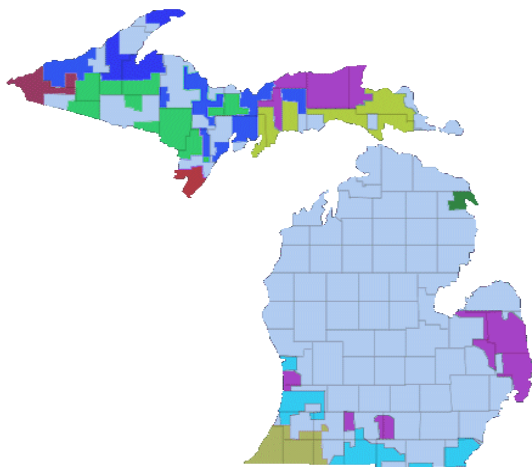




Process Evaluation of Electric and Natural Gas Energy Optimization Programs



Michigan Community Action Agency Association (MCAAA)

Final Report

Prepared by KEMA, Inc.

Clark Lake, April 9, 2012

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1. Executive Summary

This section contains a summary of more detailed findings found elsewhere in this report.

1.1 Introduction and Scope

This is the process evaluation of the 2011 Efficiency United (EU) and Energy Optimization (EO) portfolio of energy efficiency programs. It was conducted on behalf of the Michigan Community Action Agency Association (MCAAA), the Michigan Electric Cooperative Association (MECA), and the MECA Upper Peninsula Municipal Collaborative. Programs covered by this evaluation include:

- The Residential and Small Business ENERGY STAR Products (ESP) program;
- The Residential Appliance Recycling (RAR) program;
- The Residential HVAC program;
- The Residential Low-Income (RLI) program;
- The Residential Audit and Weatherization (A&W) program;
- The Multifamily program;
- The Think Energy Education program;
- The Commercial and Industrial (C&I) program; and
- Multiple residential and C&I pilot programs.

In addition to providing some program-specific findings, this evaluation examines many “cross-cutting” program activities that are fairly similar across a variety of different programs.

The information for this process evaluation came from both in-depth interviews and Computer-Aided Telephone Interview (CATI) surveys. These interviews and CATI surveys were completed during the October 2011- February 2012 period.



1.2 Findings

This section contains a summary of findings from the more detailed main body of the report.

1.2.1 Utility Findings Concerning General Program Issues and Activities

This subsection summarizes findings from our in-depth interviews with MCAAA /MECA utility representatives that are general in nature (they do not focus on specific EU/EO programs).

- *The involvement of the utilities in program delivery:* We asked the MCAAA /MECA utility representatives about their involvement in EU/EO program delivery in 2011. In the case of the MCAAA utilities this was totally new information since we did not interview these utilities in our 2010 evaluation. In the case of the MECA utilities we were trying to determine if their roles had changed since the 2010 evaluation.
 - *The MCAAA utilities:*
 - *Familiarity with the EU program:* We asked the MCAAA utilities whether they were familiar with the EU program portfolio. Representatives of all ten MCAAA utilities that we interviewed said they were familiar with the EU programs, but their level of familiarity ranged widely based on their size. A few of the smaller MCAAA utilities knew nothing about the EU programs beyond basic information. Most of the larger MCAAA utilities were familiar with the EU program offerings and some participated in the quarterly update meetings sponsored by CLEAResult.
 - *Involvement with EU program delivery outside of marketing:* Most of the MCAAA utility representatives said they had not assisted in EU program delivery beyond some marketing activities. The few exceptions were helping Franklin Energy or CLEAResult (implementation contractors for the EU/EO programs) reach their C&I customers. Forty-four percent of the MCAAA utility representatives reported spending zero/negligible hours per week on EU activities, another 44 percent reported spending 2-5 hours per week, and one reported spending 10 hours per week.
 - *Whether/why their involvement with EU might change:* We asked the MCAAA utility representatives whether going forward they expected their level of involvement with EU to increase, decrease, or stay about the same. All but one said that their level of



involvement would remain about the same. A few of them mentioned staffing level constraints as a reason for not being more involved. We asked the MCAAA representatives what factors might encourage them to become more active in the marketing and delivery of the EU program. About half of them said no factors could encourage them to be more active, but their reasons for saying so varied from not wanting the EU programs, being too small to do more, being content with their current level of activity, etc.

- *The MECA utilities:* To a large degree their roles with the EO program in 2011 remained the same as they were discussed in the 2010 evaluation. The one exception is that some utilities have reduced their EO marketing activity. Going forward, of course, the responsibilities of the MECA utilities will change as some of the co-ops relinquish their management of the Residential HVAC program to the Wisconsin Energy Conservation Coalition (WECC) – the new EO implementation contractor.
- *MCAAA utility communications with EU/EO:* The 2011 evaluation examined for the first time how the MCAAA utilities communicate with the EU/EO program (the MECA utility communications with EU/EO were discussed in the 2010 evaluation and have changed little since then).
 - *Communications with CLEAResult:* 88% of the MCAAA utility representatives reported at least some interaction with CLEAResult staff, although the frequency of interaction ranged from weekly to only occasionally. The types of interactions they reported included dealing with customer questions and complaints, coordinating with CLEAResult on marketing efforts, and participating in the quarterly EU status meetings. Two MCAAA utility representatives faulted CLEAResult for not giving them advanced notice when some of their subcontractors did a direct install campaign in their service territories. One of them described how this lack of communications caused some problems:
 - *Quarterly meetings:* 78% of the MCAAA utility representatives said that they had participated in the quarterly EU/EO update meetings either in person or by phone. We asked these attendees whether there were any particular types of information that they were interested in learning at these meetings in the future. They mentioned notification of upcoming EU marketing activities or program changes, more information on how EU is spending its funds, and soliciting more utility input on improving program marketing/delivery. All of them said they were satisfied with the quarterly frequency of the meetings.



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- *Communications with Franklin Energy:* 78% of MCAAA utility representatives reported at least some interaction with Franklin Energy staff. The nature of these interactions usually involved Franklin Energy contacting the utility staff to help facilitate communications with C&I customers in the utility's service territory.
 - *Utility involvement in marketing*
 - *The MCAAA utilities:* We asked the MCAAA utilities whether they were involved in marketing the EU program or educating their customers about the program. Eight of the nine MCAAA utility representatives said that they had sent out EU bill inserts or mailers, although a couple acknowledged that they had not done this in awhile. A number of them also mentioned maintaining links to the EU website in their utility websites and reviewing EU marketing materials. A number of the MCAAA utility representatives explained why they did not do more marketing of the EU program on their own. They noted that they were already paying MCAAA and CLEAResult to do the marketing and that they usually could not recover their marketing costs.
 - *The MECA utilities:* In the 2011 interviews we asked the MECA utility representatives how their involvement with the marketing of the EO programs had changed, if at all, in the past year. Forty-five percent of them said that their involvement in marketing had remained about the same, 27 percent said it had decreased, nine percent said it increased, and the remaining 18 percent did not know.
 - *Utility perspectives on barriers to participation*
 - *The MCAAA utility perspective:* We asked the MCAAA utility representatives what factors or barriers prevented their customers from participating in the EU program. The most-cited reasons for nonparticipation were the poor economy (44% of respondents), general unawareness of the EU program (33%), seasonal customers (22%), and lack of Internet access (22%).
 - *The MECA utility perspective:*
 - The most common barriers to participation cited by the MECA utilities in 2011 interviews including lack of access to the Internet (33% of respondents) and the poor economy discouraging spending on bigger-ticket energy efficient equipment (25% of respondents). Multiple 2011 respondents also cited as barriers the fact that members in rural service territories often have to drive further to find retailers who stock



energy-efficient equipment and some consumers distrusting and fearing CFLs (e.g. worries about mercury contamination).

- One interesting finding is that two major awareness/attitude barriers that were cited by the 2010 interviewees – unawareness of the EO program and customer apathy towards energy efficiency – both declined significantly in frequency among the 2011 interviewees. This indicates that the EO program marketing and customer education efforts may be having some success.
- *Which marketing activities have been effective:*
 - *The MCAAA utility perspective:* We asked the MCAAA utility representatives which EU marketing activities had been the most effective. About half of them said that they did not know and a few pointed out they lacked data to assess the relative effectiveness of these activities. Four of the MCAAA representatives did name marketing activities they thought were effective, although each one named a different marketing activity. These included the CFL give-aways, the distribution of energy kits at community events, the outreach efforts of Franklin Energy to C&I customers, and bill inserts.
 - *The MECA utility perspective:* Community events and *Country Lines* magazine were the two marketing activities most-cited by the 2011 MECA utility interviewees. Although bill inserts and local newspapers ads had been named as effective marketing activities by multiple 2010 interviewees, only one of the 2011 interviewees named these as effective activities.
- *Which marketing activities have been less effective:*
 - *The MCAAA utility perspective:* We asked the MCAAA utility representatives which marketing activities had been less effective. About half of the respondents said they did not know and that they did not have enough information from CLEAResult or EU to judge relative effectiveness. Three utility representatives faulted CLEAResult for not having a marketing plan that gave them advanced notice of when marketing activities would occur in their service territories. Two of them thought that JACO's attempts to market the appliance recycling program in their service territories had been ineffective based on the lack of consumer participation. One utility representative who had done many community events promoting the EU/EO programs said she was "a little bit



disappointed" that CLEAResult did not provide more staff to help them at these community events.

- *The MECA utility perspective:* The bill insert was the only marketing activity that was cited by multiple MECA utility representatives as being ineffective. This was surprising because in 2010 they had named it as one of the more effective marketing activities. These 2011 interviewees either complained that the content of the bill inserts were too general or that there was not a consistent and well-considered marketing strategy for using the bill inserts.
- *Whether EU/EO is spending enough on marketing and outreach:*
 - *The MCAAA utility perspective:* We asked six of the MCAAA utility representatives who had been willing to provide opinions on the effectiveness of EU market activities whether they thought EU program was spending an appropriate amount on marketing and outreach. Two of them said that the program was not spending enough, one thought that an appropriate amount was being spent, and the remaining three found the question difficult to answer.
 - *The MECA utility perspective:* Sixty-percent of the MECA utility representatives thought that CLEAResult was spending an appropriate amount on marketing. Many of them qualified their responses by indicating that it was an appropriate amount considering the difficulty of marketing in their service territories, or if one uses energy savings goal achievement as the criterion for marketing resource sufficiency, or compared to what they had done the previous year.
- *Whether marketing responsibilities were allocated appropriately between CLEAResult and the utilities:*
 - *The MCAAA utility perspective:* We asked six MCAAA utility representatives who were familiar enough with the EU marketing activities to have an opinion on them whether marketing and outreach responsibilities were allocated appropriately between CLEAResult and the utilities. Four of the six thought they were. The two others thought that CLEAResult was not doing a good enough job of communicating with them about planned marketing activities.
 - *The MECA utility perspective:* Seven of the nine respondents thought that the current allocation of marketing responsibilities was appropriate. The two others thought that they



should be made more aware of marketing activities and be more involved in marketing decisions:

Table 1-1 shows the percentage of MCAAA and MECA utility representatives who were satisfied with CLEAResult, with the EU/EO program marketing efforts, and with various other EU/EO activities that cut across multiple programs. It shows that only 30-33% of the MCAAA/MECA utility representatives were satisfied with the program marketing efforts. The main body of this report contains verbatim explanations of the MCAAA/MECA utility satisfaction ratings in this table.

The in-depth interviews asked the MCAAA/MECA utilities some program design questions such as whether the EU/EO program is offering the right mix of energy-efficient technologies and whether rebate level are adequate.

- *Whether the EU/EO program is offering the right mix of EE technologies:*
 - *The MCAAA utility perspective:* Half of the respondents said the EU program was offering the right mix, a quarter said it was not, and the remaining quarter did not know. The respondents who thought the EU program's technology mix was not right based their opinion on the fact that they have not had a lot of customer participation.
 - *The MECA utility perspective:* Half of the MECA utility representatives thought the EO program was not offering the right mix of technologies, 42 percent thought it was, and the remainder did not know. The utility representative who thought the program was not offering the right mix of energy-efficient technologies either thought the EO program was missing key measures in its offerings or that the program incentives were too low to encourage enough diversity in participating measures.
- *Whether rebate levels are adequate:*
 - *The MCAAA utility perspective:* Only 29 percent of the MCAAA utility respondents thought that rebate levels were adequate. Two of the respondents questioned whether the rebates were doing much to drive or change customer decision-making, both in the residential and C&I sectors.
 - *The MECA utility perspective:* Seventeen percent of the respondents thought rebate levels in general were adequate. Another 25 percent thought that rebate levels were adequate for CFLs and smart strips but not for Energy Star appliances.



**Table 1-1:
Satisfaction Ratings for
Cross-Cutting Program Activities and Implementers**

Interview/Survey Respondents	# of 2011 Respondents	Program Attribute/Implementer - % Satisfied (All %s are from 2011 surveys/interviews)
MCAAA utilities	3-8	<ul style="list-style-type: none">• CLEAResult – 63%• EU marketing – 33%• EU customer eligibility determination process – 63%• Rebate application processing – 67%• Payment of financial incentives – 100%
MECA utilities	10-12	<ul style="list-style-type: none">• CLEAResult – 55%• EO marketing – 30%• EU customer eligibility determination process – 92%• Rebate application processing – 90%• Payment of financial incentives – 70%

1.2.2 The Energy Star Products Program

Both program actors and participants had some concerns with the performance of the EU/EO Energy Star Products program. Table 1-2 summarizes the satisfaction ratings for the Energy Star Products program we obtained from the MECA utilities, the retailers participating in the program, and from participating customers. It shows that while the MECA utilities were very satisfied with the program, the participating retailers had a high level of dissatisfaction with every aspect of the program except the CLEAResult staff. The participating customers were less than satisfied with the timeliness of rebate payments and the program paperwork (we consider satisfaction levels below 80 percent as causes for concern). In addition all the participating customer satisfaction ratings were down from the 2010 levels.



**Table 1-2:
Satisfaction Ratings for the
Energy Star Products Program**

Interview/Survey Respondents	# of 2011 Respondents	Program Attribute - % Satisfied (All %s are from 2011 surveys/interviews, except %s in parentheses which are from 2010)
MECA utilities	12	Program as a whole – 92%
Participating retailers	17	<ul style="list-style-type: none">• Marketing – 53%• CLEAResult staff – 91%• Rebate reimbursement – 57%• Program as a whole – 59%
Participating customers	562	<ul style="list-style-type: none">• Rebated equipment – 84% (97%)• Rebate levels – 81% (87%)• Paperwork – 70% (84% appliances, 93% CFL)\• Rebate timeliness – 56% (79%)• Program as a whole – 86% (93% appliances, 92% CFLs)

The in-depth interviews and the verbatim responses from the CATI surveys revealed some of the reasons for these satisfaction scores:

- *Reasons for utility satisfaction:* The MECA utilities who gave the program positive ratings cited three reasons:
 1. They thought the smart strips and the CFLs offered good energy savings opportunities for their members;
 2. They liked the ability to provide the energy-saving kits directly to their members at community events or utility offices; and



3. They appreciated the lack of customer complaints in 2011.

- *Many retailers found the program's rebate-delivery model to be burdensome.* The program's rebate delivery model created two problems for participating retailers. First, the retailers had to carry the cost of the rebates until the check from CLEAResult arrived. This was the largest source of retailer dissatisfaction. Second, the retailers incurred a transaction cost at the register by requiring customers to fill out coupons and cashiers to collect them and key in special prices.
- *Retailer dissatisfaction with program marketing efforts:* Those who expressed dissatisfaction with the program's marketing efforts said that the program should provide more assistance with advertising, such as supplying ad copy and graphics, or even radio scripts. One respondent complained that the program had run newspaper ads without notifying him ahead of time, which resulted in some unnecessary confusion over the correct prices.
- *The program was late signing up retailers:* Four of the respondents to the in-depth interviews thought that the program got too late of a start in signing up retailers. One of these interviewees said that starting so late caused the program to rush to get anyone signed up that they could, and precluded setting up a more automated delivery mechanism. "It was such a piecemeal type effort so late in the year to try and make something happen like that that it just, it wasn't destined to deliver big numbers," he said.

Other findings of interest included:

- *Most retailers were not doing promotion of the program beyond the program's own efforts:* Seventy-nine percent of the participating retailers indicated that they do not do marketing and promotion of the EU/EO program themselves, beyond stocking the products and using the signage and other materials provided by the program. Retailers explained either that they simply did not have time to do this or that the programs did not provide them with the assistance (e.g., ad copy and graphics) that would have made this promotion easier.
- *Participating customers thought that more advertising was the best way to increase participation:* The survey asked respondents what could be done to get more people to participate in the program. The most-recommended approach (44% of the 2011 respondents) was for the program to do more advertising. The next-most-cited suggestion – increasing rebate levels – was only proposed by five percent of the respondents.



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- *Some retailers were not well-informed about the full range of products that the program rebated:* About one-third of the participating retailers said they were unaware that that one or more of the ENERGY STAR products they carried in their stores were also covered by the program. Respondents cited smart power strips, clothes washers, and “everything except the CFLs” as examples of such products.
 - *There was a need for more education about smart strips:* Five of the seventeen (29%) interviewed retailers said that they do not stock smart power strips because they themselves do not know enough about them to recommend them. Two other retailers said that their customers did not understand what smart power strips are for, so there was not much demand for them.
 - *Some retailers expressed an interest in POS rebates:* Half of the retailers indicated that they currently had the capability with their existing equipment to process such “point-of-sale” (POS) rebates where product discounts are taken automatically during check-out without requiring the customer to fill out a form with personal information.
 - *Suggestions for program improvements:* The survey asked respondents if there was anything their utility could do to get more people to participate in the appliance rebate program. The majority of respondents (51%) did not provide a suggestion. Those that did provide suggestions usually mentioned more advertising (44%).

1.2.3 Residential HVAC Program

The satisfaction ratings of the customers participating in the EU/EO Residential HVAC program and the HVAC contractors that participate in the program mostly declined in 2011 from 2010. Less than half of the MECA utilities who provided satisfaction ratings for this program were satisfied with it. Table 1-3 shows the full range of responses.



**Table 1-3:
Satisfaction Ratings for the
Residential HVAC Program**

Interview/Survey Respondents	# of 2011 Respondents	Program Attribute - % Satisfied (All %s are from 2011 surveys/interviews, except %s in parentheses which are from 2010)
MECA utilities	7	Program as a whole – 43%
HVAC contractors	30	<ul style="list-style-type: none">• Marketing – 43% (33%)• Incentive amounts – 47% (81%)• Rebate delivery– 57% (81%)• Interaction with program staff – 63% (59%)• Application forms – 67% (78%)• Program website -- 67% (85%)• Program as a whole – 87% (89%)
Participating customers	300	<ul style="list-style-type: none">• Rebated equipment – 95% (96%)• Rebate amount – 76% (84%)• Rebate timeliness – 75% (82%)• Application form – 64% (70%)• Program as a whole – 91% (93%)

The in-depth interviews and the verbatim responses from the CATI surveys shed some light on these reasons for these satisfaction scores. The reasons for lower satisfaction scores included:

- *Participation levels not being high enough:* “People have not participated,” said one utility representative, “They do not know about the program.”



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- *Not enough program marketing and outreach to trade allies:* All of the HVAC contractors who were less-than-satisfied with the program marketing efforts said that they were not aware of any program marketing efforts. A couple of utility representatives wished for more trade ally outreach. "I'm not sure how much they did for us on that [program] outside of what we did initially with the trade ally meeting," said one representative. "I wish we could get even closer ... with the trade allies," said another. Finally more advertising was the most-cited recommendation for program improvement from 2011 program participants.
 - *Rebates not being large enough:* "They're not super excited about a \$50 water heater rebate," said a utility representative, "... I think the way the program is designed, the rebates aren't super aggressive." Many of the HVAC contractors claimed that the rebate levels were low when compared to other Michigan energy efficiency programs and that incentives are not sufficient for the highest efficiency equipment. The four program rebates that HVAC contractors were most likely to say were inadequate included those for central air conditioners, air-source heat pumps, water heaters, and programmable thermostats. In addition to concerns about rebate levels, some contractors mentioned that there is uncertainty as to whether program funding will last through the program year. Finally Table 1-3 shows that participating customer satisfaction with the rebate levels declined from 2010 to 2011.
 - *Rebate forms being too complicated:* "It's been a little more difficult for both the applicants and the contractors to fully understand it," said one utility representative. The majority of the HVAC contractors who were dissatisfied with the forms said that the forms asked for too much information which they deemed irrelevant. They requested a one page-form which only collected the necessary information. Finally Table 1-3 shows that participating customer satisfaction with the rebate application forms declined from 2010 to 2011.
 - *Program website being too complicated:* The contractors who were dissatisfied with the website said it was too complicated and needed to be simplified. They reported difficulty and confusion finding what they need.
 - *Fuel-switching rebates not allowed:*¹ "If they go for propane the geothermal obviously is more efficient but we can't offer any rebates," said one representative. "Propane and fuel oil, those are the big two fuels that people use and with the cost of those two commodities right

¹ Starting in 2012 the MECA utilities will be able to offer rebates on fuel-switching equipment.



now it's a killer," said another. "Somebody that's spending \$4,000 a year on propane to heat their home could go \$500 on a geothermal [system]."

The drop in program satisfaction ratings from 2010 to 2011 may be due to a number of factors. First, as noted, the minimum required efficiencies for some HVAC equipment increased from 2010 to 2011. These changes increased the incremental cost of the program-eligible equipment while the rebate levels remained relatively constant. These increases in minimum efficiency also reduced the amount of equipment that HVAC contractors sell that is program-eligible.

Second the population of participating contractors has doubled from 2010 to 2011. Our 2010 sample frame of participating contractors, which was collected from customer rebate applications, included 66 unique contractors. Our 2011 sample frame of participating contractors included 132 contractors.

Having evaluated many of these residential HVAC programs, we have learned that in the beginnings of such programs a high proportion of the participating contractors are larger, more sophisticated contractors who are quick to pick up on the benefits of the rebate programs. As time passes, more of the smaller HVAC contractors begin to become aware of the rebate programs. There was some evidence that this was occurring in the EU/EO programs since the average number of employees with the HVAC contractors we interviewed dropped from 14 in 2010 to 11 in 2011, a 21 percent drop. Since these smaller contractors do not have the sophistication or staffing levels to easily handle rebate program paperwork, they may express more frustration with program requirements than their more sophisticated counterparts. This may explain some of the drops in contractor satisfaction from 2010 to 2011 in program areas such as the rebate forms and the program website.

A third possible factor concerns management of customer expectations about savings on utility bills. As discussed elsewhere in this report, some of the MCAAA/MECA utility representatives criticized bill inserts produced by the EU/EO programs that suggested a certain quantity of dollars savings from purchasing energy-efficient equipment. Some of these utilities were concerned that recent utility rate increases might cause customer bills to not decrease as much as the customers might be expecting due to the installation of the energy-efficient equipment. There was evidence in the HVAC participant survey data that customers who had joined the program expecting energy reductions were less likely to be satisfied with the program than those who did not have these expectations.



Some other interesting findings from the 2011 Residential HVAC program surveys and interviews included:

- *2011 participants were much more likely to be replacing programmable thermostats with programmable thermostats:* Fifty-six percent of the 2011 participants who received program rebates for a programmable thermostat said that their new programmable thermostat replaced an existing programmable thermostat. In 2010 only 35 percent said that this was the case. This finding brings into question the deemed energy savings value for programmable thermostats currently used in Michigan since this savings estimates presume a change in temperature setpoint behavior by going from a manual to a programmable thermostat.
- *2011 participants were less likely than 2010 participants to say they would have bought the equipment anyway.* When asked why they participated in the program, 30 percent of the 2011 participants said they would have bought the energy-efficient equipment anyway, a significant decrease from the 50 percent who said this in 2010. This is a positive change for the program because respondents who would have bought equipment without the program are likely to be free-riders.
- *Suggestions for program improvements:* The survey asked participants if there was anything their utility could do to improve the program. Recommendations for more advertising increased from 24 percent in 2010 to 45 percent in 2011. The majority of respondents who asked for more advertising were customers of MCAAA utilities.

1.2.4 The Residential Appliance Recycling Program

As had been the case in the 2010 evaluation, the 2011 evaluation found that the EU/EO Residential Appliance Recycling program continues to be very popular among customers with most satisfaction ratings above the 90 percent level (Table 1-4). However, the MCAAA and MECA utilities were much less enthusiastic (satisfaction ratings in the 25-44% range) about the program and its primary implementation contractor JACO Environmental.



**Table 1-4:
Satisfaction Ratings for the
Residential Appliance Recycling Program**

Interview/Survey Respondents	# of 2011 Respondents	Program Attribute/Implementer - % Satisfied (All %s are from 2011 surveys/interviews, except %s in parentheses which are from 2010)
MCAAA utilities	4	Program as a whole – 25%
MECA utilities	10	<ul style="list-style-type: none">• Program as a whole – 80%• JACO – 40%
Participating customers	400	<ul style="list-style-type: none">• Scheduling appliance pickup – 94% (96%)• Appliance pickup – 92% (93%)• Rebate amount – 93% (92%)• Rebate timeliness – 89% (92%)• Program as a whole – 98% (98%)

The one source of dissatisfaction with this program came from the MCAAA utilities where only one of the four utility representatives who were willing to provide a satisfaction rating provided a positive one. Two of these three dissatisfied MCAAA utility representatives said that they were unhappy with the level of customer participation in their service territories. One claimed that at the time of their interview (November 2011) their Residential Appliance Recycling program had only achieved nine percent of its savings goal. The third dissatisfied representative said that his/her utility “had customers who called for the recycling pickup and they were never responded to.”



In contrast the MECA utilities had much more positive things to say about the program. "They were very responsive," said one utility representative. "Minimal to no phone calls [from members]," commented another.

The 40 percent satisfaction rating for JACO Environmental, the subcontractor who is implementing the program, is misleading. This is because 40 percent of the MECA utility representatives said they did not know how to rate JACO because they did not have enough interaction with them. So if one only considers the MECA utility representatives who provided satisfaction ratings for JACO, then the satisfaction rating for JACO increases to 67 percent (40% divided by 60%).

A number of the utility representatives acknowledged that JACO still has occasional problems but has worked to improve its performance and address complaints. "There tends to be the occasional problem here and there as you pointed out once in your write-up here [the 2010 EU/EO process evaluation]. But that's been onesie-twosie kinds of problems that I've heard of," said one representative. "I think when they started up, they had some issues, end of last year [2010], and we may have commented about that. And I think they've corrected those," said another. "I had interactions with [JACO] last year [2010], and there were some unfortunate incidents. But they did do good remediation with the problems presented," said a third representative. "I'm not aware of complaints like we had last year, where they weren't showing up for appointments, and that kind of thing," said a fourth.

The two MECA utility representatives who indicated that they were less-than-satisfied with JACO both cited a lack of program activity in their service territory. "I don't see much from them, I don't know if they've had really much momentum in our area," said one representative. "... I don't see a lot from appliance recycling."

The participant surveys had some interesting findings including:

- *The 2011 participants were much more likely than 2010 participants to have heard about the program through a bill insert or mailer:* We attribute this change to JACO finding that mailings were the most effective promotional channel in 2010 and therefore making greater use of these in 2011.
- *The 2011 participants were much more interested in getting the rebates and much less interested in the free or convenient pickup than the 2010 participants:* One possible explanation for this change is that 2010 was the first year of the program and the program



may have tapped into some pent-up demand from customers who were especially anxious to get rid of old, inefficient secondary refrigerators. Once this subgroup was exhausted, the participants who were attracted by the rebate became a larger part of the participant population. We have noticed this pattern with other appliance recycling programs.

- *The 2011 participants were less likely than 2010 participants to say they would have kept the refrigerator in the absence of the program:* One possible explanation for this is that the 2011 participants were more likely than their 2010 counterparts to be recycling a main refrigerator (and thus less likely to be recycling a secondary refrigerator).

1.2.5 The Audit and Weatherization Program

For the EU/EO Audit and Weatherization program there was an interesting difference of opinions between the MCAAA/MECA utility representatives and the program participants. Table 1-5 shows that none of the MCAAA utility representatives (although only two provided a rating) and only four of the nine MECA utility representatives were satisfied with the online tool. In contrast over 90 percent of the program participants were satisfied with both the online and onsite components of the program.

**Table 1-5:
Satisfaction Ratings for the
Audit and Weatherization Program**

Interview/Survey Respondents	# of 2011 Respondents	Program Attribute - % Satisfied (All %s are from 2011 surveys/interviews)
MCAAA utilities	2	Online audit program as a whole – 0%
MECA utilities	9	Online audit program as a whole – 44%
Participating customers (Online Audit)	200	Program as a whole – 91%
Participating customers (Onsite Audit)	96	Program as a whole – 95%



1.2.5.1 The Online Tool Audit Component

One of the MCAAA utility representatives gave the online audit a satisfaction rating of two (on the five-point satisfaction scale) and the other gave it a one.² “We just haven’t had any customers taking advantage of the online audit ... I don’t know if they aren’t promoting it or if people just are not online,” said one MCAAA utility representative. “The online audit I am familiar with because I actually sat down and prepared that for my own home and it is a long and cumbersome process,” said another representative. “I’m not sure that the customers are willing to go through all that time and effort.” A third MCAAA utility representative did not give a satisfaction rating for the online audit but mentioned that her customers in the UP faced internet access barriers.

The MECA utility representatives who were less than satisfied with the program cited the difficulty of using the tool and not enough promotion of the tool. “I don’t think we’ve ever been like truly happy with the [online] audit,” said one MECA utility representative. “We feel it’s way too lengthy and detailed for most members.” “[It was] time consuming for members . . . it was a turn off,” said another representative. “I think there’s a place for the online audit, but I think like, most people, they want a much more, like a hands on type thing, and those cost money.”

Self-selection effects may help explain why the program participant satisfaction ratings for the online tool are so much higher than those of the utility representatives. It is important to remember that the online audit participants we surveyed had all completed the audit. So even though some of them might have thought the audit tool was too long, none of them thought it was so long that they were not willing to complete the audit. At the same time there was another group of customers who started using the tool and then stopped because they found it was too long. If we were able to survey these “partial participants,” we would likely find a higher level of dissatisfaction with the tool. Of course, this self-selection effect would not apply to the onsite audit component of the program.

In addition to asking general satisfaction questions, we also asked the online audit participants about the usefulness of the online tool. KEMA asked participants to rate the usefulness of the

² It should be noted that most of these MCAAA utility interviews were completed in late October 2011 and the first week of November. CLEAResult introduced a new streamlined version of the Online Audit tool in the first week of November 2011. So these utility representatives are reporting on the older version of the tool.



information provided by the online tool on a five-point scale anchored at one for “not at all useful” and five for “very useful.” A little over half (54%) found the tool information to be useful (usefulness ratings of 4 or 5). Senior participants appeared to find the tool less useful. Respondents aged 40 to 64 were more likely (37% of respondents) than those age 65 or older (18%) to say the information they received from the tool was “very useful” (5 on the usefulness scale).

Other findings of interest for the online audit component of the EU/EO Audit & Weatherization program included:

- *Reasons for participation:* Reducing energy consumption was the most important reason for using the online audit tool, but it lost importance relative to 2010. Getting the free kit and getting free information were almost as important as reducing energy consumption, and became more important in 2011 than in 2010. We think these changes in participant motivations are due to two factors: 1) the 2010 participant population having a higher proportion of “early adopters”; and 2) CLEAResult’s increased marketing of the online audit tool is reaching a broader customer base that has more diverse motivations for using the online tool.
- *Installation of kit measures:* Most respondents installed at least one of the kit measures. CFLs and LED nightlights were much more likely to be installed than the other measures. The Impact Evaluation Report has more detailed information on installation rates for this program.
- *Likelihood of buying the kit measures in the store:* Most respondents said they would buy CFLs in the store, but only about one-third of respondents would buy any of the other measures they received in the kit in a store.
- *Energy savings actions after the audit:* About two-thirds of respondents said they took an energy saving action after the audit. The most common actions were furnace maintenance and air sealing.
- *Suggestions for program improvements:* The survey asked respondents if there was anything their utility could do to get more people to use the online audit tool. Most respondents (52%) did not provide a suggestion. Those that did usually mentioned better advertising (33%).



1.2.5.2 The Onsite Audit Component

In addition to asking general satisfaction questions, we also asked the onsite audit participants about the usefulness of the information they received from the audit. Respondents were asked to use a five-point scale anchored at one for “not at all useful” and five for “very useful.” The vast majority (90%) of audit participants found the audit information to be useful (usefulness ratings of 4 or 5). This compares to only 54 percent who found the online tool information to be useful.

Other findings of interest for the online audit component of the EU/EO Audit & Weatherization program included:

- *How they heard about the audit program:* Word of mouth (family, friends) followed by equipment salespeople were the most common method of hearing about the program.
- *Motives for participation:* Reducing energy consumption was the most important reason for having an audit performed.
- *Post-audit EE measure installation:* While most respondents had at least one measure, such as CFL bulbs, installed during the audit, they were not likely to install rebate qualifying measures (windows, insulation) after the audit. Only a small number of participants took these actions. Most participants were likely to take some sort of (non-rebated) energy efficient action after the audit. The most common measures were installing sweeps under doors or installing weather stripping.

1.2.6 The Residential Low-Income Program

The EU/EO Residential Low Income (RLI) Program experienced significant increases in program satisfaction in 2011 from the Community Action Agencies (CAAs) that help implement the RLI program (Table 1-6). While the average total program satisfaction rating of the 2011 participants was the same as that of the 2010 participants, the 2011 participants were more likely than their 2010 counterparts to be satisfied with the installed equipment.

Most of the utility representatives said that they did not have enough interaction with the CAAs to fairly rate their satisfaction with their performance. The three utility representatives who were willing to rate their satisfaction with the CAAs gave ratings of two, three, and five respectively for an average rating of 3.3. The two respondents who gave the lower satisfaction ratings both pointed to lack of interaction from the CAAs. “We just don’t have their attention,” said one MECA utility representative. “For whatever reason, we don’t have their attention.”



The increased satisfaction of the CAAs with the EU/EO RLI program was due to a number of factors including:

- *Improved communications:* In the 2010 evaluation a number of CAA representatives had expressed frustration with program communications with CLEAResult and MCAAAA/MECA. The 2011 respondents, in contrast, provided generally favorable feedback regarding overall communication with the two entities (MCAAAA/MECA and CLEAResult). "I just think it's gotten better," said one interviewee. "Email is much better and phone calls are better," said one respondent. "It appears that CLEAResult has hired additional people, and I work a lot with [CLEAResult staffer] now....that's worked quite well," said another.
- *Improvements in program paperwork:* We asked the CAAs whether there had been any changes in the past year in the program paperwork that they had to process or the program-related reporting they had to do. Most of the respondents said that there had been changes in the paperwork. Many of them mentioned changes in the invoicing requirements. The interviewees generally viewed these changes in a positive light. "There have been some changes to the forms, but I think those have been good changes," said one interviewee. "[The changes to the EO form] didn't make it too difficult," said another. "They've changed the forms a few times, but just to help make them more streamlined so that you're not really taking longer to do them," explained a third interviewee.
- *More use of EU/EO rebates:* We asked the CAAs whether their organization has made greater use of EU/EO funding due to the pending disappearance of the ARRA funds. Many of them said that they had been using these funds recently. A few of the CAAs indicated that they planned to make greater use of the EU/EO funding going forward once the ARRA funds ran out.



**Table 1-6:
Satisfaction Ratings for the
Residential Low Income Program**

Interview/Survey Respondents	# of 2011 Respondents	Program Attribute/Implementer - % Satisfied (All %s are from 2011 surveys/interviews, except %s in parentheses which are from 2010)
MECA utilities	3	Community Action Agencies – 33%
Community Action Agencies	12	<ul style="list-style-type: none"> • CLEAResult – 78% (42%) • MCAAA – 100% (50%)
Participating customers	250 (for contractor and program satisfaction) 33-149 (for installed measure satisfaction, depending on measure)	<ul style="list-style-type: none"> • CFLs – 99% (93%) • Refrigerators – 97% (82%) • Ceiling insulation – 97% (79%) • Furnaces – 94% (93%) • Air sealing – 91% (70%) • Contractor – 87% (88%) • Program as a whole – 93% (93%)

There are a number of possible explanations why the 2011 RLI program participants were happier with their installed equipment than the 2010 participants. These include possible real improvements in the quality or performance of the measures themselves, the possibility that the CAAs did a better job of educating recipients about the measures they received, and statistical artifacts caused by a low number of completed surveys for some measures such as wall insulation. Fewer completes means outliers (or their absence) can have a strong effect on the results.

Other findings of interest concerning the RLI program include:



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- *The adequacy of RLI program rebates:* We reminded the CAAs about the rebate/buydown amounts that the EU/EO RLI program was offering for different types of equipment and then asked them if these amounts were adequate. The percentage of CAAs who considered the rebates to be adequate ranged from a high of two thirds for the CFLs to a low of only 40 percent for the refrigerators.
 - *Customer waiting lists:* We asked the CAAs whether they had an applicant waiting list or were looking for new applicants. Every respondent said that their agency had a waiting list and some of these were quite long. Most were over 100 applicants and the largest was over 650. The pending end of ARRA funding after March 2012 and uncertainty about the timing and availability of other funding sources has created some hesitancy and anxiety among the CAAs in terms of how to deal with these waiting lists.
 - *The impacts of the disappearance of major low-income funding sources such as ARRA and LIHEAP:* A number of the CAAs pointed out that while EO funding is useful as a supplement to other funding sources, by itself it is not enough to replace these other funding sources. And because it can only be a “supplemental” funding source, if major funding sources such as ARRA and LIHEAP are not replaced, then their ability to use EO funds will be diminished.

1.2.7 The Commercial and Industrial (C&I) Program

The 2011 version of the EU/EO C&I program saw improvements in participant satisfaction compared to 2010 for most program attributes with all of the satisfaction ratings being above 80 percent. The MCAAA and MECA utilities and the participating contractors (mostly lighting contractors) were less enthusiastic with average satisfaction ratings ranging from 25 percent for program marketing to 75 percent for the C&I program as a whole. Table 1-7 shows the full range of satisfaction ratings. For the participating C&I contractors (mostly lighting contractors) we show both the percentage satisfied and the percentage dissatisfied. We did this because for some program categories there were high percentages of “don’t know” responses and just showing the percentage satisfied might give the false impression that the remaining respondents were dissatisfied.



**Table 1-7:
Satisfaction Ratings for the
C&I Program**

Interview/Survey Respondents	# of 2011 Respondents	Program Attribute/Implementer - % Satisfied (All %s are from 2011 surveys/interviews, except %s in parentheses which are from 2010)
MCAAA utilities	4	Franklin Energy – 50%
MECA utilities	11	Franklin Energy – 72%
C&I contractors (mostly lighting contractors)	20	<ul style="list-style-type: none"> • Application forms – 65% satisfied, 20% dissatisfied • Program website – 55% satisfied, 25% dissatisfied • Marketing efforts – 25% satisfied, 50% dissatisfied • Timing of rebate payments – 40% satisfied, 15% dissatisfied • Incentive amounts – 50% satisfied, 35% dissatisfied • Interactions with Franklin Energy – 60% satisfied, 15% dissatisfied • Program as a whole – 75% satisfied, 15% dissatisfied
Participating customers	96	<ul style="list-style-type: none"> • Rebated equipment – 96% (99%) • Program requirements – 95% (85%) • Program staff – 93% (82%) • Financial incentives – 83% (76%) • Rebate timeliness – 85% (68%) • Paperwork – 80% (69%) • Program as a whole – 93% (92%)



The two MCAAA utility representatives who gave Franklin Energy less-than-satisfied ratings (both 3s) did not explain their ratings. The only MECA utility representative who gave Franklin Energy a very negative rating did so because he said that Franklin did nothing in their service territory. Some of the respondents who gave Franklin satisfaction ratings of three faulted the contractor for sometimes not informing them of contacts that were made with their C & I customers.

The participating C&I contractors (mostly lighting contractors) gave many explanations for their dissatisfaction:

- *Dissatisfaction with program marketing:* Fifty percent of the respondents were less than satisfied with the program's marketing efforts. Most mentioned not seeing any program marketing. One contractor suggested that the program do co-op advertising where the cost of advertising is split between the contractor and the program. Another was hoping that the C&I program could share leads with qualified contractors.
- *Dissatisfaction with program rebate levels:* Thirty-five percent of the interviewees were less than satisfied with the amounts of the program incentives. The lighting measure that contractors cited most often as having inadequate rebates was lighting controls.
- *Dissatisfaction with rebate payment:* "I've seen them take 9-15 weeks after project was done," said one contractor. "They said six weeks and it was routinely 8-10 weeks before people got paid," said another.
- *Dissatisfaction with the rebate application forms:* The interviewees cited a number of reasons for this including wanting forms that are easier to fill out, wanting faster processing/approval of applications, advocating less use of the custom rebates, and pushing for more lighting distributors get lighting calculation forms.
- *Dissatisfaction with the program website:* One contractor wanted the website to show the current availability of rebates.

Other interesting findings from our evaluation of the EU/EO C&I program include:

- *How participants heard about the program:* The 2011 participants were less likely than their 2010 counterparts to cite their utility as their first source of program information. However, the 2011 participants were more likely than those from 2010 to cite contractors, equipment vendors and suppliers as their first sources of program information. This is an encouraging



sign since leveraging trade allies to spread word-of-mouth is a cost-effective way to increase program outreach.

- *Motivations for doing EE projects:* A higher percentage of 2011 participants pointed to improving equipment and operational efficiencies as reasons for initiating energy efficiency projects than the 2010 participants did. However, in 2011 the proportion of participants identifying renovation, and planned upgrades or maintenance declined.

1.2.8 Other Programs

Because this Executive Summary is very long, we have chosen not to summarize the relatively small Education, Multifamily, and Pilot programs in this Executive Summary. Descriptions of these programs and the key findings can be found in the main body of the report.

1.2.9 The Nonparticipant /General Population Surveys

Two of the many new additions to the 2011 EU/EO process evaluation were two nonparticipant/general population surveys – one for residential customers and one for C&I customers.

1.2.9.1 The Residential Nonparticipant /General Population Survey

Some findings from this survey included:

- *Demographic differences:* The nonparticipants' demographics differed from the participants' in the following ways:
 - Nonparticipants were less likely than participants to own their homes, less likely to live in single-family detached homes, more likely to have one or two residents, were younger, were less educated, and had lower incomes.
 - Nonparticipants were less aware of ENERGY STAR, less concerned with reducing household energy consumption, and less concerned with the environment or global warming.
- *Awareness of EU/EO programs:*
 - About five percent of the households contacted reported that they had participated in at least one energy efficiency program.



