efficient appliances for low income customers (Energy Management Assistance)]..	14
[Incentives for solar power (California Solar Initiative)] .....	15
[Renewable energy/green power] .....	16
[Other] (RECORD) .....	17
[None] .....	18
[Don't know/Not sure/Can't remember/not aware] .....	-97
[Refused].....	-98

**A2A. [IF A2 =1 SKIP TO A2B]**

Have you heard that Edison offers rebates for energy-efficient refrigerators?

[Yes].....	1
[No].....	2
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**A2B. [IF A2 =2 SKIP TO A2C]**

Have you heard that Edison offers rebates for energy-efficient electric water heaters?

[Yes].....	1
[No].....	2
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**A2C. [IF A2 =3 SKIP TO A2D]**

Have you heard that that Edison offers rebates for energy-efficient room air-conditioners?

[Yes].....	1
[No].....	2

[Don't know/Not sure/Can't remember] .....-97  
 [Refused].....-98

**A2D. [IF A2 =5 SKIP TO A2E]**

Have you heard that Edison offers rebates for whole house fans?  
 [Yes]..... 1  
 [No]..... 2  
 [Don't know/Not sure/Can't remember] .....-97  
 [Refused].....-98

**A2E. [IF A2=6 SKIP TO A2F1]**

Have you heard that Edison offers rebates for energy-efficient swimming pool pumps?  
 [Yes]..... 1  
 [No]..... 2  
 [Don't know/Not sure/Can't remember] .....-97  
 [Refused].....-98

**A2F1. [IF A2=4 SKIP TO A2G1]**

Have you heard of evaporative coolers or swamp coolers?  
 [Yes]..... 1  
 [No]..... 2 SKIP to A2G1  
 [Don't know/Not sure/Can't remember] .....-97 SKIP to A2G1  
 [Refused].....-98 SKIP to A2G1

**A2F2.**

Have you heard that Edison offers rebates for energy-efficient evaporative coolers or swamp coolers?  
 [Yes]..... 1  
 [No]..... 2  
 [Don't know/Not sure/Can't remember] .....-97  
 [Refused].....-98

**A2G1. [IF A2=7 SKIP TO A2G3]**

Have you heard of cool roof technology?  
 [Yes]..... 1  
 [No]..... 2 SKIP to A3  
 [Don't know/Not sure/Can't remember] .....-97 SKIP to A3  
 [Refused].....-98 SKIP to A3

**A2G2.**

Have you heard that Southern California Edison offers rebates for the installation of materials on roofs that reflect sunlight and help reduce heat load?  
 [Yes]..... 1  
 [No]..... 2  
 [Don't know/Not sure/Can't remember] .....-97  
 [Refused].....-98

**A2G3.**



On a scale from 1 to 5, where 1 is Not at All Familiar and 5 is Very Familiar, how familiar are you with these cool roof technologies?

[Not at All Familiar] .....	1
.....	2
.....	3
.....	4
[Very Familiar] .....	5
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**A3.** [ASK ONLY IF {A2 ≠ -97 AND A2 ≠ -98} OR {A2A = 1} OR {A2B = 1} OR {A2C = 1} OR {A2D = 1} OR {A2E = 1} OR {A2F2 = 1} OR {A2G2 = 1}]

From where did you hear about these Edison programs/rebates? Anywhere else? [ALLOW MULTIPLE RESPONSES]

[Utility bill insert/ stuffer].....	1
[Other utility direct mail piece].....	2
[Word-of-mouth (friend/neighbor/landlord)].....	3
[TV] .....	4
[A retailer/installation contractor].....	5
[Participation in Edison program].....	6
[Newspaper article/ ad] .....	7
[Edison Web site].....	8
[Radio] .....	9
[Home/trade show].....	10
[Email] .....	11
[Other (RECORD)].....	12
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**A3A.**

Have you participated in any Edison programs that help customers save energy in their homes?

[Yes].....	1
[No].....	2 [SKIP TO A4A]
[Don't know/Not sure/Can't remember] .....	-97 [SKIP TO A4A]
[Refused].....	-98 [SKIP TO A4A]

**A3B.**

Which programs have you participated in? [DO NOT READ. TRY TO FIND BEST MATCH, OTHERWISE CODE AS "OTHER" AND RECORD DESCRIPTION. ALLOW MULTIPLE RESPONSES]

[Rebates on refrigerators] .....	1
[Rebates on water heaters] .....	2
[Rebates on room air conditioners].....	3
[Rebates on evaporative coolers/swamp coolers] .....	4
[Rebates on whole house fans].....	5
[Rebates on pool pumps] .....	6
[Rebates on roofing] .....	7

[Rebates on light bulbs] .....	8
[Other rebates] .....	9
[Home energy audits/energy survey] .....	10
[Financing or approved contractor lists for central air-conditioning (A/C Quality program)] .....	11
[Recycling used refrigerators or freezers].....	12
[Interrupting or cycling the central air conditioner (Summer Discount Plan)].....	13
[Paying for energy efficient appliances for low income customers (Energy Management Assistance)]..	14
[Incentives for solar power (California Solar Initiative)] .....	15
[Renewable energy/green power] .....	16
[Other] (RECORD) .....	17
[Don't know/Not sure/Can't remember/not aware] .....	-97
[Refused].....	-98

**A4A.**

Would you like to receive additional information from Edison concerning home appliance rebates?

[Yes].....	1
[No].....	2
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**A4B.**

If Edison wanted to inform you about any of its programs or services that help customers save energy, what would be the best way to do this? [ALLOW MULTIPLE RESPONSES]

[Utility bill insert/ stuffer].....	1
[Other utility direct mail piece].....	2
[TV] .....	3
[A dealer/retailer/contractor].....	4
[Newspaper article/ ad] .....	5
[Edison Web site].....	6
[Radio] .....	7
[Home/trade show].....	8
[Email] .....	9
[Other (RECORD)] .....	10
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**A5.**

Have you seen or heard of yellow stickers called Energy Guide labels that appear on new appliances?

[Yes].....	1
[No].....	2
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**A6.**

Have you seen or heard of any other labels or logos about energy on appliances or on other products for your home?

[Yes].....	1
------------	---



[No] ..... 2 [SKIP TO A8]  
 [Don't know/Not sure/Can't remember] .....-97 [SKIP TO A8]  
 [Refused].....-98 [SKIP TO A8]

**A7.**

What other labels or logos about energy have you seen or heard? Any others? [ALLOW MULTIPLE RESPONSES]

[Energy Star label] ..... 1 [SKIP TO A9]  
 [Labels, stickers, magnets, or signs from Edison] ..... 2  
 [Other (record)] ..... 3  
 [Don't know/Not sure/Can't remember] .....-97  
 [Refused].....-98

**A8:**

Have you seen or heard of the Energy Star label, which is on some new appliances, electronic equipment, lighting, and home products?

[Yes]..... 1  
 [No] ..... 2  
 [Don't know/ Not sure/ Can't remember] ..... -97  
 [Refused]..... -98

**A9:**

In the past 12 months do you recall seeing or hearing any messages from Southern California Edison concerning how to manage home energy use, the energy efficiency of specific products, or Edison programs that help customers save energy?

[Yes]..... 1  
 [No] ..... 2 [SKIP TO AKA1]  
 [Don't know/ Not sure/ Can't remember] ..... -97 [SKIP TO AKA1]  
 [Refused]..... -98 [SKIP TO AKA1]

**A10:**

What messages do you recall? [ALLOW MULTIPLE RESPONSES]

[RECORD RESPONSE]  
 [Don't know/Not sure/Can't remember] .....-97  
 [Refused].....-98

**A11:**

Where did you see or hear these messages from Edison? [DON'T PROMPT. ACCEPT MULTIPLE RESPONSES]

[Label on appliances or electronic equipment] ..... 1  
 [Display in stores] ..... 2  
 [Salesperson]..... 3

[TV] .....	4
[Radio] .....	5
[Edison bill insert/ stuffer] .....	6
[Other mailing from Edison].....	7
[Internet] .....	8
[Friend, neighbor, relative, or co-worker].....	9
[Newspaper/ magazine ad].....	10
[Newspaper/ magazine article].....	11
[Other] (RECORD) .....	12
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

### Awareness, Knowledge, and Attitudes about Energy Efficiency

**AKA1:**

Now I'm going to ask you a series of statements about energy efficiency and ask you if each one is true or false. The purpose of these questions is to help Edison better understand what residential customers do and don't know about this topic.