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- About one-third of respondents were aware of the EU/EO programs (33%) or of utility-sponsored rebate programs generally (38%).
 - Utility bill stuffers were the main source of program information for those respondents that were aware of any programs.
 - If looking for information on rebate programs, respondents would prefer to get information from the utility itself, either by calling the utility, checking the utility website, or getting information in a bill stuffer or direct mail.
 - *Reasons for not participating and barriers to energy efficiency participation*
 - The main reason respondents did not purchase CFLs was the price.
 - The main reason nonparticipant purchasers of larger equipment (clothes washers, water heaters, HVAC equipment, or dishwashers) did not participate in the rebate programs was because the respondents did not know the rebates were available.
 - Almost all respondents who purchased larger equipment purchased equipment that was eligible for the rebates they were aware of.
 - *Appliance/equipment purchases:*
 - *CFLs:* Nonparticipants tend to buy light bulbs at home improvement or hardware stores or department stores. In contrast, about half of the ENERGY STAR Products (ESP) program participants purchased their CFLs from utility meetings, offices, or energy fairs.
 - *Clothes washers and dishwashers:* Nonparticipants were less likely to purchase clothes washers or dishwashers from home improvement or hardware stores than ESP program participants.
 - *Efficiency level:* Energy efficiency was the most important characteristic for clothes washers, water heaters, and HVAC equipment. It was the second most important characteristic for dishwashers. However, an ENERGY STAR rating was one of the least important characteristics for all of the larger equipment.
 - *Market penetration:*



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- About 20 percent of respondents said their home had no CFLs. About 16 percent said all of their home's light bulbs were CFLs.
 - Less than half of the respondents reported that any of their homes' major energy using equipment was ENERGY STAR rated.
 - Less than half of the respondents reported taking any of the energy savings actions recommended in the online audits available through the program.

1.2.9.2 The C&I Nonparticipant /General Population Survey

Some findings from this survey included:

- *C&I general population respondents were generally smaller than those participating in the C&I program.* Thirty-nine percent of general population respondents had 11 full-time employees or more, compared to 66 percent of C&I participating companies.
- *General population respondents were more likely to be in the retail and office sectors and less likely to be in the manufacturing sector.* These findings suggest an opportunity for the program to increase participation from the retail and office sectors. However, energy efficiency penetration of these sectors can be difficult in cases where the retail or office facilities are leased.
- *Leasing vs. owning:* Although nearly two-thirds (62%) of the general population respondents said that they owned their space, this was a much lower ownership rate than that of the C&I program participants (84% ownership). It can be difficult to develop energy efficiency projects in leased space because of the classic split incentive barrier where the landlord controls the energy equipment purchase decisions but does not pay the energy bills.
- *Program awareness:* About one-third (35%) of the general population respondents were aware of the EU/EO programs. Over one third (41%) had heard of at least one rebate program.
 - Contractors, vendors, and suppliers were the general population respondents' dominant source of information about energy-using equipment.
 - Colleagues inside or outside their organization were also a major information source.



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- Utility contacts were not a major information source for the general population, but were for the C&I program participants. This latter difference could be an effect of the differences in company size between the general population and C&I program participants. The C&I program participants tend to be larger and manufacturing operations. Both characteristics increase the likelihood of those businesses having dedicated utility representatives.
 - *Barriers to energy efficiency:* The largest barrier to companies installing energy efficient equipment is the initial cost, with 78 percent of general population participants citing that as a barrier. The second-most-frequently cited reason was a lack of financing, at 12 percent.
 - *Equipment purchases:* The majority of the general population respondents had not made major equipment purchases since January 2008. Sixty-five percent of respondents stated that they had not purchased any new HVAC equipment, and 51 percent stated that they had not purchased new lighting equipment. For both lighting and HVAC measures, initial price and efficiency are the two most important characteristics considered in the purchase decision. For lighting, initial price is slightly more important than efficiency. For HVAC, efficiency is slightly more important than initial price.

1.3 Conclusions and Recommendations for Program Improvements

The process evaluation of the 2011 EU/EO program portfolio found that there were some areas of real improvement in program delivery and other areas where the programs appeared to be in stasis or even to have taken a step backward.

- *Areas of improved performance:*
 - *Communications:* The process evaluation of the 2011 EU/EO program found that the utilities were generally much happier with CLEAResult's reporting of program activities and status as well general communications than they had been when we interviewed them in 2010.
 - *Addressing consumer complaints/questions:* Many of the participating utilities reported that they received fewer EU/EO-related complaints or questions in 2011 than they had during the 2009-2010 period.



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- *Program tracking databases:* As described in the impact evaluation report, there was evidence that CLEAResult has improved the way it collects and organizes program tracking data.
 - *The Residential Low Income program:* Interviews with the CAAs in 2011 indicated that both the MCAAA and CLEAResult improved their performance in delivering this program compared to what they had reported in 2010. In addition, most indicators of program satisfaction from participating customers increased from 2010 to 2011.
 - *Customer awareness of energy efficiency and EU/EO:* Two major awareness/attitude barriers that were cited by the 2010 utility interviewees – unawareness of the EU/EO program and customer apathy towards energy efficiency – both declined significantly in frequency among the 2011 utility interviewees. This indicates that the program marketing and customer education efforts may be having some success.
 - *Areas where performance has not improved or even deteriorated:*
 - *Marketing plan:* Although CLEAResult did take some actions in 2011 to minimize the occurrence of “surprise” marketing campaigns that bothered some utilities during the 2009-2010 program cycle, it still has not developed a detailed and comprehensive marketing plan. This topic is discussed in more detail in Recommendation #1.
 - *The Energy Star Products program:* Interviews with retailers participating in this program found high levels of dissatisfaction with the program. Interviews with program implementers also indicated that the program was very late getting into the field to recruit retailers. Finally all indicators of program satisfaction from participating customers declined from 2010 to 2011, with some satisfaction ratings declining significantly.
 - *The residential HVAC program:* Less than half (43%) of the utilities were satisfied with this program. All the indicators of program satisfaction among participating HVAC contractors declined from 2010 to 2011 except for one. All indicators of program satisfaction from participating customers declined from 2010 to 2011. This report does provide some possible explanations for these declines in satisfaction including the increase in the minimum required energy efficiency standards (which increased incremental costs without increasing rebate levels proportionately) and the



expansion of the participating HVAC contractor population to smaller companies that lack the staff or sophistication to handle the program paperwork requirements.

The process evaluation of the 2011 EU/EO program found some evidence that the program was maturing. Some examples of this include evidence from the Residential Appliance Recycling and Audit & Weatherization that the participant populations have fewer “early adopters”, some evidence of reduction in energy efficiency and EU/EO awareness barriers, more C&I customers hearing about the EU/EO C&I program from trade allies instead of their utilities, and a doubling in the number of participating HVAC contractors.

The following are our recommendations for improving the EU/EO portfolio of programs that are reviewed in this process evaluation program. Some of these recommendations are similar to those we made in our evaluation of the 2010 program. Our reason for reiterating some of these earlier recommendations is simply that we did not believe the 2011 version of the EU/EO programs adequately addressed them.

Recommendation #1: CLEAResult needs to demonstrate that it has a detailed and comprehensive marketing plan for the EU/EO programs in 2012. We made this recommendation in our evaluation of the 2010 program and we have a lot of evidence that it was not adequately addressed in 2011. One new development in 2011 was that CLEAResult sent many of its marketing materials to a MECA representative for review and approval before they are released. This was intended to minimize the occurrence of “surprise” marketing campaigns that bothered some utilities during the 2009-2010 program cycle. While this new procedure is certainly helpful, it is not a substitute for developing a detailed and comprehensive marketing plan.

Such a plan should be available to the EU/EO utilities and have a roadmap that is detailed enough so that utilities who want to promote the EU/EO program can use this to plan their own marketing efforts. It should describe what market sectors or customer types are being targeted, which geographic regions are being targeted, which marketing approaches are being used, and a timeline of marketing activities. It should describe strategies for addressing some of the marketing needs identified by the retailers participating in the ESP program in this evaluation. It should also be a “living document” that can be altered based on input from the utilities and even trade allies.

Evidence/Justification for this recommendation from the 2011 interviews and surveys:



1. The MCAAA utility representatives, who we did not interview in the previous evaluation, are asking for more advanced notice of EU marketing activities. When we asked them which market activities have been less effective, three utility representatives faulted CLEAResult for not having a marketing plan that gave them advanced notice of when marketing activities would occur in their service territory. The MECA utilities made similar demands for a marketing plan in our evaluation of the 2010 program.
2. In 2010 interviews with utilities the bill insert was one of the most-cited examples of an effective marketing strategy. In 2011 utility interviews the bill insert was most-cited as an example of an *ineffective* marketing strategy. One reason that some of the utilities downgraded the usefulness of the bill insert was that they did not think it was being used in a strategic manner. "Probably bill inserts [have been the least effective], because ... there's no consistency, there's no plan on their part, as far as what kind of marketing they're going to do for the year," said one MECA utility representative. "It's just random. They'll just e-mail us and say: 'Can we do a bill insert next month?' So if they have more of a consistent message, I think, that they were trying to spread amongst our members ... and promote certain programs, maybe we would be able to see some effectiveness there, but there isn't anything."
3. Both CLEAResult staff and participating retailers pointed out that the EU/EO program was very late in reaching out to retailers to recruit them for the ESP program and these delays greatly reduced the effectiveness of the program. A marketing plan with clear assignments and tight timelines would help avoid these kinds of programs.
4. One of our other recommendations is to significantly increase the EU/EO marketing budget. The existence of a marketing plan would better insure that the larger EU/EO marketing budget funds are used most efficiently and effectively. A marketing plan would also increase the chance that other entities such as utilities or trade allies that are willing to do additional EO marketing on their own would be able to plan any joint promotions or co-op advertising.

Recommendation #2: Significantly increase the EU/EO marketing budget.

Evidence/Justification for this recommendation from the 2011 interviews and surveys:

1. The residential nonparticipant/general population survey found that only 33 percent of the customers in the MCAAA/MECA service territories were even aware of the EU/EO program.



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2. The main reason nonparticipant purchasers of larger equipment (clothes washers, water heaters, HVAC equipment, or dishwashers) did not participate in the rebate programs was because the respondents did not know the rebates were available.
 3. Only 33 percent of the MCAAA utilities were satisfied with the EU/EO marketing activities.
 4. Only 30 percent of the MECA utilities were satisfied with the EU/EO marketing activities.
 5. Only 25 percent of the C&I contractors were satisfied with the EU/EO program's marketing efforts.
 6. Only 43 percent of the HVAC contractors were satisfied with the EU/EO program's marketing efforts.
 7. Only 53 percent of the retailers participating in the ESP program were satisfied with the EU/EO program's marketing efforts.
 8. One of the most common recommendations for program improvements from participating customers is for the program to increase its marketing and build awareness of the program.

Recommendation #3: Replace the current ESP retailer coupon program with an upstream program that involves manufacturer buydowns, especially for CFLs.

Evidence/Justification for this recommendation from the 2011 interviews and surveys:

1. Upstream CFL buydown programs are successfully operating in many states from California to Illinois to Massachusetts.
2. Upstream CFL buydown programs are actually ideal for the type of small retailers that operate in many parts of the EU/EO service territories. This is because the lighting manufacturers do almost all of the work from completing the paperwork, to setting up the end cap and the signage in the store, etc. In California the upstream CFL program allowed hundreds of small ethnic grocery stores to sell CFLs that never sold them before. The negligible transaction costs were a big selling point for many of these small retailers.
3. Upstream CFL buydown programs actually produce lower CFL prices, because the markdown is done on the wholesale price rather than the retail price.



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4. The 2011 interviews with retailers participating in the ESP program revealed low levels of satisfaction with the current program design. Retailers disliked absorbing the carrying costs while they wait to get reimbursed. They also disliked the additional transaction costs for both customer and cashier that such a coupon program requires.

Recommendation #4: Investigate the apparent non-delivery of the energy retrofit kits.

The KEMA impact evaluation team recently discovered that as many as 13 percent of the customers who were supposed to get energy retrofit kits never received them. This is a very high percentage of non-delivery and, if it is confirmed, would significantly impact the program's ability to meet energy savings goals while also contributing to participant dissatisfaction. CLEAResult and MCAAAA/MECA and their evaluators need to investigate to first confirm this, then find the causes, and finally suggest solutions so that this does not happen again.

Recommendation #5: Consider reducing or eliminating the deemed savings value for programmable thermostats.

Fifty-six percent of the 2011 participants who received program rebates for a programmable thermostat said that their new programmable thermostat replaced an existing programmable thermostat. In 2010 only 35 percent said that this was the case. This finding brings into question the deemed energy savings value for programmable thermostats currently used in Michigan since this savings estimates presume a change in temperature setpoint behavior by going from a manual to a programmable thermostat. In addition there are a lot of program evaluation reports and conference papers that raise questions about whether programmable thermostats really do save energy.

Recommendation #6: Provide more customer and retailer education about smart strips.

Five of the seventeen (29%) retailers participating in the ESP program said that they do not stock smart power strips because they themselves do not know enough about them to recommend them. Two other retailers said that their customers did not understand what smart power strips are for, so there was not much demand for them. More education about smart strips to customers and retailers would help overcome these barriers to wider adoption of this technology.

Recommendation #7: Educate retailers about the full range of rebates being offered by the ESP program.



About one-third of the retailers participating in the ESP program said they were unaware that that one or more of the ENERGY STAR products they carried in their stores were also covered by the program. Respondents cited smart power strips, clothes washers, and “everything except the CFLs” as examples of such products.

Recommendation #8: More in-person visits of utility service territories from EU program managers and staff:

A number of the MCAAA/MECA utility representatives said that they would like to have seen more in-person visits from EU program managers and staff. “Well, it’s a long drive for everyone, but putting a face with the program would certainly help, you know, a visit, just so we could put faces with programs,” said one utility representative. Others wanted more of an EU staff presence at their community events. “The only thing that I felt a little bit disappointed in is that it seems as though, because they’re implementing the program, they would have enough staff to help support at some of these other [community] events as well,” said another utility representative. Another representative wanted EU staff for local customer education. “They should have somebody be in the area doing presentations maybe at the county library for people, or organize something through which they can get that information out there,” she said. “We don’t see the people from Efficiency United or Franklin Energy.” Finally another representative wanted the EU marketing staff to get together with the utility staff to discuss marketing ideas and strategies.

Recommendation #9: Maintain lists of participating trade allies in the program tracking databases

Although rebate application forms for the Residential HVAC, C&I , and some pilot programs capture contractor names and contact information, CLEAResult is currently not capturing this information in their program tracking databases. CLEAResult and Franklin Energy do maintain some trade ally contact lists, but these appear to mix together participating and nonparticipating contractors. These lists also do not appear to keep track of how many rebated projects/measures a given contractor handles. Because CLEAResult and Franklin Energy are not capturing participating trade ally information in this systematic manner, the evaluators had to spend a considerable amount of time collecting this information from the scanned copies of the completed rebate application forms.



Recommendation #10: Improve the quality control procedures for contractors operating in the EU Multifamily program.

Some participating multifamily property managers in this program expressed frustration that installation contractors either went too slowly, failed to fix old (potentially cheap) faucets that broke when installing new aerators, or failed to provide education about how to use thermostats, how to install kitchen aerators (e.g. hold the faucet when changing settings), and where to install CFLs (do not use on dimmers). Potential solutions include:

- Add contractor education requirements and clarification of customer service/customer education expectations in contracts;
- Withhold partial payment to contractors until installation/education concerns can be worked out;
- Provide large-print and easy-to-understand instruction manuals for all products installed (thermostats in particular);
- Verify faucet age/condition before determining the feasibility of aerator installation;
- Use new self-programming thermostats or easy-program thermostats; and
- Upgrade from plastic aerators to metal and to higher quality CFLs.

Recommendation #11: Make improvements to the Think Energy program

KEMA's in-depth interviewing revealed some program implementation challenges with the Think Energy education program. These included balancing program kit inventory against demand, customizing program promotional materials, and working within specific education targets by state. The National Energy Foundation (NEF), which implements the program, indicated that being adequately staffed for and scheduling presentations efficiently is a minor program challenge. Efficient presentation travel can also pose a challenge over the large Michigan territory (including the Upper Peninsula) covered by CLEAResult programs.

Teachers offered additional perspective on program challenges. For example, two teachers expressed concern during the January 2012 interviews that they hadn't yet received their mini-grant for the previous year, which may indicate that the program is not meeting expectations with incentive distributions. Two teachers offered examples of confusion over submitting



household survey data; for instance, one teacher used a single program SASE to return multiple classroom data to NEF. This resulted in data from one of these classrooms not being tracked properly within NEF, and it delayed this school's mini-grant payments. Another teacher indicated that while she had submitted data, she was uncertain of the status of other teachers who had participated within her school. She reported she thought the lag in having all the data from the school was delaying incentive payments.

This challenge presents an opportunity for the program to communicate more effectively about receipt of household survey data and incentive delivery after the unit concludes. Given the teachers' comfort and satisfaction communicating by e-mail with the program, continued email conversations between NEF and participating schools and teachers after the units are complete are encouraged as a low- or no-cost program recommendation. Besides the program strengthening post-unit communication with participating schools, other recommendations participating teachers or administrators had for improving the program included:

- *Assure kick-off presenter is organized and gives clear student instructions about when students can move & interact:* Two teachers expressed minor feedback indicating that the presentation 1) wasn't as organized compared to prior years and 2) didn't include strong enough direction to students about when action was appropriate, and when quiet listening was needed. Presenters may wish to check with teachers before arriving at the school to gauge if the teacher has specific requests or announcements they'd like the NEF presenter to include in the presentation if it's not already part of the process.
- *Regularly assess whether program paperwork requirements could be streamlined:* While teachers were generally very satisfied with the program; the one aspect of the program which was ranked slightly lower by the teachers was the program paperwork requirements. About half of the teachers commented that the required volume or level of detail in the paperwork was more than they expected.
- *Define program expectations more clearly with participating parents or guardians:* Teachers noted in the interview that negative program feedback was minimal. However, a subset of teachers did report that parents called or emailed them feeling overwhelmed by the kit components, or uncertain of the program timeline. One teacher reported a parent called her upon receiving the kit via his/her child and asked, "Do I HAVE to install all of this tonight?" The teacher explained to the parent that he or she had weeks to complete the installations and survey. This example illustrates a program opportunity to increase communication with parents or guardians who support and participate in the program with their student.



Recommendation #12: Make improvements to the Home Performance Pilot program

Participants, auditors, and contractors we interviewed for the Home Performance (HP) program offered suggestions about what EU should do to improve the HP program. KEMA compiled the comments and crafted the following recommendations to respond to the suggestions for program improvement.

- *Employ more interactive communication with participants throughout their program experience.* Participants, auditors, and contractors all expressed disappointment about instances of lost program paperwork or incentive payments taking much longer than expected. The program should confirm receipt of program paperwork with a phone or email, and clearly communicate payment processing timelines to participants.
- *Improve incentive payment processing to speed up delivery.* Having to “chase down” incentive payments was the key source of participant frustration with the program. The program implementer should assess where payment breakdowns occur, and create one or more internal quality control procedures to verify participants receive timely payments.
- *Reassess program marketing strategies and materials.* Both auditors and contractors identified low program awareness as a program barrier. The program plan that KEMA reviewed indicated auditors were named as the primary marketers of the program, yet only three of eight KEMA interviewed reported doing *any* marketing. In order to continue this marketing model more successfully, the program implementer should work with auditors to confirm their commitment to marketing the program and work with them to produce appealing marketing options they will use. If auditors are not willing or feasible program marketing partners, the program should reassess its marketing strategy.
- *Provide clearer information about program rebate requirements and payment levels.* Several participants noted that they did not receive the rebate amount they expected. To address these concerns, the program implementer should do the following:
 - *Assess marketing materials and include rebate information / examples where possible.*
 - *Provide more specific rebate information / examples when the participant applies to the program.*



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- *Verify program-partner auditors and contractors have up-to-date and accurate rebate information and are relaying it properly to participants.*
 - *Provide rebate calculation support to auditors, contractors, and / or participants as needed to create accurate incentive estimates.*
 - *Expand post-audit reports to include more information to help participants assess costs and benefits of implementing program measures. Examples include provide more measure categories and choice, compile and distribute a recommended contractor list, and offer additional information on findings and recommendations that enable the participant independently weight their costs vs. benefits.*



2. Findings from the In-Depth Interviews

This section contains our findings from in-depth interviews we conducted with various program implementers as well as with various trade ally groups.

2.1 Background

From April 2011 through February 2012 we completed 73 in-depth interviews with individuals who were involved in implementing the Efficiency United (EU) and Energy Optimization (EO) program portfolios. These interviews included:

- Seven interviews with five representatives of CLEAResult – the primary implementation contractor;
- One interview with a representative of Franklin Energy – a subcontractor for CLEAResult that is implementing the EU/EO Commercial and Industrial (C&I) program;
- Two interviews (initial interview in March 2011; update interview in December 2011) with a representative of the National Energy Foundation who is implementing the Think Energy program;
- One interview with a representative of JACO Environmental -- a subcontractor for CLEAResult that is implementing the EU/EO Residential Appliance Recycling program;
- Nine interviews with 12 representatives of 10 utilities associated with the Michigan Community Action Agency Association (MCAAA) and the EU programs. These included representatives from Alpena Power, Bayfield Electric, Daggett Electric, Edison Sault, Indiana Michigan Power, Michigan Gas Utilities, Semco Energy, Upper Peninsula Power Company, Wisconsin Public Service, and Xcel Energy. The only utility participating in the EU program that we were not able to complete an interview with was WE Energies;
- Twelve interviews with 13 representatives of 12 Michigan Electric Cooperative Association (MECA) utilities that are either self-implementing programs (e.g., HVAC) or assisting in the implementation of EO programs. These included Alger Delta Electric, City of Stephenson, Cloverland Electric, Escanaba Power, Great Lakes Energy, HomeWorks Tri-County, Marquette Board of Light and Power, Midwest Energy, Ontonagon County REA, Presque Isle Electric and Gas Coop, and Thumb Electric;



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- Thirteen interviews with representatives of Community Action Agencies (CAAs) who are implementing the EU/EO Residential Low Income program;
 - Six interviews with six teachers / administrators who are helping to deliver the Think Energy program;
 - One interview with a representative of Thumb Electric concerning their agricultural pilot program;
 - One interview with a representative of Midwest Energy concerning their Home Energy Makeover program;
 - Eight interviews with Home Performance Auditors;
 - Nine interviews with Home Performance Contractors; and
 - Three interviews with Home Energy Makeover Volunteers.

In addition to these in-depth interviews with program implementers, we also interviewed a program manager with a Deep Energy Retrofit program in Massachusetts (this program is similar to the Home Energy Makeover program) as well as the sole participant in the Home Energy Makeover pilot program.

Finally we also completed in-depth interviews with various trade ally groups. These included HVAC contractors, C&I contractors, and retailers participating in the ENERGY STAR Products program.

2.2 Program Management and Delivery

This section includes our process evaluation findings concerning most of the activities for managing and delivering the EU/EO programs. The one exception is the program marketing/recruitment function, which is covered in a separate section. Program activities discussed in this section include:

- The program management activities of CLEAResult and its subcontractors;
- Utility involvement in program management;
- Communication with other implementing utilities and other program stakeholders;



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- Processes for checking participant eligibility; and
 - Incentive payments.

2.2.1 The Program Management Activities of CLEAResult and Its Subcontractors

CLEAResult said that its current management structure for the EU/EO programs includes:

- An overall manager of all EU/EO program implementation;
- Four subsidiary managers of specific EU/EO programs;
- An administrative specialist and
- A regional specialist.³

In addition to this management team, CLEAResult draws upon many other staff resources within its company. Many of them are drawn from the company's headquarters in Texas. Some of them are involved in implementing other Michigan energy efficiency programs besides those for EU/EO. These other CLEAResult staff resources provide a number of important services including:

- Program tracking database development and maintenance;
- Call center support;
- Marketing;
- Incentive payments;
- Financing/accounting; and
- Quality Assurance/Control inspections of energy efficiency projects in C&I facilities.

³ A CLEAResult representative described the regional specialist's responsibilities as "going out into the community, figuring out what's going on, who's doing what where, and creating the contacts to do events and those kinds of things."



CLEAResult estimated that 30-40 different people work on the implementation of the EU/EO programs over the course of a typical week, although only a few of these are dedicated to these programs.

CLEAResult also taps the resources of its two major subcontractors: Franklin Energy and JACO Environmental. As noted, Franklin Energy implements the EU/EO C&I program and JACO implements the EU/EO Residential Appliance Recycling program. Both Franklin and JACO also implement similar programs in other parts of Michigan outside the EU/EO service territories. The Residential Low Income program is primarily implemented by the CAAs with some assistance from CLEAResult and the MCAAA.

The Franklin Energy staff for the EU/EO C&I program includes:

- A senior manager that is responsible for all of Franklin's Michigan programs;
- A program manager that is responsible for the EU/EO program;
- A project coordinator who is responsible for making sure that all the Michigan program processes are running smoothly;
- An outreach lead who is responsible for reaching out to potential customers;
- An energy engineer who is primarily responsible for the custom component of the C&I program; and
- Four energy advisors who are locally-based in Grand Rapids, Escanaba, and the UP.

JACO Environmental outsources the appliance pickups to another contractor called Appliance Distribution. However, it is responsible for the marketing (along with another subcontractor) and it provides a call center for its operations.

2.2.2 The Involvement of the MCAAA Utilities in Program Delivery

This subsection discusses the familiarity of the MCAAA utilities with the MCAAA program portfolio, their involvement with program delivery, how much time they spend on EU-related activities in a typical week, whether they have plans to become more involved in EU in the future, and what their reasons might be for any future level of EU activity.



2.2.2.1 MCAAA Utility Familiarity with the EU Program Portfolio

We asked the MCAAA utilities whether they were familiar with the EU program portfolio and to what extent they were involved with these programs. Representatives of all ten MCAAA utilities that we interviewed said they were familiar with the EU programs, but their level of familiarity ranged widely based on their size.

- *The smaller utilities:* A few of the smaller MCAAA utilities knew nothing about the EU programs beyond basic information such as the fact that the EU programs are contracted by the state of Michigan and are financed by surcharges on their customers' utility bills. A representative of one of the smaller utilities said she had never interacted with CLEAResult.
- *Larger utilities:* Most of the larger MCAAA utilities were familiar with the EU program offerings and some participated in the quarterly update meetings sponsored by CLEAResult. Most were fairly familiar with the EU marketing efforts in their service territory and a couple of them mentioned reading the monthly status reports from CLEAResult.

2.2.2.2 MCAAA Utility Involvement with Program Delivery

We asked the MCAAA utility representatives whether they assisted CLEAResult in the delivery of the EU program. Most of the MCAAA representatives said they had not assisted in delivery beyond the marketing activities mentioned in the previous section. The few exceptions included:

- *Helping Franklin Energy reach C&I customers:* A number of MCAAA utility representatives mentioned helping Franklin Energy getting in contact with their C&I customers. One MCAAA representative said that the utility's duty to protect the confidential data of their C&I customer information forced them to act as an intermediary between Franklin Energy and their customers. So when Franklin Energy gave them a list of C&I customers they wanted to contact, the utility contacted these customers directly to get their permission and only then handed the contact information to Franklin. Another MCAAA representative mentioned working with Franklin reach some of their small commercial customers for energy audits.
- *Helping CLEAResult give out awards to their C&I customers:* A couple of MCAAA utility representatives said that they helped CLEAResult present an energy efficiency award to one of their C&I customers. One of these utility representatives said that while they appreciated the gesture, they wished that CLEAResult had given them more advanced notice. "It was really a short timeframe, so we received the information and had to turn it



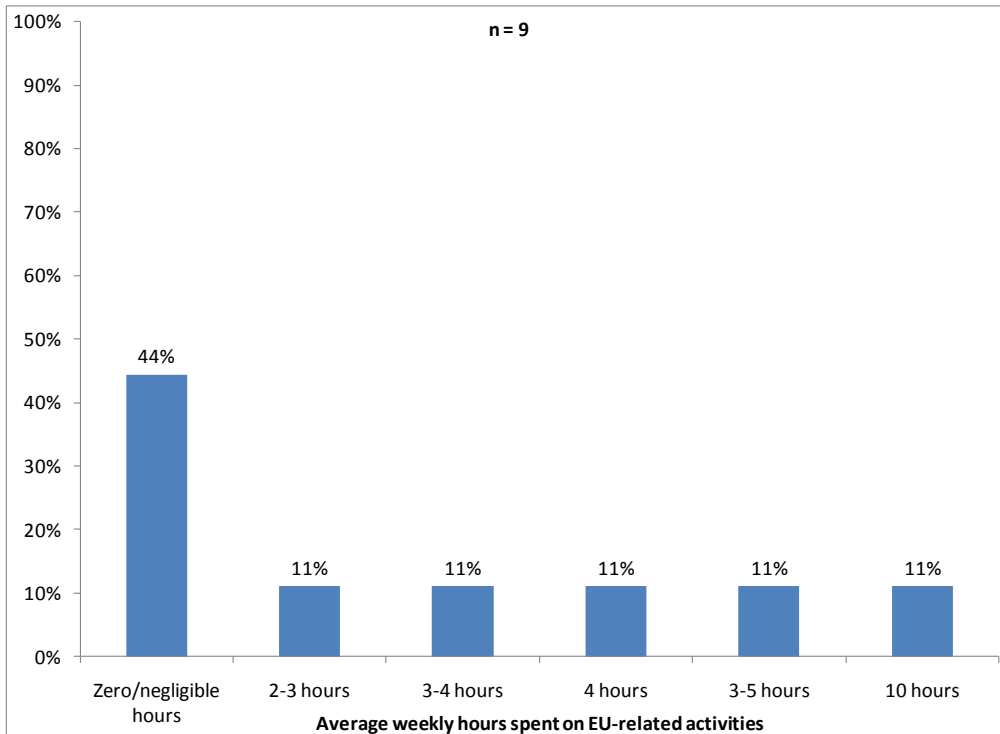
around like within 48 hours' time, which makes it really tough to try and get a hold of customers."

- *Helping CLEAResult's education program:* One MCAAA utility helped CLEAResult get access to one of their schools and a member of the utility staff even attended a training session for one of the elementary schools.

2.2.2.3 The EU Time Commitment of MCAAA Utilities

We were curious how much time the MCAAA utility representatives spent on EU-related activities and we asked them. Figure 2-1 shows that 44 percent reported spending zero/negligible hours per week on EU activities, another 44 percent reported spending 2-5 hours per week, and one MCAAA utility representative reported spending 10 hours per week. A couple of the representatives indicated that complying with monthly/regulatory requirements was very time consuming. One MCAAA representative noted that there was a lot of variability around this weekly time estimate. "It's probably ten percent of my time," she said. "If you're talking marketing and promotions, maybe let's just say an hour a week. But when I'm really doing it [regulatory requirements] it's a whole bulk of time and then I don't work on it for quite a while."

**Figure 2-1:
Average Hours per Week
MCAAA Utilities Spend on Efficiency United Activities**



2.2.2.4 Whether/Why MCAAA Utilities Might Get More Involved in EU

We also asked the MCAAA utility representatives whether going forward they expected their level of involvement with EU to increase, decrease, or stay about the same. All but one of the respondents said that their level of involvement would remain about the same. A few of them mentioned staffing level constraints as a reason for not being more involved. “The truth of the matter is ... we’re utilizing Efficiency United and CLEAResult because we don’t have the staffing levels to undertake a program of our own,” said one representative. “We’d certainly like [their involvement with EU] to increase, but we do not have labor or promotional dollars to spend on it,” said another representative.



The one MCAAA utility representative who said that her utility's level of involvement with EU would likely increase explained that this was because they wanted to spend more time in 2012 to take stock of whether EU was really working for them:

We have renewed our commitment to be involved in Efficiency United for two years, so this year and next year ... So we may be looking at actually determining: Is it reasonable to continue that? Or does it make sense for us to go back and implement those programs from a utility perspective versus using a third party administrator? ... Within the next year or so I would see us being more intimately involved in really looking and seeing where we're at with these programs ... Where it's at, what it's costing us to run those programs, and does it make sense to continue. ... One of the primary drivers for our activity with CLEAResult so far regarding delivery of the programs has been ... how they directly impact the customers. Are the customers notified in advance of activity? Is there plenty of marketing or outreach to customers before we get into customer neighborhoods and things of that sort?

We asked the MCAAA representatives what factors might encourage them to become more active in the marketing and delivery of the EU program. About half of them said no factors could encourage them to be more active, but their reasons for saying so varied:

- *Becoming more active would confuse their customers:* "We've kind of taken the position that we do not want to be more active because ... MCAAA has been hired to perform that function, and we don't want to confuse our customers," said one representative. "And they are confused when they think that they can come here for Efficiency United or CLEAResult. We've tried to tell them that those programs are not ours, they are administered by MCAAA."
- *Because they were too small to do more;*
- *Because they did not want the EU program:* "It's a tax that [my customers] have to pay for this program, and we are not getting what needs to be done," said one representative. "And people already know about the light bulbs, and they know about saving energy, and they know what they need to do, and it's a very depressed, low-income area, and I feel horrible charging my people every month on their electric bill for a program that we've utilized [infrequently]. I feel terrible."



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- *Because they were content with the current level of program activity:* “We don't see a need for us to be more involved, and I think our level of involvement now is preferably what's required to keep everyone informed,” said one representative.

The other MCAAA utility representatives mentioned a few things that could make them more active in EU activities. These included being able to recover some of the funds they would spend on EU marketing/delivery, getting more convenient access to current EU marketing materials (e.g., being able to print these online) and getting directives from senior utility management to become more involved. As noted above, one utility was already planning to become more active of its own accord so that it could better assess whether or not it wanted to continue with the EU program.

2.2.3 MCAAA Utility Perspectives on EU Communications

Good communications between program actors are essential for the effective delivery of energy efficiency programs. This subsection describes how the MCAAA utilities communicated with the EU program and learned about program activities.

2.2.3.1 How the MCAAA Utilities Communicated with EU Program Actors

We asked the MCAAA utilities whether they had interacted with CLEAResult and what the nature of these communications or interactions was. Eight of the nine (88%) MCAAA utility representatives reported at least some interaction with CLEAResult staff, although the frequency of interaction ranged from weekly to only occasionally. The types of interactions they reported included:

- *Customer questions and complaints:* A number of MCAAA utility reps mentioned contacting CLEAResult to answer customer questions or address customer complaints about filling out the rebate application forms.
- *Coordinating with CLEAResult on marketing efforts:* Most of the MCAAA utility representatives mentioned working with CLEAResult on sending out EU bill inserts or other EU promotional mailings. Two MCAAA utility representatives mentioned reviewing EU marketing materials or telemarketing scripts.
- *The quarterly status meetings:* As discussed in the next subsection, most of the utility representatives participated in the quarterly EU status meetings that are hosted by



CLEAResult. Some attended the meetings in person while others participated via conference calls.

- *The monthly status reports:* A couple of interviewees mentioned reading the monthly status reports from CLEAResult and sometimes contacting CLEAResult to get clarification on information in the report.
- *Coordinating with CLEAResult on program delivery:* A number of MCAAA utility representatives mentioned working with CLEAResult program managers (and also Franklin Energy representatives) who wanted to deliver their programs to nonresidential customers in their service territories.
- *Dealing with website issues:* One MCAAA utility representative mentioned working with CLEAResult on a website "landing page."

We also asked the MCAAA utility representatives about their interactions with Franklin Energy – the implementation contractor for the Efficiency United C&I program. Seven of the nine (78%) MCAAA utility representatives reported at least some interaction with Franklin Energy staff. The nature of these interactions usually involved Franklin Energy contacting the utility staff to help facilitate communications with C&I customers in the utility's service territory. A couple of the MCAAA utility representatives mentioned Franklin Energy attending either contractor trainings or community events that were held in their service territories.

However two of the MCAAA utility representatives found CLEAResult's communications to be lacking for not giving them advanced notice when some of their subcontractors did a direct install campaign in their service territories. One of them described how this lack of communications caused some problems:

I can tell you the program that caused the most calls to us was ... when they were going door-to-door installing thermostats and pipe wrapping. I can tell you that created a lot of phone calls for us. I don't know if that was successful. It certainly was a little bit of a burden on us. ... As a matter of fact, early on in that process, we didn't know what was going on, and we called the cops. We actually had the cops out there, because we didn't know who these people were.



2.2.3.2 The Quarterly EU Status Meetings

We asked the MCAA utility representatives whether they have participated in the quarterly EU status update meetings. Seven of the nine (78%) respondents said that they had. The only two utilities that have not participated were the smallest of the MCAA utilities.

We then asked the seven MCAA utility representatives who said that they attended these quarterly meetings whether there were any particular types of information that they were interested in learning at these meetings in the future. A few of them had suggestions including:

- *Notification of upcoming EU marketing activities or program changes:*
 - "It would be helpful ... to let us know in advance of the different programs for solicitation and marketing efforts that they are planning, so that we might be able to do some more coordination with them," said one respondent. "We have been receiving phone calls, more recently, from new people there within their organization, letting us know that they're doing a direct-mailing campaign and things of that nature. So it's helpful to have that information in advance so that we can alert, number one, our call center so that once customers are contacted, we can say: 'Yes, this is a program that we're involved in and yes, these are appropriate people to be contacting you,' sort of as a stopgap."
 - "We want to know marketing plans," said another.
 - "[We would like] more on forward-looking calendars for training or marketing communications that we can help out with, and any program changes," said a third. "There's not like a routine e-mail blast that goes out when there's a program change that I've seen so that I can let others in the company know. The call centers and usually the reps are the people that I put information out to let them know."
- *More information on how EU is spending its funds:* "We want more transparency in the EU financial data," said one respondent. "Where is the money going specifically ... how is it being spent, and who's getting it? Really, right now, I would say that's our chief concern."
- *Soliciting more utility input on improving program marketing/delivery:* "Talk about success stories but also talk about improvements," said another representative. "What we'd like to do ... is actually having the utilities engage in what are you doing for your customers, and try to create some more learning across the utilities that identify opportunities for improvement. ..."



We have tons of experience in other jurisdictions as other utilities, as Efficiency United members, as members of other utility organizations. We have tons of experience, and we shouldn't be reinventing the wheel here. We can look at, play upon experiences we have."

Finally we asked the seven MCAA utility representatives who said that they attended these quarterly meetings whether they thought that quarterly meetings were frequent enough or whether they would you prefer monthly meetings. All seven of them said they were satisfied with the quarterly frequency of the meetings. "The quarterly is fine because monthly they send us the reports anyway," explained one respondent. "I like the quarterly meetings, I think that's enough," echoed another respondent. "When I have issues that are outside of that [timeframe], I'm making calls anyways."

2.2.3.3 Program Tracking/Status Reports

The evaluation of the 2010 EU/EO programs focused a lot of attention on utility complaints about the tardiness of program tracking/status reports. There was a general consensus from both the MECA and MCAA utility representatives who we interviewed in 2011 that CLEAResult had improved its performance in this area. The following are some of their comments.

- "The reporting that we have been getting from CLEAResult has improved this year versus last year. Before we weren't getting monthly reporting, now we are. They streamlined the reporting. They did a very nice job with that."
- "I think MCAA, CLEAResult have refined their reporting, provided more detail on the reporting, expanded the data that they share with the different utilities, and that's going well, better than the previous year."
- "[The reporting] has gotten better. It's improved."
- "They are good at reporting the results."
- "They were better than last year as far as getting the reporting to us. It wasn't timely like they promised, not exactly, but it was better than last year."



2.3 Marketing and Recruitment

This section discusses the involvement of the utilities in marketing and recruitment for the programs as well as their perspectives on marketing issues. Topics covered in this section included:

- Who does the marketing;
- How they promote the programs;
- Barriers to participation;
- The effectiveness of various marketing approaches;
- The adequacy of program marketing efforts;
- Whether marketing responsibilities were properly allocated and carried out; and
- Whether the programs were being promoted upstream.

2.3.1 Who Does the Marketing

2.3.1.1 The Marketing Efforts of CLEAResult and Its Subcontractors

CLEAResult has primary responsibility for marketing the EU/EO residential programs, with the exception of the Residential HVAC program that is being self-implemented by some of the utilities and the Residential Appliance Recycling program, which is marketed by JACO Environmental. The utilities pay CLEAResult for these marketing services but also can supplement these with their own marketing efforts. In addition, they often provide input on the marketing collateral that CLEAResult develops. One new development in 2011 was that CLEAResult sent many of its marketing materials to a MECA representative for review and approval before they are released. This was intended to minimize the occurrence of "surprise" marketing campaigns that bothered some utilities during the 2009-2010 program cycle.

Franklin Energy is responsible for marketing the EU/EO C&I program. However, CLEAResult and the utilities or their representatives (MCAAA/ MECA) must approve any marketing materials that Franklin develops. JACO Environmental does most of the marketing for the Residential



Appliance Recycling program although it relies on CLEAResult for any in-person marketing such as distribution of program materials at community events.

The evaluation of the 2010 program described in some detail the various marketing methods that CLEAResult and its subcontractors used to promote the EU/EO program. For the most part these marketing methods remained the same in 2011 with a heavy reliance on bill inserts, direct mail, utility periodicals, newspaper ads, community events, and in the case of the C&I program – cold calling and knocking on doors.

The 2011 interviewees mentioned a few changes in type or frequency of their marketing approaches. For example, in November 2011 the HVAC program did a short-term promotion where they doubled the rebates for some of the more popular HVAC measures. To get the word out about the bonus rebates to the HVAC contractors they did both direct mail and email blasts.

In 2011 the C&I program has also made greater use of trade ally outreach, with particular emphasis on certain market sectors such as grocery. "We put an ad in the Michigan Food News in order to try to get grocery stores a little bit and also just different food areas or restaurants," said the CLEAResult program manager. "Also, we did like grocery trade shows ... and then also, we bumped up our trade ally marketing a lot in the middle to end of the year [2011]."

The JACO representative said they had made greater use of radio ads to advertise the Residential Appliance Recycling program in 2011 compared to 2010. "Radio has proven to be pretty successful especially in the rural areas," he said. "The one problem with it, obviously, is that it's expensive, and so we can't do a whole lot of it with our marketing budgets. But it's pretty effective." They also said that they made greater use of direct mail than they have in the past, especially in service territories where the utilities were short of reaching their energy savings goals.

The program implementers also mentioned some greater use of "social media" marketing vehicles such as Facebook. Yet they also noted that the lack of high-speed Internet in many areas of the EU/EO service territories limited the effectiveness of these social media marketing approaches. "Certainly not everybody has a computer and has computer literacy," said one CLEAResult program manager. "But if you're surfing online and you have a Facebook page and you live in Marquette, for example, there's a pretty high probability that if you saw an ad to get some free energy-saving stuff you'd take advantage of it."



2.3.1.2 MCAAA Utility Involvement with EU Marketing

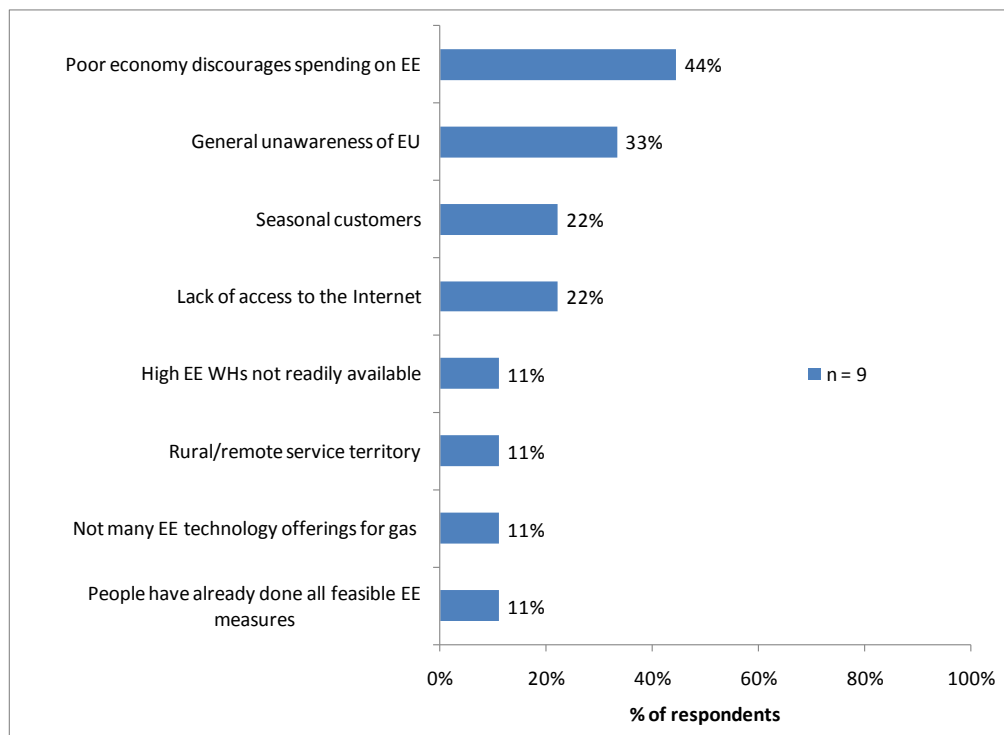
We asked the MCAAA utilities whether they were involved in marketing the Efficiency United program or educating their customers about the program. Eight of the nine (89%) MCAAA utility representatives said that they had sent out EU bill inserts or mailers, although a couple acknowledged that they had not done this in awhile. A number of them also mentioned maintaining links to the EU website in their utility websites. A couple of them also mentioned reviewing EU marketing materials to make sure that the EU/utility co-branding information had the proper look, etc. The representative for one MCAAA utility said that they had been very active in promoting the EU energy kits at community events.

A number of the MCAAA utility representatives explained why they did not do more marketing of the EU program on their own. They noted that they were already paying MCAAA and CLEAResult to do the marketing and that they usually could not recover their marketing costs. "Every penny that we collect for these energy efficiency programs goes to MCAAA," said one representative. "So the expectation is that MCAAA and CLEAResult will use those funds to pay for, market, and support the full implementation of those programs. So we do as little marketing as possible because we don't have funding to recover that."

2.3.2 The MCAAA Utility Perspective on Barriers to Participation

We asked the MCAAA utility representatives what factors or barriers prevented their customers from participating in the EU program. All nine of the utility representatives weighed in on this question. The most-cited reasons for nonparticipation were the poor economy (44% of respondents) and general unawareness of the EU program (33%). However, Figure 2-2 shows the utility representatives also cited six other barriers to participation.

**Figure 2-2:
MCAAA Utility Perspectives
on Barriers to EU Participation**



Note: The total exceeds 100% because the respondents were allowed to provide multiple responses.

Most of the respondents elaborated on these barriers. The following are some of their explanatory comments:

- *Poor economy discourages spending on energy efficiency:*
 - “My personal opinion is that you’re asking [customers], in a tough economy, to go ahead and spend some money out-of-pocket on something that they may not necessarily need right now. It’s not broken, why fix it? Even though I can appreciate there’s going to be energy savings down the line, but you’re going to offer me just \$25 to do it. And I have other expenses right now. Is that on my priority list? So I think it’s the timing of all of this

that, if the economy was much better and members had more money that they could spend right now to make these improvements, I think they would do that. And I don't think you would need much of an incentive to do that. But I think right now times are tough and it's very difficult for members to make those kind of financial decisions."

- "Well ... I think the current state of the economy is such that people aren't sure whether they should invest the money that's necessary to make the improvements that they want to make on their home. It's still a difficult economy, at least here in Michigan. And I know we still have customers struggling to pay their bills. And certainly making improvements on their home is secondary."
- "Really the economy is really the biggest barrier. Everything else seems easy and simple to get through to participate. I think people just aren't participating now because the economy."

- *General unawareness of EU:*

- "The customer knowledge level would also be a barrier, you know, you've got to educate first."
- Well, I think from my standpoint, I think it's just an unawareness of the program. ... [So they need to be] "getting the word out on it to our customers ... that the program even exists."
- "More advertising and communications would be one that you can always do."

- *Seasonal customers:*

- "Well, the fact that most of [our customers] are seasonal, and I don't know what incentive they would have or whether they really think about energy efficiency in connection with those kinds of residences."
- It could be due to the fact that there are seasonal customers in Michigan, so they're not there all the time."

- *Lack of access to the Internet:*

- "The Internet, because [the EU programs] are all on the Internet, but not all of our customers are on the Internet."



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- "I would say wish their online capability and development would be another barrier."

2.3.3 The MCAAA Utility Perspective on Marketing Effectiveness

This subsection explores the perspectives of the MCAAA utilities on the effectiveness of the EU marketing efforts. It discusses their interview responses concerning which EU marketing activities have been effective, whether EU is spending enough on marketing and outreach, whether marketing activities are properly allocated between CLEAResult and the utilities, and their general satisfaction with the EU marketing efforts.

2.3.3.1 Which Marketing Activities Have Been Effective

We asked the MCAAA utility representatives which EU marketing activities had been the most effective. About half of them said that they did not know and a few pointed out they lacked data to assess the relative effectiveness of these activities. "I'm not sure because I never see the research on the information," said one representative. "I just know when there's marketing and promotional efforts." "Whether they're direct mail or whether [it's] their presence in trade shows, I don't really have a way to know which of those outreach activities have been successful for them," said another.

Four of the MCAAA representatives did name marketing activities they thought were effective, although each one named a different marketing activity:

- *The 2010 CFL give-aways*: "Last year the free light bulbs were real effective because it was free," said one representative.
- *The distribution of energy kits at community events*: "[The energy kits] went like hotcakes, quite honestly," said one representative.
- *The outreach efforts of Franklin Energy to C&I customers*: "We're having a little bit more success with the large customers on some of the prescriptive programs ... compared to what we're seeing on the mass market," said one representative. "I think Franklin does a good job."
- *Bill inserts*: "I always think that the bill inserts are the only way I can affect [the EU program] directly."



2.3.3.2 Which Marketing Activities Have Been Less Effective

We also asked the MCAAA utility representatives which marketing activities had been less effective. Once again about half of the respondents said they did not know and repeated that they did not have enough information from CLEAResult or EU to judge relative effectiveness. Two of them thought that JACO's attempts to market the appliance recycling program in their service territories had been ineffective based on the lack of consumer participation. One said that JACO had only scheduled two dates over the course of the whole year to pick up refrigerators/freezers in their service territory. "I just don't think customers actually are ... waiting for that one or two days out the entire year." One MCAAA utility representative had thought that the bill inserts had not been effective.

One utility representative who had done many community events promoting the EU/EO programs said she was "a little bit disappointed" that CLEAResult did not provide more staff to help them at these community events. "Most of the time we could not even get our booth set up because people knew we had these kits there," she explained. "So we're trying to set up our booth, and we're selling them at the same time, and they went like hotcakes, quite honestly. So it would have been nice to be able to have someone there that could do the explaining while we did the processing."

Three utility representatives faulted CLEAResult for not having a marketing plan that gave them advanced notice of when marketing activities would occur in their service territory.

- "In Wisconsin we've got a marketing plan, so we understand when the administrator or implementer is going to be with our customers, and we make sure that we're not sending too many messages to our customers during the month," said one representative. "So that would be beneficial in Michigan as well."
- "I think they need to have a more long-range plan ... I don't see a lot of long-range planning with them," said another representative. "I think they're still trying to get their staff and key people in place. There's been a lot of turnover there as well."
- "I guess I don't really know what their marketing plan is for a whole year," said a third. "I don't really know ... what's ...coming out."

In last year's evaluation a few of the MECA utilities made a similar complaint about CLEAResult not having a long-term marketing plan.



One of these MCAAA utility representatives also recommended that this marketing coordination with CLEAResult involve multiple MCAAA utilities. "It's really about getting the communication folks from the utilities and CLEAResult together to talk about kind of an annual plan so that there can be coordination," she said. "Because a lot of the communications that are done for the utilities are done pretty regimented, on an annual schedule. So the earlier that CLEAResult can start working with our communication folks to try and understand what we plan to do and what we can do and try to coordinate things, [that] would be useful."

2.3.3.3 Whether EU Is Spending Enough on Marketing and Outreach

We asked six of the MCAAA utility representatives who had been willing to provide opinions on the effectiveness of EU market activities whether they thought EU program was spending an appropriate amount on marketing and outreach. Two representatives said that the program was not spending enough. "There is outreach in our service territory, [but] whether it's sufficient in ... getting the level of participation that they need to achieve the goals that's allocated out there ... I'm not sure if they do," said one representative. "I don't think there's been enough," said another.

One representative thought that an appropriate amount was being spent. "You can always do more, but it's expensive, you got to find a balance," he said. "So I think for the money that we pay in, our customers are aware. And I know from looking at the numbers that someone is taking advantage of [the EU program]."

The remaining three found the question difficult to answer:

- "That's a tough one to answer, again, because, how are our customers reacting to it, we don't know," said one representative.
- "That's difficult for me to answer because I think that ... you can always spend more money, but is it effective?" said another. "So I think they need to have a more long-range plan."
- "It's kind of hard for me to judge," said a third. "I know the targets are being met, but I'm not sure how much expenditure is being spent on that. So, yeah, it's kind of hard for me to assess that."



2.3.3.4 Whether Marketing Responsibilities Are Appropriately Allocated

We asked these same six MCAAA utility representatives (who were familiar enough with the EU marketing activities to have an opinion on them) whether marketing and outreach responsibilities were allocated appropriately between CLEAResult and the utilities. Four of the six (67%) thought they were, although two of them qualified their answers:

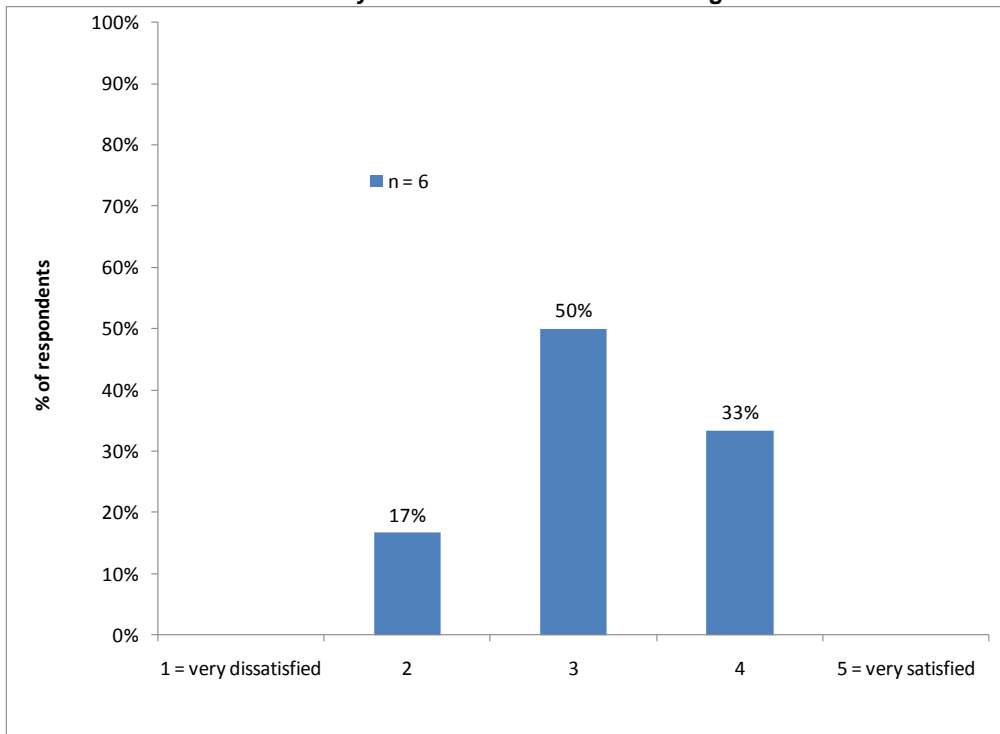
- “I do, based on where the money’s going,” said one. “If the utility is going to be expected to do more proactive, aggressive marketing to get the word out about those programs, then there has to be some allocation of that money that comes back to the utility to direct towards that activity.”
- “Ultimately, if we don’t do anything, it’s up to them,” explained another representative. “But because there are kilowatt savings goals that we need to meet, there’s a certain level of participation and responsibility on the part of the utility as well. And so keeping [our customers] informed about these opportunities, it’s just good business.”

Two of the six (33%) utility representatives thought the marketing and outreach responsibilities were not allocated appropriately between CLEAResult and the utilities. Both of them thought that CLEAResult was not doing a good enough job of communicating with them about planned marketing activities. “I know our organization as a whole does not feel comfortable with what has been done or is being done,” said one of these representatives, “because I think they feel a lack of input into the process.” “If we could all get together and have a set calendar and really understand what each other is doing from a communications perspective, that would really benefit the program overall,” said the other.

2.3.3.5 MCAAA Utility Satisfaction with EU Marketing Efforts

We asked the six MCAAA utility representatives who indicated familiarity with the EU marketing and outreach activities to rate their satisfaction with these activities. We asked them to use a five-point satisfaction scale where five indicated “very satisfied” and one indicated “very dissatisfied.” We consider satisfaction ratings of four or five on this five-point scale to indicate that the respondent is satisfied with the program activity being judged. Figure 2-3 shows that only a third of the respondents were satisfied with the EU program marketing efforts. The average satisfaction rating was 3.2.

**Figure 2-3:
MCAAA Utility Satisfaction with EU Marketing Efforts**



We asked the six respondents to explain their satisfaction ratings. They gave the following reasons:

- *Satisfaction rating of 2:* This respondent pointed to inadequate communications from CLEAResult on upcoming marketing activities, the lack of a marketing plan, and the ineffectiveness of the EU mass marketing efforts.
- *Satisfaction ratings of 3:*
 - “Well, they were late getting started for 2011, and I’m not sure they’re capturing the customers as much as we’d like to.”



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- “[We need] more support [from CLEAResult] at the [community] events” and the bill inserts “could be more specific ... they were too general in nature.” This same respondent also remarked on the lack of a “long-range” marketing plan.

- *Satisfaction ratings of 4:*

- “The design [for the bill inserts] looks good ... the message is there for the programs. We do not know where they’re sending the marketing to, we just know what are the ones that are sent out to the bill stuffers. Other than that, where their marketing efforts are, what they’re doing to get the message out, we don’t see all that detail.”
- “The only reason I wouldn’t put a five is that, and it may be partially my fault too, is that we don’t do that last step of collaborating or sharing information afterwards. I think if we did that step, I would give [the EU program’s marketing efforts] a five.”

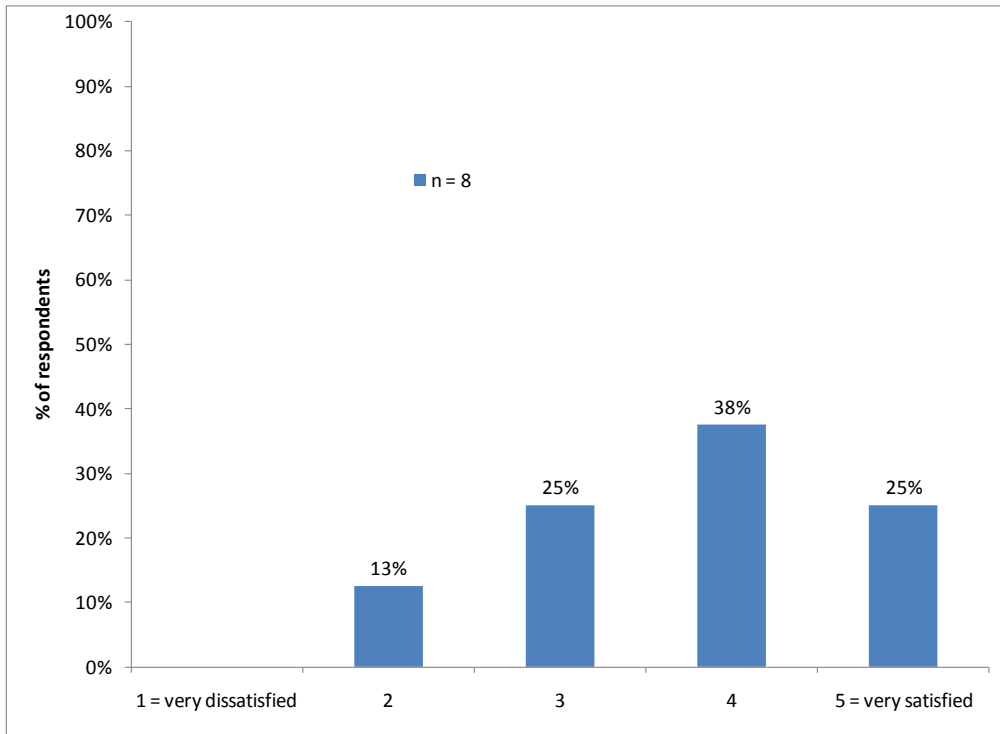
2.4 MCAAA Utility Satisfaction with the EU Programs

This section summarizes the interview responses of the MCAAA to questions about their satisfaction with various aspects of the EU programs (except marketing, which was discussed in the previous section).

2.4.1 MCAAA Utility Satisfaction with CLEAResult and the Whole EU Program

We asked the MCAAA utility perspectives how satisfied they have been with the performance of CLEAResult. We asked them to use a five-point satisfaction scale where five indicated “very satisfied” and one indicated “very dissatisfied.” Figure 2-4 shows their responses. The average satisfaction rating was 3.8 and the modal rating was 4.0.

**Figure 2-4:
MCAAA Utility Satisfaction
with CLEAResult**



We asked the respondents to explain their ratings. There was a general theme among the respondents that CLEAResult's performance was improving and that they had become more responsive to utility requests and inquiries than they had been in the past. The following are some of their responses:

- Satisfaction rating = 2: This utility was generally dissatisfied with their level of residential participation and were unhappy with CLEAResult not communicating with them more about marketing strategies.
- Satisfaction rating = 3
 - "I'm satisfied because I guess they're doing what they're supposed to be doing."



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- “We would have preferred more detailed transparency in the numbers about how much our customers have contributed in the program, and where each one of those dollars has gone. So we would have preferred a little more transparency in the financial numbers about where all the money is going. And ... we generally feel like not enough money is going to customers in the form of direct incentives in that there's a lot of money being spent in implementation of program design, not necessarily going to customers in the form of incentives.”
 - Satisfaction rating = 4
 - “They have been much more responsive this year now that they're set up.”
 - “I think things have improved quite a bit since last year ... we're into this program a few years now and things seem to be leveling out.”
 - “They've been responsive ... as we have called to gather information ... and if we had not received a timely follow up, they've taken corrective action to make sure that we get timely follow up on inquiries or customer calls and make sure that we have different resources to make sure that the same situation won't occur again. So from that perspective, they've been pretty good.”
 - Satisfaction rating = 5
 - “I personally have been very satisfied. I'd have to give it a five. They've been responsive when I've called them up or when I contact them. And they've been proactive in contacting me and letting me know what's going on and when they're going to be in our service territory and things of that nature. So I feel that I have a good relationship with them.”
 - “For a new program, I have had very few issues come up ... I think they've been good at communicating with me and especially for someone who, I mean I'm so far away so a lot of communications are via phone and e-mail ... And we just haven't ... had any issues really. I mean it's rolled out pretty smoothly, we don't get customer complaints, the portfolio is pretty good I think. So we're pretty happy with how it's rolled out.

Later in the interview we asked the satisfaction ratings for the EU programs as a whole. These generally corresponded with the satisfaction ratings for CLEAResult shown here.



2.4.2 MCAAA Utility Satisfaction with CLEAResult's Subcontractors

We also asked the MCAAA utility representatives to rate their interaction with Franklin Energy, which serves as CLEAResult's implementation contractor for the C&I program. Only four of the utility representatives said that they had enough direct interaction with Franklin Energy to judge their performance. Using the same five-point satisfaction scale, one respondent gave Franklin a rating of five, one gave them a rating of four and two gave them a rating of three for an average rating of 3.8.

2.4.3 MCAAA Utility Satisfaction with Program Design

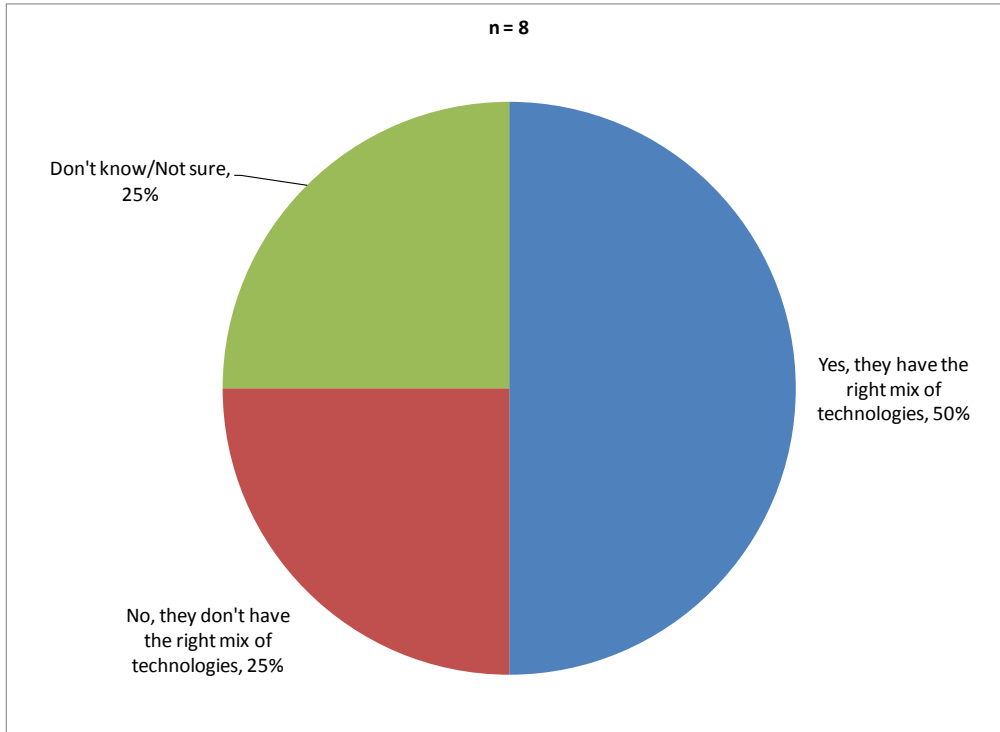
This section discusses the interview responses of the MCAAA utilities concerning their satisfaction with some elements of the EU program design. These elements include whether the EU program is offering the right mix of energy efficiency technologies to customers and whether the EU program's rebate levels are adequate.

2.4.3.1 Whether the Program is Offering the Right Mix of EE Technologies

We asked the MCAAA utility representatives whether they thought that the EU program was currently offering the right mix of energy-efficient technologies. Half of the respondents said the program was, a quarter said it was not, and the remaining quarter did not know ([Figure 2-5](#)). Two of those who thought that the EU program was offering the right mix said they were familiar with energy efficiency programs in other states and that the EU program's offerings were comparable to these. Yet one of the respondents who thought the program offerings were adequate pointed out that offering the right products was not enough to insure adequate customer participation. "I would say yes [the technology mix was right], "but the incentives are quite low, so I don't know if they're getting as much activity based on that," she said.

The two respondents who thought the EU program's technology mix was not right both based their opinion on the fact that they have not had a lot of customer participation. "If we're not getting much participation, that would tell me no," said one of them, although she conceded that she was not "sure if it's the product or if ... it's the communication and how it's being publicized."

Figure 2-55:
Whether MCAAA Utilities Thought
The EU Program was Offering the Right Mix of EE Technologies



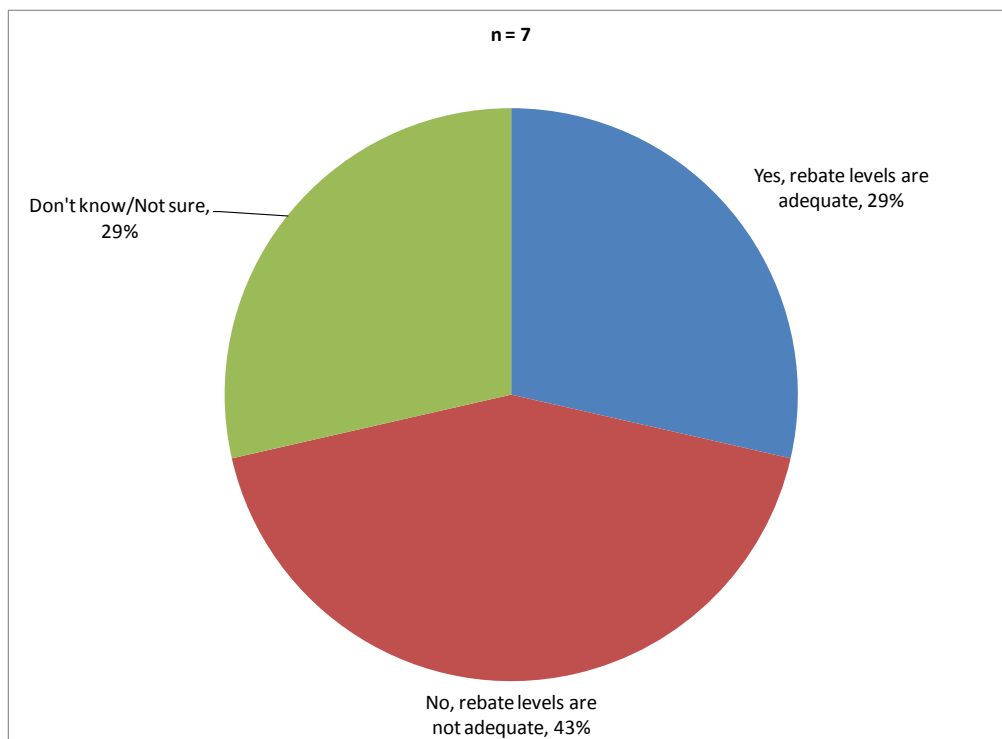
2.4.3.2 Whether EU Rebate Levels are Adequate

We asked the MCAAA utility representatives whether they thought the EU program's current rebate levels were adequate to encourage adoption of the energy-efficient technologies. Figure 2-6 shows that less than a third of the respondents thought the rebate levels were adequate. In addition, even those who said the rebates were sufficient thought it was necessary to qualify their answers. One of them explained:

Given the current economy and everything, I'd say they're the best they can be. The difficulty I see is that a number of people just don't want to make that expenditure based upon the current costs. And I'm not sure that they have the money available to make those types of investments. But for those that do, the incentives are reasonable.

One of the MCAAA utility representatives who thought the rebates levels were inadequate also pointed to the economic downturn. “[The rebates are] not enough, based on the expense of the items that we’re encouraging, and the state of the economy at this point,” he said. He pointed to the Energy Star Products program in particular as an EU program where the rebates, with the exception of the smart strips, were not adequate. Another representative who thought the rebates were insufficient thought that EU program had its spending priorities out of balance. “We generally feel like not enough money is going to customers in the form of direct incentives in that there’s a lot of money being spent in implementation of program design, not necessarily going to customers in the form of incentives,” she said.

**Figure 2-6:
Whether the MCAAA Utilities
Thought the EU Rebate Levels were Adequate**



Two of the respondents questioned whether the rebates were doing much to drive or change customer decision-making, both in the residential and C&I sectors. “I don’t think residential



customers are going out and buying things because of the rebates, but it's a nice added feature to buying a new appliance," said one representative. "I do know, anecdotally, a lot of [C&I] customers in 2009 delayed what they were already going to do just so they could take advantage of rebates on the programs that were offered," said another representative. "But it appeared to us that they were going to do stuff anyway, and they just took advantage of the rebates."

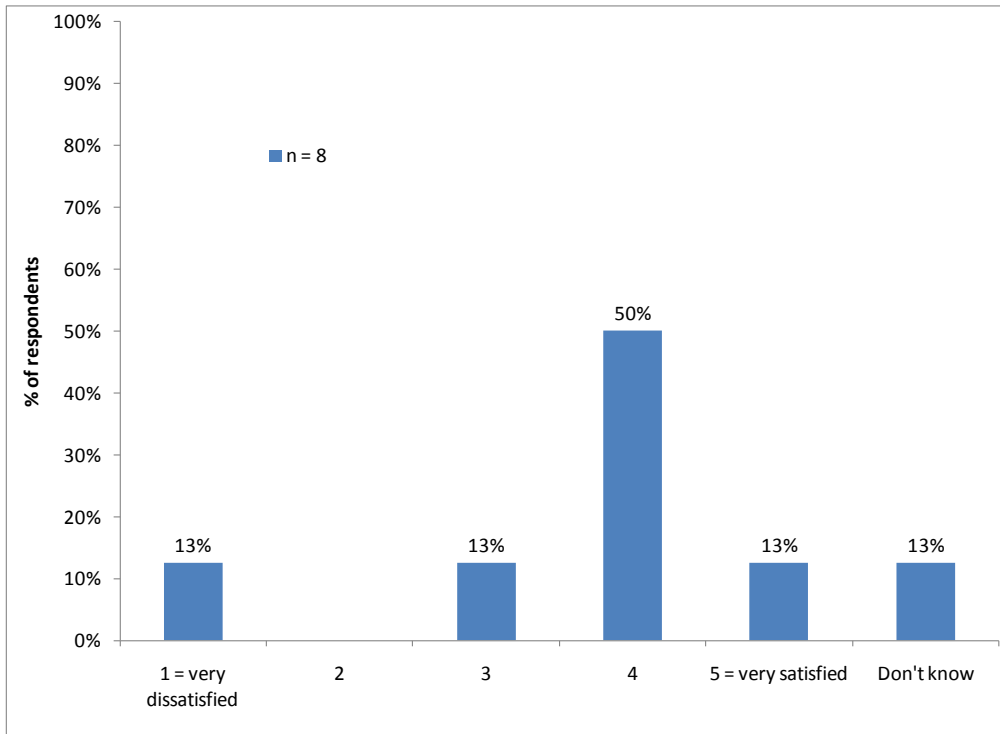
2.4.4 MCAAA Utility Satisfaction with EU Program Processes

This section summarizes the MCAAA utility representatives' responses to interview responses concerning their satisfaction with program processes such as checking customer eligibility for EU and the processing of EU rebate applications.

2.4.4.1 Satisfaction with Checking Customer Eligibility for EU

We asked the MCAAA utility representatives who were familiar with the process that CLEAResult used for checking customer eligibility for the EU program how satisfied they had been with this process. We asked them to use a five-point satisfaction scale where five indicated "very satisfied" and one indicated "very dissatisfied." Figure 2-7 shows the distribution of responses. The average satisfaction rating was 3.6 and the modal response was 4.

**Figure 2-7:
MCAAA Utility Satisfaction
with EU Customer Eligibility Determination Process**



We asked the respondents to explain their ratings. The following are some of their responses.

- Satisfaction rating = 1: "I'm just going to say that I'm dissatisfied."
- Satisfaction rating = 3: "We did have a concern, and we've never had this clarified to us, that when they were at an exhibit at [a community event] that they were just handing out ... free light bulbs ... and we were curious about how they were validating whether they were [our] customers because they didn't have the availability to check that on the spot. ... And unfortunately, it's a small community, and we've had some that said they were not our customers but that they got the free stuff."
- Satisfaction rating = 4

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- "I think things have improved, so I would say it's probably about a four. ... What my gauge is, so that we're clear, is: Are my members calling me and they're very upset with the service they're receiving? That would really be a concern for me. ... But I think we just don't have our members calling and kicking and screaming about Clear Results. So that's a good thing."
 - "I think there is the electronic portal that is available and I'm not sure they're utilizing it."
 - "It was a very basic portal that we put in place ... We had to spend money to get that portal in place."
 - "I wish [the customer eligibility checking process] was electronic. I wish there was a way to make it electronic."
 - Satisfaction rating = 5: "It's working fine. I mean, if you're looking at one to five, I'd say that's probably five, that's fine."

2.4.4.2 Satisfaction with the Processing of Rebate Applications

We asked the MCAAA utility representatives how satisfied they have been with the EU program's processing of rebate applications for their customers. They were told to use a five-point satisfaction scale where five equals "very satisfied" and one equal "very dissatisfied."

Most of the respondents declined to provide a satisfaction rating for this part of the EU program. They explained that this was handled by CLEAResult and they simply did not have enough information on whether it was going well or not. "We don't hear any feedback whether they got the rebate, or if it was fast, or if they had to wait, it's part of their information that we don't know," explained one respondent. "We're not involved in that at all," said another MCAAA representative. "Early on ... in late 2009 and early 2010 ... I know customer satisfaction was a little below, because they had difficult times processing rebates in a timely matter," said a third. "But it appears to me that that's been resolved, but only because we don't get those complaints anymore."

Three of the MCAAA utility representatives were willing to provide satisfaction ratings for the EU program's processing of the rebate application forms. Two gave the program a satisfaction rating of five and one gave a satisfaction rating of two – for an average satisfaction rating of four. The two respondents who gave the program a high rating cited the lack of customer complaints. "I haven't heard any complaints or any problems with rebates from any customers or



anything of that nature,” said one of these representatives. “I would give it a five because I have never heard any complaints from any customers. I’ve never heard any complaints on timing,” said another. The one respondent who gave a satisfaction rating of two complained that very few of her utility’s customers were benefitting from the rebates. “I feel like I’m paying a lot for nothing,” she said.

We also asked the MCAAA utility representatives a related question about their satisfaction with the EU program’s payment of the financial incentives. Once again only three of the respondents were willing to provide a satisfaction rating. One gave a satisfaction rating of five, one gave a rating of four-to-five, and the third gave a satisfaction rating of four. These higher ratings were generally due to an absence of customer complaints. “I’m not aware of any difficulties or any problems that customers been having,” said one of these respondents.

2.4.5 MCAAA Utility Satisfaction with Individual Programs

We asked the MCAAA utility representatives about their satisfaction with two of the EU programs that we figured they might be most familiar with – Audits and Weatherization and Residential Appliance Recycling. Yet most of the respondents said that they were either not familiar enough with these programs or, in the case of the gas utilities and the appliance recycling, they were not offering the program. The responses of the few respondents who provided satisfaction ratings for these programs are discussed below. We also asked the MCAAA utility representatives which EU programs they liked best. Most respondents refused to name a favorite program. The three respondents who did have a favorite program named the C&I program twice and the Residential Low Income program once. However, when we asked for suggestions for EU improvements, one MCAAA utility representative said that they would be interested in both the Education and Onsite Audit programs, which their service territory has not yet participated in.

2.4.5.1 The Audits and Weatherization Program

Two MCAAA representatives gave satisfaction ratings for the online audit portion of the Audits and Weatherization program (they were unfamiliar with the new onsite component of the program). One gave the online audit a satisfaction rating of two (on the five-point satisfaction



scale) and the other gave it a one.⁴ A third respondent did not give a rating but mentioned that her customers in the UP faced internet access barriers. Their explanations included:

- (Satisfaction rating = 1) "We just haven't had any customers taking advantage of the online audit ... I don't know if they aren't promoting it or if people just are not online ... the last time I really looked at the numbers, it was at two, and I know one was an employee that we had do it just to see what it was like."
- (Satisfaction rating = 2) "The online audit I am familiar with because I actually sat down and prepared that for my own home. And it is a long and cumbersome process. And while it's quite a bit of work, and I'm not sure that the customers are willing to go through all that time and effort."
- (No satisfaction rating) "The difficulty with the online audit, especially for us up here in the UP, is a lot of our members either have dial up or don't have Internet, and so they liked to be able to have the availability of an audit, but the online audit isn't going to work for them. So what we've tried to do is go ahead and say, we will print the worksheets for you, and go ahead and complete them, return the worksheets to us, we'll enter the information in the system. So you can see where that is very time consuming. And we can do that for them, just trying to make it work for them. But I know it's very difficult."

2.4.5.2 The Residential Appliance Recycling Program

Four MCAAA utility representatives provided satisfaction ratings for the Residential Appliance Recycling program. Using the five-point scale they gave satisfaction ratings of four, three, two, and one respectively for an average rating of 2.5. The following are some of their comments.

- (Satisfaction rating = 1) – "Very dissatisfied ... We've had, like we said, great success in the other service territories, but certainly not up in the UP, so I would give that a one as well ... And I don't even know how they're promoting that, to be honest with you, how well that's being communicated to our customers."

⁴ It should be noted that most of these MCAAA utility interviews were completed in late October 2011 and the first week of November. CLEAResult introduced a new streamlined version of the Online Audit tool in the first week of November 2011. So these utility representatives are reporting on the older version of the tool.

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- (Satisfaction rating = 2) – “Last year, we had customers who called for the recycling pick up and they were never responded to.”
 - (Satisfaction rating = 3) – “Overall, the design of the program, I understand how it works, but the level of goal achievement so far for the year, I mean, they’re at 9% for our utility ... Nine percent achieved goal so far.”
 - (Satisfaction rating = 4) – The respondent complimented JACO for making the extra effort to pick up appliances for customers who live on islands. However, the respondent added: “the only thing is a couple of times where the members said: ‘We’ve been here waiting and where’s the truck?’ Orthey had so many appliances to pick up, and their truck was already full, and they still had appointments. So I think they need to still work on that a bit. You know, the size of the appliance and what they are actually picking up, may not always jive.”

2.4.6 The MCAAA Utility Perspective on What is Going Well

The MCAAA utility representatives were asked what aspects of the EU program were going well. They mentioned a number of different things including:

- *Improved communications from CLEAResult;*
- *Improved reporting of program activities with more detail:* “I think it’s much better. They provide a regular printed report that’s very detailed and gives us great information. I think actually the report now is much better than some of the telephone conversations and the conference calls.”
- *An improved website; and*
- *Fewer customer complaints.*

2.4.7 The MCAAA Utility Perspective on Areas for EU Program Improvement

We asked the MCAAA utility representatives about areas of EU program administration and delivery where there was room for improvement. They cited a number of areas including:



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- *Long-term marketing plans, advanced notice of marketing efforts:* "When [EU is] doing a new [marketing] campaign, if I knew about it ahead of time, those are things that I can help highlight for [EU]. Sometimes I'm more reactive to them calling [EU] for information. I guess I don't really know what [EU's] marketing plan is for a whole year. ...I don't really know necessarily what's always coming out."
 - *More advanced notice of direct-install campaigns:* "They implemented [the direct install program] ... towards the latter part of the year and were out in customers' neighborhoods and did not provide adequate customer notification to the community leaders, to the customers themselves. And as a result, we had customer complaints and concerns, inquires, calling up whether this is legitimate. They were concerned. It's close to Christmas. What are these people knocking on my door and trying to come in and saying they want to install things? Very uncomfortable. Very negative response. So we didn't like that."
 - *More utility-customized information on program participation:* "I don't have any information as to even the number of [our] customers that have received any compact fluorescents or received rebates or requested rebates. The only thing I get are monthly and quarterly reports that indicate that there's some progress being made, but as to what, how they derive those percentages, I have no idea."
 - *More program funds spent on incentives vs. administration:* "Well, from my opinion, more direct cash going to our customers. I think that would be an improvement, and ...more transparency in getting the reporting of the financials, where all of the money went ... how much was spent on ... customers versus how much went to other contractors and other administrations. There just seems to be a lot of money being spent on administration in this program."
 - *More local customer education:* "They should have somebody be in the area doing presentations maybe at the county library for people, or organize something through which they can get that information out there. We don't see the people from Efficiency United or Franklin Energy. I would think the library or the senior center would be two locations, or the Chamber of Commerce."
 - *More use of utility billing inserts and newsletters:* "Probably being more routine about taking advantage of getting into our bill inserts and ... newsletter, just using those free avenues that we have."



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- *More specifics in the bill inserts:* "I've been a little bit disappointed with the approach on the inserts. It seems like you need to have that price point out there, not so much the rebate, but ... for example, for the smart power strips, saying that they're under \$10, you can get your smart strip, and so there's kind of a call to action based on the price. And a lot of the information for the bill inserts was very general in nature ... It was more a lure piece for [EU/EO] and not necessarily getting right down to the nitty gritty of what's the offer."
 - *More information on the website about pilot programs:* "They currently run some pilot programs, and the thought process behind those pilot programs is not everyone is eligible for them so they do not put them on the website. And we would prefer to see those, all program offerings to our customers thoroughly detailed on the website, because that's our only means of getting that information and sharing it with customers and all of our call center staff and anybody who works in the field. If they would get an inquiry, our guidance to them is to look on the website. Everything we offer to our Michigan customers is on that website, but, in fact, it's not, so that's an area that I feel needs to be addressed and improved, and we've communicated that a couple of times."
 - *More communication/coordination between EU and utility account reps:* "But we have our marketing managers that would get involved on a customer-by-customer basis. They're the ones that deal with the customers directly, and they know what the customers' needs are. So there could be maybe some increased communications between those marketing reps that we have and the people at either Franklin Energy or CLEAResult."
 - *More in-person visits from CLEAResult staff:* "Well, it's a long drive for everyone, but putting a face with the program would certainly help, you know, a visit, just so we could put faces with programs."
 - *More participation by CLEAResult staff in community events:* "The only thing that I felt a little bit disappointed in is that it seems as though, because they're implementing the program, they would have enough staff to help support at some of these other [community] events as well."
 - *Achieving savings goals:* Some MCAAA utility representatives said that they were falling short of goals, especially in the residential sector.