**T/F STATEMENTS**

- AKA1A. Replacing an old refrigerator with a new Energy Star refrigerator will save the typical household more than \$150 a year.
- AKA1B. Edison will haul away your old refrigerator or freezer at no cost to you.
- AKA1C. Standard incandescent light bulbs generate more heat than light.
- AKA1D. Homes emit insignificant amounts of greenhouses gasses compared with cars.
- AKA1E. All air conditioners that are Energy Star certified are equally efficient.

[FOR AKA1A TO AKA1E, RANDOMIZE ORDER OF PRESENTATION AND RECORD ONE OF THE FOLLOWING FOR EACH SOURCE:]

True.....	1
False.....	2
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**AKA2:**

Information about energy efficiency can come from many sources, some more trustworthy than others. On a scale of 1 to 5, where 5 means "Completely Trustworthy" and 1 means "Not at all Trustworthy," please rate how trustworthy each of the following are as sources of information about energy efficiency.

Information Source

- AKA2A. Government
- AKA2B. Environmental activists
- AKA2C. Contractors who install energy-using equipment
- AKA2D. Manufacturers of energy-using equipment
- AKA2E. Retailers of energy-using equipment
- AKA2F. Utilities
- AKA2G. Friends or family

[FOR AKA2A TO AKA2G, RANDOMIZE ORDER OF PRESENTATION AND RECORD ONE OF THE FOLLOWING FOR EACH SOURCE:]

- Not at all Trustworthy ..... 1
- ..... 2
- ..... 3
- ..... 4
- Completely Trustworthy ..... 5
- [Don't know/Not sure/Can't remember] .....-97
- [Refused].....-98

**AKA3:**

Now I'm going to read several statements about energy efficiency and related issues. Please indicate how much you agree or disagree with each statement using a scale of 1 to 5, where 1 means "Disagree Completely" and 5 means "Agree Completely."

STATEMENTS

- AKA3A. Conserving energy is important for lowering my bills.
- AKA3B. Using energy in ways that preserve the environment is not worth it if it requires major lifestyle changes.
- AKA3C. My energy use is too small to worry about in the grand scheme of things.
- AKA3D. I feel guilty if I use too much electricity.

[FOR AKA3A TO AKA3D, RANDOMIZE ORDER OF PRESENTATION AND RECORD ONE OF THE FOLLOWING FOR EACH STATEMENT:]

- Disagree completely..... 1
- ..... 2
- ..... 3

.....	4
Agree completely .....	5
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**AKA4:**

[IF A9 ≠ 1, SKIP TO RP1A]

Earlier you mentioned seeing or hearing messages from Edison about energy efficiency. I'm going to read you three statements about the possible effects of these messages on your knowledge and attitudes regarding energy efficiency. Please indicate how much you agree or disagree with each statement using a scale of 1 to 5, where 1 means "Disagree Completely" and 5 means "Agree Completely."

**STATEMENTS**

AKA4A. Information from Edison has made me more aware of energy efficiency programs that they offer.

AKA4B. Nothing that Edison has said or done has changed my attitudes about energy efficiency.

AKA4C. I've learned practical ways to be more energy efficient from Edison.

[FOR AKA4A TO AKA4C, RANDOMIZE ORDER OF PRESENTATION AND RECORD ONE OF THE FOLLOWING FOR EACH STATEMENT:]

Disagree completely.....	1
.....	2
.....	3
.....	4
Agree completely .....	5
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**AKA5:**

[ASK ONLY IF AKA4A > 3 AND AKA4C > 3 AND AKA4B < 3]

Do you believe that what you've learned from Edison will change what appliances or energy-using equipment you purchase for your home?

[Yes].....	1
[No].....	2
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

## Recent Purchases

### RP1A:

Have you or someone else in your household purchased a brand new refrigerator or electric water heater for this residence in the last two years? [ALLOW MULTIPLE RESPONSES, AS LONG AS NONE OF THEM = 3.]

[Yes, refrigerator] .....	1
[Yes, electric water heater] .....	2
[No, neither].....	3
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

### RP1B:

Have you or someone else in your household purchased a brand new room air conditioner, evaporative cooler/swamp cooler, or whole house fan for this residence in the last two years? [ALLOW MULTIPLE RESPONSES, AS LONG AS NONE OF THEM = 4.]

[Yes, room air conditioner].....	1
[Yes, evaporative cooler/swamp cooler].....	2
[Yes, whole house fan] .....	3
[No, none of these].....	4
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

### RP1C:

Have you or someone else in your household purchased a brand new swimming pool pump or a new roof for this residence in the last two years? [ALLOW MULTIPLE RESPONSES, AS LONG AS NONE OF THEM = 3.]

[Yes, pool pump] .....	1
[Yes, roof].....	2
[No, neither].....	3
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

[ASK THE RP2 – RP8A QUESTION SEQUENCE FOR EACH APPLIANCE TYPE PURCHASED, USING THE FOLLOWING GUIDE:

IF	<APPLIANCE TYPE>
RP1A = 1	REFRIGERATOR
RP1A = 2	ELECTRIC WATER HEATER
RP1B = 1	ROOM AIR CONDITIONER
RP1B = 2	EVAPORATIVE COOLER OR SWAMP COOLER

RP1B = 3    WHOLE HOUSE FAN  
 RP1C = 1    POOL PUMP  
 RP1C = 2    ROOF]

**RP2:**

When you were purchasing the <APPLIANCE TYPE> from where did you get information about what to buy? Any other sources of information? [ALLOW MULTIPLE RESPONSES]

[Retailers/ salesperson] .....	1
[Installation contractor].....	2
[Friend, neighbor, relative, or co-worker] .....	3
[Edison] .....	4
[Other gas/electric utility].....	5
[Internet].....	6
[Consumer Reports or other product-oriented magazines]...	7
[Other magazines].....	8
[Newspaper].....	9
[Radio].....	10
[Television].....	11
[Other] (RECORD) _____ .....	12
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**RP3A:**

At what type of store, or from what sort of contractor, did you purchase the <APPLIANCE TYPE>? [RECORD VERBATIM AND CODE AS FOLLOWS]

[Sears] .....	1
[Appliance store] .....	2
[Best Buy, Wal-Mart or other "big box"] .....	3
[Home improvement store (e.g., Home Depot, Lowes, Menards.)] .....	4
[Brand retailer (e.g., Maytag store)] .....	5
[Heating/ cooling/ plumbing installation contractor].....	6
[Roofing contractor].....	7
[Swimming pool contractor].....	8
[Plumbing supply store].....	9
[Local Hardware store/Ace/TruValue] .....	10
[Internet].....	11
[Other] (RECORD) _____ .....	12
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**RP3B:**

When you were considering the purchase of the <APPLIANCE TYPE>, what characteristics of the <APPLIANCE TYPE> did you and any contractors or salespeople talk about? [FOLLOW UP WITH:] Anything else? [DO NOT READ. ACCEPT MULTIPLE RESPONSES.]

[Price/Cost] .....	1
[Size (tons/Btus/capacity)] .....	2
[Brand] .....	3
[Operating cost].....	4
[Efficiency level/SEER/EER] .....	5
[Energy Star] .....	6
[Rebates].....	7
[Warranty] .....	8
[Color] .....	9
[Ease of Installation].....	10
[Other] (RECORD) _____ .....	11
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**RP4:**

Were there any rebates available for the <APPLIANCE TYPE> at the time that you were purchasing the <APPLIANCE TYPE >?

[Yes].....	1
[No] .....	2 [SKIP TO RP7]
[Don't know/Not sure/Can't remember] .....	-97 [SKIP TO RP7]
[Refused].....	-98 [SKIP TO RP7]

**RP5A:**

Who was offering the rebate for the <APPLIANCE TYPE>? [ALLOW MULTIPLE RESPONSES]

[Edison] .....	1
[Another utility] .....	2
[Manufacturer].....	3
[Retailer].....	4
[Energy Star] .....	5
[Other – specify]_____ .....	6
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**RP5B:**

Did you receive a rebate for the <APPLIANCE TYPE> that you purchased?