2.5 In-Depth Interviews Concerning the ENERGY STAR Products Program

2.5.1 Introduction

To learn more about the Residential and Small Business ENERGY STAR Products (ESP) program, KEMA completed:

- *In-depth interviews with 22 retailers participating in the ESP program:* Retailers were asked questions about their knowledge of the ESP program, the extent of their marketing and promotional efforts, the Energy Star products they carried in their stores, and their level of satisfaction with the program.
- *An in-depth interview with one of the CLEAResult employees responsible for setting up the retailer portion of the ESP program:* This employee primarily dealt with setting up retailers to deliver the rebated CFLs.

This section summarizes the findings from these interviews.

2.5.2 Program Description

The ESP Program was launched in November 2009 in all utility service territories. The ESP program is the largest program in the EU and EO portfolios. According to the CLEAResult representative, CLEAResult began implementing the retailer component of the ESP program by developing maps of retailers (primarily Ace Hardware, True Value, and Do it Best) around the major metropolitan areas where participating utilities provide service based on the Hoover database. Then several CLEAResult employees drove around to those retailers with program materials to try to recruit them into the program, face to face.

The CLEAResult representative said that participating retailers were happy to devote some shelf space, usually end caps, to the program, but did not actively promote the program. CLEAResult employees typically set up the end caps with existing inventory and got promises from the participating retailers that they would order more inventory. CLEAResult explained the program and left rebate coupon books with these retailers.

The CLEAResult representative reported that participating retailers would make the coupons available to customers, who used them to provide their contact information and utility in



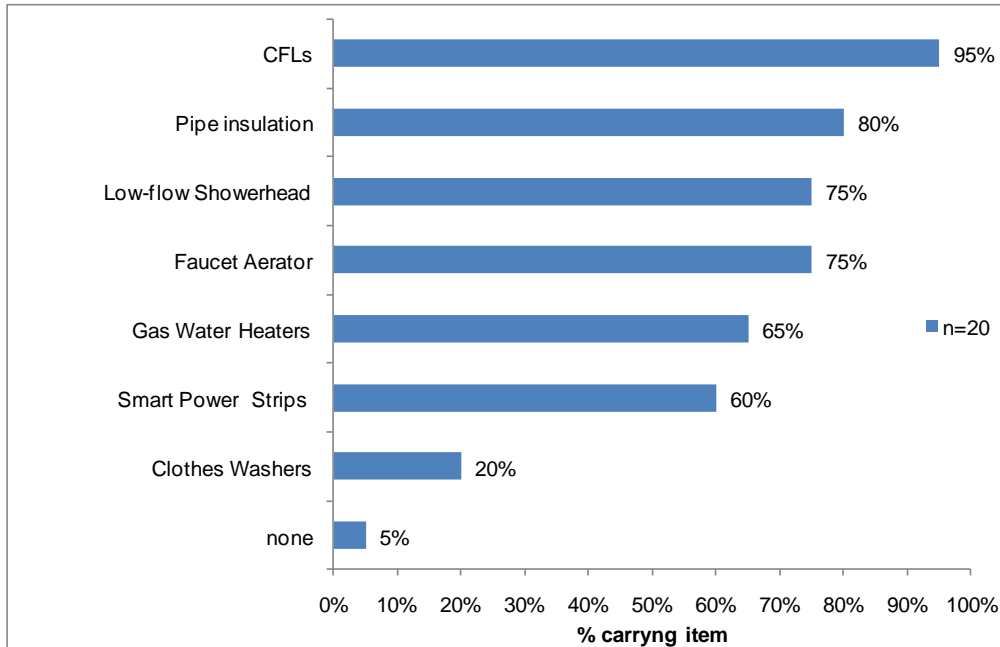
exchange for discounts on the CFLs. Retailers manually keyed in the discounted price and collected the coupons at the register. Periodically, retailers sent in envelopes of coupons and sales records to CLEAResult to receive compensation for the rebates. There was no automation of the process. This process only applied to CFLs. The respondent did not do any promotion of retailers to provide rebates for smart power strips or water heater measures.

2.5.3 Product Offerings and Program Knowledge

2.5.3.1 Product Offerings

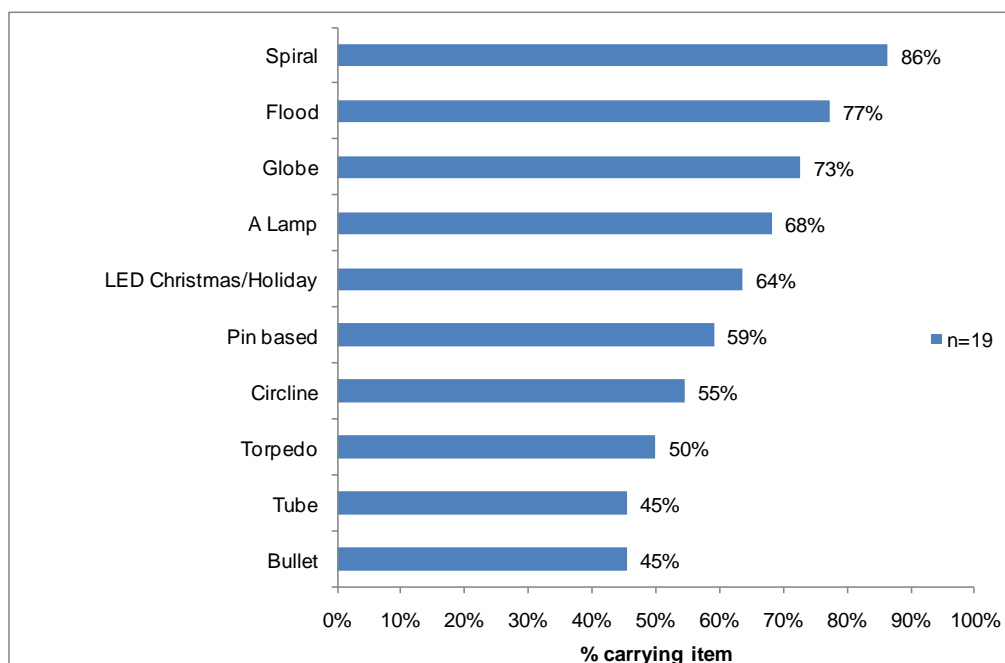
KEMA asked the participating retailers about their level of knowledge about the ENERGY STAR rebate program, and the range of ENERGY STAR products they carried in their stores. By far the most popular category of ENERGY STAR product was CFLs, with 95 percent of respondents indicating that they stocked them. Products designed to reduce hot water energy consumption, such as pipe insulation, low-flow showerheads and faucet aerators, were also important. [\(Figure 2-8\)](#)

**Figure 2-8:
ENERGY STAR Products Offered
by Participating Retailers**



KEMA asked respondents which types of CFLs they carried in their stores. As Figure 2-9 shows, while spirals are the most widely-stocked variety (86% of respondents said they carried this type), most retailers also carried a number of other varieties.

**Figure 2-9:
Types of CFLs Carried**



KEMA also asked retailers to estimate the shares of all lighting products sold in their stores represented by CFLs, incandescents, halogens, and LEDs. Seventy-four percent of respondents (n=19) reported that incandescents still comprise more than half of all bulbs sold. However, the interviews revealed that CFLs have achieved a fairly impressive degree of market penetration in some stores: 21 percent said that they made up a majority of their bulb sales, while 47 percent said CFLs represented between 20 and 50 percent sales. LEDs still comprise only a small fraction of lighting product sales (Table 2-1).

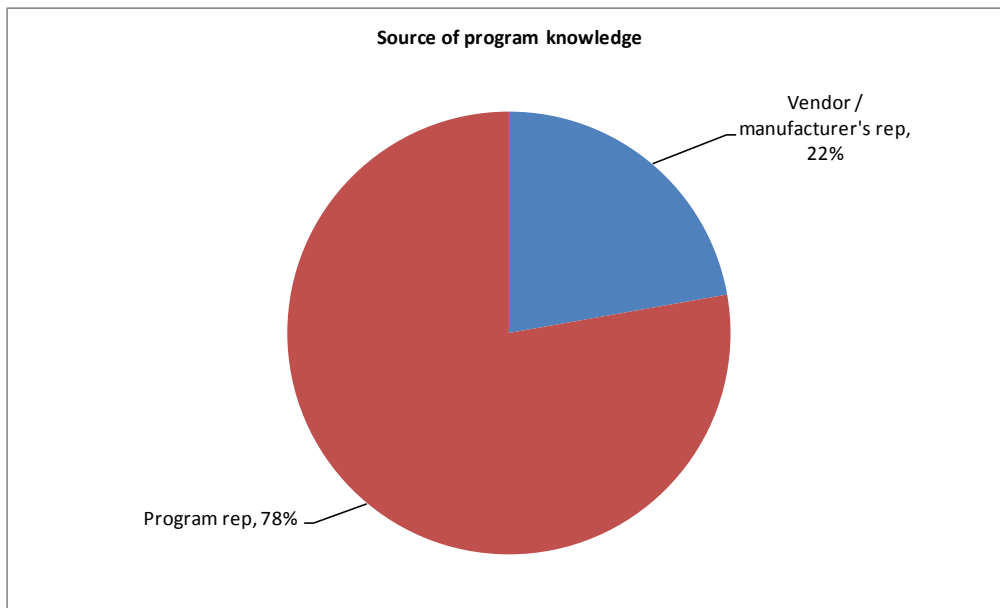
Table 2-1:
Share of Light Bulb Types in Total Lighting Sales

Percentages	0-20%	20-50%	Over 50%
CFLs	32%	47%	21%
Incandescents	5%	21%	74%
Halogens	79%	21%	0%
LEDs	100%	0%	0%

2.5.3.2 Program Knowledge

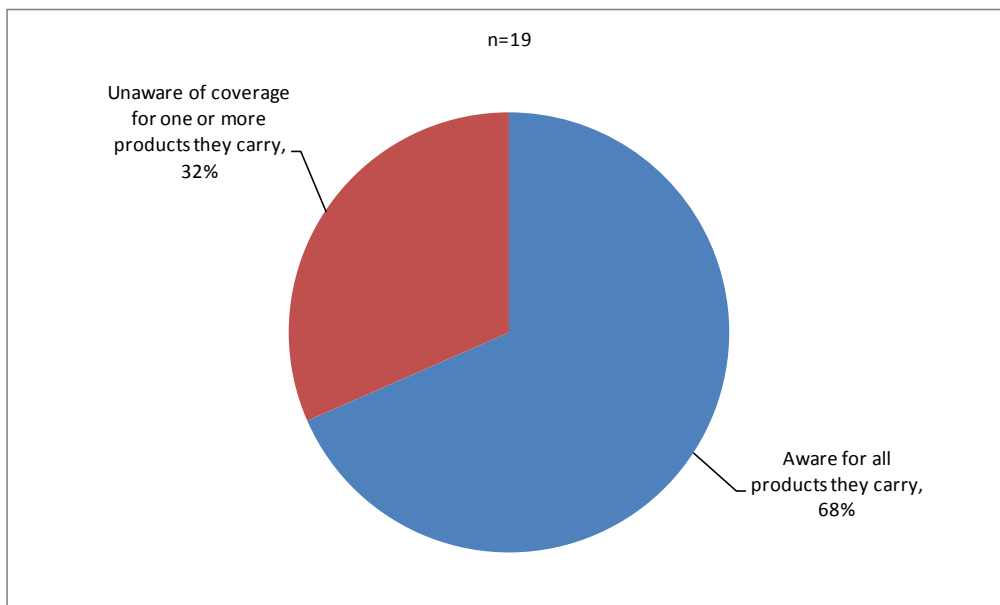
On the whole, the participating retailers believed they were well-informed about the EU/EO ESP rebate program. Ninety-five percent of respondents said that they were generally well-informed about the program prior to being interviewed. Most cited an EU/EO representative as their primary source of information about the program. A salesperson or manufacturers' representative was the other cited source. None of the respondents identified their utility as a source of information about the program (Figure 2-10).

Figure 2-10:
Sources for Participating Retailers
of General ESP Program Information



Yet the interviews revealed that even retailers who said they had a good general knowledge of the EU/EO ESP program were sometimes not aware that the program covered energy-efficient products that they carried in their stores other than CFLs. About one-third of respondents (32%) said they were unaware that one or more of the ENERGY STAR products they carried in their stores were also covered by the program. Respondents cited smart power strips, clothes washers, and “everything except the CFLs” as examples of such products (Figure 2-11).

**Figure 2-11:
The Extent of Specific ESP Program Knowledge
for Participating Retailers**



The interviews examined the extent of retailer knowledge about smart power strips in particular. The interviews found that some retailers thought they lacked sufficient knowledge or understanding of smart strips and that this was preventing them from promoting their use effectively. Five of the interviewed retailers said that they do not stock smart power strips because they themselves do not know enough about them to recommend them. Two other retailers said that their customers did not understand what smart power strips are for, so there was not much demand for them. After having the interviewer explain more about them, two of



these respondents said that they would be willing to carry smart strips in their stores in the future.

The impact evaluation report will have a full program attribution analysis. However, the process evaluation did ask one question that is relevant to the program attribution issue, namely whether the retailer had carried the rebated items in their stores prior to becoming involved in the EU/EO ESP rebate program. Ninety-four percent said that they had done so. Therefore the program was not encouraging retailers to introduce new products to their customers, although it is still possible for the rebates to increase the sales of these products.

2.5.4 Retailer Marketing and Promotional Activities

The interviews revealed that retailers believed that their employees were sufficiently knowledgeable about ENERGY STAR products and the EU/EO ESP program to be able to promote the rebated products effectively to customers. Ninety-five percent of respondents said that their employees were well trained. When asked who had provided the training, most respondents indicated that they had been the primary source (Table 2-2).

**Table 2-2:
Source of Employee Training**

Percentages	
Program rep	24%
Vendor/manufacturer's rep	12%
Store management	65%

When asked about the extent of their marketing and promotional strategy for ENERGY STAR rebated products, most respondents (63%) said that they did not have such a strategy. Seventy-nine percent indicated that they do not do marketing and promotion of the ENERGY STAR Products program themselves, beyond stocking the products and using the signage and other materials provided by the program. Among those saying that they did undertake additional promotional activities, the main activity mentioned was devoting space to the program in their print advertising.

2.5.5 Issues with Program Delivery

According to the CLEAResult interviewee this program delivery model creates two negative side effects for retailers. First, the retailers had to carry the cost of the rebates until the check from



CLEAResult arrived. Second, the retailers incurred a transaction cost at the register by requiring customers to fill out coupons and cashiers to collect them and key in special prices. The interviewee explained:

The number one complaint we had in all the retailers that we talked to is there were different levels of concern about them having to support the financial burden until their rebate checks came in.

The respondent reported that the retailers never really actively promoted the program. The respondent speculated that store managers were too busy and had too many products to devote substantial time or energy to this particular program. "They just didn't really push it, if you will," he said. "They made space available and counted on the program driving itself." The lack of promotion may also have been due to the previously-described costs the program delivery model created for the retailers.

The CLEAResult interviewee was not aware of any retailers ever running out of CFL stock, but he noted they may not have had much inventory. "I never really saw any that really sold out of inventory so they weren't dead in the water from lack of inventory," he said. "But some of those end caps were pretty thin with inventory."

The respondent also thought that the process of signing up retailers happened too late in the year. Starting so late caused them to rush to get anyone signed up that they could, and precluded setting up a more automated delivery mechanism. In particular, the respondent would have preferred that CLEAResult had started in January and taken the time to set up an "upstream" program where manufacturers and distributors provide rebated CFLs to retailers, who then pass those savings on to consumers. "It was such a piecemeal type effort so late in the year to try and make something happen like that that it just, it wasn't destined to deliver big numbers," he said.

One reason CLEAResult was reluctant to adopt an upstream model for the ESP program was a fear that customers from nonparticipating utilities would be able to take advantage of the discounted CFLs. The respondent confirmed that this was a possibility. He noted that many of the stores he recruited were in areas where their customers were likely from many different utilities, some of whom did not participate in the program. However, he also thought that the coupon delivery method was not without the potential for a similar type of abuse. He said nothing prevented people from checking the wrong utility on the coupon forms, either honestly or dishonestly:



If they can get them for ninety nine cents or pay two fifty apiece for them and all they've got to do is fill out this coupon and check a box that says I'm a participating member of this utility...the potential for those kind of situations is there.

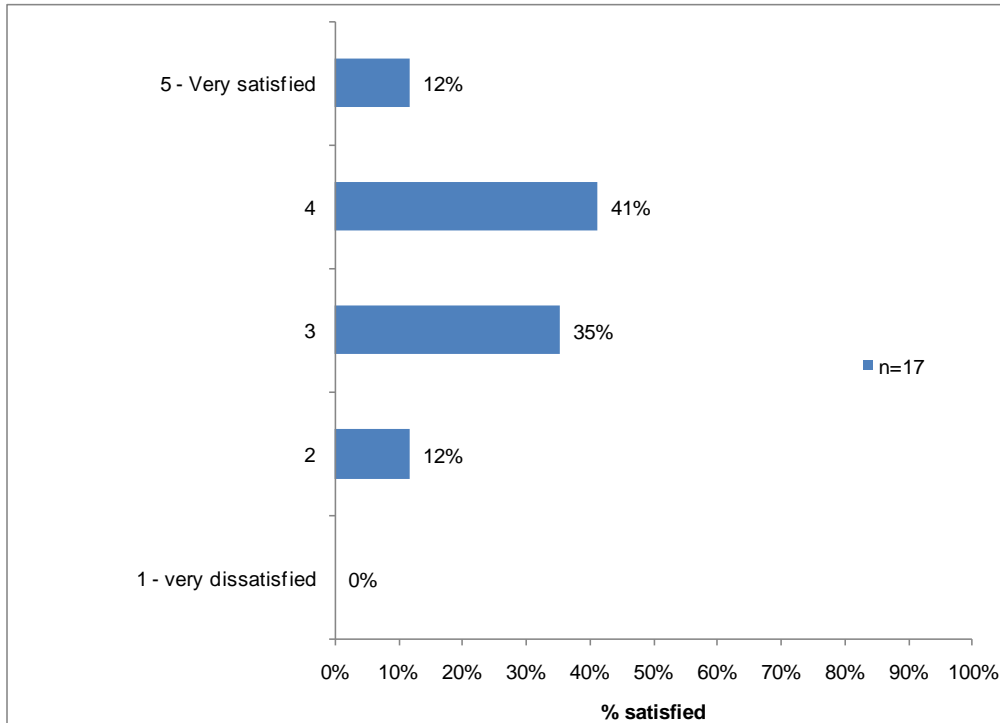
The respondent was not aware of any efforts from the utilities to market the program.

2.5.6 Satisfaction with the ENERGY STAR Program

KEMA asked the participating retailers about their level of satisfaction with the marketing and promotional features of the EU/EO EPS program, as well as how they felt about the financial reimbursement process, their interactions with program staff, and their satisfaction with program as a whole.

Satisfaction with the marketing and promotion of the program was low (Figure 2-12). Only about half (53%) were satisfied (answered 4 or 5 on a 5-point scale, where 1 is "very dissatisfied" and 5 is "very satisfied") with the marketing and promotional aspects of the program, with the remainder being less than satisfied (answered in the 1-to-3 range). This indicates that there is a lot of room for improvement in this area.

Figure 2-12:
Satisfaction with EU/EO Marketing of
ENERGY STAR Products program

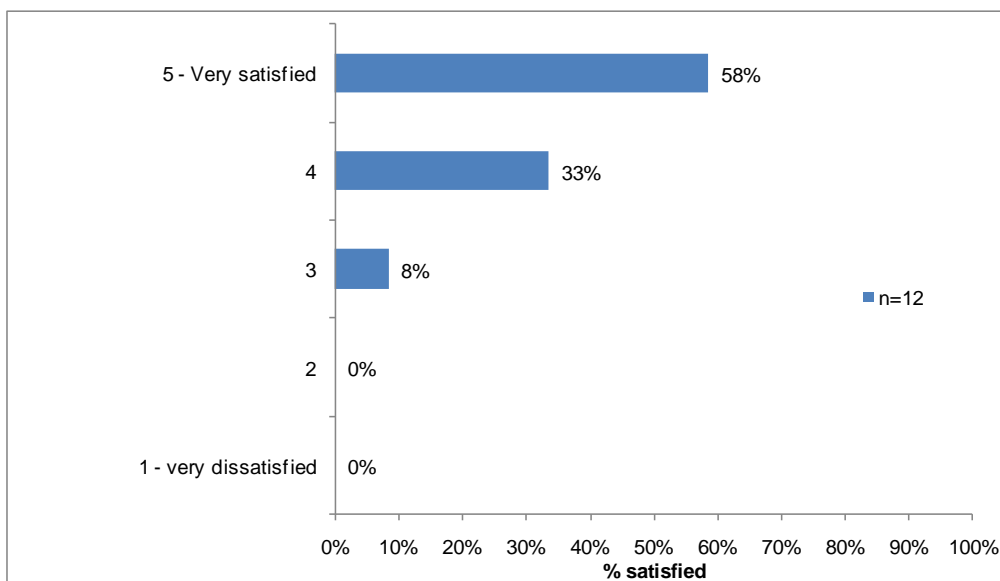


Positive comments about program marketing centered on the signage and other promotional materials (pamphlets, end caps, coupons) provided by the program. A number of respondents answering in the one-to-three range expressed the opinion that the program should provide more assistance with advertising, such as supplying ad copy and graphics, or even radio scripts. Reasons included that store managers and staff are too busy and have too many products in their stores for them to devote a lot of time or energy to this one program. One respondent commented that while he didn't "mind promoting energy efficiency and using these types of programs to familiarize people with products ... I'm here to make a profit- I'm not here just to do promotions." Another complained that the program had run newspaper ads without notifying him ahead of time, which resulted in some unnecessary (though temporary) confusion over the correct prices. Two respondents also said that they thought the process had started too late in the year; one commented that "It seems like they started it [at the] last minute."



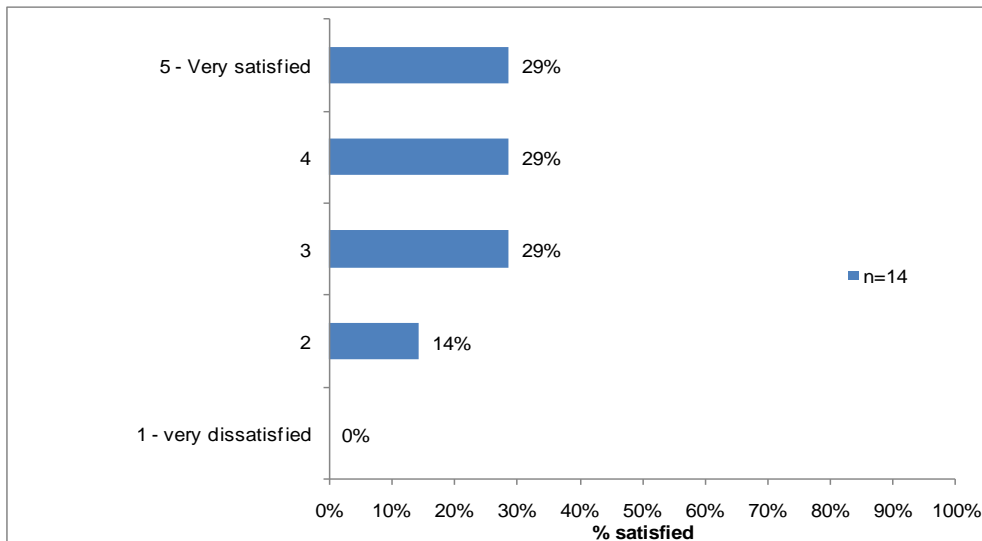
KEMA also asked about retailers' degree of satisfaction with their interactions with EU/EO staff. Sixty-five percent of respondents said that they had had contact with CLEAResult personnel. Of these, a high percentage (91%) indicated that they were happy with them (answered 4 or 5 on the same 5-point scale) (Figure 2-13).

Figure 2-13:
Satisfaction with CLEAResult Staff



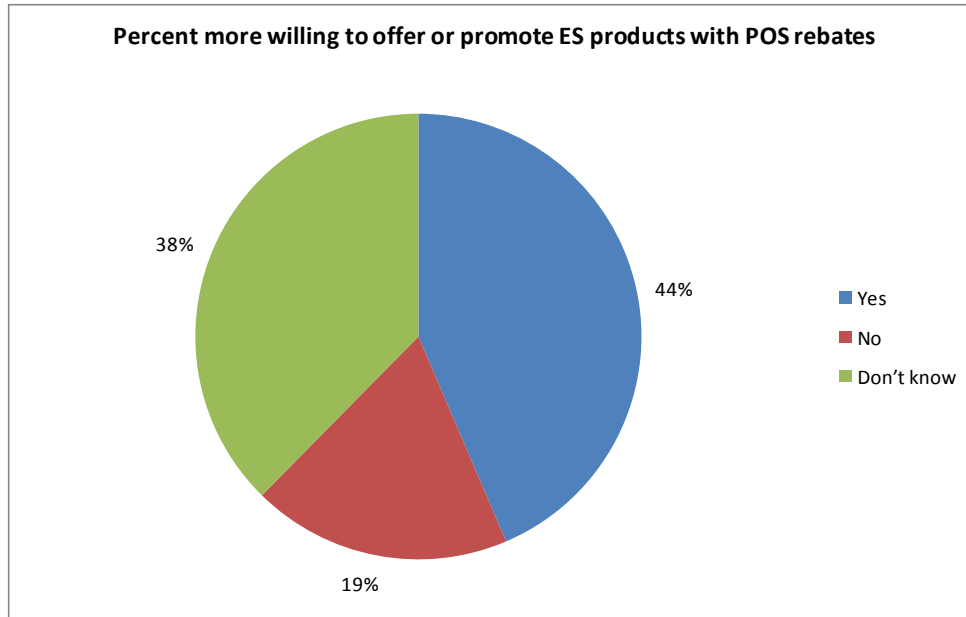
By far the biggest source of negative retailer comments arose from the program's process for reimbursing retailers for the rebate coupons they pay out to customers. Only 57 percent of respondents expressed satisfaction (4 or 5 on the same 5-point scale) with the reimbursement process (Figure 2-14). Their main concern was that the program requires them to carry the cost of the rebates until the checks from CLEAResult arrive. Several respondents indicated that they had not yet received some or all of the money they were owed at the time of the interview. There were a few positive comments about this payment process including: "The checks have come right along" and "I didn't hear [of] any issues [concerning reimbursement]." A secondary concern of retailers was the additional time and effort the program imposed upon check out when customers had to fill out coupons and the cashiers had to collect them and key in special prices.

Figure 2-14:
Satisfaction with EU/EO ENERGY STAR Rebate Reimbursements



Some respondents expressed an interest in changing to an automatic point-of-sale program, where subsidies would take the form of discounts that are taken automatically during check-out without requiring the customer to fill out a form with personal information. Half of the respondents indicated that they currently had the capability to process such “point-of-sale” (POS) rebates with their existing equipment. Forty-four percent said that if the ESP program switched to a POS model, they would be more likely to offer and promote ENERGY STAR products than under the current system (Figure 2-15).

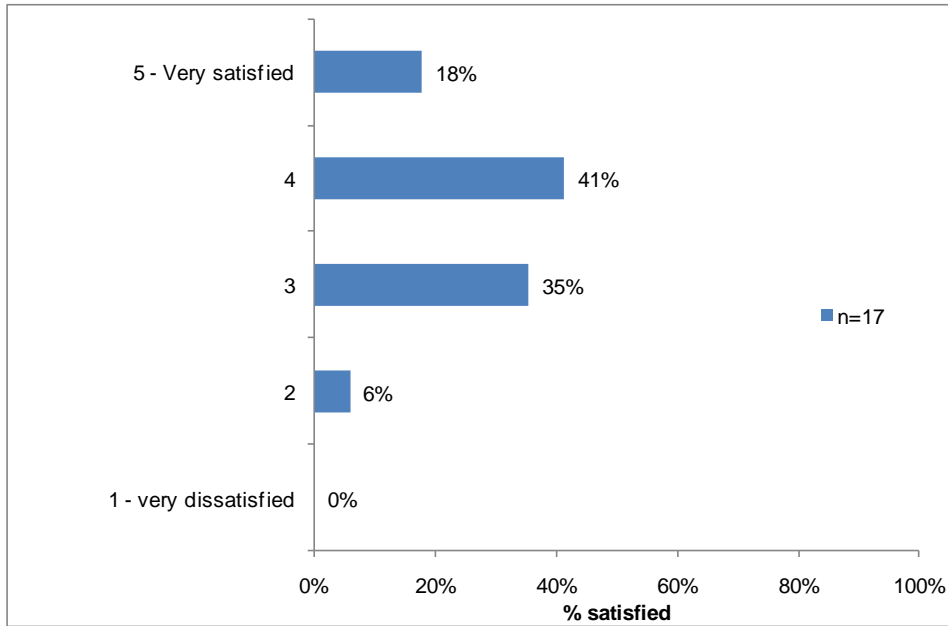
**Figure 2-15:
Participating Retailer Interest
in Switching to a POS Rebate Program**



One barrier to moving to a POS program is that many of the participating retailers are located in areas where customers may receive service from a utility that doesn't participate in the program. Some retailers also commented that they preferred a coupon-based system for purely business reasons, saying that the coupons makes the discounts seem more attractive to their customers by emphasizing that the product is "on sale."

Finally, KEMA asked retailers to rate their overall satisfaction with the ENERGY STAR rebate program. Fifty-nine percent of respondents rated their satisfaction with the program as a whole either as a four or five on the five-point scale, with the remainder giving ratings of three or lower (Figure 2-16). The main positive comments were that the program helped drive sales. Critical comments, again, had to do with delays in being reimbursed, as well as a feeling that more should be done to promote the program to the public.

**Figure 2-16:
Participating Retailer Satisfaction with
the Overall EPS Program**



2.5.7 Other Findings

The CLEAResult interviewee worked at events where CLEAResult sold CFLs, smart power strips, and water heater kits. The respondent said CLEAResult went to any event they could find where they thought there would be a lot of people, including those not directly related to energy, such as street fairs, art fairs, and county fairs. He said that they moved a lot of product at those events. He disagreed with KEMA's advice after the 2010 evaluation to charge a little for those measures, rather than giving them away for free. He thought there was enough resistance to trying new things in the markets where the program operates that it was necessary to give away products. "Especially in these rural markets a lot of times to get these people to try anything, you almost have to give it to them for free," he said.



2.6 Participating HVAC Contractor Interviews

KEMA completed in-depth interviews with 30 participating HVAC contractors in December 2011. This section summarizes the findings from these interviews.

2.6.1 Methodology

Developing the sample frame for the participating HVAC contractors was difficult because CLEAResult does not maintain a list of these contractors. So as we did in the previous evaluation, KEMA staff had to compile its own list by laboriously reviewing thousands of rebate application forms KEMA extracted from these application forms the following information:

- The contractor names and contact information;
- The utility service territories from which their customers originated; and
- Their number of rebated projects (to serve as a proxy for program activity and company size).

Our sample frame had 132 unique contractors, an increase from the 2010 sample frame of 66. This doubling in the number of participating contractors indicates that the EU/EO programs are gaining recognition in the Michigan HVAC market sector. Contractors in the 2011 sample completed anywhere from 1 to 105 installations, an increase from the 2010 sample range of 1 to 15. Most of the contractors had done projects in at least two different EU/EO service territories and some had done projects in as many as five.

Due to an adequate sample size and sufficient variation in the number of rebates per contractor, KEMA was able to stratify the sample. Table 2-3 shows the sample frame for the 2011 participating HVAC contractors, the target number of completed interviews, and the actual number of completions. The table shows that although we were able to hit our overall target of 30 completed interviews, we were not able to complete as many interviews with the larger contractors as we had planned to.



**Table 2-3:
2011 Participating HVAC Contractor Sample Frame
and Interview Disposition**

# Rebates per Contractor	Contractors in strata	Target Completions	Completions
1-2	66	8	8
3-10	42	7	14
11-17	12	7	7
18-49	8	6	0
50+	3	3	1
Total	132	30	30

2.6.2 Characterizing the Participants

Although we did not complete interviews with as many of the larger HVAC contractors as we hoped, the average company size of the HVAC contractors we completed interviews with in 2011 – 11 employees – was only slightly smaller than the average in 2010 (14 employees). The companies that completed 2011 interviews ranged in size from one to 60 employees. Most participants received a majority of their sales from the residential rather than the commercial sector. Residential sector sales shares for the 2011 participating contractors ranged from 20 to 100 percent, with an average of 77 percent (compared to an average of 84% in 2010). Participating contractors installed between 15 and 700 residential water heaters and HVAC systems per year, averaging just over 207 installations per year.

2.6.3 Equipment Discussed

We asked the 2011 participating contractors about a list of program-eligible HVAC equipment types that was largely similar to the list we asked the 2010 participating contractors about. Table 2-4 shows the 2010 and 2011 equipment lists.



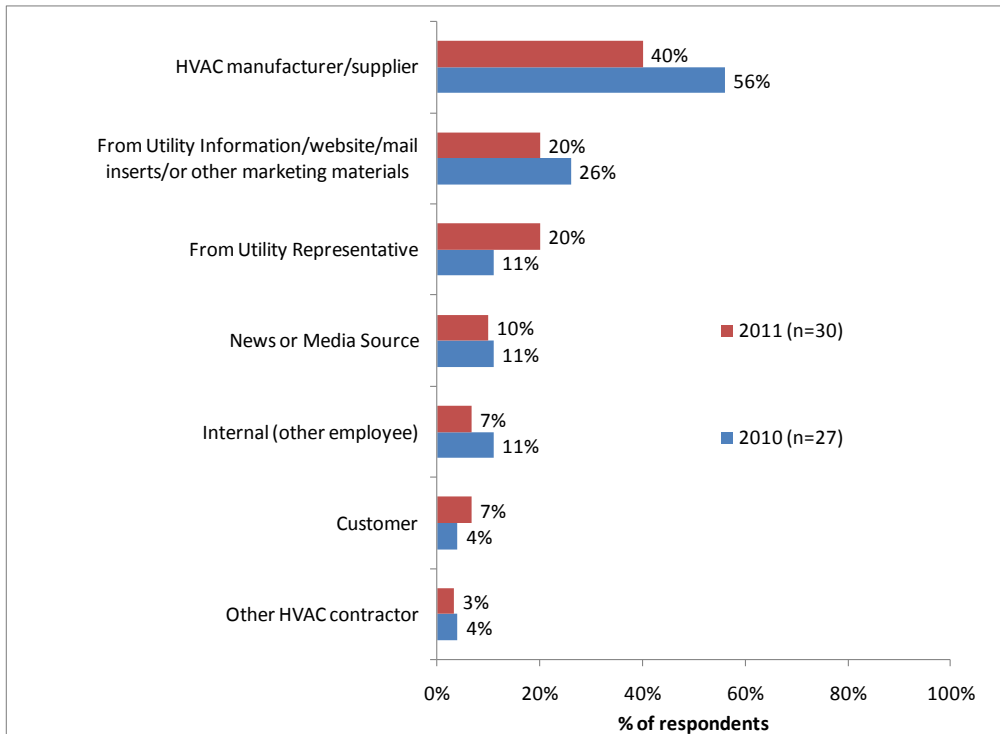
**Table 2-4:
Program-Eligible HVAC Equipment
2010 vs. 2011**

2010 Equipment	2011 Equipment
CAC, 14 SEER or greater	CAC, 15 SEER or greater
Heat Pump	Air Source Heat Pump
	Ground Source Heat Pump
Water Heater, 0.62+ Energy Factor	Water Heater, 0.67+ Energy Factor
Set-Back Thermostat	Set-Back Thermostat
Furnace, 92%+ AFUE	Furnace, 94%+ AFUE
Natural Gas Boiler, 87%+ AFUE	Natural Gas Boiler, 92%+ AFUE
ECM Drives (Motors or Furnace Fans)	ECM Drives (Motors or Furnace Fans)
Hot Water Pipe Insulation	Hot Water Pipe Insulation

2.6.4 Sources of Information

Interviewers asked the 2011 participating HVAC contractors where they first heard of the program. The most-cited information source, by far, (40% of respondents) was an HVAC manufacturer or supplier. One-fifth said they heard about from utility representatives with another fifth hearing about the program through utility materials such as mailers, bill inserts, or the utility website. Figure 2-17 shows the full range of responses and compares them to the responses of the 2010 participating contractors. It shows that the 2011 participants were more likely than the 2010 participants to hear about the program from their manufacturer/supplier and less likely to hear about the program from their utility representative or customers. This indicates that utility and program outreach efforts to HVAC contractors may be paying off and some word-of-mouth may be building among customers.

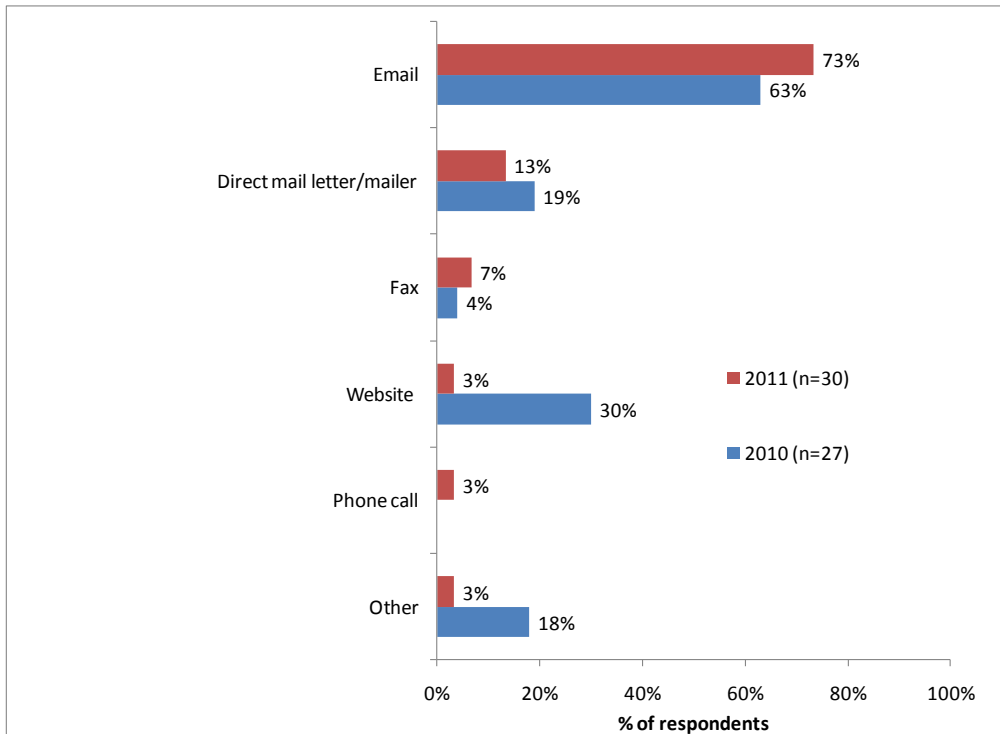
**Figure 2-17:
First Sources of Program Information
for Participating HVAC Contractors: 2010 vs. 2011**



Note: Total may exceed 100% because multiple answers were accepted.

The interviewers asked respondents about the best way for the program to send them information about program changes and updates ([Figure 2-18](#)~~Figure 2-18~~). Nearly three quarters (73%) said email was the best way, a slight increase from 63 percent in 2010. Direct mailer was a distant second (13% of respondents) with a smaller share of respondents suggesting faxes, website and phone calls. The chart shows that there was a large decline from 2010 to 2011 in the percentage of contractors preferring to get their information from websites. One possible explanation for this is that the doubling of the participating HVAC contractor population in 2011 may have brought many smaller “mom and pop” HVAC contractors into the mix who are in the field most of the time with little or no administrative staff. Such contractors likely have little time to access the Internet beyond checking their email through a smart phone.

Figure 2-18:
Best Ways to Provide Program Information
According to Participating HVAC Contractors: 2010 vs. 2011

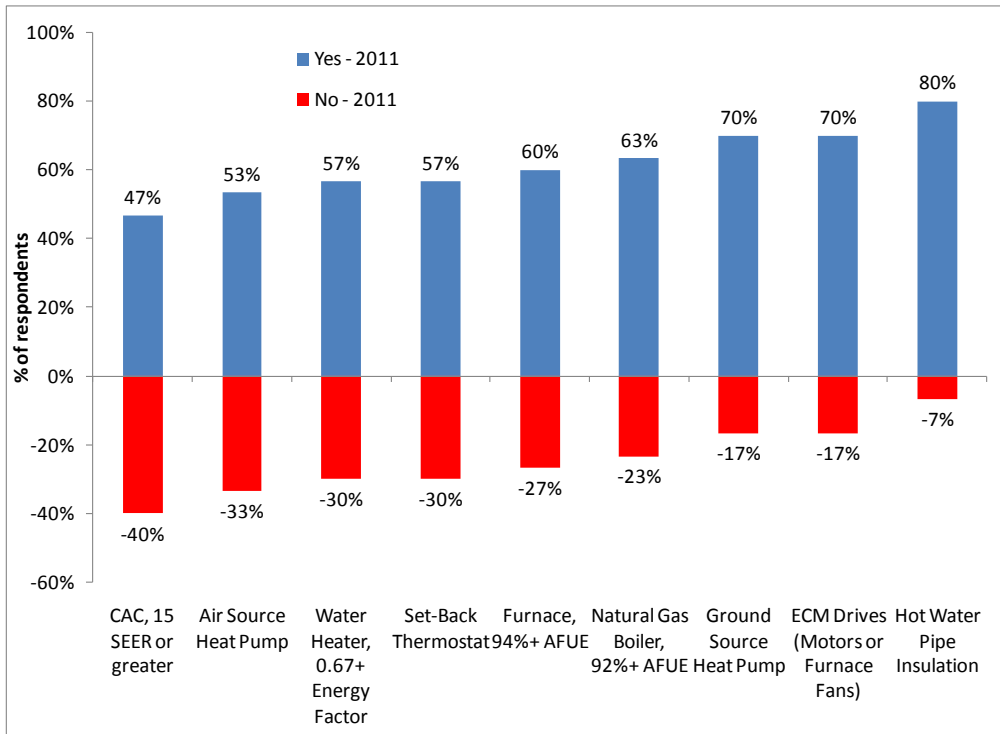


Note: Total may exceed 100% because multiple answers were accepted.

2.6.5 Adequacy of Rebate Levels

The interviewers asked respondents whether the program's rebate levels were adequate to move equipment sales. With the exception of central air conditioners (CAC), at least half of HVAC contractors indicated that the incentive levels were adequate (Figure 2-19). The majority of respondents said the rebate levels were adequate for pipe insulation (24 yes, 2 no), ground source heat pumps and motor furnace fans (21 yes, 5 no), and natural gas boilers (19 yes, 7 no).