- [Yes]..... 1
- [No] ..... 2 [SKIP TO RP6]
- [Don't know/Not sure/Can't remember] ..... -97 [SKIP TO RP7]
- [Refused]..... -98 [SKIP TO RP7]

**RP5C:**

If you had not received the rebate for this [APPLIANCETYPE], how likely would you have been to purchase this model of [APPLIANCETYPE]? ...Would you say you would have been ...[READ UNBRACKETED RESPONSES]

- Very likely..... 1
- Somewhat likely ..... 2
- Not very likely ..... 3
- Or very unlikely ..... 4
- [Don't know] ..... -97
- [Refused]..... -98

**RP6:**

[IF RP5B = 2 ASK RP6, ELSE SKIP TO RP7]

What was the main reason why you didn't purchase a <APPLIANCE TYPE> that was eligible for the rebate? [ALLOW MULTIPLE RESPONSES]

- [Too expensive] ..... 1
- [The rebate not big enough] ..... 2
- [Too much trouble/hassle to fill out rebate forms/ paperwork] ..... 3
- [The dealer/ contractor didn't recommend it] ..... 4
- [A consumer magazine didn't recommend it] ..... 5
- [It didn't have the features I was looking for] ..... 6
- [It didn't have the style or color I was looking for] ..... 7
- [It didn't meet my needs]..... 8
- [I prefer another brand/manufacturer] ..... 9
- [Other] (RECORD) \_\_\_\_\_ ..... 10
- [Other] (RECORD) \_\_\_\_\_ ..... 11
- [Nothing could prevent me from purchasing an energy efficient model] \_\_\_\_\_ 12
- [Don't know/ Not sure/ Can't remember] ..... -97
- [Refused]..... -98

**RP7:**

[IF A7 = 1 or A8 = 1 THEN ASK RP7, ELSE SKIP TO RP8.]





Did you purchase a <APPLIANCE TYPE> with an Energy Star label? The label could be on the product, the packaging, or in the operating instructions?

- [Yes]..... 1
- [No] ..... 2
- [Don't know/ Not sure/ Can't remember] ..... -97
- [Refused]..... -98

**RP8:**

Why did you select this model <APPLIANCE TYPE>? [ALLOW MULTIPLE RESPONSES. [IF APPLIANCE TYPE = "ROOF" SAY "TYPE OF" INSTEAD OF "MODEL"]

- [It was a good value/ in my price range] ..... 1
- [There was a rebate for it] ..... 2
- [It costs less to operate/energy savings] ..... 3
- [It is good for environment] ..... 4
- [It was all that was available/ only choice] ..... 5
- [The contractor/retailers recommended/ pushed it] ..... 6
- [It had the features I wanted] ..... 7
- [It was the right size, color] ..... 8
- [Wanted that brand] ..... 9
- [It had an Energy Star label] ..... 10
- [Other] (RECORD) \_\_\_\_\_ ..... 11
- [Don't know/ Not sure/ Can't remember] ..... -97
- [Refused]..... -98

**RP8A:**

[ASK ONLY IF THERE WERE MULTIPLE RESPONSES TO RP8]

What was the **main reason** you selected this model <APPLIANCE TYPE>? [IF APPLIANCE TYPE = "ROOF" SAY "TYPE OF" INSTEAD OF "MODEL"] [READ BACK RESPONDENT'S ANSWERS TO RP8; ALLOW ONLY ONE RESPONSE]

- [It was a good value/ in my price range] ..... 1
- [There was a rebate for it] ..... 2
- [It costs less to operate/energy savings] ..... 3
- [It is good for environment] ..... 4
- [It was all that was available/ only choice] ..... 5
- [The contractor/retailers recommended/ pushed it] ..... 6
- [It had the features I wanted] ..... 7
- [It was the right size, color] ..... 8
- [Wanted that brand] ..... 9

[It had an Energy Star label] .....	10
[Other] (RECORD) _____ .....	11
[Don't know/ Not sure/ Can't remember] .....	-97
[Refused].....	-98

[IF RP1A = 1 OR RP1A = 2 OR RP1B = 1 OR RP1B = 2 OR RP1B = 3 OR RP1C = 1 OR RP1C = 2, SKIP TO D1]

### Future Appliance/Energy-Using Equipment Purchases

**FP1A:**

Do you or someone else in your household plan to purchase a brand new refrigerator or electric water heater for this residence in the next 12 months? [ALLOW MULTIPLE RESPONSES, AS LONG AS NONE OF THEM = 3.]

[Yes, refrigerator] .....	1
[Yes, electric water heater] .....	2
[No, neither].....	3
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**FP1B:**

Do you or someone else in your household plan to purchase a brand new room air conditioner, evaporative cooler/swamp cooler, or whole house fan for this residence in the next 12 months? [ALLOW MULTIPLE RESPONSES, AS LONG AS NONE OF THEM = 4.]

[Yes, room air conditioner].....	1
[Yes, evaporative cooler/swamp cooler].....	2
[Yes, whole house fan] .....	3
[No, none of these].....	4
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**FP1C:**

Do you or someone else in your household plan to purchase a brand new swimming pool pump or a new roof for this residence in the next 12 months? [ALLOW MULTIPLE RESPONSES, AS LONG AS NONE OF THEM = 3.]

[Yes, pool pump] .....	1
[Yes, roof].....	2
[No, neither].....	3
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98



[ASK THE FP2 – FP6 QUESTION SEQUENCE FOR EACH APPLIANCE TYPE THEY PLAN TO PURCHASE, USING THE FOLLOWING GUIDE:

<b>IF</b>	<b>&lt;APPLIANCE TYPE&gt;</b>
FP1A = 1	REFRIGERATOR
FP1A = 2	ELECTRIC WATER HEATER
FP1B = 1	ROOM AIR CONDITIONER
FP1B = 2	EVAPORATIVE COOLER OR SWAMP COOLER
FP1B = 3	WHOLE HOUSE FAN
FP1C = 1	POOL PUMP
FP1C = 2	ROOF]

**FP2:**

Have you already started shopping or researching options for the purchase of a new <APPLIANCE TYPE>?

[Yes].....	1
[No].....	2
[Don't know/Not sure/Can't remember].....	-97
[Refused].....	-98

**FP3:**

From where do you expect to get information about what <APPLIANCE TYPE> to buy? Any other sources of information? [ALLOW MULTIPLE RESPONSES]

[Retailers/ salesperson] .....	1
[Installation contractor].....	2
[Friend, neighbor, relative, or co-worker] .....	3
[Edison] .....	4
[Other gas/electric utility].....	5
[Internet].....	6
[Consumer Reports or other product-oriented magazines]...	7
[Other magazines].....	8
[Newspaper].....	9
[Radio].....	10
[Television].....	11
[Other] (RECORD) _____ .....	12
[Don't know/Not sure/Can't remember].....	-97
[Refused].....	-98

**FP4:**

What features will be important to you when deciding what <APPLIANCE TYPE> to buy? Any other important features? [ALLOW MULTIPLE RESPONSES]

[Price].....	1
[Availability of rebates].....	2
[Operating cost/energy use].....	3
[Environmentally friendly].....	4
[What model is available/in stock].....	5
[Easy delivery/installation].....	6
[Size or color] .....	8
[Brand] .....	9
[Energy Star label] .....	10
[Other] (RECORD) _____ .....	11
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**FP5:**

On a scale of 1 to 5, where 1 is “Not at all Important” and 5 is “Very Important,” how important is it to you that you purchase an energy efficient <APPLIANCE TYPE>?

Not at all Important.....	1
.....	2
.....	3
.....	4
Very Important.....	5
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

**FP6:**

What might prevent you from purchasing an energy efficient <APPLIANCE TYPE>? [ALLOW MULTIPLE RESPONSES]

[Price too high].....	1
[Lack of rebates] .....	2
[Lack of information about which models are energy efficient] .....	3
[Don't know where to go to purchase an energy efficient model] .....	4
[Not available/in stock] .....	5
[Wrong size or color] .....	6
[Not the right brand] .....	7
[Lacks other features I want] .....	8
[Don't care about energy efficiency] .....	9
[Other] (RECORD) _____ .....	10
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

## Demographics

### D1.

Finally I would like to ask you a few questions about your household.

Do you own or rent your home?

Own.....	1
Rent.....	2
Other .....	3
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

### D2.

For how many years have you lived at this address? [Record number of years, put 0 if less than one year.]

_____ # of years at this address	
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

### D3.

Approximately what year was your home built?

1995 or later .....	1
1990 to 1994 .....	2
1980 to 1989 .....	3
1978 to 1979 .....	4
1970 to 1977 .....	5
1960 to 1969 .....	6
1950 to 1959 .....	7
Before 1950.....	8
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

### D4.

Including yourself and children, how many people live in your home at least six months of the year?

[Record number people living in home] .....	_____
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98

### D5.

How many people in your household are over 65 years of age?

[Record number of people over 65] .....	_____
[Don't know/Not sure/Can't remember] .....	-97
[Refused].....	-98
[IF D4=D5, SKIP TO D9]	

### D6.

How many people in your household are 18 to 65 years of age?

[Record number of people 18 to 65 years old].....	_____
---	-------

[Don't know/Not sure/Can't remember].....-97  
 [Refused].....-98  
 [IF D4=D5 + D6, SKIP TO D9]

**D7.**

How many in your household are 5 to 17 years of age?  
 [Record number of people between 5 and 17] ..... \_\_\_\_\_  
 [Don't know/Not sure/Can't remember].....-97  
 [Refused].....-98  
 [IF D4=D5 + D6+D7, SKIP TO D9]

**D8.**

How many people in your household are under 5 years of age?  
 [Record number of people under 5] ..... \_\_\_\_\_  
 [Don't know/Not sure/Can't remember].....-97  
 [Refused].....-98

[CHECK THAT D5 THROUGH D8=D4. IF NOT REPEAT D5 THROUGH D8]

**D9.**

What is *your* age?  
 [Record age of respondent] ..... \_\_\_\_\_  
 [Don't know/Not sure/Can't remember].....-97  
 [Refused].....-98

**D10.**

Which of the following is the highest level of education you completed?  
 8<sup>th</sup> grade..... 1  
 High school..... 2  
 Associates degree, vocational or technical school, or some college.. 3  
 Four year college degree..... 4  
 Graduate or professional degree ..... 5  
 [Don't know/Not sure/Can't remember] ..... -97  
 [Refused].....-98

**D11.**

Next, I'd like to know your household's total 2007 annual income before taxes. Please stop me when I reach the category that best describes your household's income. [IF NECESSARY, SAY: THIS INFORMATION IS CONFIDENTIAL AND WILL ONLY BE USED FOR CHARACTERIZING RESPONDENTS TO THIS STUDY."]

Less than \$15,000 ..... 1  
 \$15,000 to less than \$20,000.....2  
 \$20,000 to less than \$30,000.....3  
 \$30,000 to less than \$40,000.....4  
 \$40,000 to less than \$50,000.....5  
 \$50,000 to less than \$75,000.....6  
 \$75,000 to less than \$100,000.....7  
 \$100,000 to less than \$125,000.....8



---

\$125,000 to less than \$175,000.....	9
\$175,000 or more .....	10
[Don't know/Not sure].....	-97
[Refused].....	-98

**D12.**

[RECORD GENDER OF RESPONDENT]

[Male].....	1
[Female] .....	2
[Missing].....	3

**D13.**

[RECORD NAME OF RESPONDENT]

Thank you for taking the time to answer the questions. This will help Edison improve the programs and services they offer their customers.

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## **Appendix B: Survey Instrument for SCE Customers Participating in the HEER Program**

[To be inserted]





## Appendix C: Survey Instrument for Appliance Retailers Participating in the HEER Program

### Finding the Decision Maker

A1. [IF CONTACT NAME AVAILABLE] Hello, may I please speak with [CONTACT NAME]?

[Contact available].....[SKIP TO A4] 1  
[Contact currently unavailable].....[ARRANGE CALL BACK] 2  
[No contact]..... 3

A2. I'd like to speak with the person at your store who manages sales of appliances such as refrigerators. What is that person's name?

[RECORD NAME] \_\_\_\_\_  
[Contact unavailable].....[ARRANGE CALL BACK] 2  
[Don't know] ..... [ARRANGE CALL BACK] -97  
[Refused]..... [TERMINATE] -98

A3. May I please speak with [Person from A2]?

[Person available] ..... 1  
[Person responsible currently unavailable] .....[ARRANGE CALL BACK] 2  
[Refused]..... [TERMINATE] -98

A4. Hello I am \_\_\_\_\_ from \_\_\_\_\_. I am calling on behalf of Southern California Edison.

[PROVIDE UTILITY CONTACT NAMES IF NEEDED TO VERIFY STUDY:

SCE – Kristina Wong 626-633-3075]

I am interviewing appliance retailers who participated in the Southern California Edison's Single-Family Energy Efficiency Rebate Program, which provides rebates for some energy efficient appliances. Your input will help SCE improve the Program. Your answers will be kept confidential.

## Program Awareness

B1. Which of the following types of appliances do you sell?

[DO READ, ALLOW MULTIPLE RESPONSES]

Refrigerators .....	1
Room Air Conditioners .....	2
Whole House Fans.....	3
Electric Storage Water Heaters.....	4
Ducted Evaporative Coolers .....	5
[Don't know] .....	[THANK AND TERMINATE] -97
[Refused].....	[THANK AND TERMINATE] -98

B2. Before this interview, had you heard of Edison's Home Energy Efficiency Rebate Program? This Program offers rebates for energy-efficient measures such as refrigerators, room air conditioners, and water heaters.

[Yes] .....	[SKIP TO B6] 1
[No].....	2
[Don't know] .....	-97
[Refused].....	-98

B3. Now that you have heard of this rebate Program, would you be interested in getting more information about it?

[Yes] .....	1
[No].....	[SKIP TO B5] 2
[Don't know] .....	[SKIP TO B5] -97
[Refused].....	[SKIP TO B5] -98

B4. What would be the best way for Southern California Edison to send you information about this Program? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

[Direct mail/Brochure].....	1
[Email] .....	2
[Phone call] .....	3
[Web page] .....	4
[Other, Specify _____] .....	5
[Don't know] .....	-97
[Refused].....	-98

[THANK and TERMINATE]

B5. Why aren't you interested in such a Program?

[I don't know enough about it] .....	1
[The rebates are not large enough].....	2
[Too much paperwork/hassle] .....	3
[We don't sell those appliances].....	4
[Other, Specify _____] .....	5
[Don't know] .....	-97
[Refused].....	-98

[THANK and TERMINATE]

[AT THIS POINT, WE HAVE A QUALIFIED RESPONDENT. TERMINATES AT 0/B4/B5 SHOULD NOT BE COUNTED AS COMPLETES]

B6. I will refer to Southern California Edison as SCE for the rest of this interview. How did you find out about SCE’s rebate Program? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

[SCE mailings/brochures].....	1
[SCE website].....	2
[SCE/California utility meeting].....	3
[SCE email] .....	4
[SCE phone call] .....	5
[Equipment manufacturer/retailer] .....	6
[Trade conference/trade association] .....	7
[Word-of-mouth/Industry colleague] .....	8
[OTHER, Specify _____] .....	9
[Don’t know] .....	-97
[Refused].....	-98

B7. How knowledgeable do you think the appliance sales staff at your store are about what ENERGY STAR™ certification means? Use a scale of 1 to 5 where 5 indicates “very knowledgeable” and 1 indicates “not knowledgeable at all.”

[1 “not knowledgeable at all”] .....	1
[2] .....	2
[3] .....	3
[4] .....	4
[5 “very knowledgeable”] .....	5
[Don’t know] .....	[SKIP TO C1] -97
[Refused].....	[SKIP TO C1] -98

B8. To what extent would additional training about ENERGY STAR™ help your staff sell energy efficient appliances? Use a scale of 1 to 5 where 5 indicates it would be “very useful” and 1 indicates it would be “not very useful.”

- [1 “not useful”] ..... 1
- [2] ..... 2
- [3] ..... 3
- [4] ..... [SKIP TO C1] 4
- [5 “very useful”] ..... [SKIP TO C1] 5
- [Don’t know] ..... [SKIP TO C1] -97
- [Refused] ..... [SKIP TO C1] -98

B9. Why do you say that?

- [RECORD RESPONSE] \_\_\_\_\_
- [Don’t know] ..... -97
- [Refused] ..... -98

## Refrigerators

[IF 0 ≠ 1 (Refrigerators), SKIP TO D1]

Next, I have some questions about the refrigerators you sell. Are you the right person to talk to about this?

- [Yes] ..... 1
- [No] ..... [SKIP TO D1] 2
- [No + referral to other person (record name: \_\_\_\_\_)] ..... [SKIP TO D1] 3
- [Don’t know] ..... [SKIP TO D1] -97
- [Refused] ..... [SKIP TO D1] -98

Before this interview, were you aware that SCE provides \$50 rebates to SCE customers for ENERGY STAR™ refrigerators?

- [Yes] ..... 1
- [No] ..... [SKIP TO C5] 2
- [Don’t know] ..... [SKIP TO C5] -97
- [Refused] ..... [SKIP TO D1] -98

How actively has your company promoted these rebates? Use a scale of 1 to 5 where 5 indicates “very active” and 1 indicates “not very active,”

[1 "not very active"].....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO C5] 4
[5 "very active"].....	[SKIP TO C5] 5
[Don't know] .....	[SKIP TO C5] -97
[Refused].....	[SKIP TO C5] -98

Why haven't you been more active in promoting these rebates? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

[The rebates are too small to bother with] .....	1
[The rebates are too much hassle to process] .....	2
[The rebates don't affect sales] .....	3
[Our marketing budget is too small] .....	4
[We don't promote ENERGY STAR™ refrigerators] .....	5
[We don't promote refrigerators at all] .....	6
[Other, Specify _____] .....	7
[Don't know] .....	-97
[Refused].....	-98

Do you think a \$50 rebate is enough to move consumer demand for ENERGY STAR™ refrigerators?