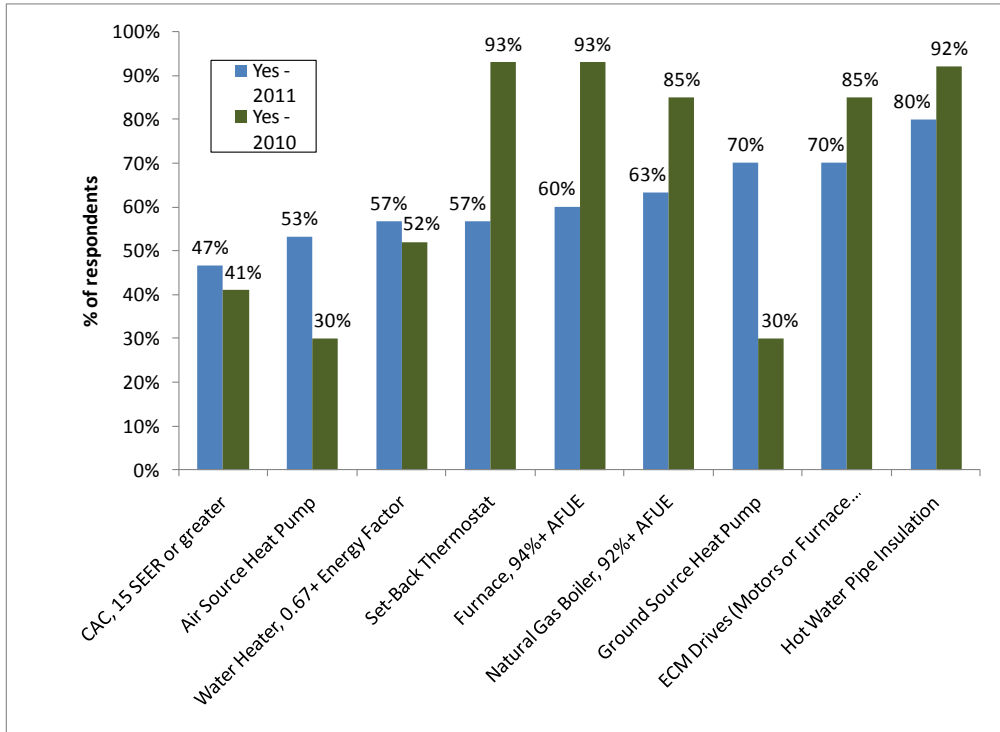
Figure 2-19:
Percent of 2011 Participating HVAC Contractors
Saying Rebate Levels Were Adequate



All categories do not sum to 100%, as numerous respondents did not know or refused to respond.

Figure 2-20 shows that the 2011 HVAC contractors were much more likely than their 2010 counterparts to say that the program rebates for ground-source and air-source rebates were adequate. However, they were much less likely to say that the rebates for furnaces, boilers, or programmable thermostats were adequate. One likely reason for this is that in 2011 the program increased the minimum AFUE for qualifying furnaces from 92% to 94% and for qualifying boilers from 87% to 92%. Yet although these higher efficiency furnaces/boilers are more expensive pieces of equipment, the program rebate amounts were at the same level (\$200) as they had been in 2010. The contractors also often referred to higher rebate levels for similar products from Consumers Energy as a reason for a lack of perceived adequacy.

**Figure 2-20:
2010 vs. 2011 % of Participating HVAC Contractors
Saying Rebate Levels Were Adequate**



If a respondent said the rebate level for a particular type of equipment was inadequate, then the interviewer asked them what rebate level would be adequate. Not all respondents provided a response to this question. A number of respondents indicated that whatever levels were considered, they should be at least at the same level as those offered by Consumers Energy. Table 2-5 shows the average rebate levels that the 2011 participating contractors said were needed to move equipment sales and compares this to the responses of the 2010 participating contractors.



**Table 2-5:
Average Rebate Levels Suggested by HVAC Contractors
Who Thought Current Rebate Levels Were Inadequate**

Equipment	Suggested Rebate Level	
	2010	2011
CAC	\$230	\$338
Furnace	\$250	\$325
Air Source	\$292	\$396
Ground		\$300
Natural Gas Boiler	\$330	\$450
Water Heater	\$150	\$356
Set-Back Thermostat	\$75	\$108
ECM Drives (Motors or Furnace Fans)	\$250	\$120
Hot Water Pipe Insulation	\$50	No response

As shown earlier in this section in Table 2-4, furnaces and boilers were not the only equipment types for which higher minimum efficiency levels were required in 2011 vs. 2010. For example, the minimum SEER for central air conditioners increased from 14 SEER in 2010 to 15 SEER in 2011. Since higher efficiency equipment is more expensive equipment, it is not surprising that the 2011 participating contractors suggested higher rebate levels than the 2010 participating contractors.

The interviewers asked if there are any other types of equipment the program should offer rebates for that it was not currently offering. Six respondents offered suggestions. Suggestions included: humidifiers, interruptible service, solar panels, high efficiency fireplace inserts, and higher incentives for ultra-high efficiency units.

Contractors were also asked whether the payment of incentives directly to consumers drives sales of high efficiency units better than upstream incentives paid to manufacturers. Of the 30 contractors, 27 (90%) responded to the question. Of those respondents, 25 (93% of respondents) said that rebates should be provided to the customer, while two of them (7% of the respondents) believed that rebates should be paid to both the consumer and the manufacturer. A number of respondents revealed that they did not believe that any savings would get passed on if incentives were paid to manufacturers, but would instead simply be used for manufacturer profit. Finally, it was suggested that it would be better for retailers and installers to be able to provide instant rebates, refunded by the program.

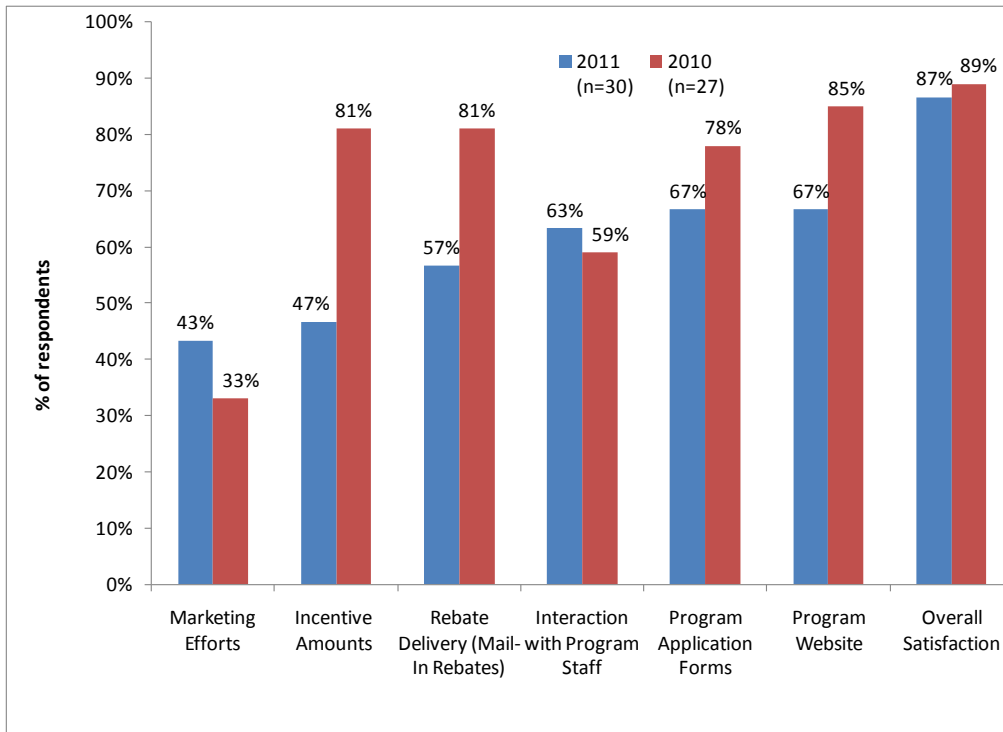


2.6.6 Satisfaction with the Program

Respondents provided satisfaction ratings for a variety of program characteristics such as application forms, websites, marketing efforts, rebate delivery, incentive amounts, and interactions with staff. We also asked them to rate their satisfaction with the program as a whole. We asked them to use a five-point scale in which five indicated “very satisfied” and one indicated “very dissatisfied.” Figure 2-21 shows the percent of contractors that were satisfied (gave a 4 or 5 on the five-point scale) with various characteristics of the program. [Table 2-6](#) shows the contractor responses in more detail. If a respondent said they were less than satisfied (3 or less on the five-point scale), the interviewer asked them why.

Overall satisfaction with the program was largely unchanged. However, four of six categories experienced decreases in satisfaction from 2010. The decreases ranged from an 11 percent drop (78% to 67%) for program application forms to a 34 percent drop (81% to 47%) for incentive amounts.

Figure 2-21:
Percent of Participating HVAC Contractors
Satisfied (4 or 5 on five-point scale)
2010 vs. 2011





**Table 2-6:
2011 HVAC Contractor
Satisfaction with Program**

	Don't know/ no response	1 - Very Dissatisfied	2	3	4	5 - Very Satisfied
Program Application Forms	3%	7%	7%	17%	43%	23%
Program Website	17%	0%	3%	13%	40%	27%
Marketing Efforts	20%	10%	10%	17%	30%	13%
Rebate Delivery (Mail-In Rebates)	27%	3%	10%	3%	33%	23%
Incentive Amounts	7%	0%	13%	33%	33%	13%
Interaction with Program Staff	33%	0%	0%	3%	30%	33%
Overall Satisfaction	3%	3%	0%	7%	60%	27%

n=30 contractors for all characteristics.

The following subsections provide a little more information on these satisfaction responses and reasons for dissatisfaction with the program.

2.6.6.1 Website

Two thirds of the respondents were satisfied with the program website. The few contractors who were less than satisfied said the website was too complicated or was difficult to navigate.

2.6.6.2 Incentive Amounts

Only about half (47%) of respondents were satisfied with the program incentive levels. Some respondents added that the levels were low when compared to other programs and that incentives are not sufficient for the highest efficiency equipment. Other respondents mentioned that there is uncertainty as to whether program funding will last through the program year or into the program year.

2.6.6.3 Application Forms

Two-thirds of respondents were satisfied with the rebate application forms. As discussed elsewhere, we consider average satisfaction levels below 80 percent as indicators that a program has some room for improvement. When asked why they were less-than-satisfied, most mentioned difficulties filling out the forms. The majority of those who responded when asked why they were dissatisfied responded that the forms asked for too much information which was largely seen as irrelevant. A one page form with only the information that is necessary for the rebate was requested by contractors.



2.6.6.4 Rebate Delivery

Fifty-seven percent of contractors said they were satisfied with the rebate delivery. The reason given by less-than-satisfied contractors were that the rebates take too long to arrive.

2.6.6.5 Interactions with Staff

Nearly all (95%) of the contractors who provided satisfaction ratings for program staff were satisfied (10 of 30 did not provide ratings and some explained that they had no contact with program staff). The one respondent with a rating less than satisfied commented that staff were "very prompt and helpful".

2.6.6.6 Marketing Efforts

Satisfaction with the program marketing efforts was low (54%). Less-than-satisfied contractors all said they were not aware of the any marketing.

2.6.6.7 Overall

A large majority (87%) of respondents were satisfied with the program overall. Only one contractor provided reasons for being less than satisfied. That contractor stated that the program overall should be simpler – simpler or no forms, instant rebates.

2.6.7 Contractor Recommendations

The interviewers asked the respondents if they had any recommendations for improving the recommendations. Eight (27%) of the respondents did not have any recommendations. Those that did have recommendations fell into the following categories.

- *Application forms (57% of respondents offering recommendations):* The contractors said they wanted simplified forms. They did not see the need for all of the data requested on forms.
- *Rebate levels (30%):* The contractors claimed that the rebate levels are insufficient. This problem is worsened by the incentive levels offered by other utilities such as Consumers Energy. Contractors want to see levels that are at least equal to other utilities.
- *Program website (23%):* The contractors said that the website is too complicated and needs to be simplified. Contractors expressed difficulty and confusion finding what they need.



-
- *Marketing efforts (23%):* A number of contractors emphasized that they were not even aware of any marketing efforts done to promote the program.
 - *Other recommendations (11%):* Contractors said that the program needs to ensure that rebate funds do not run out too quickly and that the contractors need advance notification when the funds are running low. Other responses (7%) included moving the forms online and making the forms easier.

2.6.8 Utility Differences

The survey asked contractors if they noticed any differences between the various utilities involved in the rebate program. Respondents did not mention differences between participating utilities. A number of contractors did mention that there is a difference between the administration and rebate level of the Consumer Energy and DTE programs.

When asked if any of the participating utilities did anything the contractors considered best practices, only two contractors responded. These were limited to DTE moving paperwork online (not within the program) and that Midwest Energy has great communication with their customers.

2.7 Findings from the CAA Interviews

In December 2011, KEMA interviewed 13 Community Action Agency (CAA) Program Managers representing 12 different CAAs to gather their opinions on the marketing and delivery of the Residential Low Income (RLI) Program. We asked approximately 30 questions focusing on what had changed or remained the same since we last interviewed them in December 2010. Respondents were asked the following questions on potential changes:

Have there been any changes in:

- How you communicate with these entities (MCAAA and CLEAResult) about the RLI Program?
- How you do marketing and outreach for your energy efficiency services?
- The requirements for program participation or how you check customer eligibility?
- The types of energy-efficient measures you are installing or subsidizing?



-
- The rebates or other subsidies you are providing to program participants?
 - The sources of your funding or the relative mix of these funding sources?
 - The paperwork that you've had to process or any reporting you've had to do?

2.7.1 Communication

KEMA asked about the topic of communication again in 2011 due to the frequency with which respondents had expressed frustration during the evaluation of the 2010 EU/EO program. Respondents provided generally favorable feedback regarding overall communication with the two entities (MCAAA and CLEAResult). "I just think it's gotten better," said one interviewee.

One interviewee gave the MCAAA credit for helping them with the EO paperwork:

[W]e made a real effort to, this year, at least to bill for EO measures. And we got it thoroughly messed up. So we've been, we've had almost a continuing ... open line of communication with MCAAA, and they've really, really been able to guide us through a lot of our mistakes and help us correct some things.

The MCAAA was also cited for helping alert CAAs to available funds from the RLI program:

The MCAAA is good about contacting us and saying: 'Hey, we've got some money left ... from this ... from this utility company or that utility company.' Or [they might say]: 'We were wondering if you could do some work in this area.' So there's been a pretty open line of communications in that regard.

Other respondents noticed an improvement in CLEAResult's communication skills compared to what they had reported in 2010. "Email is much better and phone calls are better," said one respondent. "It appears that CLEAResult has hired additional people, and I work a lot with [CLEAResult staffer] now....that's worked quite well,": said another.

Several CAAs mentioned that timing and pressure to deliver results for the other funding sources, namely, the 2009 stimulus funds from the American Recovery and Reinvestment Act (ARRA), detracted from their ability to focus on the unique aspects of this program and communication with the program implementers. A continued theme throughout the interviews was the impact of the influx of ARRA funds and its pending closure. Some respondents noted



that the sheer magnitude of funding they received demanded a great deal of their time and attention, to the detriment, at times, of other programs such as EU/EO.

The interviews revealed that many CAAs communicate about the RLI program almost exclusively with either MCAAA or CLEAResult. It appears that MCAAA and CLEAResult are comfortable allowing CAAs to direct their questions to the entity or individual with whom they prefer to work. However, the risk of this approach is that it may lead to some CAAs perceiving there to be problems with communication on the CLEAResult side.

2.7.2 Marketing, Outreach and Eligibility

Since 1976, one or more CAAs have been implementing a program on improving the weatherization of homes for low income households following strict poverty guidelines mandated by the State of Michigan. Because of this history, there has been relatively little need by these CAAs to do extensive marketing or community outreach to identify qualified customers. As described in more detail in the previous evaluation, referrals routinely come from the Department of Human Services and other state agencies. When CAAs were asked if there had been any changes in marketing and outreach over the last year a common response was “no change” or “we really don’t do that at all.”

The high profile of the ARRA funding further reduced the need of the CAAs to do more outreach. “Because of the influx of applications due to the ARRA funding we had plenty of applicants,” said one respondent.

Only one respondent indicated it had been difficult to meet their targets for the RLI program. This was likely due to specific aspects of their service territory, which consisted of several small municipalities.

We also asked the CAAs whether there have been any changes in the past year in terms of their requirements for program participation or how they check customer eligibility. None of the interviewees said that there had been

2.7.3 Energy Efficiency Measures

We asked the CAAs whether there had been any changes in the past year in terms of the types of energy-efficient measures they were installing or subsidizing. By far the most common response here was there had not been any significant changes since the time of the last interview. One representative indicated that there had been some changes to the types of air



sealing and attic insulation measures would qualify. Another said that it was difficult to make a blanket statement about it one way or the other:

[T]here really isn't any consistency because we go into some communities knowing that we're not going to have any billable measures in that community. And then we go, like for instance in Battle Creek where we're located, everything we do is billable here. So ... it's almost a case-by-case basis

2.7.4 Rebates & Funding Sources

We asked the CAAs whether there had been any changes in the past year in the rebates or other subsidies they were offering or in their funding sources. Most of them said that they had lost two key funding sources. These included funds from the Low Income Home Energy Assistance Program (LIHEAP) and from the Michigan Public Service Commission (MPSC).

They also mentioned that the last of the ARRA funds would run out by March 2012. Some interviewees seemed resigned to seeing their programs shrink significantly. Others indicated some relief that ARRA would no longer be using up so much of their time and attention and they would be able to get back to smaller, more manageable, and more flexible programs funded by the utilities, the state, and/or DOE. Some in this latter group indicated that ARRA had actually caused some of their other sources of funds to dry up until that source of funds had been exhausted.

2.7.5 Processing Program Paperwork

We asked the CAAs whether there had been any changes in the past year in the program paperwork that they had to process or the program-related reporting they had to do. Most of the respondents said that there had been changes in the paperwork. Many of them mentioned changes in the invoicing requirements. "They did change the invoicing," said one interviewee. "They did add a little bit more to what we have to document." "They changed the EO form, and that just added some more things on there ... you now have to have copies of our mechanical bills," said another. Some all mentioned other changes to the EO forms such as differences in the way that insulation rebates are calculated.

The interviewees generally viewed these changes in a positive light. "There have been some changes to the forms, but I think those have been good changes," said one interviewee. "[The changes to the EO form] didn't make it too difficult," said another. "They've changed the forms a



few times, but just to help make them more streamlined so that you're not really taking longer to do them," explained a third interviewee.

Several respondents said that ARRA was more demanding in terms of monitoring and filing paperwork than the other funding sources they worked with:

- "There's so much paperwork involved with [ARRA] you know . . . reports and processing invoices, filling out energy authorization invoices, everything is separate. Doing the need audits we have to do in the beginning, costing out jobs. There are so many steps. And I know I'm not alone when I say that it definitely is time-consuming."
- "Well ... anytime you go from doing about 100 homes a year to doing 1,200 homes in two years and all of the strings that get attached to it when you have a program this large, it's been kind of daunting, especially for someone like me who's not used to this kind of paperwork. But ... we've managed to get through it. And now that there's an end date, we're kind of breathing a sigh of relief. ... But just when you get to where you understand it, then it's over."

2.7.6 Participation Levels, ARRA Status

We asked the CAAs whether they had an applicant waiting list or were looking for new applicants. Every respondent said that their agency had a waiting list and some of these were quite long. Most were over 100 applicants and the largest was over 650. The pending end of ARRA funding after March 2012 and uncertainty about the timing and availability of other funding sources has created some hesitancy and anxiety among the CAAs in terms of how to deal with these waiting lists. The following are some of their comments:

- "Because of the stimulus funds, we're trying to wind down, we're having to be very careful as to how many jobs we get going where it's going to be very difficult to exactly spend out the funds. We only had that trouble normally with the regular DOE, but it's a lot less money. ... And ...we've still got a lot of jobs out, a lot of money involved, and so we're at the point right now where we just about have all the applications we can handle and we have a waiting list..... But with the political situation the way it is right now, and nobody knows if we're going to be funded at all even. So we're not wanting to spend a lot of money on energy audits. And matter of fact, we can't mix the funding anyway. So if we did a bunch of audits using stimulus funds, we'd have to transfer them over before the end of March into another funding source. So we have to be real careful about that. And if we don't have Department



of Energy money left we'll end up probably with some audits that we can pay for with the regular DOE money so we won't be without any to start with. But it's a little bit different than normal years. I know with the ARRA, people were ramping up and had so much money to spend and all these new hires to bring on, and now it seems like there's a lot of downsizing going on."

- "[Whether they can handle their current waiting list] is depending on funding. There again, until we know exactly the allocation our agency will have, and ... I'm assuming the program year is, has always started April 1. So I'm assuming we will be notified sometime in March of 2012 about if we're getting funding. I guess that is the point we're at now. We're all hopeful, but no one knows anything."

We also asked the CAAs whether they were seeking support from CLEAResult or MCAAA to find more eligible low-income participants. All of them said they were not seeking such support. "No, we have plenty, so we don't need any more help," said one interviewee. "Not at this time, no," said another.

2.7.7 Use of EU/EO Funds in Face of Disappearing ARRA Funds

We asked the CAAs whether their organization has made greater use of EU/EO funding due to the pending disappearance of the ARRA funds. Many of them said that they had been using these funds recently. The following are some of their comments:

- "Yes, we are trying to use more of it now. And I know I've been in touch with CLEAResult and MCAAA because they had some with our area, one of our utilities didn't get used up as much. So they contacted us, to see if we could use more. So we are using more than what we originally were allocated."
- "We have used as much [EO funding] as we can. When they first started, we've used as much as we can. So I don't know how to utilize it any more than we already have.... If I can use the EO money, I use the EO money."
- "Yeah, we do [use EO funds]. ... For the bulk of our clients who are Consumers Energy, there isn't any funding right now. So we don't have any choice there. But there's still a little bit left that we have for the smaller utility companies in a couple of our counties. But we don't get very many applicants there, just a small target audience."
- "Yes. We have been using EO a lot. In fact, we're almost done [with the EO funding]."



A few of the CAAs indicated that they planned to make greater use of the EU/EO funding going forward once the ARRA funds ran out. Their comments included:

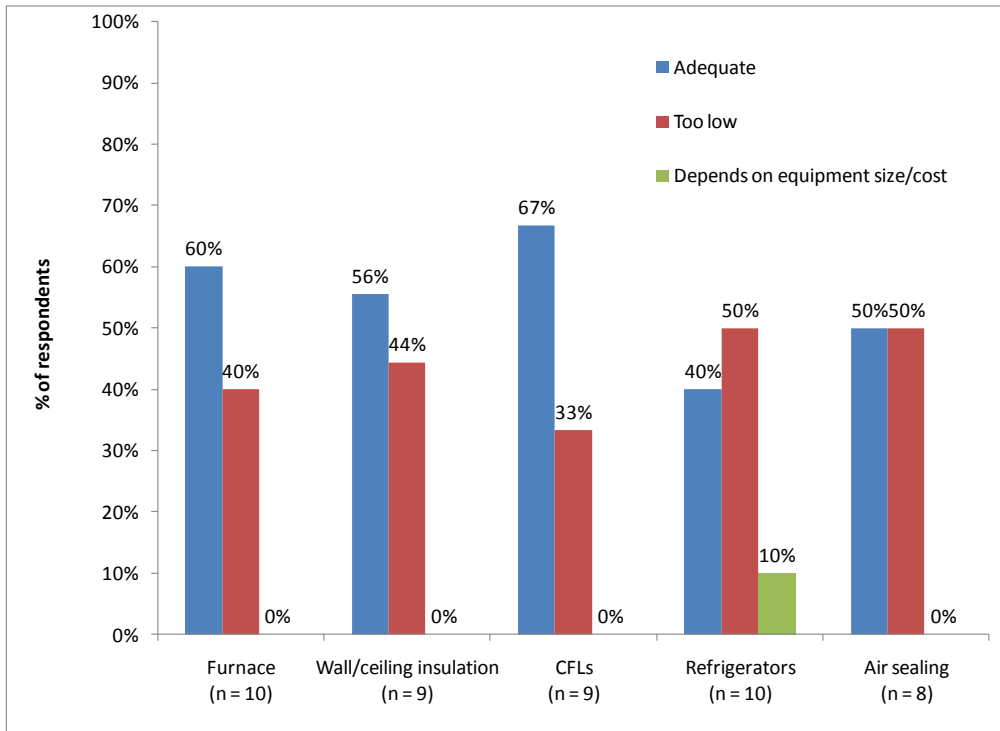
- “We do have funds that come through from the rebates from [EO]. And those moneys are available for us to use and we have been kind of putting them in reserve at this point.”
- “Well, what we’ve been doing is the money, the administrative fees that we are getting out of these [EO] funds ... they’re kind of unfettered. They have no requirements. So we’re just kind of stockpiling that. And when ARRA is done, we’re going to be looking at that to see how we can use that to keep on key staff members or offer some type of client service. But it’s not that much money.”
- “Because the dollars are going to be tighter in the next funding year, we’re actually going to be much more aware of Energy Optimization because it will make our dollars go a lot farther.”

However, a number of the CAAs pointed out that while EO funding is useful as a supplement to other funding sources, by itself it is not enough to replace these other funding sources. And because it can only be a “supplemental” funding source, if major funding sources such as ARRA and LIHEAP are not replaced, then their ability to use EO funds will be diminished. “Well, you know, Energy Optimization only pays for a percentage of the measure to be installed,” said one interviewee. “We still have to have our funds to pay the difference. So it can’t ever replace that [ARRA].” “Like a refrigerator, if we go in and meter it and it needs replacing, well, then we use the EO buy-down dollars,” said another interviewee. “But ... when the [ARRA-funded] jobs slow down, so will the EO quotas as well. ... There’s no way that we can continue to produce the [EO participation] numbers because we’re not going to be producing the amount of jobs without the ARRA.”

2.7.8 The Adequacy of RLI Rebates

We reminded the CAAs about the rebate/buydown amounts that the EU/EO Residential Low Income program was offering for different types of equipment and then asked them if these amounts were adequate. Figure 2-22 shows that the percentage of CAAs who considered the rebates to be adequate ranged from a high of two thirds for the CFLs to a low of only 40 percent for the refrigerators.

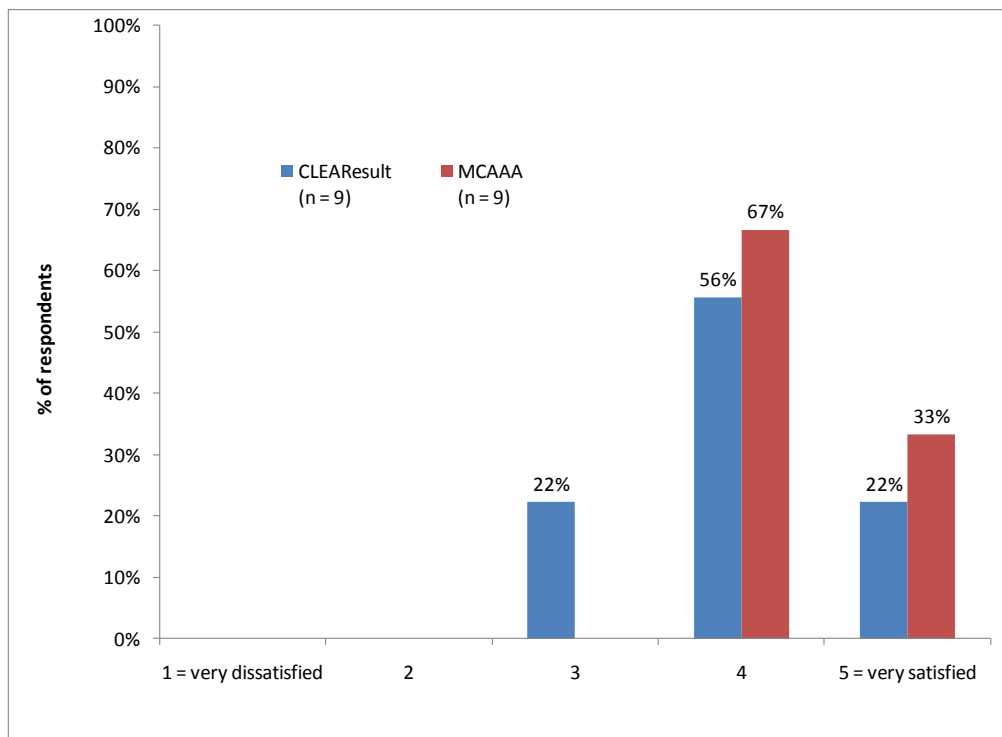
**Figure 2-22:
Whether the CAAs Thought That
RLI Rebate Levels Were Adequate**



2.7.9 Program Satisfaction

We asked the CAAs to rate their level of satisfaction with CLEAResult and the MCAAA. They were told to use a five-point satisfaction scale where five equals “very satisfied” and one equals “very dissatisfied.” Figure 2-23 shows that all the CAAs were satisfied (4 or 5 satisfaction ratings) with MCAAA and seventy-eight percent were satisfied with CLEAResult. One of the CAAs who gave CLEAResult a less-than-satisfied rating mentioned that CLEAResult had taken some promised funds away, which meant they had to go back and adjust their invoices, which was frustrating.

Figure 2-23:
CAA Satisfaction with CLEAResult and MCAAA



We asked the CAAs whether they had any suggestions for improving the RLI program. Most of them did not. One wondered whether the RLI program had the ability to identify program-eligible participants. “I don’t know what information they have on a client,” said the interviewee, “if they would know that they would be income eligible and could do a self-referral if, they’re seeing high utility bills, which would indicate need for weatherization.” A second warned that the RLI program may see a decrease in volume due to the disappearance of large funding sources such as ARRA and LIHEAP:

When the ARRA money is gone, that’s going to change the face of this whole thing and we’re not going to have the ability or the volume of houses. I’m not sure if they’ve thought about what they’re going to do to meet their goal. I’m going to go from 45 houses a month to 45 houses for the whole year. So that will really change. So it’s more of a problem for them than it is for me, other than I’m not going to make as much



money. From their point of view, it's like they're not going to have the volume of houses ... to achieve the goals with the utilities. I'm sure they've had to have thought about it.

2.8 Residential Plug Load Analysis (RPLA) Program

This section of the report presents results of a process evaluation for the Residential Plug Load Analysis (RPLA) program, which is delivered as part of the larger Michigan Community Action Agency Association (MCAAA) Residential and C & I Pilot Programs.

2.8.1 Summary

This is a high level summary of the process evaluation findings which are discussed in more detail below. Our interviews with a sample of ten RPLA program participants found that satisfaction levels with the various program activities were high (see Table 2-7).

**Table 2-7:
Satisfaction Ratings for Program Activities**

Category	(n)	Average Satisfaction
Site Visit Scheduling	10	5.0
Site Inspector	10	5.0
Site Visit Overall	10	5.0
Smart Strip	10	4.4
Follow-up Home Visit	3	5.0
Audit Report	9	4.7
Paperwork	2	5.0
Incentive Process	9	4.9
Program Staff	3	5.0
Program Follow Up	2	5.0

Half of the participants said that they had made changes to their energy use because of the audit and the information provided in the report. The most common response from individuals was that they were much more conscious of their energy use and were working to change their behaviors. Participants cited turning off computers at night, unplugging unused appliances, and choosing when to use electronics or appliances.

However, there were also some areas of concern:



-
- *Receipt of the Kill-a-Watt meters:* In theory all ten of the RPLA participants should have received a Kill-a-Watt meter, but only two of the ten reported receiving the meters.
 - *CFL installations:* Only five of the ten RPLA participants reported receiving the CFLs in the free kit and installing them. Two of participants said they never received the CFLs and three other said they received them but did not install them or removed them for various reasons.
 - *Follow-up visits:* Only two individuals reported receiving a program follow up visit. It was our understanding that this follow-up visit was to be a key educational component of the program.

2.8.2 Program Description and Evaluation Background

In late 2010, MCAAA utilities implemented three new pilot programs. These included the Home Performance (HP) program, the RPLA program, and the Comfort System Analysis (CSA) program. The RPLA program is available to all MCAAA electric utilities.

The RPLA Program promotes energy savings in the residential sector by evaluating the potential energy savings available through residential home plug load analysis. The program aims to better define the market for plug load analysis, evaluate the available savings potential, and identify other measures that should be incorporated into the Efficiency United (EU) portfolio. Plug load analysis is done by visiting the customer homes, collecting data on how many plug-in devices they have and how much power each of them draws, and carrying out post-inspection data analysis. The program then provides the participants with a plug load analysis report and offers advice to them on how they can reduce their power consumption. The program also provides the participants with a kit that contains CFLs and a smart power strip.

The findings in this section are primarily from:

- 1) In-depth interviews with ten program participants;
- 2) In-depth interviews with CLEAResult staff; and
- 3) A review of program materials.

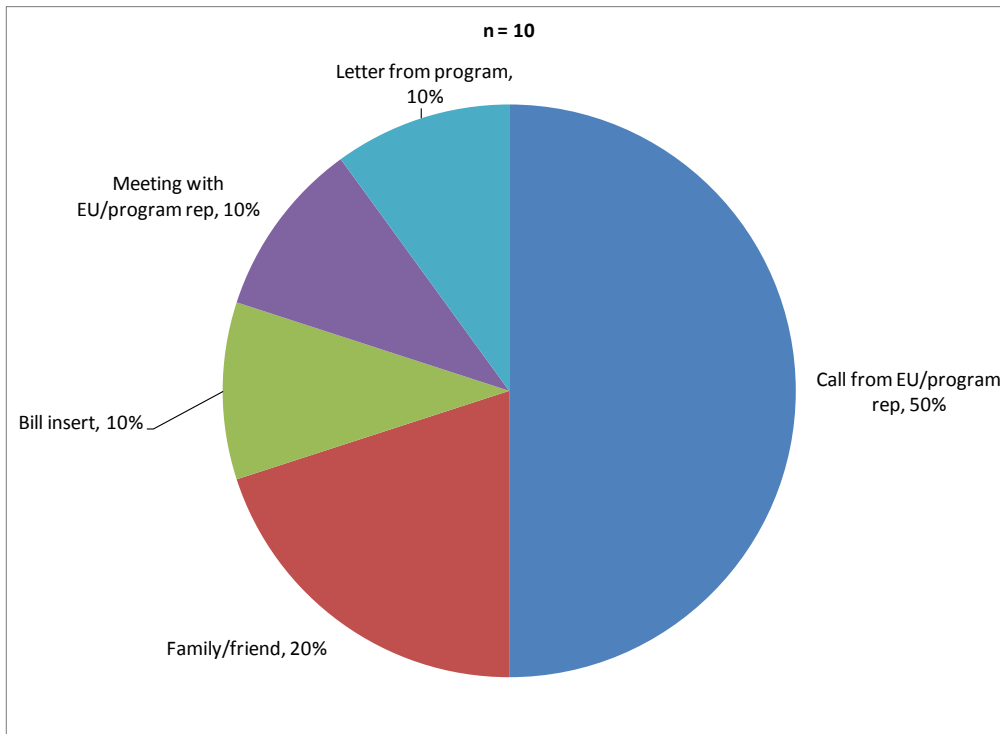


2.8.3 Marketing, Outreach and Program Awareness

We asked CLEAResult how the RPLA program is being marketed to eligible customers. CLEAResult staff reported that marketing efforts for this pilot have been somewhat limited to date. They indicated that program marketing has relied primarily on site inspectors to promote the RPLA program. In the process of working through inspectors, improvements have been made by providing inspectors with new materials, including informational postcards. In order to work with individual utilities preferences, these postcards were developed with space for individual utility stickers to be added.

CLEAResult documentation describes the marketing plan as targeting “residential customers who have previously participated in EU energy efficiency programs, leveraging the existing program marketing channels and events as a vehicle for marketing of the pilot.” The participants identified a number of sources for program contact when asked about how they first heard about the program. The most common were a phone call from an EU/program representative (60% of respondents) and information from a friend or family member (20%). [Figure 2-24](#) shows the full range of responses.

Figure 2-24:
Where Respondents First Heard Of Program



Five of the participants had previously heard of EU energy efficiency programs. Only two of ten respondents had previously participated in any energy efficiency programs from EU. Both had participated in the Residential Appliance Recycling program.

2.8.4 Program Process

RPLA program materials indicate that there are several steps for program participation to begin. These steps are:

- Contacting EU;
- Completing a pre-qualification survey;
- Setting an appointment for initial analysis/home audit; and
- Installing Kill-a-watt meter.



We asked the ten program participants about each step in this program participation process. They indicated that contacting EU staff was relatively simple with all reporting similar experiences. By being called directly by program staff or calling the number received through a variety of sources, participants spoke with RPLA staff and scheduled a time for an initial analysis. During this call, participants received a pre-qualification survey. The survey was done as a part of the call, ensuring that the caller's home is suitable for the program.⁵ Four of the interviewed participants recalled completing the pre-qualification survey, saying that the survey "just asked about my home and appliances." This indicates that participants are not seeing the survey as a burden, intrusive or unnecessary.

Participants also reported similar satisfactory experiences for the audit. According to participants, the initial site visit consisted of a site inspector visiting their home, walking through, and testing electronics with a meter. No complications were reported with the site audits.

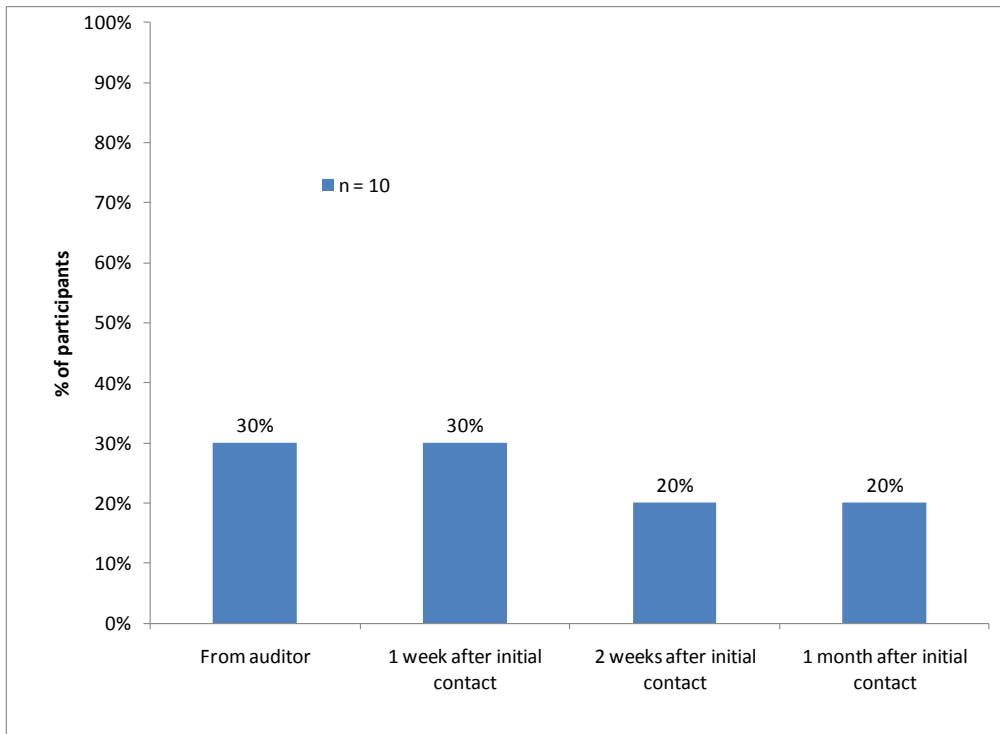
There did appear to be some issues, however, with the program sending out the Kill-A-Watt meter. According to our interviews with program staff and also program documentation, a Kill-A-Watt meter is supposed to be sent to all participants after they have contacted the program, completed the pre-qualification survey and set an appointment for initial analysis. The meter is supposed to be mailed after the call, installed by the participant, and left for two weeks when it will be checked by the inspector during the initial site visit. The program staff also claimed that "we do a follow up call with them to ensure that they received and installed the Kill-A-Watt meter."

Yet of the ten participants interviewed, only two reported receiving the Kill-A-Watt in the mail prior to the visit. Only one participant reported reviewing the instruction materials provided with the meter, and indicated that instructions were easy to follow.

All participants received a smart strip as a part of the program either in the mail or during the audit and installed by the site inspector. Three of the ten participants received the smart strip during the evaluation. The other participants received them in the mail one week to one month later, averaging just over two weeks to receive them after initial program contact, as shown in Figure 2-25.

⁵ According to program staff, to qualify for the program customers they must have at least three of the qualifying items which include televisions, VCR/DVD players, cable boxes, satellite boxes, and gaming systems.

**Figure 2-25:
When Participants Received Smart Strips**

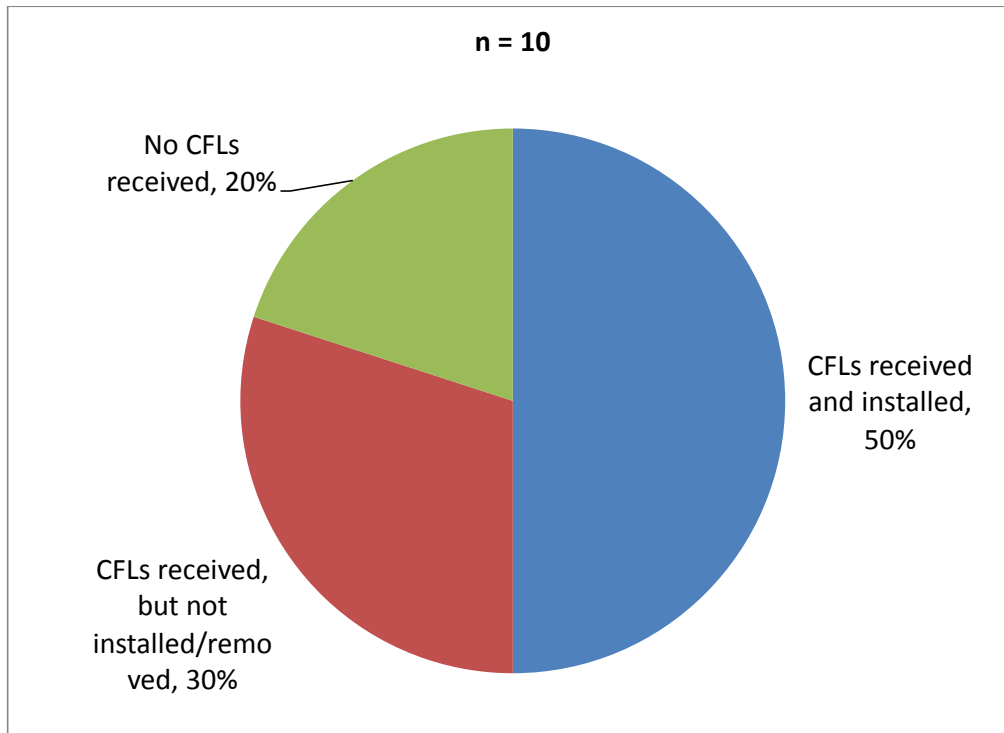


Following the initial site visit, customers were sent CFL bulbs in the mail. Of the ten interviewed participants, only five had the bulbs installed. Two participants did not recall receiving bulbs in the mail. Three more did not install the bulbs or had them removed for various reasons:

- They claimed that the program called them and told them not to install the bulbs;
- The bulbs took too long to warm up; and
- They didn't like the bulbs and gave them away.