[Yes] .....	[SKIP TO C7] 1
[No].....	2
[Don't know] .....	-97
[Refused].....	-98

What rebate level would be needed to move consumer demand for ENERGY STAR™ refrigerators?

[RECORD RESPONSE] \$ _____	
[Don't know] .....	-97
[Refused].....	-98

What is the average price difference between ENERGY STAR™ and comparable non-ENERGY STAR™ refrigerators?

[IF NECESSARY: Between models that are comparable except for energy efficiency.]

[RECORD RESPONSE] \$ _____	
[Don't know] .....	-97
[Refused].....	-98



[IF C4 = 5 OR 6, SKIP TO C10]

Does your store actively market or promote ENERGY STAR™ refrigerators?

- [Yes] ..... 1
- [No]..... [SKIP TO C10] 2
- [Don't know] ..... [SKIP TO C10] -97
- [Refused]..... [SKIP TO C10] -98

What is your marketing strategy for ENERGY STAR™ refrigerators? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

- [Salesmen get extra commission for ENERGY STAR™]..... 1
- [Products are physically positioned more prominently] ..... 2
- [Use signage/promotional materials from utility]..... 3
- [Use signage/promotional materials from manufacturer]..... 4
- [Same as non- ENERGY STAR™ refrigerators] ..... 5
- [Other, Specify \_\_\_\_\_] ..... 6
- [Don't know] ..... -97
- [Refused]..... -98

What is your best estimate of the percentage of refrigerators that you sold over the past year that were ENERGY STAR™-qualified.

- [RECORD RESPONSE]\_\_\_\_\_%
- [Don't know] ..... -97
- [Refused]..... -98

[IF C2 ≠ 1 SKIP TO C12] If the SCE refrigerator rebate of \$50 had not been available, what would this percent have been?

- [RECORD RESPONSE]\_\_\_\_\_%
- [Don't know] ..... -97
- [Refused]..... -98

Are there any barriers that prevent sales of ENERGY STAR™ refrigerators?

- [Yes, Specify \_\_\_\_\_] ..... 1
- [No]..... 2
- [Don't know] ..... -97
- [Refused]..... -98

In the past, SCE has found that retailers get most of their information about ENERGY STAR™ refrigerators from manufacturers. How satisfied have you been with the information you have



received from manufacturers about their ENERGY STAR™ refrigerators? Use a scale of 1 to 5 where 5 indicates “very satisfied” and 1 indicates “not very satisfied.”

- [1 “not very satisfied”]..... 1
- [2] ..... 2
- [3] ..... 3
- [4] ..... [SKIP TO C15] 4
- [5 “very satisfied”] ..... [SKIP TO C15] 5
- [Don’t know] ..... [SKIP TO C15] -97
- [Refused]..... [SKIP TO C15] -98

Why do you say that?

[RECORD RESPONSE]\_\_\_\_\_

- [Don’t know] ..... -97
- [Refused]..... -98

Are you aware of the recent changes to the ENERGY STAR™ standards for refrigerators? [IF NECESSARY: Starting in April 2008, full-sized refrigerators had to be 20 percent more efficient than the federal standard to qualify for ENERGY STAR™. Before this they only had to be 15 percent more efficient than the federal standard.]

- [Yes] ..... 1
- [No]..... [SKIP TO C17] 2
- [Don’t know] ..... [SKIP TO C17] -97
- [Refused]..... [SKIP TO C17] -98

What effects, if any, have these changes had on your sales of ENERGY STAR™ refrigerators?

- [Increased sales]..... 1
- [Decreased sales] ..... 2
- [No change / No effect] ..... 3
- [Other, specify \_\_\_\_\_] ..... 4
- [Don’t know] ..... 5
- [Refused]..... -98

Before this interview, were you aware of SCE’s refrigerator and freezer recycling Program? [IF NECESSARY: SCE will pay customers \$50 to upgrade from an old refrigerator/freezer. SCE also hauls away the old appliance from the customer’s service address for free.]

[IF NECESSARY: The \$50 for recycling is in addition to the \$50 rebate for ENERGY STAR™.]



[Yes] .....	1
[No].....	[SKIP TO D1] 2
[Don't know] .....	[SKIP TO D1] -97
[Refused].....	[SKIP TO D1] -98

How actively has your company promoted the recycling Program? Use a scale of 1 to 5 where 5 indicates "very active" and 1 indicates "not very active,"

[1 "not very active"].....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO D1] 4
[5 "very active"].....	[SKIP TO D1] 5
[Don't know] .....	[SKIP TO D1] -97
[Refused].....	[SKIP TO D1] -98

Why haven't you been more active in promoting the recycling Program? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

[The incentive is too small to bother with] .....	1
[The recycling Program doesn't affect sales] .....	2
[Our marketing budget is too small] .....	3
[We don't promote refrigerators at all] .....	4
[Other, Specify _____] .....	5
[Don't know] .....	-97
[Refused].....	-98

## Room Air Conditioners

[IF 0 ≠ 2 (Room AC), SKIP TO E1]

D1. Next, I have some questions about the room air conditioners you sell. Are you the right person to talk to about this?

[Yes] .....	1
[No].....	[SKIP TO E1] 2
[No + referral to other person (record name: _____)] .....	[SKIP TO E1] 3
[Don't know] .....	[SKIP TO E1] -97
[Refused].....	[SKIP TO E1] -98

D2. Before this interview, were you aware that SCE provides \$50 rebates to SCE customers for ENERGY STAR™ room air conditioners?

[Yes] .....	1
[No].....	[SKIP TO D5] 2
[Don't know] .....	[SKIP TO D5] -97
[Refused].....	[SKIP TO E1] -98

D3. How actively has your company promoted these rebates? Use a scale of 1 to 5 where 5 indicates "very active" and 1 indicates "not very active."

[1 "not very active"].....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO D5] 4
[5 "very active"].....	[SKIP TO D5] 5
[Don't know] .....	[SKIP TO D5] -97
[Refused].....	[SKIP TO D5] -98

D4. Why haven't you been more active in promoting these rebates? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

[The rebates are too small to bother with] .....	1
[The rebates are too much hassle to process] .....	2
[The rebates don't affect sales] .....	3
[Our marketing budget is too small] .....	4
[We don't promote ENERGY STAR™ room ACs].....	5
[We don't promote room ACs at all] .....	6
[Other, Specify _____] .....	7
[Don't know] .....	-97
[Refused].....	-98

D5. Do you think a \$50 rebate is enough to move consumer demand for ENERGY STAR™ room air conditioners?

[Yes] .....	[SKIP TO D7] 1
[No].....	2
[Don't know] .....	-97
[Refused].....	-98

D6. What rebate level would be needed to move consumer demand for ENERGY STAR™ room air conditioners?

[RECORD RESPONSE] \$ _____	
[Don't know] .....	-97
[Refused].....	-98

D7. What is the average price difference between ENERGY STAR™ and comparable non-ENERGY STAR™ room air conditioners?

[IF NECESSARY: Between models that are comparable except for energy efficiency.]

[RECORD RESPONSE] \$ \_\_\_\_\_

[Don't know] ..... -97

[Refused]..... -98

[IF D4 = 5 OR 6, SKIP TO D10]

D8. Does your store actively market or promote ENERGY STAR™ room air conditioners?

[Yes] ..... 1

[No]..... [SKIP TO D10] 2

[Don't know] ..... [SKIP TO D10] -97

[Refused]..... [SKIP TO D10] -98

D9. What is your marketing strategy for ENERGY STAR™ room air conditioners? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

[Salesmen get extra commission for ENERGY STAR™]..... 1

[Products are physically positioned more prominently] ..... 2

[Use signage/promotional materials from utility]..... 3

[Use signage/promotional materials from manufacturer]..... 4

[Same as non- ENERGY STAR™ room AC] ..... 5

[Other, Specify \_\_\_\_\_] ..... 6

[Don't know] ..... -97

[Refused]..... -98

D10. What is your best estimate of the percentage of room air conditioners that you sold over the past year that were ENERGY STAR™-qualified.

[RECORD RESPONSE] \_\_\_\_\_%

[Don't know] ..... -97

[Refused]..... -98

D11. [IF D2 ≠ 1 SKIP TO D12] If the SCE air conditioner rebate of \$50 had not been available, what would this percent have been?