Installation results are shown below in Figure 2-26. Although the sample size for this evaluation was very small, a 50 percent CFL installation rate is low enough to be a cause for concern.

**Figure 2-26:
CFL Disposition
Reported by RPLA Program Participants**



All participants were supposed to receive a Plug Analysis report, usually immediately following the initial visit. One participant did not recall receiving a report, and one did not receive the report until the CFL bulbs arrived a couple of weeks later. However, respondents generally thought that the report was “helpful”, “informative” and “professional”.

2.8.5 Customer Satisfaction

We asked participants about their satisfaction with various aspects of the program – from scheduling the initial home visit to equipment received to program follow up. We asked them to rate their satisfaction on a scale from 1 (very dissatisfied) to 5 (very satisfied). Satisfaction levels with all aspects of the program we asked about were high, as shown in [Error! Reference source not found.](#) [Table 2-8](#). However, it is important to note that we did not ask them to rate



their satisfaction with two aspects of the program – the CFLs from the kit and the Kill-a-Watt meter – where participants reported some problems.

**Table 2-8:
Satisfaction Ratings for Program Activities**

Category	(n)	Average Satisfaction
Site Visit Scheduling	10	5.0
Site Inspector	10	5.0
Site Visit Overall	10	5.0
Smart Strip	10	4.4
Follow-up Home Visit	3	5.0
Audit Report	9	4.7
Paperwork	2	5.0
Incentive Process	9	4.9
Program Staff	3	5.0
Program Follow Up	2	5.0

Another area of concern is the small number of participants (3 of the 10) who reported receiving a follow-up home visit. It was our understanding that this post-analysis discussion was an important component of the program.

2.8.6 Participant Actions and Recommendations

Five participants said that they had made changes to their energy use because of the audit and the information provided in the report. The most common response from individuals was that they were much more conscious of their energy use and were working to change their behaviors. Participants cited turning off computers at night, unplugging unused appliances, and choosing when to use electronics or appliances. One respondent reported that because of the audit and report she received, she replaced her old CRT television with an LCD television.

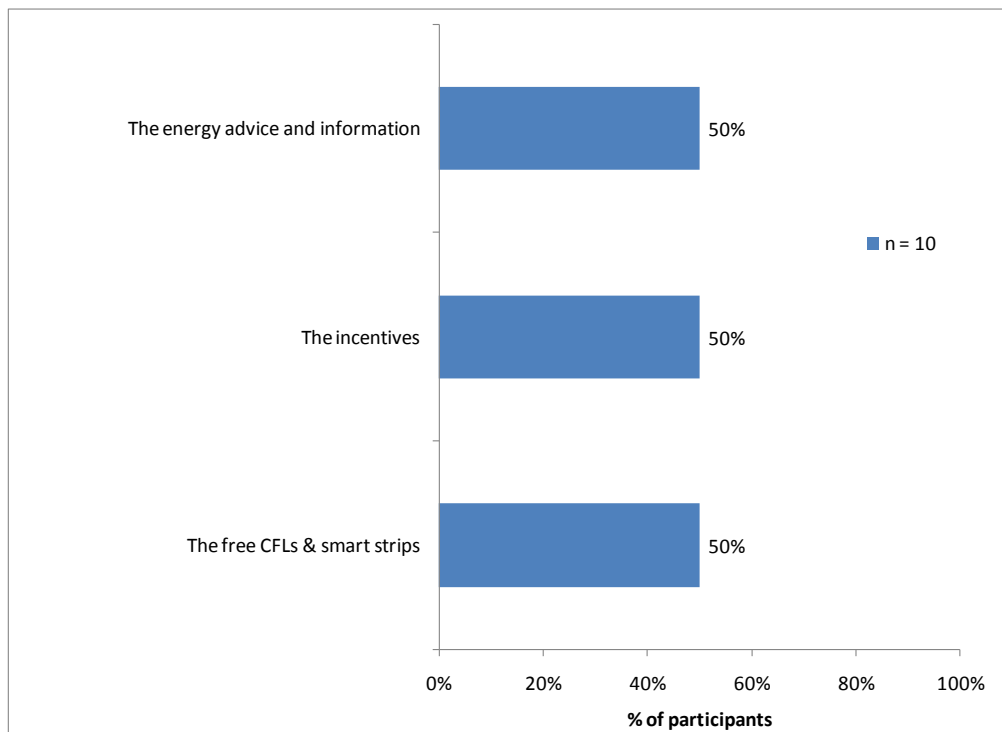
The remaining five participants did not report changing their behaviors or energy using equipment in their home. Participants cited a number of reasons including:

- They were planning on selling their home;
- Their home was energy efficient already;

- It was not the right time to replace certain things; and
- They had a fixed income and therefore had no money available to replace items.

Participants also shared their perceptions of program benefits and thoughts for program improvement. Their responses to questions about program benefits fell into three categories – Free bulbs and smart strips, cash incentives, advice and information. Multiple answers were taken from individuals, resulting in even results between these three categories, as shown in Figure 2-27.

**Figure 2-27:
What Participants Liked About the Program**



Two customers also had program criticisms, both pertaining to its general utility. The first participant stated that he didn't "really see the purpose of the program." The second participant stated "it doesn't really seem like a good use of utility customer money." However, even though



both of these customers expressed these critiques, their overall satisfaction levels were high along with other participants.

2.9 Home Performance (HP) Program

This section of the report presents results of a process evaluation for the Home Performance (HP) program, which is delivered as part of the larger Michigan Community Action Agency Association (MCAAA) Residential and C & I Pilot Programs.'

2.9.1 Summary

This is a high level summary of the process evaluation findings which are discussed in more detail below. KEMA interviewed ten HP program participants, eight home energy auditors, and nine contractors who have worked on a HP-related energy efficiency project. Our interviews with all three groups found that satisfaction levels with the various program activities were high (see Table 2-9).

**Table 2-9:
Satisfaction Ratings for Program Activities**

Group	Category	(n)	Average Satisfaction
Participants	Initial audit	10	4.4
Participants	Auditor (during initial audit)	10	4.8
Participants	Audit report	9*	4.4
Participants	Program incentives	9**	4.3
Participants	Second audit	8	4.8
Participants	Auditor (during second audit)	8	5
Participants	Whole Program	10	4.2
Auditor	Whole Program	8	4.1
Contractor	Whole Program	4 ***	4.5

* Among participants who recall receiving a report.

** Among participants who received program incentives.

*** Among contractors who were knowledgeable about the program.

All participants completed at least some of the program-recommended energy efficiency improvements due to program participation, and most received program incentives for installations. Auditors reported that they liked the program and enjoyed good access to and communication with the program implementer. They overwhelmingly support the program



continuing. Contractors who had good program awareness also generally liked the program and saw it as a valuable way to educate utility customers on energy efficiency benefits.

However, some interview findings also created cause for concern and present opportunities for program improvements:

- *Inconsistencies across program marketing materials and forms:* Program forms generally use consistent color schemes, program names and terms, and are branded with the EU logo. However, the customer-landlord agreement is a black and white page with no logos or color tie in to program documents.
- *CLEAResult reports relying on auditors as a primary marketing vehicle; yet a majority of auditors report doing nothing to market the program.* Only three of the eight auditors we interviewed reported doing *any* program marketing. Auditors further identified that low program awareness was a participation barrier, which could be addressed through increased marketing.
- *Direct install measures are not consistently offered or distributed to EU HP participants.* Only two participants indicated they received direct install measures. Two of eight auditors we interviewed reported regularly offering kits to participants.
- *Contractor awareness of the HP program was low.* Roughly half of the contractors we contacted in our interviews first heard about the HP program from a participant as they were implementing an energy efficiency program recommendation for a participant. These contractors had done between one to three projects connected with the program. Half of the contractors who claimed to have HP program knowledge were not able to accurately recall basic program requirements participants must meet in order to qualify for incentives.
- *Late incentive payments came up frequently within in-depth interviews and across all interview groups:* Nearly half of participants reported having to contact the program to inquire about their incentive payment status. Auditors and contractors reported hearing about participants' dissatisfaction about incentive payments.

2.9.2 Program Description and Evaluation Background

In late 2010, MCAAA utilities implemented three new pilot programs. These included the Home Performance (HP) program, the RPLA program, and the Comfort System Analysis (CSA)



program. Michigan utilities 1) SEMCO and 2) Michigan Gas Utilities are currently implementing the HP program.

The findings in this section are primarily from in-depth interviews with program participants, and with auditors and contractors who have worked with the pilot program. Specifically, we interviewed the following:

- 1) Ten program participants
- 2) Eight HP auditors
- 3) Nine HP contractors
- 4) CLEAResult staff (one initial interview and one update interview).

KEMA also reviewed an assortment of program documents to better understand HP marketing and information available to program participants and partners.

The HP Program promotes energy savings in the residential natural gas sector. The main program deliverables are a pre-and post-home energy audit of a participant's home. The initial or pre-audit offers diagnostic testing of various home systems to determine projected national gas savings through installation of measures or other recommended home improvements. Both auditors and participants report this comprehensive, initial audit takes roughly two to three hours to complete. Participants receive a \$150 incentive for the energy audit process. Four auditors confirm they also received an incentive of \$150; others describe the program incentive as an opportunity to discount the cost of their audit.

The initial home audit is followed up by a report to the participant, which summarizes recommended items to improve home efficiency and/or reduce energy consumption. The program provides additional incentives for participants install measures or implement recommendations. The program encourages participants to work with a Michigan state licensed contractor to complete work, preferably one who works through the *Michigan Saves* program (five of the nine contractors we interviewed are *Michigan Saves* contractors). In order to receive an incentive, the participant must choose to install one or more measures from two program incentive categories. Those categories are:

- Mechanical
- Infiltration reduction



-
- Insulation improvement
 - Windows & doors.

The participants also receive a “*customer energy savings kit*”, which contains free direct install measures. Auditors who offer the kits install the measure while onsite during the initial audit.

After the participants install direct or recommended program measures, or make other energy efficiency improvements, auditors conduct a post-audit. This audit is briefer than the initial audit, and its main component is blower door test. The results of the blower door test in the post-audit are compared to results from the pre-audit to verify energy savings achieved. The participant submits information about the installed measures or completed work, along with the post-audit blower door test results to the program. CLEAResult processes an incentive payment and sends it to the participant. The participant can receive up to \$3,050 for energy efficiency improvements.

We asked participants basic demographic questions to get a better understanding of who participated in the HP program. The participant profile for this HP Pilot program (among those we surveyed) has the following characteristics:

- All HP participants KEMA surveyed lived in and owned single family homes. On average, participants have lived in their home for more than 15 years.
- The average HP participant age is 50.
- All participants have earned either a four-year college or graduate-level degree.
- All participants have high-speed internet access.
- The average participant household size is 2.2 residents per household.
- Participants who were aware of their home’s size (n=4) most frequently indicated it was between 1,200 to less than 1,800 sq. ft.
- Eight of 10 participants indicate their house was built before 1980. Four of those 8 reports their house was constructed earlier than 1950.



2.9.3 Marketing, Outreach and Program Awareness

CLEAResult's program documentation describes the target market as including "*residential gas customers who live within the Efficiency United service territory*". We asked CLEAResult how the HP program is being marketed to eligible customers. CLEAResult verified that it has leaned heavily on home energy auditors to market the program, and the auditor-customer outreach has worked especially well in SEMCO territory. Program promotion has been less effective in Michigan Gas Territory. CLEAResult has anecdotally discovered through conversations with auditors in that territory that word-of-mouth marketing has been challenging due to "a more scattered service territory."

Only three of the eight auditors we interviewed confirmed they did any marketing for the Home Performance program. One auditor reported he was doing monthly radio interviews about the program. Auditors are encouraged to customize postcards or door hangers with their company logos, stickers, or their own handwritten message and distribute them to promote the program; one auditor indicated he initially blanketed a three-block area with door hangers when the program began. The last auditor to report program marketing activities indicated he/she passed on the program materials to real estate agencies for distribution to new home buyers.

The following is a list of marketing items and supporting program forms KEMA reviewed during this evaluation.

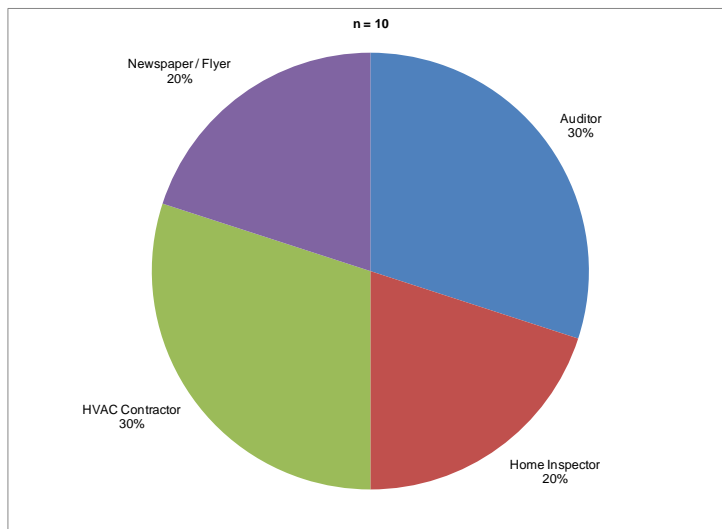
- Program postcard
- Door hanger
- Certified auditor fact sheet
- Homeowner fact sheet
- Customer – landlord agreement
- Auditor agreement
- Program application / rebate packet
- Late incentive payment letter.



The HP program materials are generally clear and branded with EU logos. There is color scheme consistency across many of the documents. The exception is the customer – landlord agreement, which has no EU logo, and does not use colors noted in other similar program materials.

Eight of 10 participants identified they first heard about the program through an auditor, a home inspector, or an HVAC contractor. The remaining participants saw other marketing, mentioning the newspaper and a flyer, respectively. Figure 2-28 shows the full range of responses.

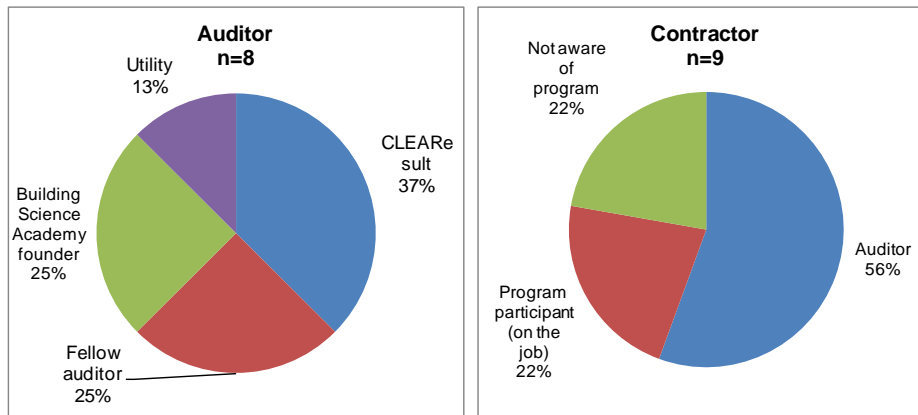
Figure 2-28:
Where Participants First Heard Of Program



Auditors indicate most participants contact them by phone, and report word of mouth referrals produce most of their program business. They most frequently report that they can conduct an audit for a participant within a week of scheduling the request.

Auditors and contracts often also attributed their program awareness to word of mouth. Figure 2-29: has pie charts which display where the auditors and contractors indicated first hearing of the program.

**Figure 2-29:
Where Auditors and Contractors First Heard Of Program**



All auditors confirmed they received training from CLEARResult to work with the pilot program. Nearly all indicated the training covered HP program background and paperwork procedures and felt the training was adequate to help them understand how to interface with the program and understand program offerings. Four identified that CLEARResult provided the training. Recalled length of training varied from 1 or more hours to one day.

Four mentioned training was delivered via webinar

Four indicated receiving their training via seminar or live meeting.

All auditors named a CLEARResult staff member as their primary program contact. Their communication frequency ranged from often to only whenever there was a program problem. Most auditors recalled the CLEARResult staffer by name and reported that he was highly responsive and made himself extremely available for program support. Six of eight auditors report also communicating with contractors about the HP program as needed by phone.

Contractors reported not having any communication with EU or CLEARResult. Contractors also confirmed they did not have formal marketing responsibilities within the program. We asked contractors who reported they knew how the program worked (n=4) about program qualifications. Here's what we learned:



-
- All contractors confirmed they were aware of minimum program requirements needed to earn incentives when asked. All four indicated they thought customers understand the minimum program requirements.
 - Two of four went on to clearly describe program requirements, such as the requirement that a participant needs to choose measures from two incentive categories in order to qualify for a program incentive.
 - The same contractors also correctly identified the length of time participants have to complete the program steps (45 days).
 - The contractors who knew the program work-time requirements indicated they thought 45 days was sometimes too brief for contractors and participants to work together to accomplish work. Both contractors suggested 60 days would appropriately ease the rush to complete work.
 - Two contractors were not able to describe any program incentives or requirements correctly. The contractors overestimated the program's time requirements (e.g. one year) and indicated the time windows they stated were reasonable to complete work.

Auditors attributed the program training and regular communication with CLEAResult to their program awareness and success working within the program. If the pilot program becomes permanent, the program should consider similar training and/or communication support for contractors who install energy efficiency equipment for the program. Participant satisfaction and program success will flourish if all program partners communicate consistently about program incentive levels, requirements, and allocated time to complete work.

2.9.4 Program Process

HP program materials indicate that there are several steps to program participation. These steps are:

- Contacting a home energy auditor and scheduling an appointment
- Completing an initial, whole home audit with several diagnostic tests. If applicable, the participants will receive free direct measures
- Receiving and review the program report recommendations



-
- Installing recommended energy efficiency measures or completing home improvements to increase natural gas efficiency
 - Scheduling and completing a post-audit (which will include a post-blower door test) to validate savings levels.
 - Submitting program forms highlighting post-audit testing in order to receive program incentive.

We asked the ten program participants about these program participation process steps. Nearly all participants described their first program contact as a call to an auditor. They indicated that a home energy audit was scheduled during this call. Auditors we talked to concurred this was the process most often used to schedule an initial audit.

We asked participants to tell us what happened during their first home audit. Participants often described one or more diagnostic tests specific to a home energy audit; half of the participants named a blower door test as a key audit component. Participants were highly satisfied with their initial audit and their auditor. Comments surveyed participants offered about the initial audit were generally positive; some verbatim responses included that the program was “informative”, “helpful”, and “thorough”. Participants consistently added positive comments about their auditor, using descriptors like “nice” or “helpful”. Participants who offered more critical feedback during this portion of the interview indicated that recommended repairs were more costly than expected, and that the audit didn’t seem comprehensive compared to the customer’s expectations.

Only two participants reported receiving direct install measures during the home energy audit. Both participants indicated the auditor helped install the measures and reported they were very satisfied with the equipment. Examples of direct install measures the participants received include: CFLs, kitchen faucet aerator, and a low-flow showerhead. Among the auditors we surveyed, two indicated they direct install measures at nearly every appointment; two of the auditors report *never* installing direct measures during their initial audit. Remaining auditors stated they decide during the appointment based on need or participant interest.

The program delivers audit reports to participants after the initial audit. Nine of 10 described receiving the report (one participant indicated he could not remember). We asked participants how they received their report, and participants who could remember the delivery method (7) indicated the auditor personally delivered it to them within one to three weeks of completing the



first audit. Many also noted that the auditor then reviewed the report and addressed their questions.

Two participants offered feedback about the audit report. One participant indicated the report was unclear, and explained that rebate information should be clearer. An additional participant described the report as “basic” and was unsatisfied that it did not offer a recommended contract list or other guidance about how to implement the suggested installations.

Most participants experienced all program process steps. Each participant implemented at least one or more audit recommendations, and eight of 10 participants reported having a second audit at their home. Participants most often reported installing insulation (e.g. attic, basement, or foundation) or a furnace, hot water heater, or combination unit replacement. Participants reported no problems with program-recommended installations. Nine of 10 indicated receiving program incentives for completed work. The participant who did not receive rebates explained that he/she did not think there were incentives available for his/her specific completed work.

While all participants implemented at least one recommendation, half of the participants did not complete all program recommendations or improvements. They attributed it to cost and project timing. Four of five indicate they do intend to implement the remaining recommendations at some point in the future.

Six participants recalled filling out program paperwork, and all indicated they had assistance filling out paperwork from an auditor or contractor. Participants were generally satisfied with the program paperwork. Program participants have 45 days to move through this process and did not indicate this period of time posed a challenge.

Participants had more robust feedback on the topic of program incentives. While many participants made positive comments about the amount received, four participants commented on delayed program incentives. Examples given by participants included:

- All four participants indicated they contacted CLEAResult or their auditor to inquire about incentive receipt timing.
- One participant reported receiving multiple late payment letters. His/her delayed incentive took roughly three months to arrive.
- Two participants mentioned their rebate or paperwork was “lost” due to a “mistake”.



Both participants with stories of lost rebates and/or paperwork reported calling CLEAResult staff about the error, and both were very satisfied with their interactions and problem resolution.

2.9.5 Participant, Auditor, and Contractor Satisfaction

We asked participants about their satisfaction with the program as a *whole*. We also asked them to rate their satisfaction with various program elements previously explored in this report (e.g. marketing, audits, etc). We asked them to rate their satisfaction for each question using a scale from 1 (very dissatisfied) to 5 (very satisfied). Satisfaction with all aspects of the program we asked about was high among participants, and with the auditors and contractors who work with the program, as shown in Table 2-10.

Table 2-10:
Satisfaction Ratings for Program Activities

Group	Category	(n)	Average Satisfaction
Participants	Initial audit	10	4.4
Participants	Auditor (during initial audit)	10	4.8
Participants	Audit report	9*	4.4
Participants	Program incentives	9**	4.3
Participants	Second audit	8	4.8
Participants	Auditor (during second audit)	8	5
Participants	Whole Program	10	4.2
Auditor	Whole Program	8	4.1
Contractor	Whole Program	4 ***	4.5

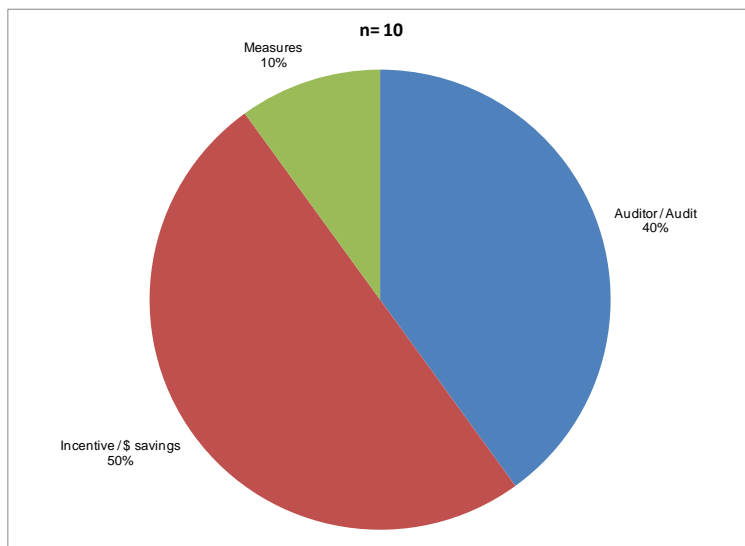
* Among participants who recall receiving a report.

** Among participants who received program incentives.

*** Among contractors who were knowledgeable about the program.

We asked participants what they liked best about the HP program. Figure 2-30: visually displays their response distribution. Half of the participants indicated they liked incentives best, but an additional 40 percent answered this question by indicating the information they received within the audit or delivered through the auditor was the most valuable program benefit.

Figure 2-30:
What Participants Like Best about the HP Program



We asked both auditors and contractors what aspects of the program were going well, and what could be improved. Auditor enthusiasm for the program was apparent within their report of what is working within the program. An equal portion of auditors attributed program success to a 1) “good program” overall and 2) above average communication between auditors and the implementer. Contractors most frequently named customer energy education as the most successful program element.

When asked about ways the program could improve, two auditors suggested augmenting program incentives. The motivations differed. One auditor indicated decreasing program incentives would serve more customers; the other explained additional incentives would further motivate participants to act on energy efficiency recommendations. Most auditors explained the program needs to do more to communicate with participants when receiving program paperwork. They suggested the implementer confirm receipt, and set expectations and achievable deadlines about when participants will receive their incentive payment. Contractors also echoed this recommendation for program improvement.

We also asked auditors and contractors to identify program barriers to participation. Auditors and contractors held different perspectives on these barriers. The four contractors who were



knowledgeable about the program indicated that adequate funds for energy efficiency equipment or upgrades are the most common participation barrier. Contractors who identified funding as a barrier indicated more program incentives were necessary. Auditors most frequently identified low program awareness among its customer base as a key program barrier. They suggested increased program marketing to build awareness.

2.9.6 Program Actions and Recommendations

Participants, auditors, and contractors we interviewed offered suggestions about what EU should do to improve the HP program. KEMA compiled the comments and crafted the following recommendations to respond to the suggestions for program improvement.

- **Employ more interactive communication with participants throughout their program experience.** Participants, auditors, and contractors alike all expressed disappointment about instances of lost program paperwork or incentive payments taking much longer than expected. The program should confirm receipt of program paperwork with a phone or email, and clearly communicate payment processing timelines to participants.
- **Improve incentive payment processing to speed up delivery.** Having to “chase down” incentive payments was the key source of participant frustration with the program. The program implementer should assess where payment breakdowns occur, and create one or more internal QCs to verify participants receive timely payments.
- **Reassess program marketing strategies and materials.** Both auditors and contractors we interviewed identified low program awareness as a program barrier. The program plan that KEMA reviewed indicated auditors were named as the primary marketers of the program, yet only three of eight KEMA interviewed reported doing any marketing. In order to continue this marketing model more successfully, the program implementer should work with auditors to confirm their commitment to marketing the program and work with them to produce appealing marketing options they will use. If auditors are not willing or feasible program marketing partners, the program should reassess its marketing strategy.
- **Provide clearer information about program rebate requirements and payment levels.** Several participants noted during the interviews that they did not receive the rebate amount they expected. KEMA was not able to identify the cause of the participant disappointment; however, the program implementer should assess the following to address this sentiment:



-
- Assess marketing materials and include rebate information / examples where possible.
 - Provide more specific rebate information / examples when the participant applies to the program.
 - Verify program-partner auditors and contractors have up-to-date and accurate rebate information and are relaying it properly to participants.
 - Provide rebate calculation support to auditors, contractors, and / or participants as needed to create accurate incentive estimates.
 - **Expand post-audit reports to include more information to help participants assess costs and benefits of implementing program measures.** Examples include provide more measure categories and choice, compile and distribute a recommended contractor list, and offer additional information on findings and recommendations that enable the participant independently weight their costs vs. benefits.

2.10 Findings from the Think! Energy with Efficiency United Interviews

This section of the report presents results of a process evaluation for the Think! Energy with Efficiency United (Think Energy) program. The process evaluation relies heavily on information collected while conducting the following 10 in-depth interviews:

- Six in-depth teacher / administrator Think Energy program participant interviews (interviews conducted in January 2012)
- Two in-depth program implementer interviews (initial interview in March 2011; update interview in December 2011)
- Two in-depth interviews with an Efficiency United (EU) staff member (initial interview in March 2011; update interview in November 2011)
- Two in-depth interviews with CLEAResult staff members (interviews in November 2010 and April 2011, respectively) who work to administer the program.



2.10.1 Background

The Think Energy program offers an energy efficiency education unit to teachers to use with students in grades 4 through 6 in EU territory. The program is available to schools within a partner utility service territory and to teachers or administrators who sign up at no cost. Interested teachers / administrators are accepted to participate into the program on a first come-first served basis, although only half of the teachers KEMA interviewed were aware of the policy. Demand for the program has consistently exceeded program resource supply since the program began. The EU-based program served 25 schools in the past program year.

The National Energy Foundation (NEF) is a not-for-profit organization which delivers the Think Energy program for EU. It also implements similar school-based energy efficiency programs for DTE Energy and Consumers Energy in Michigan. NEF indicates the only program element that differs across the various Michigan programs is program marketing and promotion. The foundation produces unique and specific promotional / marketing materials for each Michigan school-based energy efficiency program with which it works. NEF has been involved in Michigan energy efficiency programs for schools for three years.⁶

There are relatively few NEF staff members working to deliver the Think Energy program. The program director plays a key role in most elements of program delivery; support comes by way of additional retired or current teachers NEF hires to give school presentations. NEF offers yearly training to recruited presenters in Detroit. NEF holds statewide presenter training in order to capture time and financial efficiencies (such is the case with EU) by bundling representatives from multiple utility-based programs. Training attendance is mandatory for teachers planning to work for the NEF and is typically one to one and one-half days long. Components covered in training are as follows:

- Program data collection
- Inventory of distributed student energy efficiency kits at school
- Presentation content and tips
- Travel and other program expense reimbursement policies & paperwork.

⁶ This program duration estimate was provided during a May 2011 interview.



NEF is responsible for nearly all program delivery components. Program delivery elements covered by the NEF include:

- General program oversight
- Program marketing / promotion
- Communications with the following parties:
 - Teachers and/or administrators at interested or participating schools
 - CLEAResult staff
 - Efficiency United representatives
- School program enrollment
- School program scheduling (presentations, supplies, etc)
- School kickoff presentations
- Program data collection
- Program data compilation and reporting.

The NEF delivers the program in additional states within the U.S., tailoring the program to fit within each state's specific Department of Education energy education targets. Beyond working with the Department of Education to target school energy curriculums, NEF also works with the Department to cross-promote the program – especially in the first program year.

2.10.2 Program Delivery

The Think Energy program provides teachers with a pre-packaged classroom unit about energy efficiency targeted for students in grades 4 through 7. The program goal is to educate students about energy and energy efficiency and inspire behavior change. The program does not claim energy savings. The program is designed to deliver the following educational items during the course of the unit: a) a one-hour kickoff school presentation about energy; b) a kit for each participating student to take home; and c) supporting classroom curriculum. A brief description of each program component follows:



-
- *One-hour kickoff school presentation about energy:* NEF schedules and conducts kick-off presentations at participating schools. Presentations are generally scheduled directly between the participating teacher or administrator and the NEF employee (teacher-presenter) assigned to the school or region. Scheduling is most often initiated and achieved through e-mail communication. Teachers we interviewed indicated they were generally offered an approximate window of time presenters would be available in or near their community, and they conceded that they had to work within the offered times. While presentation dates/times or unit launches were not always opportune for teachers we interviewed, those who expressed concerns about presentation and/or unit timing indicated it was a worthwhile trade given the program's value in their classrooms. NEF changed its school presentation within the course of this evaluation. The foundation removed the *Pass the Facts* activity about renewable and nonrenewable resources. It substituted it with an electric circuit activity. Additional minor presentation edits included graphical updates and upgrades to a Jeopardy-inspired game that improved run-time. Presentations were migrated to an Ipad platform to enable presenters to travel with lighter equipment.
 - *Kits for participating students:* The energy efficiency classroom kit offered to students is the same throughout the program. NEF acquires its kits through Resource Action Programs in Nevada. The kit is customized for use at schools within the EU program area. The kit (box) design includes *Think! Energy* and *Efficiency United* logos, and the NEF and the Michigan Department of Education are also called out on the kit exterior as the program implementer and partner, respectively. Specific EU graphics are also on the inside of the student kits. The kit includes the following energy-efficient equipment for installation or testing tools:
 - Two 13-Watt CFLs
 - High efficiency, low-flow showerhead
 - Faucet (kitchen) aerator
 - Digital water thermometer / refrigerator temperature thermometer
 - Shower timer
 - LED nightlight
 - Flow rate test bag



Additional kit elements that are not actual energy efficiency measures include the student guide, a fun facts slide chart, turn it off and scratch n' sniff stickers, a parent/guardian comment card, product installation instructions, and a program brochure.

- *Classroom curriculum:* Teachers receive curriculum and items for classroom display when they sign up to participate in the program. They receive an educational energy efficiency poster to post in their classroom and a teacher's guide of activities. The guide offers teachers a bridge to continue conversations and activities with students which were initiated in the unit's kick-off presentation. Teacher curriculum was updated during the course of this evaluation to reflect activity changes within the presentation, as previously described.

2.10.3 Program Process Steps

KEMA interviewed five teachers and one principal who were listed as key program contacts and participants by NEF. For simplicity's sake throughout the remainder of this report, KEMA will refer to this interview group as teachers. The teachers most often heard about the program through its direct marketing efforts (described below). We asked teachers if they were aware NEF enrolled schools on a first come, first-served basis; four out of six indicated they knew about the policy. Two of them learned about the policy when they signed up, and the program representative they interacted with told them.

NEF contacts the enrolled participants as the designated fall time for the unit nears. Communication is most often through e-mail, and NEF and teachers exchange emails in order to schedule the program kick-off presentation. The designated student kits for the school arrive in advance of the presentation. Teachers we interviewed often expressed their surprise at the sheer size of the shipment; nearly all of them were able to describe it in detail without prompting. One interviewee offered: *"The kits came in five HUGE boxes – like three-foot by three-foot boxes. The delivery attracted a lot of attention at school."*

Participating teachers and/or schools receive permission slips to send home with students in advance of the kick-off presentations or receipt of the kit. KEMA did not review the permission slip, but interview respondents indicated it describes the program and acts as a vehicle to get parental buy-in to the program in advance of students arriving home with a kit. Students who return a signed permission slip receive a student kit for their household.



The program unit officially kicks off with a presentation by a trained NEF staff member. The presentation is roughly one-hour long and communicates information on energy generally, and energy efficiency specifically. The presentation contains hands-on activities for students and otherwise engages them with graphics and game show inspired interaction. All teachers reported distributing student kits after the kick-off presentation. Teachers also integrate program-provided energy lessons or activities into the curriculum following the presentation to continue the energy education as part of a school unit.

After the students receive their kits, they take them home, review the materials, and install measures with their families. The student workbook included in the kit contains a household survey the student and an adult work together to complete. Members of the household receiving a kit are asked to collect data about the current energy-using equipment in the house, and measure how energy usage changes after installing an energy efficient measure from the kit is a key part of the program.

The household survey that accompanies the kits within the Student Guide booklet is the primary data collection tool for the program. All teachers KEMA interviewed confirmed the students transfer the household survey data to SCANTRON sheets after completing the survey at home and bringing it back with them to school. Program requirements indicate SCANTRONS must be filled in with a number two pencil. Once all data is transferred, the teachers collect the populated SCANTRON sheets and place the SCANTRON sheets in a self-addressed (c/o NEF), postage-paid envelope.

After the teacher mails the envelope to NEF and NEF receives each school's envelope, SCANTRON data is read by machine. NEF tracks which participating schools and teachers returned program data and prepares it for reporting. The foundation analyzes the data and prepares and delivers a report to CLEARresult. The report, created annually, provides a program overview, a list of participating schools, an estimate of program savings⁷, and any comments provided by participating teachers, students or their parents. Interim monthly reports are prepared by NEF and sent to CLEARresult in spreadsheet format which includes enrolled schools, affiliated utilities, and various data snapshots.

⁷ Staff working with the program explained during in-depth interviews that program energy savings are calculated based on program budget and expenditures. The program does not claim energy savings through verifying installation of measures in the student kit; however, the annual report process does estimate expected and/or assumed energy savings based on program participation.



The program offers incentives for both students and teachers who participate in returning the household survey data to the program. Students are awarded a blue *Think Energy* wristband for returning their household data and transferring the data to a program SCANTRON. Teachers earn a \$100 mini-grant to use in their classrooms for completing the program steps, including returning their classroom data to NEF.

The mini-grant incentive structure for teachers has recently changed. In prior years, teachers earned a \$100 mini-grant for their classroom if he or she collects and returns 80% of participating student SCANTRONS. If teachers turned in anything less than 80% of their data, they did not receive an incentive. The most recent program incentive is tiered by percent of data returned. Table 2-11 outlines the current teacher incentive structure.

Table 2-11:
Teacher Mini-Grant Incentive Structure
(as of December 2011)

SCANTRON return rate	Mini-grant award amount
80% (or more)	\$100 (full award)
50% to 79%	\$50 (partial award)
Less than 50%	\$25 (partial award)

The updated teacher mini-grants create an incentive for teachers to return any forms they can collect from students. One teacher KEMA interviewed reported doing extra promotion of the mini-grant opportunity to parents in order to increase the household survey response rate. Furthermore, schools and its affiliated teachers who fail to return student data during its first year of participation are designated as low priority marketing opportunities in subsequent program years.

NEF indicates its program success metrics are largely based off receipt of household survey data through SCANTRON forms. These data provide verification of measure installations, an opportunity to estimate rough energy savings, and a record of how household energy use and/or activities may have changed though program participation.



The second data collection effort the program makes is through the pre- and post-participation survey that is filled out by a participating school representative. The survey is a data collection requirement from the Department of Education. These survey instruments attempt to measure behavior change to classroom learning and curriculum content.

Information gleaned from our in-depth interviews revealed that CLEAResult and NEF have had additional conversations about how to further capture data on how the program changes participant behavior or raises awareness of energy efficiency. KEMA was not able to verify if additional surveying of past participating schools or students / households had been implemented within the scope of this evaluation.

NEF also emphasized repeat program participation and positive teacher and/or student feedback are additional program measures of success.

2.10.4 Marketing/Communication Between Teachers and NEF

NEF markets to schools based on a vetted list provided by participating utilities. The main marketing campaign takes place in the spring to enroll schools to the program for the following fall. For example, NEF implemented a marketing campaign in spring of 2011, teachers signed up in the weeks following the campaign, and committed to program participation in fall 2011. NEF uses direct mail to schools as its primary promotional vehicle; it also distributes flyers at eligible schools. Creative for the direct mail and flyers stress limited program supply and the first-come, first-served program policy towards filling available participation spots. Marketing examples NEF produced for the past year are provided in Figure 2-31 and [Figure 2-32](#)~~Figure 2-32~~.

**Figure 2-31:
Think Energy Flyer**

ATTENTION MICHIGAN TEACHERS


Give your students the power to TAKE ACTION and make a difference through energy efficiency!

The Think! Energy with Efficiency United program helps teachers and students in grades 4-6 "think" about energy, "talk" about energy and "take action" now with in-school student presentations by our energy experts. Every student receives a Take Action kit with technologies to make their home more energy efficient.

Participating teachers receive the Take Action kit PLUS a selection of instructional materials correlated to Michigan content expectations and will be awarded classroom mini-grants of up to **\$100 per enrolled teacher**, subject to meeting program eligibility requirements.

The program is **FREE**, but **numbers are limited**, register quickly!

Enroll NOW to save your spot to participate in:




What: FREE energy efficiency kits for you and your students introduced by a 45-60 minute assembly by our energy experts.

When: October 24-November 4, 2011

Where: Your school

Who: One grade level, you choose from 4th or 6th

How: Enroll online at <http://www.thinkenergy.org/eu> or call NEF at 1-855-494-2943 for more information.



Space is limited so TAKE ACTION now!




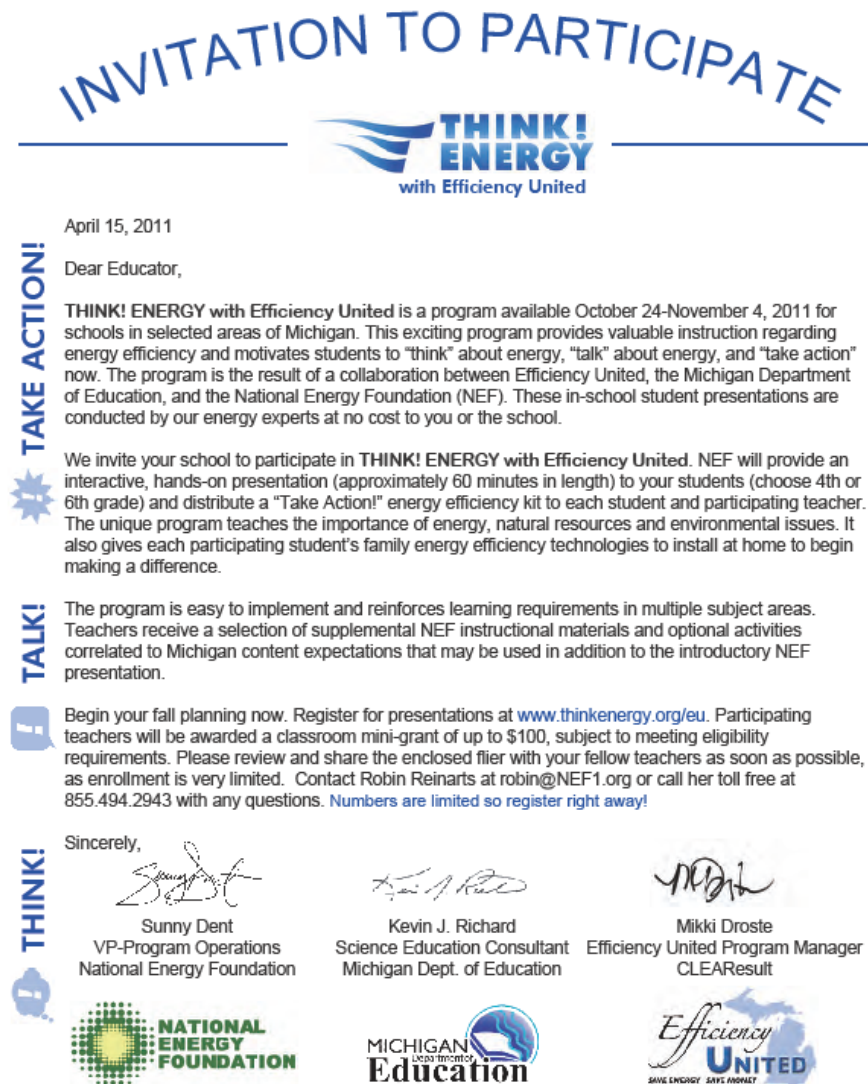




Figure 2-32:
Think Energy Direct Mail (Letter to Teachers)





NEF executes its program marketing with limited program budget and student energy efficiency kits in mind. NEF reports targeting its marketing efforts based on school size in advance of promotional efforts. The foundation selects school candidates who match available kit inventory, and limits its marketing to schools it can adequately supply with student kits. NEF employs this strategy to avoid disappointment or program overruns. The strategy can present a participation barrier to schools within partner utility territory with a very limited number of eligible school districts. NEF also staggers selective targeted marketing to schools over time instead of launching all marketing efforts simultaneously to avoid creating an unserviceable program demand within a very short window of time.