[RECORD RESPONSE] \_\_\_\_\_%

[Don't know] ..... -97

[Refused]..... -98

D12. Are there any barriers that prevent sales of ENERGY STAR™ room air conditioners?

[Yes, Specify \_\_\_\_\_] ..... 1

[No]..... 2

[Don't know] ..... -97

[Refused]..... -98

D13. In the past, SCE has found that retailers get most of their information about ENERGY STAR™ room air conditioners from manufacturers. How satisfied have you been with the information you have received from manufacturers about their ENERGY STAR™ room air conditioners? Use a scale of 1 to 5 where 5 indicates “very satisfied” and 1 indicates “not very satisfied.”

- [1 “not very satisfied”]..... 1
- [2] ..... 2
- [3] ..... 3
- [4] ..... [SKIP TO E1] 4
- [5 “very satisfied”]..... [SKIP TO E1] 5
- [Don’t know] ..... [SKIP TO E1] -97
- [Refused]..... [SKIP TO E1] -98

D14. Why do you say that?

[RECORD RESPONSE]\_\_\_\_\_

- [Don’t know] ..... -97
- [Refused]..... -98

## Whole House Fans

[IF 0 ≠ 3 (Whole House Fans), SKIP TO F1]

E1. Next, I have some questions about the whole house fans that you sell. Are you the right person to talk to about this?

- [Yes] ..... 1
- [No]..... [SKIP TO F1] 2
- [No + referral to other person (record name:\_\_\_\_\_)] ..... [SKIP TO F1] 3
- [Don’t know] ..... [SKIP TO F1] -97
- [Refused]..... [SKIP TO F1] -98

E2. Before this interview, were you aware that SCE provides \$50 rebates to SCE customers for whole house fans?

- [Yes] ..... 1
- [No]..... [SKIP TO E5] 2
- [Don’t know] ..... [SKIP TO E5] -97
- [Refused]..... [SKIP TO F1] -98

E3. How actively has your company promoted these rebates for whole house fans? Use a scale of 1 to 5 where 5 indicates “very active” and 1 indicates “not very active.”

[1 "not very active"].....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO E5] 4
[5 "very active"].....	[SKIP TO E5] 5
[Don't know] .....	[SKIP TO E5] -97
[Refused].....	[SKIP TO E5] -98

E4. Why haven't you been more active in promoting these rebates? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

[The rebates are too small to bother with].....	1
[The rebates are too much hassle to process] .....	2
[The rebates don't affect sales] .....	3
[Our marketing budget is too small] .....	4
[We don't promote whole house fans at all] .....	5
[Other, Specify _____] .....	6
[Don't know] .....	-97
[Refused].....	-98

E5. Do you think a \$50 rebate is enough to move consumer demand for whole house fans?

[Yes] .....	[SKIP TO E7] 1
[No].....	2
[Don't know] .....	-97
[Refused].....	-98

E6. What rebate level would be needed to move consumer demand for whole house fans?

[RECORD RESPONSE] \$ _____	
[Don't know] .....	-97
[Refused].....	-98

[IF E4 = 5, SKIP TO E9]

E7. Does your store actively market or promote whole house fans?

[Yes] .....	1
[No].....	[SKIP TO E9] 2
[Don't know] .....	[SKIP TO E9] -97
[Refused].....	[SKIP TO E9] -98

E8. What is your marketing strategy for whole house fans? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

[Salesmen get extra commission] .....	1
[Products are physically positioned more prominently] .....	2
[Use signage/promotional materials from utility].....	3
[Use signage/promotional materials from manufacturer].....	4
[Other, Specify_____] .....	5
[Don't know] .....	-97
[Refused].....	-98
E9. [IF E2 ≠ 1, SKIP TO E10] Over the last year, what percent lower would your sales of whole house fans have been if SCE's \$50 rebate had not been available? [RECORD RESPONSE]_____%	
[Don't know] .....	-97
[Refused].....	-98
E10. Are there any barriers that prevent sales of whole house fans?	
[Yes, Specify_____] .....	1
[No].....	2
[Don't know] .....	-97
[Refused].....	-98
E11. In the past, SCE has found that retailers get most of their information about whole house fans from manufacturers. How satisfied have you been with the information you have received from manufacturers about their whole house fans? Use a scale of 1 to 5 where 5 indicates "very satisfied" and 1 indicates "not very satisfied."	
[1 "not very satisfied"].....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO F1] 4
[5 "very satisfied"].....	[SKIP TO F1] 5
[Don't know] .....	[SKIP TO F1] -97
[Refused].....	[SKIP TO F1] -98
E12. Why do you say that? [RECORD RESPONSE]_____	
[Don't know] .....	-97
[Refused].....	-98

## Electric Storage Water Heater

[IF 0 ≠ 4 (Electric Storage Water Heaters), SKIP TO G1]

F1. Next, I have some questions about the electric storage water heaters that you sell. Are you the right person to talk to about this?

- [Yes] ..... 1
- [No]..... [SKIP TO G1] 2
- [No + referral to other person (record name: \_\_\_\_\_)] ..... [SKIP TO G1] 3
- [Don't know] ..... [SKIP TO G1] -97
- [Refused]..... [SKIP TO G1] -98

F2. Before this interview, were you aware that SCE provides \$30 rebates to SCE customers for energy-efficient electric storage water heaters? These are water heaters that have an Energy Factor of 0.93 or greater.

- [Yes] ..... 1
- [No]..... [SKIP TO F5] 2
- [Don't know] ..... [SKIP TO F5] -97
- [Refused]..... [SKIP TO G1] -98

F3. How actively has your company promoted rebates for these energy-efficient electric storage water heaters? Use a scale of 1 to 5 where 5 indicates "very active" and 1 indicates "not very active."

- [1 "not very active"]..... 1
- [2] ..... 2
- [3] ..... 3
- [4] ..... [SKIP TO F5] 4
- [5 "very active"]..... [SKIP TO F5] 5
- [Don't know] ..... [SKIP TO F5] -97
- [Refused]..... [SKIP TO F5] -98

F4. Why haven't you been more active in promoting these rebates? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

- [The rebates are too small to bother with] ..... 1
- [The rebates are too much hassle to process] ..... 2
- [The rebates don't affect sales] ..... 3
- [Our marketing budget is too small] ..... 4
- [We don't promote energy-efficient electric storage water heaters] ..... 5
- [We don't promote electric storage water heaters at all] ..... 6
- [Other, Specify \_\_\_\_\_] ..... 7
- [Don't know] ..... -97
- [Refused]..... -98

F5. Do you think a \$30 rebate is enough to move consumer demand for energy-efficient electric storage water heaters?

- [Yes] ..... [SKIP TO F7] 1
- [No]..... 2
- [Don't know] ..... -97
- [Refused]..... -98

F6. What rebate level would be needed to move consumer demand for energy-efficient electric storage water heaters?

- [RECORD RESPONSE] \$ \_\_\_\_\_
- [Don't know] ..... -97
- [Refused]..... -98

F7. What is the average price difference between an electric water heater with an energy factor of 0.93 or greater and your standard efficiency electric water heater?

[IF NECESSARY: Between models that are comparable except for energy efficiency.]

- [RECORD RESPONSE] \$ \_\_\_\_\_
- [Don't know] ..... -97
- [Refused]..... -98

[IF F4 = 5 OR 6, SKIP TO F10]

F8. Does your store actively market or promote energy-efficient electric storage water heaters?

- [Yes] ..... 1
- [No]..... [SKIP TO F10] 2
- [Don't know] ..... [SKIP TO F10] -97
- [Refused]..... [SKIP TO F10] -98

F9. What is your marketing strategy for energy-efficient electric storage water heaters? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

- [Salesmen get extra commission] ..... 1
- [Products are physically positioned more prominently] ..... 2
- [Use signage/promotional materials from utility]..... 3
- [Use signage/promotional materials from manufacturer]..... 4
- [Same as other, non- ENERGY STAR™ electric storage water heaters] ..... 5
- [Other, Specify \_\_\_\_\_] ..... 6
- [Don't know] ..... -97
- [Refused]..... -98

F10. [IF F2 ≠ 1 SKIP TO F11] Over the last year, what percent lower would your sales of energy-efficient water heaters have been if SCE's \$30 rebate had not been available?

[IF NECESSARY: These are water heaters with an energy factor of 0.93 or greater.]

- [RECORD RESPONSE] \_\_\_\_\_ %



[Don't know] .....	-97
[Refused].....	-98

F11. Are there any barriers that prevent sales of water heaters with energy factors of 0.93 or greater?

[Yes, Specify _____] .....	1
[No].....	2
[Don't know] .....	-97
[Refused].....	-98

F12. In the past, SCE has found that retailers get most of their information about energy efficient water heaters from manufacturers. How satisfied have you been with the information you have received from manufacturers about their energy efficient water heaters? Use a scale of 1 to 5 where 5 indicates "very satisfied" and 1 indicates "not very satisfied."

[1 "not very satisfied"].....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO G1] 4
[5 "very satisfied"].....	[SKIP TO G1] 5
[Don't know] .....	[SKIP TO G1] -97
[Refused].....	[SKIP TO G1] -98

F13. Why do you say that?

[RECORD RESPONSE]_____	
[Don't know] .....	-97
[Refused].....	-98

## Evaporative Coolers

[IF 0 ≠ 5 (Evaporative Coolers), SKIP TO H1]

G1. Next, I have some questions about the evaporative coolers that you sell. Are you the right person to talk to about this?

[Yes] .....	1
[No].....	[SKIP TO H1] 2
[No + referral to other person (record name: _____)] .....	[SKIP TO H1] 3
[Don't know] .....	[SKIP TO H1] -97
[Refused].....	[SKIP TO H1] -98



G2. Before this interview, were you aware that SCE provides \$300 to \$600 rebates to SCE customers for energy-efficient ducted evaporative coolers?

[IF NECESSARY: These rebates are for single-stage ducted evaporative coolers with an efficiency rating of .85 or higher and two-stage ducted evaporative coolers with an efficiency rating of .95 or higher.]

- [Yes] ..... 1
- [No]..... [SKIP TO G5] 2
- [Don't know] ..... [SKIP TO G5] -97
- [Refused]..... [SKIP TO H1] -98

G3. How actively has your company promoted the SCE rebates for evaporative coolers? Use a scale of 1 to 5 where 5 indicates "very active" and 1 indicates "not very active."

- [1 "not very active"]..... 1
- [2] ..... 2
- [3] ..... 3
- [4] ..... [SKIP TO G5] 4
- [5 "very active"]..... [SKIP TO G5] 5
- [Don't know] ..... [SKIP TO G5] -97
- [Refused]..... [SKIP TO G5] -98

G4. Why haven't you been more active in promoting these rebates? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

- [The rebates are too small to bother with] ..... 1
- [The rebates are too much hassle to process] ..... 2
- [The rebates don't affect sales] ..... 3
- [Our marketing budget is too small] ..... 4
- [We don't promote energy-efficient evaporative coolers] ..... 5
- [We don't promote evaporative coolers at all] ..... 6
- [We don't do ducted evaporative coolers] ..... 7
- [Other, Specify \_\_\_\_\_] ..... 8
- [Don't know] ..... -97
- [Refused]..... -98

G5. Do you think a \$300 to \$600 rebate is enough to move consumer demand for energy-efficient ducted evaporative coolers?

- [Yes] ..... [SKIP TO G7] 1
- [No]..... 2
- [Don't know] ..... -97
- [Refused]..... -98

G6. What rebate level would be needed to move consumer demand for energy-efficient ducted evaporative coolers?

- [RECORD RESPONSE] \$ \_\_\_\_\_
- [Don't know] ..... -97
- [Refused]..... -98

G7. What is the average price difference between energy efficient and standard efficiency ducted evaporative coolers?

[IF NECESSARY: A single-stage ducted evaporative cooler is energy efficient if it has an efficiency rating of .85 or higher. Two-stage ducted evaporative coolers with an efficiency rating of .95 or higher are energy efficient.]

[IF NECESSARY: Between models that are comparable except for energy efficiency.]

- [RECORD RESPONSE] \$ \_\_\_\_\_
- [Don't know] ..... -97
- [Refused]..... -98

[IF G4 = 5 OR 6, SKIP TO G10]

G8. Does your store actively market or promote energy-efficient ducted evaporative coolers?

- [Yes] ..... 1
- [No]..... [SKIP TO G10] 2
- [Don't know] ..... [SKIP TO G10] -97
- [Refused]..... [SKIP TO G10] -98

G8. What is your marketing strategy for energy-efficient ducted evaporative coolers? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

- [Salesmen get extra commission] ..... 1
- [Products are physically positioned more prominently] ..... 2
- [Use signage/promotional materials from utility]..... 3
- [Use signage/promotional materials from manufacturer]..... 4
- [Other, Specify \_\_\_\_\_] ..... 5
- [Don't know] ..... -97
- [Refused]..... -98

G9. [IF G2 ≠ 1 SKIP TO G11] Over the past year, what percent lower would your sales of energy-efficient evaporative coolers been if the SCE rebate of \$300 to \$600 had not been available?

[IF NECESSARY: These rebates are for single-stage ducted evaporative coolers with an efficiency rating of .85 or higher and two-stage ducted evaporative coolers with an efficiency rating of .95 or higher.]

[RECORD RESPONSE] \_\_\_\_\_ %

[Don't know] .....	-97
[Refused].....	-98

G10. Are there any barriers that prevent sales of energy-efficient ducted evaporative coolers?

[Yes, Specify _____] .....	1
[No].....	2
[Don't know] .....	-97
[Refused].....	-98

G11. In the past, SCE has found that retailers get most of their information about energy efficient evaporative coolers from manufacturers. How satisfied have you been with the information you have received from manufacturers about their energy efficient evaporative coolers? Use a scale of 1 to 5 where 5 indicates "very satisfied" and 1 indicates "not very satisfied."

[1 "not very satisfied"].....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO H1] 4
[5 "very satisfied"].....	[SKIP TO H1] 5
[Don't know] .....	[SKIP TO H1] -97
[Refused].....	[SKIP TO H1] -98

G12. Why do you say that?

[RECORD RESPONSE]_____	
[Don't know] .....	-97
[Refused].....	-98

## Marketing and Customer Education Efforts

H1. Now, I'd like you to think about SCE's marketing and consumer education efforts. Using a scale of 1 to 5, where 5 means "very satisfied" and 1 means "not at all satisfied", how satisfied have you been with the way that the utilities market their rebates for energy efficient appliances?

[1 "not at all satisfied"].....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO H3] 4
[5 "very satisfied"].....	[SKIP TO H3] 5
[Don't know] .....	[SKIP TO H3] -97
[Refused].....	[SKIP TO H3] -98

H2. Why do you say that?

[IF NECESSARY: That SCE’s marketing efforts aren’t very effective at moving consumer demand for energy efficient appliances]

[DO NOT READ, ALLOW MULTIPLE RESPONSES]

[They do not provide brochures/literature] .....	1
[The info in their brochures/literature is unclear] .....	2
[The info in their brochures/literature is unconvincing] .....	3
[The info in their brochures/literature is incomplete] .....	4
[We use our own literature/brochures] .....	5
[They do not provide signage] .....	6
[Their signage is not good/effective] .....	7
[We often have to educate customers ourselves] .....	8
[Other, specify _____] .....	9
[Don’t know] .....	-97
[Refused].....	-98

H3. Now I’d like you to think about SCE’s website for the rebate Program. Using a scale of 1 to 5, where 5 = “very satisfied” and 1 = “very dissatisfied”, how satisfied have you been with the way the utility websites promote and explain the rebates for appliances?

[1 “very dissatisfied”] .....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO H5] 4
[5 “very satisfied”].....	[SKIP TO H5] 5
[Don’t know] .....	[SKIP TO H5] -97
[Refused].....	[SKIP TO H5] -98

H4. Why do you say that?

[IF NECESSARY: That you’re less than satisfied with SCE’s website].

[DO NOT READ, ALLOW MULTIPLE RESPONSES]

[Was not aware of the website] .....	1
[The website is hard to understand] .....	2
[It is difficult to navigate the website].....	3
[They do not keep the website up to date] .....	4
[The website does not have info on the types of appliances we sell].....	5
[Other, Specify _____] .....	6
[Don’t know] .....	-97
[Refused].....	-98

H5. What, if anything, could SCE do to improve the effectiveness of its marketing and consumer education efforts?

- [RECORD RESPONSE]\_\_\_\_\_
- [Don't know] .....-97
- [Refused].....-98

## Program Processes

[IF B2 ≠ 1 (Yes) SKIP TO J1]

I1. What would be the best way for SCE to send you information about the appliance rebate Program? [DO NOT READ PROMPTS. ALLOW MULTIPLE RESPONSES]

- [direct mailings/brochures] ..... 1
- [SCE website]..... 2
- [email]..... 3
- [phone call]..... 4
- [internet other than SCE website] ..... 5
- [I'm not interested in such information] ..... 6
- [Other, Specify\_\_\_\_\_] ..... 7
- [Don't know] .....-97
- [Refused].....-98

I2. On a scale of 1 to 5, with 5 being "very easy" and 1 being "very hard," how easy or hard has it been to keep up with SCE rebate Program changes?