We asked teachers and administrators during in-depth interviews how they first heard about the Think Energy program. Answers varied. Three respondents indicated they saw or received a flier, additional respondents described the direct mail letter or indicated they received an email about the program. Word of mouth was often mentioned as an additional way teachers got information about the program. Teachers who have participated for more than one year reported receiving annual e-mails asking them if they want to continue their program participation; each teacher in this situation reported responding 'yes'. The program may become less reliant on program marketing as it builds goodwill in its schools, and word-of-mouth may become an effective marketing vehicle.

Teachers primarily communicate with program representatives via e-mail and are satisfied with both the method and responsiveness of program communications. Four out of the five interviewees who were able to rate program communications ranked it as a '5' or *extremely satisfied*, out of a possible five points. However, teachers interviewed for this evaluation were largely unable to recall who specifically, or what organizations, they were communicating with. KEMA was unable to draw conclusions about communication satisfaction (or general awareness) specifically connected to NEF, Efficiency United, or CLEAResult due to teachers' inability to distinguish between them.

2.10.5 Teacher Satisfaction with the Think Energy Program

Teachers relayed high levels of satisfaction about their Think Energy program experience. All interviewed teachers reported that the program was worthwhile. Five out of six teachers rated the program a 5, or *extremely satisfied*, out of a possible 5 points (the sixth teacher rated the program a '4'). Five out of the six interviewed school representatives offered during the interview that they were repeat participants to the program, which otherwise reflects program satisfaction.



Both program administrators and implementers KEMA interviewed discussed the program with obvious affection.

Nearly all interviewed teachers identified the \$100 mini-grant was a positive incentive to participate in the program, despite not being specifically asked about it during the interview. When we asked specifically about program successes or what students and/or parents liked best about the program, the kit received rave reviews. Teachers indicated that students were genuinely excited to receive the kits, and teachers felt it helped provide a strong opportunity to link energy efficiency education lessons with hands-on activities and demonstrative results. Finally, nearly all teachers also gave high praise to the NEF presenters and the content of the kick-off presentation and its effectiveness in helping to launch the unit.

Teachers and administrators KEMA interviewed rarely identified other programs or additional technical or financial help they utilize to implement energy efficiency education. Programs mentioned include: specific utility presentations at school (e.g. demonstration from linemen), National Parks Service presentations (nature / water use theme).

2.10.6 Think Energy Program Challenges and Recommendations for Improvements

KEMA's in-depth interviewing revealed some program implementation challenges. Previously mentioned challenges include: balancing program kit inventory against demand, customizing program promotional materials, and working within specific education targets by state. NEF indicated that being adequately staffed for and scheduling presentations efficiently is a minor program challenge. Efficient presentation travel can also pose a challenge over the large Michigan territory (including the Upper Peninsula) covered by CLEAResult programs.

Teachers offered additional perspective on program challenges. For example, two teachers expressed concern during the January 2012 interviews that they hadn't yet received their mini-grant for the previous year, which may be indicative that the program is not meeting expectations with incentive distributions. Two teachers offered examples of confusion over submitting household survey data; for instance, one teacher used a single program SASE to return multiple classroom data to NEF. This resulted in data from one of these classrooms not being tracked properly within NEF, and it delayed this school's mini-grant payments. Another teacher indicated that while she had submitted data, she was uncertain of the status of other teachers who had participated within her school. She reported she thought the lag in having all the data from the school was delaying incentive payments.



This challenge presents an opportunity for the program to communicate more effectively about receipt of household survey data and incentive delivery after the unit concludes. Given the teachers' comfort and satisfaction communicating by e-mail with the program, continued email conversations between NEF and participating schools and teachers after the units are complete are encouraged as a low- or no-cost program recommendation. Besides the program strengthening post-unit communication with participating schools, other recommendations participating teachers or administrators had for improving the program included:

- *Assure kick-off presenter is organized and gives clear student instructions about when students can move & interact:* Two teachers expressed minor feedback indicating that the presentation 1) wasn't as organized compared to prior years and 2) didn't include strong enough direction to students about when action was appropriate, and when quiet listening was needed. Presenters may wish to check with teachers before arriving at the school to gauge if the teacher has specific requests or announcements they'd like the NEF presenter to include in the presentation if it's not already part of the process.
- *Regularly assess whether all required program processes and paperwork is as efficient with requirements as possible:* Teachers are overwhelmingly satisfied with the program; however, the item ranked slightly lower by teachers is the program paperwork requirements. About half of the teachers commented that the required volume or level of detail in the paperwork was more than they expected.
- *Define program expectations more clearly with participating parents or guardians:* Teachers noted in the interview that negative program feedback was minimal; however, a subset of teachers did report that parents called or emailed them feeling overwhelmed by the kit components, or uncertain of the program timeline. One teacher reported a parent called her upon receiving the kit via his/her child and asked, "Do I HAVE to install all of this tonight?" The teacher explained to the parent that he or she had weeks to complete the installations and survey. This example illustrates a program opportunity to increase communication with parents or guardians who support and participate in the program with their student.

2.11 Participating C&I Contractor Interviews

In February 2012, KEMA conducted twenty interviews with Commercial and Industrial (C&I) contractors who were mentioned in participant applications for the EU/EO (C&I) Program. The contractor interview guide was intended as a flexible approach to elicit details regarding several key topic areas including:



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- Company characteristics;
 - Program awareness & participation;
 - Program marketing;
 - Program rebates; and
 - General satisfaction with program delivery.

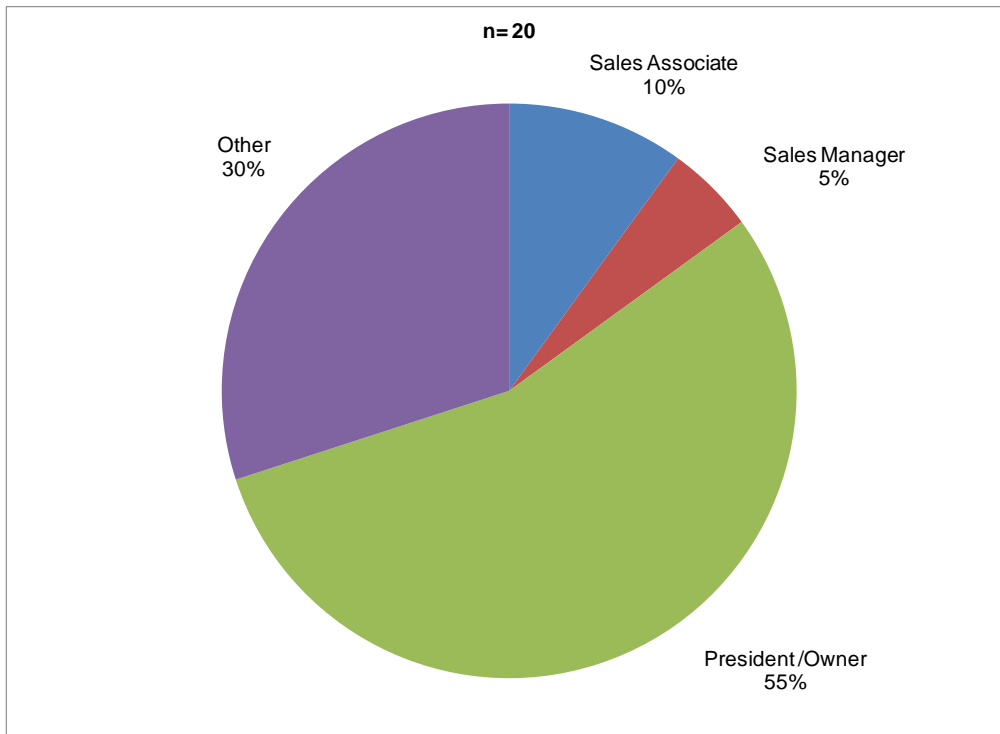
2.11.1 Sampling Methodology

KEMA developed a sample frame of participating contractors by extracting company names from the customer rebate applications and other project paperwork from the C&I program. The original list included 76 companies. We then removed 16 companies from the sample frame who had installed HVAC measures (HVAC contractor interviews were covered in another research task). We also removed one company for which no contact information was available. This left a final sample frame of 59 companies. Almost all of the remaining companies were lighting contractors. We then called the companies in random order until we had completed our 20 interviews.

2.11.2 Characterizing the C&I Contractor Interview Respondents

We collected some information about the respondents and their companies. Over half (55%) of the interviewees were business owners or presidents of their company with the remainder being involved in some type of management (Figure 2-33).

**Figure 2-33:
Job Positions of the Contractor Interviewees**



Thirty percent of the companies had multiple business locations. Forty-five percent had five or fewer employees, 30 percent had between 6-20 employees, 15 percent had 21-100 employees, while the remaining 10 percent of companies had over 100 employees including one large company with as many as 1,200 employees.

We asked the interviewees to characterize their companies' lines of business. Sixteen of the twenty (80%) had 70 percent or more of their business serving the commercial market with four of them serving the commercial market exclusively. We also asked them what shares of their sales was in the new construction vs. replacement markets. On average they reported that 71 percent of their business was in the replacement market.

To help the contractors recall their experience with the program we provided them with the customer name as referenced in the application and supportive details. Collectively the 20

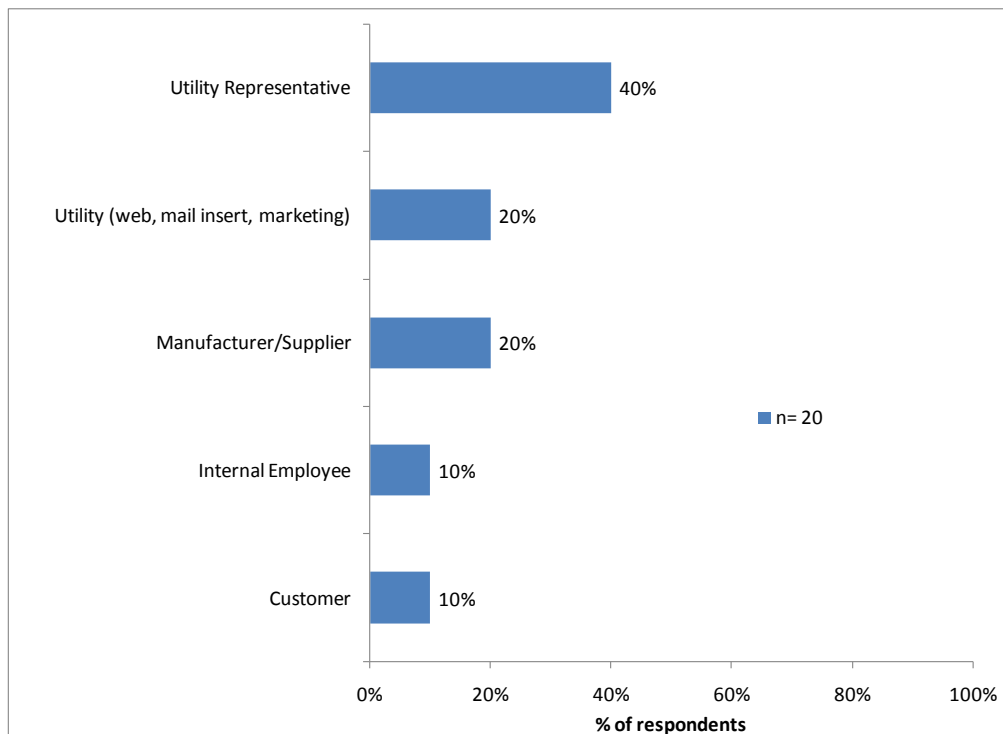


contractors installed 197 measures on those projects from December 2010 through October 2011 with a total of \$106,241 in incentive payments. Over half of the projects (60%) had only one unique measure type.

2.11.3 Program Awareness & Participation

We asked the contractors how they had first heard about the EU/EO rebate program. As shown in Figure 2-34, the utility representative, which likely includes EU/EO representatives from CLEAResult, was the most-cited (40% of respondents) first source of program information with utility marketing sources (websites, mailers, etc.) and manufacturer representatives each being cited by a fifth of the interviewees. Only 10 percent of respondents heard about the program from their customers.

Figure 2-34:
Contractors' First Source of Program Awareness



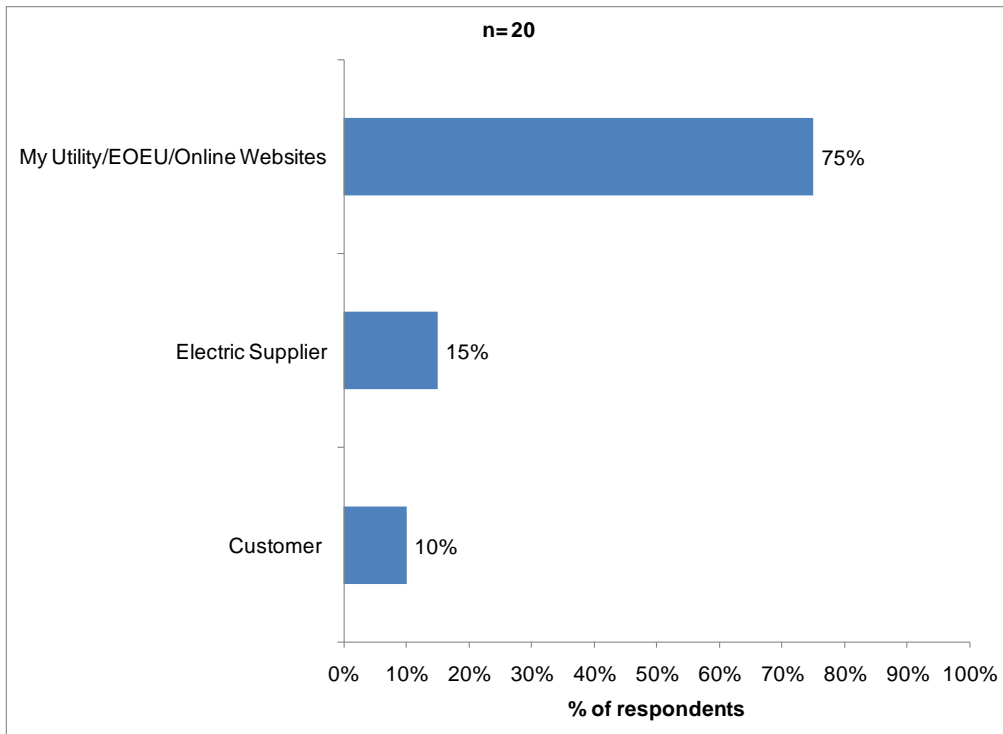


In a subsequent question, we asked the C&I contractors if they would be willing to attend a seminar for the purpose of hearing about program updates. Seventy percent indicated it was “likely” to very likely” they would attend. They indicated that seminars would need to be within a 50 mile radius to interest them although one contractor, in a very rural region of the state, indicated he would be willing to travel as far as 300 miles.

We asked the contractors why they were interested in attending such a program seminar. Some pointed to the importance of rebates in their business. “Because of incentives I’m able to do my job. These incentives drive what I do,” said one contractor. Others looked forward to the educational opportunity. “I want to learn more about it so I can tell my customers so they can upgrade their light fixtures and start saving some money,” said another. Finally some thought it would be useful to learn the program rules. One contractor who had attended some seminars for Consumer Energy’s programs said: “for some of them you need [to learn how] to fill out the application a certain way.”

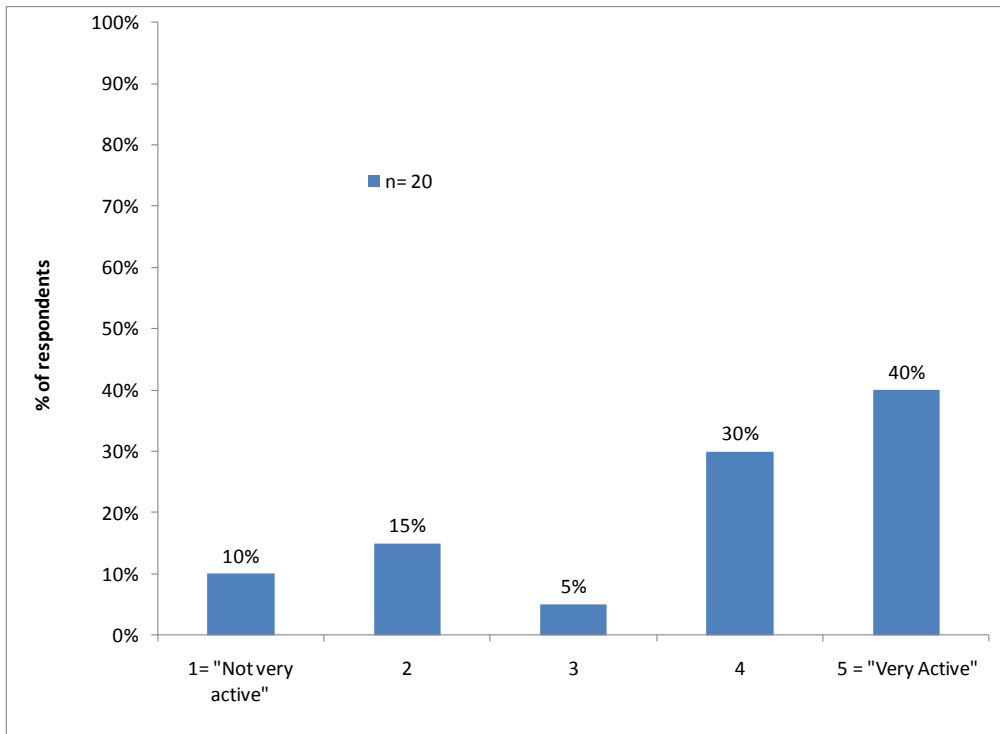
We asked the contractors how they obtain EU/EO program information. Figure 2-35 shows that three quarters of them get their information from websites whether those of their own local utilities or from the main EU/EO website.

Figure 2-35:
Sources That Contractors Use for Program Information



We asked the contractors how actively they promoted the EU/EO C&I rebate program using a five-point scale where five indicated “very active” and one indicated “not very active.” Figure 2-36 shows that 70 percent of the contractors were on the more active part of the scale.

Figure 2-36:
How Actively the Contractors Promote the Programs



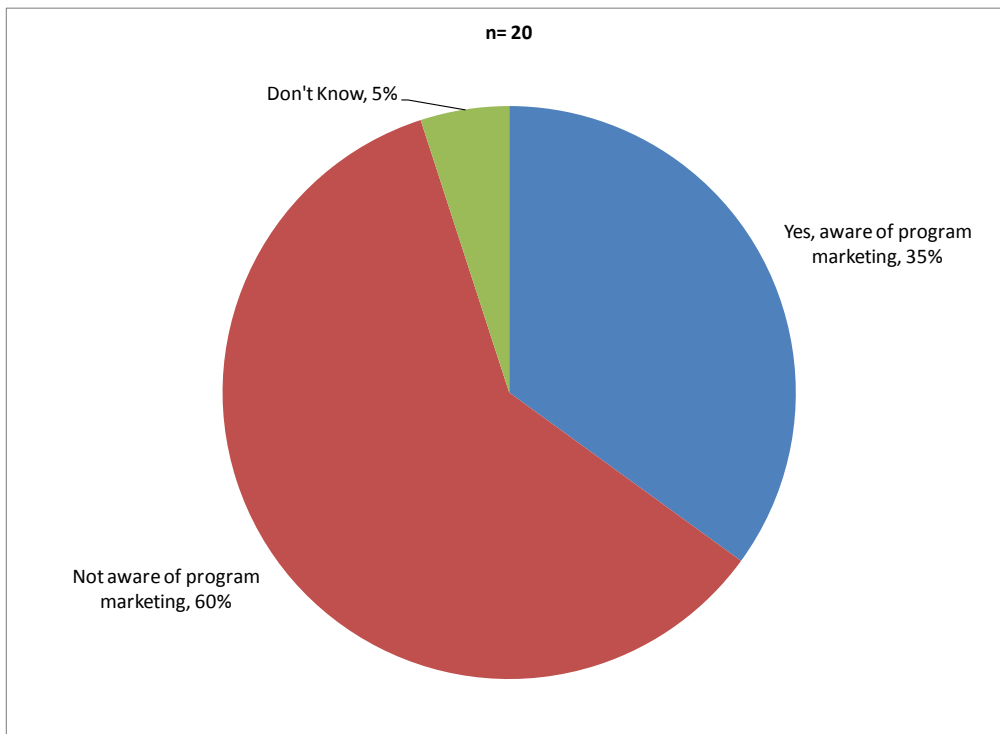
We asked the contractors to explain their level of activity. Some of their comments included:

- "[It's due to the] location of customers outside of the territory".
- "A lot of people don't care about it."
- "Don't have people here who need it. Most stores are up-to-date or out of business."
- "Some of the monies from local utilities was used up before I could get a project done. Also, some rebates not available for new construction."

2.11.4 Program Marketing

We asked the C&I contractors whether they were aware of any marketing efforts by the EU/EO C&I program. Figure 2-37 shows that only about a third said that they were aware of such marketing efforts.

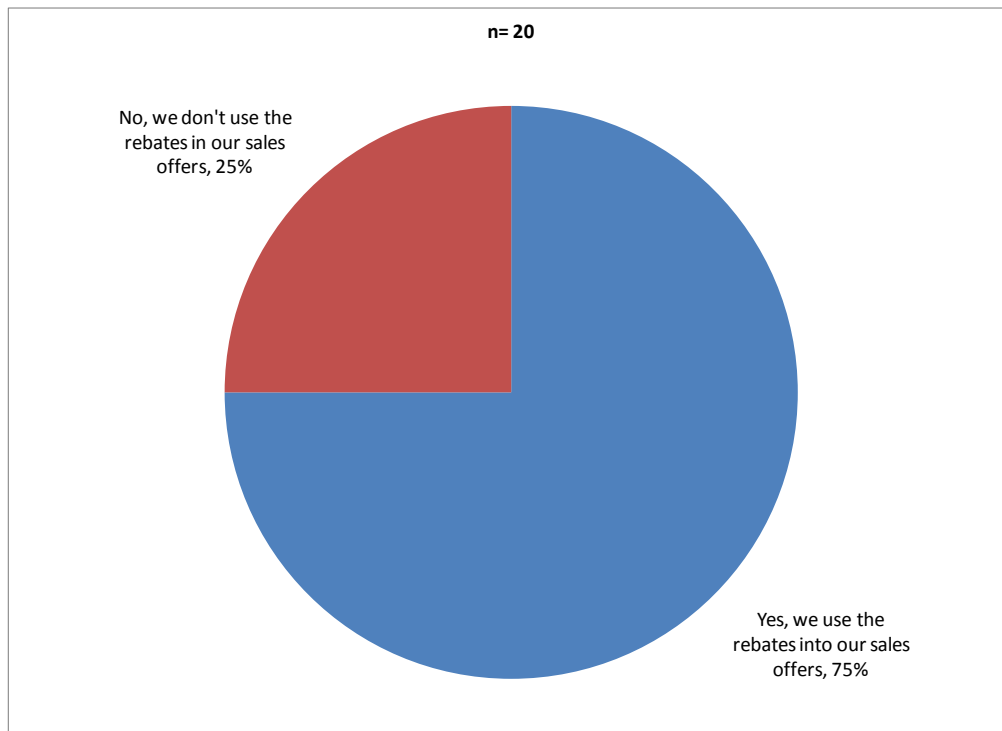
**Figure 2-37:
C&I Contractor
Awareness of C&I Program Marketing**



Yet even though most contractors were not aware of marketing efforts by the program itself, most of them were promoting the rebates on their own. We asked the contractors whether they were incorporating the rebates into their product offerings. Figure 2-38 shows that three quarters of them were. “Yes we usually have a worksheet we use to calculate the operating cost per day, the cost of installation, the rebate amount, the annual savings; the payback period, existing vs. proposed, and what the cost is on a monthly basis to keep their existing system

running,” explained one contractor. Another called the rebates “an attention getter.” “We express to the customer that not only will they save dollars on the utility bill but that they will receive a rebate to help offset the cost of initial installation,” he said.

Figure 2-38:
Integrating Rebates into Sales Offerings

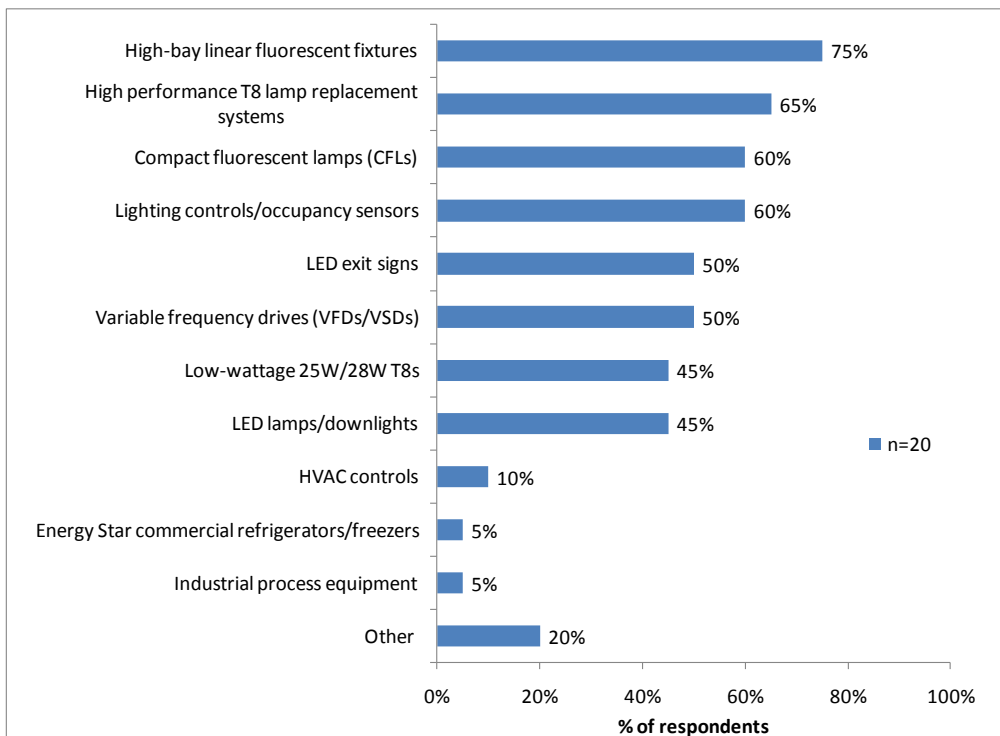


2.11.5 Program Rebate Awareness and Adequacy

We asked the contractors what types of commercial and industrial equipment they were aware that the program offered rebates for. It was an open-ended question (we did not read them a list or prompt them in any way). Figure 2-39 shows that three quarters of them were aware of the rebates for high-bay fluorescent fixtures and over half of them were aware of the rebates for high-performance T8s, CFLs, and lighting controls. Since almost all of the respondents were lighting contractors it is not surprising that the most-cited rebates were lighting measures. The

most-cited non-lighting measure was VFDs, although many of contractors were general electrical contractors who also install these.

**Figure 2-39:
C&I Contractor Awareness
of C&I Equipment That Program Offered Rebates For**

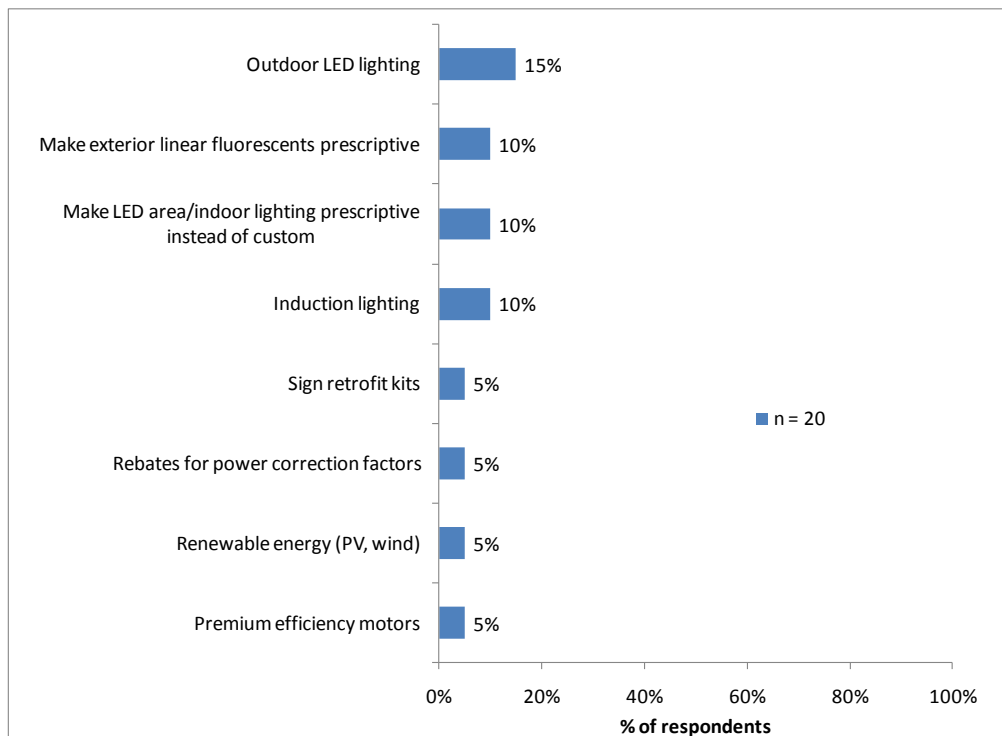


We also asked the C&I contractors whether there were any other types of energy efficient equipment that they thought that the EU/EO C&I program should be offering rebates for (that it was not already). Figure 2-40 shows that they had quite a few suggestions with outdoor LED lighting – which included not only parking lot lighting but also street lighting -- being the most-cited. In some cases -- such as exterior linear fluorescents and interior LED lighting -- the EU/EO program was already offering custom rebates but the contractors wanted prescriptive rebates for these technologies. “LED area lighting falls under custom rebate which has more paperwork,” explained one contractor. “They should create a prescriptive rebate for the linear



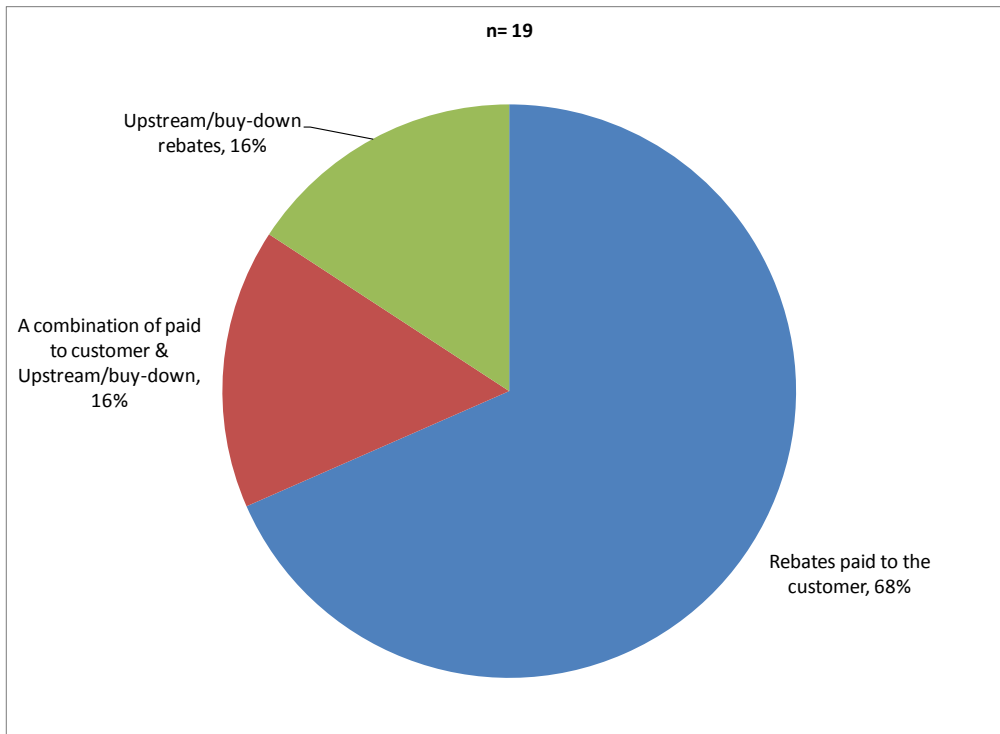
fluorescent exterior fixtures,” said another. “As a custom measure, it’s difficult to achieve the 1-7 year time frame unless the previous fixture is 1,000 watts.”

Figure 2-40:
EE Technologies That the Contractors
Wished the EU/EO Program Was Offering Rebates For



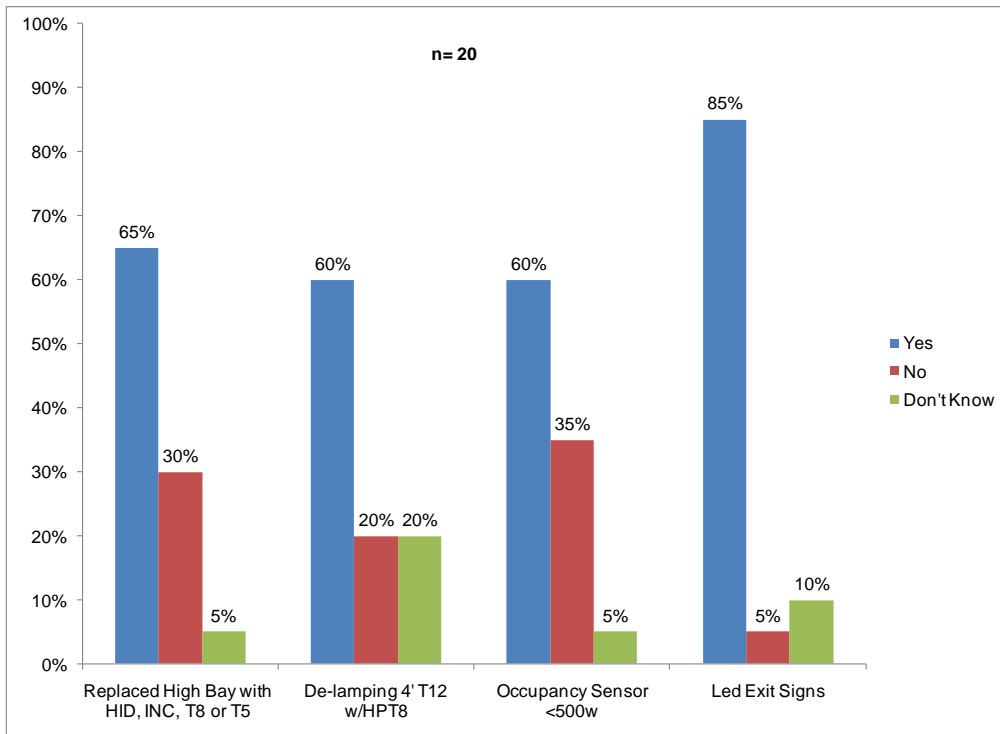
We asked the C&I contractors: “Which rebate delivery method thought do you think would be more effective, one that pays rebates only to end users, one that only goes to manufacturers and distributors to buy down the wholesale cost of the equipment, or one that uses both end user rebates and upstream buy-downs?” Figure 2-41 shows that over two thirds of the respondents preferred the current rebate approach where the rebates go directly to the customers. Some expressed skepticism that manufacturers or distributors would pass along the savings from the upstream rebates while others thought it would be difficult to explain to the customer they were getting the product at a reduced price.

**Figure 2-41:
Preferred Rebate Approach**



We read to the interviewees the more common lighting rebates being offered by the EU/EO C&I program and asked them whether they thought they were adequate. Figure 2-42 shows that for all the rebates named a majority of the respondents thought the rebates were sufficient. The highest level of disagreement with the lighting rebates (35% of respondents) was for the lighting controls.

**Figure 2-42:
Satisfaction with Rebate Levels**



Some of those who did not like the current rebate levels had the following suggestions:

- High bay replacement:
 - Three respondents preferred that these rebates be paid per fixture (e.g., \$35-\$40 per fixture) rather than being paid per Watt.
 - Three respondents preferred 35 cents per watt, which was the previous rebate level.
- De-lamping
 - Two respondents preferred \$7-8 lamp.
 - One respondent preferred \$12-\$15 per fixture.



- Occupancy sensors
 - Two respondents preferred rebates of \$30-40 per sensor.
 - One respondent preferred rebates of 8 cents per watt.
 - One respondents said the rebates should depend on the quality of sensor.
- LED Exit Signs
 - One respondent suggested \$20-25 for replacement and \$12 for retrofit.

2.11.6 General Satisfaction with Program Delivery

We asked the C&I contractors about their level of satisfaction with a variety of program characteristics such as application forms, websites, marketing efforts, rebate delivery, incentive amounts, and interactions with staff and overall satisfaction. We also asked them to rate their satisfaction with the program as a whole. We asked them to use a five-point scale in which 5 indicated “very satisfied” and 1 indicated “very dissatisfied.”

Table 2-12 shows that 75 percent of the contractors were satisfied (4 or 5 satisfaction ratings) with the overall EU/EO C&I program. However, their levels of satisfaction were lower for individual program attributes ranging from 65 percent for the rebate application forms to as low as 25 percent for the program marketing efforts.

Table 2-12:
C&I Contractor Program Satisfaction Levels

	Don't Know	1- Very Dissatisfied	2	3	4	5- Very Satisfied
Application Forms	15%	0%	5%	15%	35%	30%
Program Website	20%	-	-	25%	25%	30%
Marketing Efforts	25%	5%	5%	40%	20%	5%
Timing of Rebate Payment	45%	-	10%	5%	30%	10%
Incentive Amounts	15%	5%	5%	25%	30%	20%
Interaction with Program Staff or Franklin Energy	25%	5%	5%	5%	25%	35%
Overall Satisfaction	10%	0%	-	15%	55%	20%

The following subsections provide a little more information on these satisfaction responses and reasons for dissatisfaction with the program.



2.11.6.1 Application Forms

Twenty-percent of the respondents were less than satisfied with the rebate application forms. Some of their concerns included:

- *Wanting application forms that are easier to fill out:* One respondent said he/she would prefer the program used a format of Adobe PDF that would allow them to type the information into the application rather than having to print it out and then fill it out.
- *Faster processing/approval of applications:* One contractor said that he/she would like "a little quicker turnaround time, from time they receive the application to the time they give the go ahead."
- *Less use of the custom rebates:* One contractor expressed dislike for the Custom rebates. "Some of the pre-qualification stuff they could do away with," he said. "Do more prescriptive stuff [Custom rebates] are a "waste of time for both contractor and owner."
- *Insure that lighting distributors get lighting calculation forms:* One contractor said that it was important that the program implementers insure that lighting calculation forms are provided to lighting distributors since they are a source that contractors refer to when identifying qualifying rebated equipment.

2.11.6.2 Program Website

Twenty-five percent of the respondents were less than satisfied with the program website. One suggested that the website provide current information on the availability of rebates. "I find I'm calling the program directly with questions, such as checking the status of rebates," he said. "It would be nice to have the currents funds available through the program updated regularly on the website".

2.11.6.3 Marketing Efforts

Fifty percent of the respondents were less than satisfied with the program's marketing efforts. One contractor suggested that the program do co-op advertising where the cost of advertising is split between the contractor and the program. Other contractor comments on the program marketing efforts included:



-
- "They did a pretty good job when program rolled out, but recently, I haven't seen a lot of advertisement or efforts to alert the public to the program."
 - "I don't see much in my area about it being marketed to the public."
 - "Somebody somewhere needs to spend money on that."
 - "I would like to have more input from their marketing campaigns. Who are they referring? Can we get put on a list of recommended contractors? Are there leads generated that could be shared? I'm really not aware of what they are doing with their marketing campaign".

2.11.6.4 Rebate Delivery

Since the program pays rebate checks directly to end users, it was not surprising that a high percentage (45%) of the interviewees said that they did not know enough about the timeliness of the program rebate payments. However, 15 percent of the interviewees were less than satisfied with the payment of the rebates. Some of their comments included:

- "I've seen them take "9-15 weeks after project was done."
- "They said six weeks and it was routinely 8-10 weeks before people got paid"
- "Probably could be a little quicker."
- "Incentive have taken a little longer would like but I think they have gotten better as of just this year 2012 they seem to be getting the processed faster."

2.11.6.5 Incentive Amounts

Thirty-five percent of the interviewees were less than satisfied with the amounts of the program incentives. Some of their concerns were already discussed above in the subsection on rebate adequacy. Other comments they had included:

- "Incentive amounts on T12 replacements could be better, even if just for the rest of the year."
- "It really depends on what [type of lighting equipment] it is for."



-
- "Some of the municipality incentive caps are way too low at \$5,000. There was one instance where I didn't read the fine print on the caps, a custom project; I calculated the incentive to be \$8,000 so I lost \$3,000 on the job".

2.11.6.6 Contractors Recommendations for Program Improvements

We asked the contractors for their suggestions on general ways that the EU/EO C&I program could be improved. In addition to the verbatim comments shows in the previous subsections, they had the following suggestions:

- "[The program should provide] "advertising information that can be given to the customer and lighting calculation forms provided to lighting distributors";
- "Get people out there talking to people";
- "[The program should provide] "some form of catalogue or book to show between contractor and client. So they can choose";
- "Wish they could put top five contractors on website";
- "I don't use the websites; I would like to get more rebate information mailed to me in hard copy"; and
- "They don't get enough information out to the general public, there needs to be some other form of advertising perhaps a budget where they share advertising costs with contractors. The website isn't very good I don't think business owners would know to look there (EO EU) for the information."