- [1 "very hard"]..... 1
- [2] ..... 2
- [3] ..... 3
- [4] ..... [SKIP TO I4] 4
- [5 "very easy"] ..... [SKIP TO I4] 5
- [Don't know] ..... [SKIP TO I4] -97
- [Refused]..... [SKIP TO I4] -98

I3. Why do you say it's been hard to keep up with Program changes?

- [RECORD RESPONSE]\_\_\_\_\_
- [Don't know] .....-97
- [Refused].....-98

I4. Is it hard to find out which appliances are eligible for rebates?

- [Yes] ..... 1  
 [No]..... [SKIP TO I6] 2  
 [Don't know] ..... [SKIP TO I6] -97  
 [Refused]..... [SKIP TO I6] -98
15. Which appliances have you found it's hardest to determine rebate eligibility for? [DO NOT READ. ALLOW MULTIPLE RESPONSES]  
 [Refrigerators] ..... 1  
 [Room air conditioners] ..... 2  
 [Whole house fans] ..... 3  
 [Electric storage water heaters]..... 4  
 [Evaporative coolers]..... 5  
 [Don't know] ..... -97  
 [Refused]..... -98
16. Using a scale of 1 to 5 where 5 = very satisfied and 1 = very dissatisfied, how satisfied have you been with the availability of the appliances that qualify for the rebates?  
 [1 "very dissatisfied"] ..... 1  
 [2] ..... 2  
 [3] ..... 3  
 [4] ..... [SKIP TO I8] 4  
 [5 "very satisfied"] ..... [SKIP TO I8] 5  
 [Don't know] ..... [SKIP TO I8] -97  
 [Refused]..... [SKIP TO I8] -98
17. Why do you say that?  
 [RECORD RESPONSE] \_\_\_\_\_  
 [Don't know] ..... -97  
 [Refused]..... -98
18. Currently SCE has three rebate options: point-of-sale, mail-in, and online. Which of these types of rebates are you familiar with? [DO NOT READ. ALLOW MULTIPLE RESPONSES]  
 [Point of sale] ..... 1  
 [Mail in]..... 2  
 [Online]..... 3  
 [Don't know] ..... -97  
 [Refused]..... -98
19. [SKIP IF I8 does not include 1 (point of sale)] Using a scale of 1 to 5 where 5 = very satisfied and 1 = very dissatisfied, how satisfied have you been with the point of sale rebate process?

[1 “very dissatisfied”] .....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO I11] 4
[5 “very satisfied”] .....	[SKIP TO I11] 5
[Don’t know] .....	[SKIP TO I11] -97
[Refused] .....	[SKIP TO I11] -98
I10. Why do you say that?	
[RECORD RESPONSE] _____	
[Don’t know] .....	-97
[Refused] .....	-98
I11. [SKIP IF I8 does not include 2 (mail in)] Did your store fill out any mail-in rebate applications on behalf of your customers in 2006 – 2008?	
[Yes] .....	1
[No] .....	[SKIP TO I14] 2
[Don’t know] .....	[SKIP TO I14] -97
[Refused] .....	[SKIP TO I14] -98
I12. Did you find the mail-in rebate forms to be reasonable in terms of length and level of detail?	
[Yes] .....	[SKIP TO I14] 1
[No] .....	2
[Don’t know] .....	[SKIP TO I14] -97
[Refused] .....	[SKIP TO I14] -98
I13. Why do you say that?	
[RECORD RESPONSE] _____	
[Don’t know] .....	-97
[Refused] .....	-98
I14. [SKIP IF I8 does not include 3 (online)] Did your store fill out any online rebate applications on behalf of your customers in 2006 – 2008?	
[Yes] .....	1
[No] .....	[SKIP TO I17] 2
[Don’t Know] .....	[SKIP TO I17] -97
[Refused] .....	[SKIP TO I17] -98
I15. Did you find the online rebate forms to be reasonable in terms of length and level of detail?	



[Yes] ..... [SKIP TO I17] 1  
 [No]..... 2  
 [Don't know] ..... [SKIP TO I17] -97  
 [Refused]..... [SKIP TO I17] -98

I16. Why do you say that?

[RECORD RESPONSE] \_\_\_\_\_  
 [Don't know] ..... -97  
 [Refused]..... -98

I17. Using a scale of 1 to 5 where 5 = "very satisfied" and 1 = "very dissatisfied", how satisfied have you been with the timeliness of the downstream rebate payments?

[1 "very dissatisfied"] ..... 1  
 [2] ..... 2  
 [3] ..... 3  
 [4] ..... [SKIP TO I19] 4  
 [5 "very satisfied"] ..... [SKIP TO I19] 5  
 [Don't know] ..... [SKIP TO I19] -97  
 [Refused]..... [SKIP TO I23] -98

I18. Why do you say that?

[RECORD RESPONSE] \_\_\_\_\_  
 [Don't know] ..... -97  
 [Refused]..... -98

I19. Using the same scale, how satisfied have you been with your interactions with the rebate Program's staff?

[1 "very dissatisfied"] ..... 1  
 [2] ..... 2  
 [3] ..... 3  
 [4] ..... [SKIP TO I21] 4  
 [5 "very satisfied"] ..... [SKIP TO I21] 5  
 [Don't know] ..... [SKIP TO I21] -97  
 [Refused]..... [SKIP TO I21] -98

I20. Why do you say that?

[RECORD RESPONSE] \_\_\_\_\_  
 [Don't know] ..... -97  
 [Refused]..... -98

I21. Using the same scale, how satisfied have you been with the rebate Program in general?

[1 “very dissatisfied”] .....	1
[2] .....	2
[3] .....	3
[4] .....	[SKIP TO I23] 4
[5 “very satisfied”] .....	[SKIP TO I23] 5
[Don’t know] .....	[SKIP TO I23] -97
[Refused] .....	[SKIP TO I23] -98

I22. Why do you say that?

[RECORD RESPONSE]_____	
[Don’t know] .....	-97
[Refused] .....	-98

I23. Do you have any suggestions for how to improve the California Single-Family Energy Efficiency Rebate Program?

[RECORD RESPONSE]_____	
[Don’t know] .....	-97
[Refused] .....	-98

## Miscellaneous

J1. SCE is considering expanding the rebate Program to include some consumer electronics. What do you think are the advantages and disadvantages of expanding the Program in this way?

[RECORD RESPONSE]_____	
[Don’t know] .....	-97
[Refused] .....	-98

J2. [READ ONLY IF 0 = 1 (Refrigerator) AND C1 = 2 (NO)] You said earlier that you were not the right person to discuss refrigerators with. Do you know the name of the person that we should talk to about refrigerators?

[Yes, specify _____] .....	1
[No] .....	2
[Don’t know] .....	-97
[Refused] .....	-98

J3. [READ ONLY IF 0 = 2 (Room AC) AND D1 = 2 (NO)] You said earlier that you were not the right person to discuss room air conditioners with. Do you know the name of the person that we should talk to about room air conditioners?

[Yes, specify \_\_\_\_\_] ..... 1  
[No]..... 2  
[Don't know] ..... -97  
[Refused]..... -98

J4. [READ ONLY IF 0 = 3 (Whole house fans) AND E1 = 2 (NO)] You said earlier that you were not the right person to discuss whole house fans with. Do you know the name of the person that we should talk to about whole house fans?

[Yes, specify \_\_\_\_\_] ..... 1  
[No]..... 2  
[Don't know] ..... -97  
[Refused]..... -98

J5. [READ ONLY IF 0 = 4 (electric storage water heaters) AND F1 = 2 (NO)] You said earlier that you were not the right person to discuss electric storage water heaters with. Do you know the name of the person that we should talk to about electric storage water heaters?

[Yes, specify \_\_\_\_\_] ..... 1  
[No]..... 2  
[Don't know] ..... -97  
[Refused]..... -98

J6. [READ ONLY IF 0 = 5 (evaporative coolers) AND G1 = 2 (NO)] You said earlier that you were not the right person to discuss evaporative coolers with. Do you know the name of the person that we should talk to about evaporative coolers?

[Yes, specify \_\_\_\_\_] ..... 1  
[No]..... 2  
[Don't know] ..... -97  
[Refused]..... -98

[THANK AND TERMINATE]