2.11.6.7 Cited Programs that Run Well

Lastly, respondents were asked if they have observed differences among utility providers or come across any examples of well-run programs. We received the following comments:

- "Consumers Energy and Franklin Energy are very aggressive in going out and talking about the program and promoting it.";
- "'I can get a project approved by DTE or Consumers three times faster than others. ...Speed of getting project approved, speed of getting questions answered, getting check." How the "incentive is structured.";



-
- "Yes, Consumers is easiest to work with." [When probed]: Application process - they have a pre-application form. "Other places ask for everything [all information] up front.";
 - "Consumers energy is the best and the easiest program. Their website and forms are extremely well thought out and easy to use. And they do what they say they are going to do".
 - "The other utilities are advertising more dropping off sample information, brochures, and cost saving projections etc. It would be helpful to receive this kind of information and not have to try and find it over the Internet.";
 - "No, they seem to be doing things pretty much the same.";
 - "No they appear to be uniform."; and
 - "I'd like to stress that there is a need for more help and I really hope the program continues. The local schools and municipalities can't afford to participate and I think that should be changed. There's no reason that we shouldn't be able to get this done and save money down the road. I want the program to continue and you can call me again next year!"

2.12 Multifamily

This section of the report presents results of a process evaluation for the 2011 Efficiency United (EU) Multifamily (MF) Program.

2.12.1 Program Description and Evaluation Background

This subsection provides a description of the EU MF program and provides some background information on the process evaluation of this program.

2.12.1.1 Program Description

The multifamily program began implementation in August 2010. The program provides energy-saving products free of charge to multifamily building managers. In addition, the program offers incentives for installations paid either to contractors or directly to maintenance staff. The MF program offered incentives for both gas and electric savings to customers in the EU utility service territories. The program estimates energy savings based on calculations outlined in the Michigan Statewide Energy Measures Library/Database (MEMD).



Under the MF program, participants receive the following products:

- Compact Fluorescent Lamps (CFLs);
- Bathroom Faucet Aerators;
- Kitchen Faucet Aerators;
- Low Flow Showerheads;
- Pipe Wrap; and
- Programmable Thermostats.

The program initially offered water-related installations only to customers with electric water heating, though quickly decided to offer these measures to customers with gas water heating as well. To participate, properties must contain five or more units. Tenants may pay their own gas and electric bills on separate residential meters, or landlords may pay them on a central commercial meter. Both types of customers are eligible.

The program continually considers additional technologies to offer for this program, though no additional measures appear feasible at this time. In light of concerns about CFL persistence, the program considered installing CFL fixtures, though abandoned this for cost reasons.

The program finds its customers through pre-existing relationships with landlords, and by using the phone book and cold-calling property managers and owners. Often, a management company representing one property asks whether the program offers the same measures in other geographic areas, which leads to a number of installations from one customer contact. Customers often end up on a waiting list for this program. In the future the program may consider encouraging contractors to hunt for projects and bring them to the program, but the current backlog of customers makes this unnecessary.

The program offers these measures to both low-income and market-rate multifamily properties. While the program markets primarily to market-rate properties, most participation comes from low income properties. Market-rate properties offer a harder sell for a direct install program like this, because they tend to focus on bigger-ticket items like refrigerators and dishwashers.

Nearly all properties participating in the MF program come from urban areas. The program tried to find multifamily properties in rural areas administered by co-op utilities but, with one



exception, failed to find any. In these cases the EU program often transferred funds from the MF program to other programs administered in those territories.

Program participation begins when the program contacts the property manager representative – often a maintenance agent. Program staff goes through an extensive questionnaire to determine eligibility, interest, and potential energy savings.

If a property manager chooses only to install CFLs, the program ships the bulbs to the building management staff and they install the measures themselves. For installations including thermostats, the program hires a contractor to install them. For installations with measures other than CFLs, but without thermostats, the program offers customers the option of installing themselves and receiving a payment for their time, or receiving installation from a program-hired contractor. To participate in the program, installation contractors must have insurance coverage and a license in good standing with the state.

For properties with 24 or more units, the program offers the opportunity for a community meeting where program staff explains how the measures work and how they save energy. For smaller properties, the program simply leaves information about the energy efficient measures for staff to use at their discretion. Most customers turn down the offer of community meetings.

After participation, the program performs quality control site visits on a quarterly basis to verify that products received proper installation and are still installed. When an area of the state receives enough installations, program staff perform site visits on all properties in that area and look through about 10 percent of units.

Table 2-13 shows the accomplishments for the MF program based on the program tracking data. The table shows the tracking savings, number of projects rebated, and incentives paid during 2011.

**Table 2-13:
Summary of 2011 MF Program Accomplishments**

Metric	Program Tracking
Projects	34
Measures	25,453
kWh	825,118
Therms	141,823
Incentives	\$164,064



2.12.1.2 Evaluation History

KEMA did not conduct a process evaluation of the 2010 multifamily program. The program did not start until August 2010 and there was insufficient program activity by the end of 2010 to warrant a process evaluation. The impact evaluation did verify savings for the one MF program project that the evaluators were able to find in the 2010 tracking database sample (which included participants through August 2010).

The process evaluation team was even uncertain about doing a process evaluation of the 2011 MF program. This was because when they pulled the 2011 tracking database sample (which included participants through August 2011) they only found two completed projects. However, in December 2011 CLEAResult informed KEMA that most of the MF program participants had their energy efficiency projects implemented after August 2011.⁸ So the evaluators obtained the MF program tracking data for the September – December 2011 period and determined that there were enough participants to justify a process evaluation.

The evaluation work plan had specified ten in-depth interviews with MF program participants and three in-depth interviews with CLEAResult program staff. We ended up completing eleven interviews with program participants and one interview with a CLEAResult program representative (CLEAResult informed us that due to staffing losses there was only one person available who was very familiar with the program).

2.12.2 Participant Interviews

In January 2012 KEMA used CLEAResult's online data tracking system to download paper copies of documentation for all 34 MF program projects, randomized the sample, and performed interviews with the first 11 participants, representing 16 multifamily properties. This section summarizes the results of these interviews.

2.12.2.1 Participant Characteristics

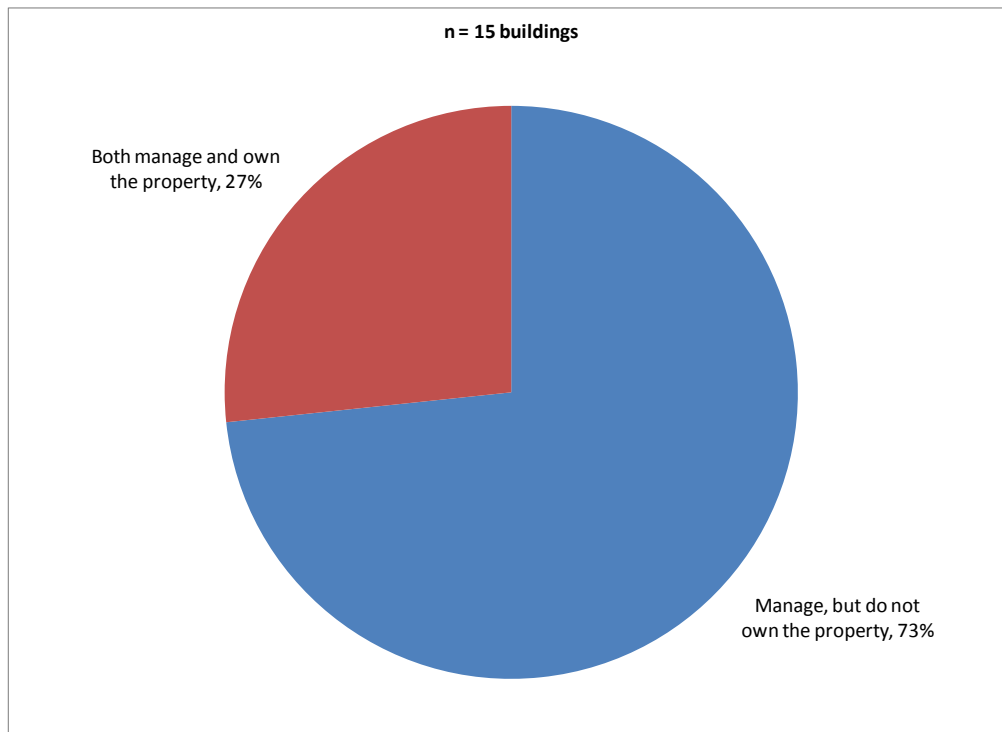
To better understand what types of multifamily property managers/owners and properties were participating in the EU MF program, we asked them questions about their company's management/ownership structure and the size of their buildings and property portfolios.

⁸ December 27, 2011 email communication from Mikki Droste of CLEAResult.

2.12.2.1.1 Ownership/Management of Participating Properties

We asked the participants: “Do you or your firm own the property at <INSTALLATION ADDRESS>, do you manage it, or do you both own and manage it?” Figure 2-43 shows that nearly three quarters (73%) of the participating buildings were managed but not owned by the survey respondents. The remainder were both owned and managed by the same company.

Figure 2-43:
Ownership/Management of Participating Properties



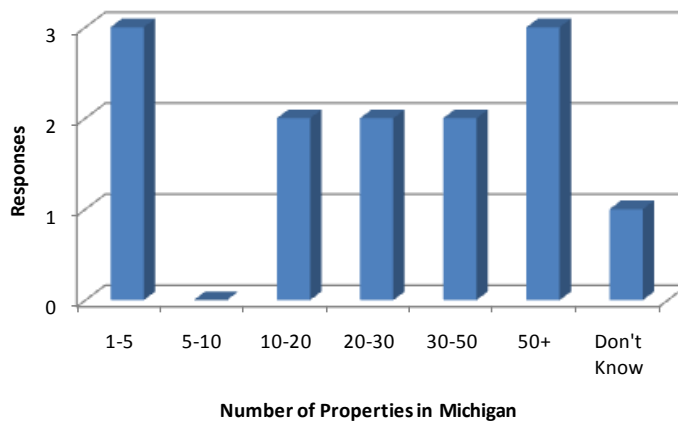
2.12.2.1.2 The size of participating properties

The average number of tenant units in the participating multifamily properties was 70 units with the median number of units being 51 units. The largest participating property had 178 units and the smallest had 32 units.

2.12.2.1.3 The # of properties managed by participants

We asked the participating multifamily property managers/owners how many multifamily properties their companies own or managed in Michigan. As shown in Figure 2-44, most property management companies hold a large number of properties. This suggests that if they were satisfied with their participation in the program, they have the potential to participate at a very high level around the state.

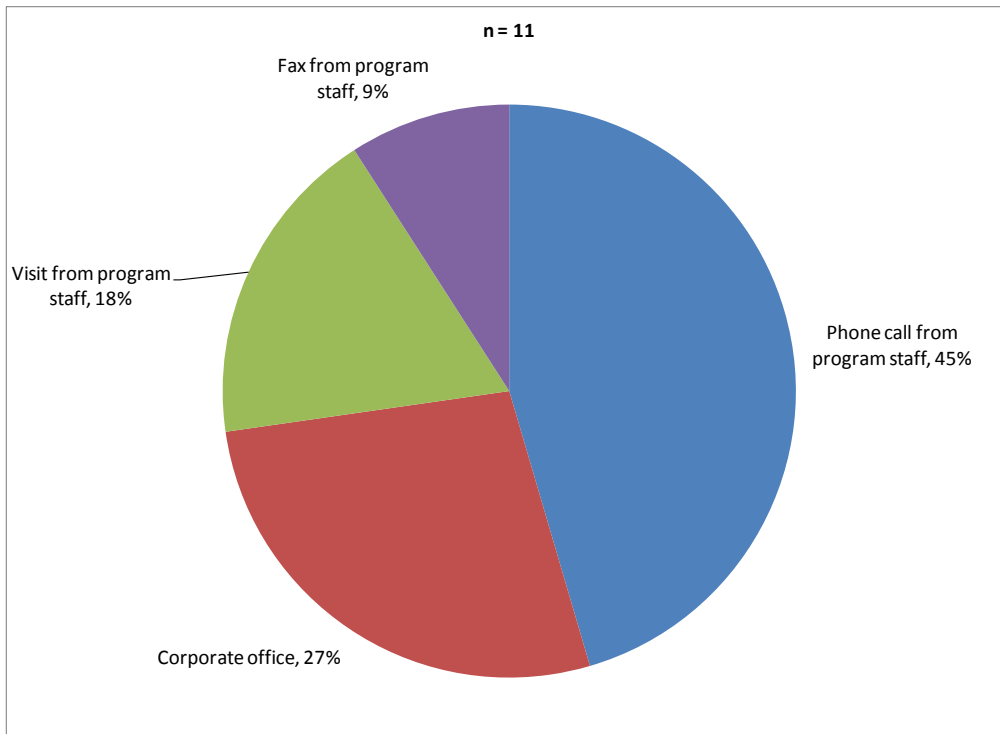
Figure 2-44:
of Multifamily Properties Owned by Participating Companies



2.12.2.2 How Participants First Heard About the Program

As discussed above, the CLEAResult representatives said that they did not market the MF program through mass-marketing, but rather by contacting participants directly. The participant responses concurred with this. Figure 2-45 shows the participant responses to the question, “How did you first hear about the multifamily program?” The chart shows that the program used various means (phone calls, visits, faxes) to reach the multifamily property managers, with slightly less than half (45%) first hearing about the program through a phone call. In some cases, the program had contacted the corporate headquarters of a management company who passed along the information to onsite maintenance staff.

Figure 2-45:
How Participants First Heard About the Program



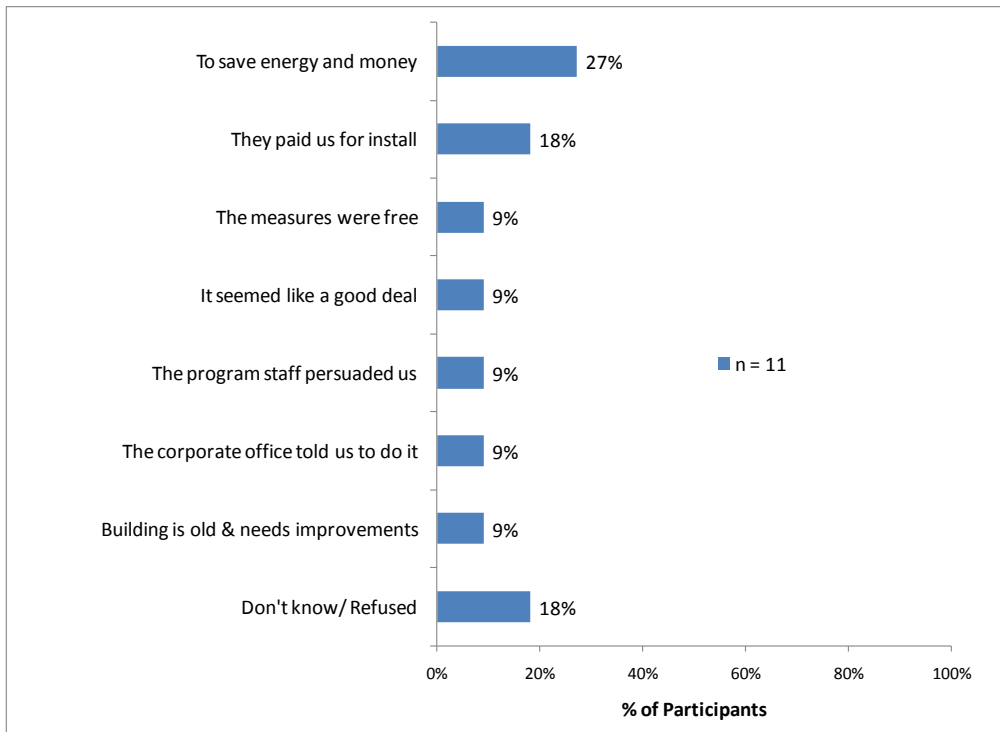
2.12.2.3 Program Participation Motives and Barriers

This subsection summarizes the responses from program participants concerning their motives for joining the program as well as the barriers they face in participating in this program or implementing energy efficiency projects in general.

2.12.2.3.1 Program Participation Motives

The evaluators asked the participants: “What motivated you to become involved with this program?” The most-cited reasons included saving energy/money (27% of respondents) and the fact that the program paid them to install the energy-efficient measures (18%). Figure 2-46 shows the full range of responses.

**Figure 2-46:
Reason for Participation**

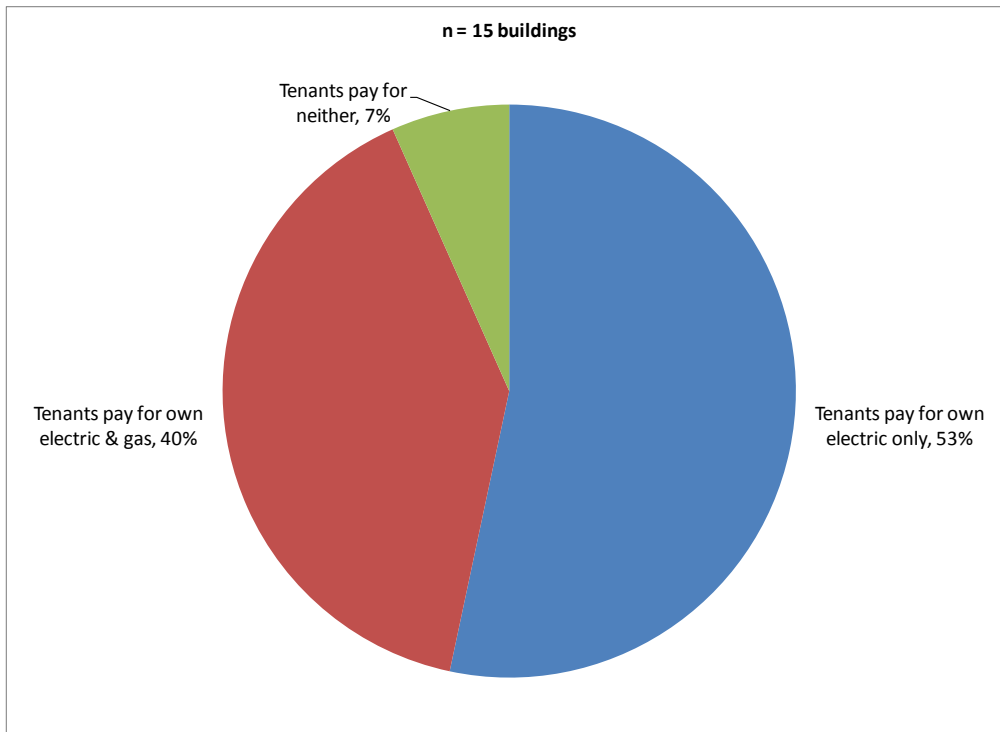


Note: Total exceeds 100% because participants were allowed to give multiple reasons.

2.12.2.3.2 Barriers to Participation and Energy Efficiency

One issue that is often discussed in the context of landlord motivations for making energy-efficient improvements is the so-called “split incentive barrier.” The premise of this barrier is that although property managers/owners are responsible for facility improvements, they usually do not pay energy bills for the tenant spaces and therefore have no direct financial incentive to install more expensive energy-efficient measures in these spaces. We asked the property managers/owners who were participating in the MF program whether their tenants were responsible for paying their own utility bills, or whether utilities were included in the rent. Figure 2-47 shows that in the vast majority (93%) of participating buildings the tenants had to pay at least some of their own utilities. This indicates that in theory the split incentive barrier is a factor in the EU service territories.

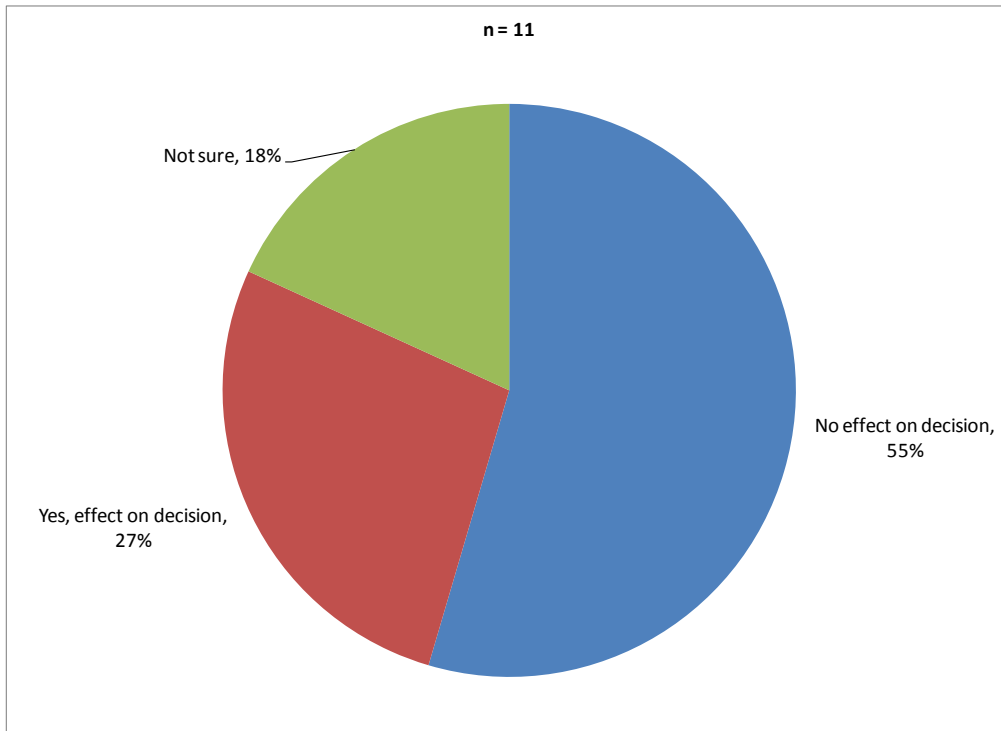
Figure 2-47:
Which Utility Bills Tenants Pay



However, there is evidence from other evaluation research that the importance of the split incentive barrier in influencing property manager/owner behavior may be exaggerated.⁹ To further explore the possible impact of the split incentive barrier we asked the EU MF program participants: “You mentioned earlier that your tenants pay their own utility bills. Does this affect how you make decision about which energy-using equipment you purchase?” Figure 2-48 shows that only about a quarter (27%) of the participating multifamily property managers said that the fact their tenants pay their own energy bills affected their decisions about which types of energy-using equipment they purchased.

⁹ Dyson, Christopher, KEMA; Shahana Samiullah and Caroline Chen, Southern California Edison, *The Split Incentive Barrier: Theory or Practice in the Multifamily Sector?*, 2010 ACEEE Summer Study on Energy Efficiency in Buildings.

**Figure 2-48:
Whether Tenants Paying Own Utility Bills
Affects Equipment Purchase Decisions**



We asked the program participants if they knew of any other opportunities for energy efficiency on their properties. Few participants said that they did know of such opportunities. One reported that they would like new stoves and refrigerators, another that they would like “shower diverters” (presumably devices to shut off water flow while lathering up). Another said that they had already done insulation and furnace upgrades. All others said that they don’t know of any opportunities.

Most of the respondents gave the interviewer the impression that they knew very little about energy use or efficiency, and could not name an energy efficiency improvement without being prompted with options. Many stated that the corporate office decides about capital improvements and that the local maintenance/office staff (who KEMA interviewed for this evaluation) had no role in purchasing other than reporting broken equipment. No participants



suggested that participating in this program had given them additional ideas about saving energy, though the corporate office staff (who in many cases received the initial program contact but were not interviewed) may have been influenced to consider additional improvements.

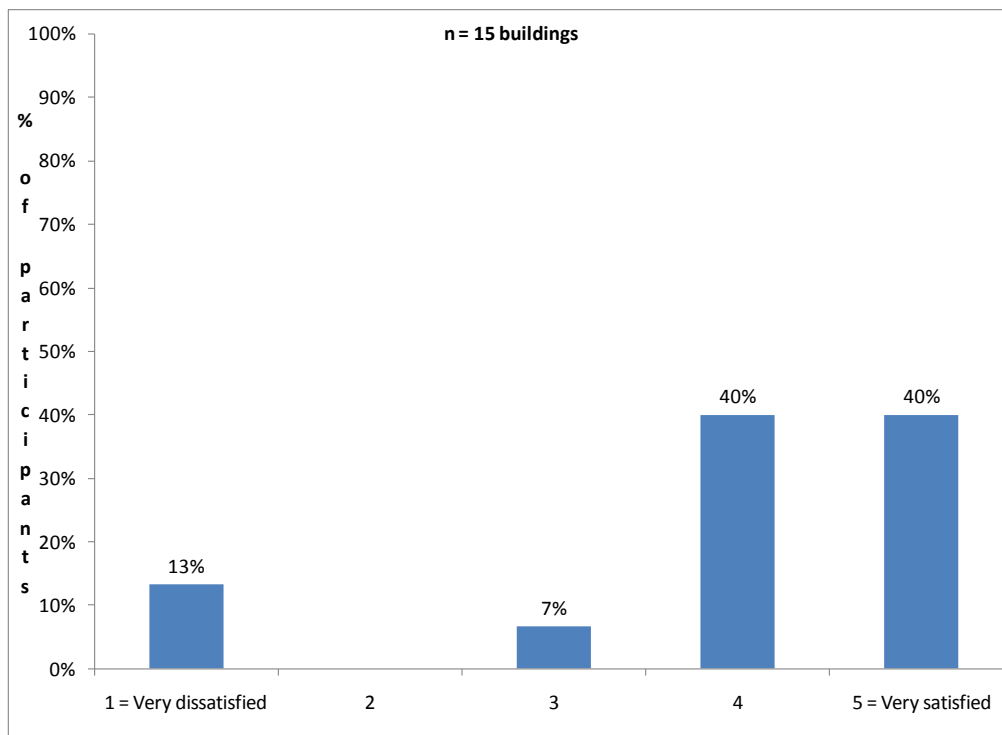
2.12.3 Satisfaction

We asked the participants about their satisfaction with various aspects of the EU MF program as well as their satisfaction with the program as a whole. This section discusses their responses to these satisfaction questions.

2.12.3.1 Satisfaction with the Installation Process

We asked the program participants to rate their satisfaction with the whole process of getting the energy-efficient equipment installed. We told them to use a satisfaction rating scale where five indicated "very satisfied" and one indicated "very dissatisfied." We allowed participants who had multiple participating buildings to provide a separate installation satisfaction rating for each building. Figure 2-49 shows their responses. The average satisfaction rating was 3.9 on the five-point scale. The chart shows that 80 percent of the buildings received a satisfied (4 or 5) rating but the respondents gave "a very dissatisfied" rating for two of the buildings. Our rule of thumb, based on based on may program evaluations, is that satisfaction ratings below 80 percent for a program are cause for concern.

Figure 2-49:
Satisfaction with the Installation Process



Participants who gave low installation satisfaction ratings did so because they said that contractors broke faucets when installing aerators and did not fix them; that the products themselves failed; because installation went too slowly or was postponed; or because thermostats were too difficult to program. One participant actually kicked the contractor off the site mid-installation because the thermostats were too complicated and because faucet aerators leaked.

In addition to asking participants to provide a satisfaction rating for the installation process, we also asked them an open-ended question: "How did the process of installing the energy efficiency measures go?" The responses we received did not add much new information to their reasons for dissatisfaction mentioned above. The one exception to this is that two of the eleven respondents (18%) said that the installation process took too long.



2.12.3.2 Satisfaction with the Installed Measures

While we did not ask the participants to provide a numerical satisfaction rating for the installed equipment, we did receive feedback on the installed equipment from their responses to various open-ended questions such as whether there were any tenant complaints during the installation process. Overall, most respondents said that tenants provided positive feedback about the products. None of the participants had any problems with showerheads or pipe wrap, though all other measures caused problems for at least one participant. Several stated that some light bulbs burned out, others that aerators leaked or the process of installing them on old faucets broke the faucets. Of those participants who reported broken faucets, one said that the contractor returned to fix them. That person reported a high level of satisfaction. Those where the contractor did not fix broken faucets reported low levels of satisfaction. Some of the leaking kitchen faucets began leaking because tenants did not hold the faucet when changing the spray setting, placing pressure on rubber washers in the faucet.

Several participants responded that a significant number (though a small percentage) of CFLs burned out in the weeks following installation. One participant said that this resulted from tenants using them with dimmer switches.

Opinions varied greatly on the programmable thermostats. Multifamily properties which interviewees described as having a lot of young or middle-income residents all reported that they liked the thermostats. Those properties with older or low-income residents (with a couple of exceptions) reported that the thermostats were too complicated or that the contractors did not provide maintenance staff or residents with any education or large-print paperwork (for older residents) about how to use them. Most participants who complained about thermostat complexity indicated that they expected that the contractor should have spent more time explaining how they worked to residents and staff.

When asked whether the MF program measures were still installed, respondents almost universally stated something to the effect of, "as far as I know." Some respondents reported small numbers of post-installation equipment failures. Several respondents said that contractors left behind a number of extra light bulbs or aerators which maintenance staff used up replacing failed or burned out equipment. Maintenance staff may replace failed or burned out items (above the number of extras left behind) with inefficient equipment.



2.12.3.3 Satisfaction with the Program Paperwork

We asked the participating multifamily property managers/owners whether they had filled out any paperwork to participate in the program. Five of the eleven respondents said that they had. The rest said either that their corporate office had filled out the paperwork, Efficiency United had filled it, or they were not sure who had done it.

The five participants who said they had filled out the program paperwork were then asked whether they had found it reasonable in terms of length and level of detail. All five of them said "Yes" to this question.

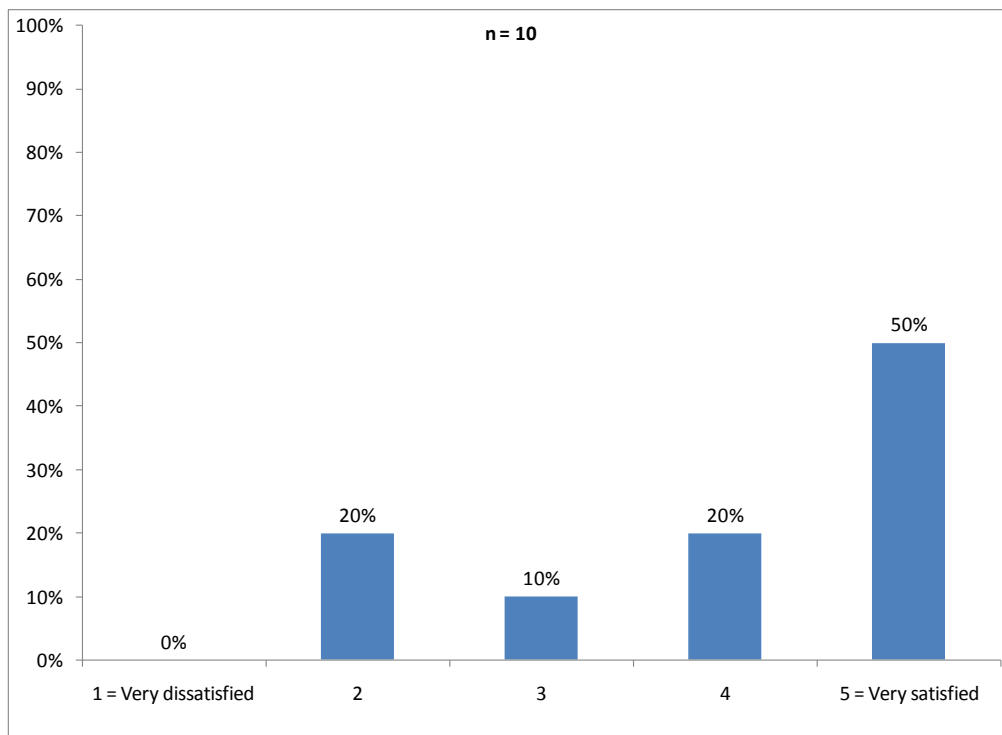
2.12.3.4 Overall Program Satisfaction and Recommendations for Program Improvement

Finally we had the participants provide satisfaction ratings for the overall program. Once again we told them to use a satisfaction rating scale where five indicated "very satisfied" and one indicated "very dissatisfied." Figure 2-50 shows that seventy percent of them were satisfied (4 or 5 on the scale) with the overall program. As noted above, we believe this level of satisfaction for a program indicates a cause for concern.

We asked the less-than-satisfied participants about the reasons for their ratings. They pointed to three factors:

- 1) Long delays in getting the measures installed;
- 2) Product failures with the faucet aerators and CFLs; and
- 3) Some dissatisfaction with the program not providing clear instructions for operating the programmable thermostats.

Figure 2-50:
Satisfaction with the Program as a Whole





3. Findings from Participant Surveys

3.1 ENERGY STAR Appliances and CFLs

3.1.1 Summary of Findings

The section summarizes the major findings from the ENERGY STAR Products (ESP) Program 2011 evaluation.

- The sale of CFLs and other measures in kits and at utility sponsored events created an evaluation challenge and likely resulted in many of the observed year to year differences.
- 2011 participant demographics were similar to those in 2010. There were a couple of exceptions: 2011 participants were a little older and more likely to live alone.
- Almost all of the 2011 respondents are aware of ENERGY STAR (83%) and concerned with reducing their home's energy use (97%).
- Program awareness declined from 92 percent in 2010 to 63 percent in 2011. The sale of CFLs and other measures in kits and at events probably accounts for this change.
- Community events became a much more important information source and utility newsletters declined in importance in 2011. In-depth interviews with program administrators revealed that CLEAResult may have had communication issues with the editors of Country Lines which may have contributed to the newsletter containing less program information. Community events may have filled the information void left by the newsletters.
- Bill or energy consumption reduction was the most cited reason for participating. Respondents in 2011 were more likely than 2010 participants to say they participated to reduce their energy reduction or utility bills and were less likely to say they would have bought the equipment anyway.
- Most respondents said they purchased the kits because it was convenient to get all the measures at once, rather than to get specific, individual measures at a discount.



-
- Most respondents purchased appliances (washing machines, clothes dryers, dishwashers, and ceiling fans) at home improvement, hardware stores, or big box retailers such as Best Buy.
 - Most respondents purchased CFLs and other measures sold in kits or events in the kits or at the events rather than at retail locations.
 - Satisfaction with the program and with CFL characteristics has declined slightly from 2010 levels. Slow rebate payments and complex paperwork were the most often cited reasons for dissatisfaction.

3.1.2 Residential and Small Business ENERGY STAR Products Program

3.1.2.1 Program Description

The Residential and Small Business ENERGY STAR Products (ESP) Program was launched in November 2009 in all utility service territories. The ESP program is the largest program in the EU and EO portfolios. Incentives are provided to the customer through mail-in or retail point-of-purchase rebates for ENERGY STAR products, such as CFLs, clothes washers, smart strips, faucet aerators, low-flow showerheads, gas water heaters, and hot water pipe insulation. Not all measures are offered in all utility service territories. [Table 3-1](#) ~~Table 3-1~~ shows the measure combinations offered by the given utilities. At this time, the ESP Program does not include point-of-sale rebates or upstream rebates to suppliers or manufacturers.



**Table 3-1:
Measures Offered by the ENERGY STAR Product Program**

Group of Measures	Utilities Offering Measure Group
CFL	Great Lakes Stephenson
CFL Smart Strip	Bayfield Daggett Marquette Newberry
CFL Clothes Washer (Elec WH)	Midwest HomeWorks Tri-County Alpena
CFL Smart Strip Clothes Washer (Elec WH)	Presque Isle Thumb Alger Delta Cloverland Ontonagon Edison Sault Escanaba Indiana Power UP Power We Energies
Clothes Washer (Gas WH) Faucet Aerator Low-Flow Showerhead Pipe Insulation	SEMCO
Clothes Washer (Gas WH) Faucet Aerator Low-Flow Showerhead Gas Water Heater Pipe Insulation	Michigan Gas Utilities
CFL Smart Strip Clothes Washer (Elec WH) Clothes Washer (Gas WH) Faucet Aerator Low-Flow Showerhead Gas Water Heater Pipe Insulation	WPS Corp Xcel

Major changes for 2011 included much greater activity by CLEAResult and some utilities selling CFLs, smart strips, pipe insulation, faucet aerators, and low-flow showerheads, and LED nightlights directly to customers singularly or in pre-packaged energy saving kits at events or



utility offices. Most kits included CFLs along with other measures, with some variation in kit contents among the utilities. [Table 3-2](#) lists the different combinations of measures sold in the various events, in kits, and at utility offices.

**Table 3-2:
Energy Saving Kit Contents**

	CFLs	Smart Power Strip	LED Nightlight	Faucet Aerator	Low Flow Shower-head	Pipe Insulation
Kit 1	3					
Kit 2	12	2				
Kit 3	3	1	1			
Kit 4		1				
Kit 5			1			
Kit 6	12	2		2	1	6
Kit 7	3	1	1	2	1	6
Kit 8				2	1	6
Kit 9					1	

3.1.2.1.1 Surveys of Recent ESP Participants

The energy saving kits created a substantial challenge for the 2011 evaluation. For the 2010 evaluation, KEMA used one survey for CFL purchasers and a separate survey for all other measures rebated through the ESP program. With the addition of the energy saving kits in 2011, there were too many participants with CFLs and other measures to make two surveys practical. KEMA had to use a single survey to evaluate the ESP program for 2011.

For the 2010 evaluation, KEMA reported the results of each survey (CFLs and “Appliances”) separately. The “Appliances” report included true appliances such as washing machines and water heaters, as well as non-appliance, non-lighting measures such as low flow showerheads, faucet aerators, and pipe insulation (these measures were also the ones included in the kits, so they are referred to as “kit” measures for the remainder of this report.).

In 2011, the single survey included three different batteries of questions: one for CFLs, one for true appliances, and one for the kit measures. This allows us to report results at a more specific level. However, it also makes the year-to-year comparisons more uncertain because the 2010



“Appliance” survey results included both true appliances and kit measures, which are separate in 2011 (~~Table 3-3~~~~Table 3-3~~). This report provides the year to year comparisons wherever possible, but the non-CFL comparisons should be considered with caution because they are “apples to oranges” comparisons.

**Table 3-3:
Measures Included in Results
2010 vs. 2011**

Measure	2011			2010	
	CFLs	Appliances	Kits	Appliances	CFLs
CFLs	✓				✓
Ceiling Fan		✓			
Clothes Dryer		✓			
Dishwasher		✓			
Washing Machine		✓		✓	
Faucet Aerator			✓		
LED nightlight			✓		
Showerhead			✓	✓	
Pipe Insulation			✓	✓	
Smart Power Strip			✓	✓	
Holiday Lights				✓	
Water Heater				✓	

3.1.2.2 Methodology

CLEAResult provided KEMA with a sample population of 2,188 rebate recipients as of August 31, 2011. KEMA contracted Research America (RA) to conduct computer-aided telephone interviews (CATI) of program participants. RA dialed numbers at least eight times across at least two different weeks before they considered the number unreachable. RA completed interviews with 562 rebate recipients in January and February 2012. This resulted in a final response rate of 38 percent (~~Table 3-4~~~~Table 3-4~~).



This response rate was substantially lower than the response rates¹⁰ achieved in 2010. There are two possible reasons for the decrease in response rate. First, the majority of the 2011 sample received CFL rebates. The 2011 response rate is much closer to the 2010 CFL evaluation than the 2010 Appliance evaluation. Secondly, RA found a larger proportion of disconnected phone numbers in 2011 (about 11%) than in 2010 (about 4%). This increase in disconnected numbers may have been caused by lingering effects of the 2008 recession.

**Table 3-4:
ENERGY STAR CATI Dispositions**

Sample Description	Number	Percent
Starting Sample	2,188	
Never Called	231	
Sample Used	1,957	
Known Not Eligible	378	
Estimated additional not eligible	119	
Sample-Valid	1,460	
Complete	562	38%
Refused	542	37%
Not Completed - Eligible	6	0%
Not Completed - Est. Eligible	350	24%

The CATI survey covered the following topics:

- Program awareness;
- Sources of information;
- Reasons for participation;
- Purchase location;
- Memory of in-store promotions and awareness of the rebates;
- The purchase experience;
- Equipment use;

¹⁰ The 2010 ENERGY STAR CFL evaluation achieved a 43 percent response rate. The 2010 ENERGY STAR Appliance evaluation achieved a 64 percent response rate.



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- Satisfaction;
 - Suggestions for program improvements; and
 - Demographics.

3.1.2.3 Characterizing the Participants

The survey asked several demographic questions to help characterize the participants. The following are some highlights. Unless otherwise noted, these demographics are similar to 2010.

- Almost all respondents (96%) own their homes;
- Almost all homes (90%) are detached, single-family homes;
- Almost all (95%) of homes were occupied 12 months per year;
- The number of residents living in the home varied as follows: one resident (14%), two residents (54%), three residents (13%), four residents (10%), five or more residents (7%). There were more single-resident households in 2011 than in 2010.
- The respondent ages varied as follows: under 40 (8%), 40 to 64 (48%), 65 or older (34%), and did not answer (10%). 2011 participants are older than 2010 participants.
- About half (47%) of respondents' households have at least one resident 65 or older. Most (80%) households have no school-aged children (5 to 18). Most (92%) households have no children under 5.
- Respondent education varied as follows: high school diploma or less (35%), some college or technical school (27%), four-year college degree (21%), some graduate school or and advanced degree (12%), and did not answer (5%).
- 2010 pre-tax income varied as follows: less than \$50,000 (39%), \$50,000 or more (27%), and did not answer (34%).
- Most respondents (57%) were female.

The surveys also asked about energy efficiency knowledge and attitudes. These questions were not asked in the 2010 evaluation, so no comparisons are possible.



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- Most (83%) of respondents said they had heard of ENERGY STAR prior to the survey.
 - Most respondents were either very concerned (72%) or somewhat concerned (25%) with reducing their home's energy use.
 - Almost all respondents who were concerned with reducing their home's energy use were concerned with the cost of energy or reducing their utility bills. About one-fourth (25%) also cited environmental concerns. A few mentioned power availability (6%) or dependence on foreign oil (3%) as reasons.

3.1.2.4 Program Awareness

The survey asked the ESP participants whether they were aware of the ESP program before taking the survey. About two-thirds (63%) of respondents said that they were aware of the program. This is substantially less than 2010 Appliance participants, about 92 percent of whom said they were aware of the program. The reason for this decline is probably due to number of respondents who purchased kit measures at events or utility offices. The kit measures were sold at discounted prices rather than being given away. Respondents were asked to provide their contact information, but they it may not have been clear that they were participating in a specific program.

In 2011, there were statistically significant¹¹ differences in program awareness depending on the respondent's education, income, and whether the rebated purchase was the first time they had bought CFLs.

- *Education:* Respondents with some college and at least four year degrees were more likely (65% and 71% of respondents respectively) than those with high school diplomas or less (53%) to say they were aware of the program.
- *Income:* Respondents who reported incomes of \$50,000 or more were more likely (73%) than those with lower incomes (56%) or who did not report income (63%) to be aware of the ESP program. Education and income are usually highly correlated.
- *First time CFL purchase:* First time CFL purchasers were less likely (51%) than other respondents (70%) to say they were aware of the ESP program prior to taking the survey.

¹¹ All reported differences are statistically significant at a 90% confidence level.

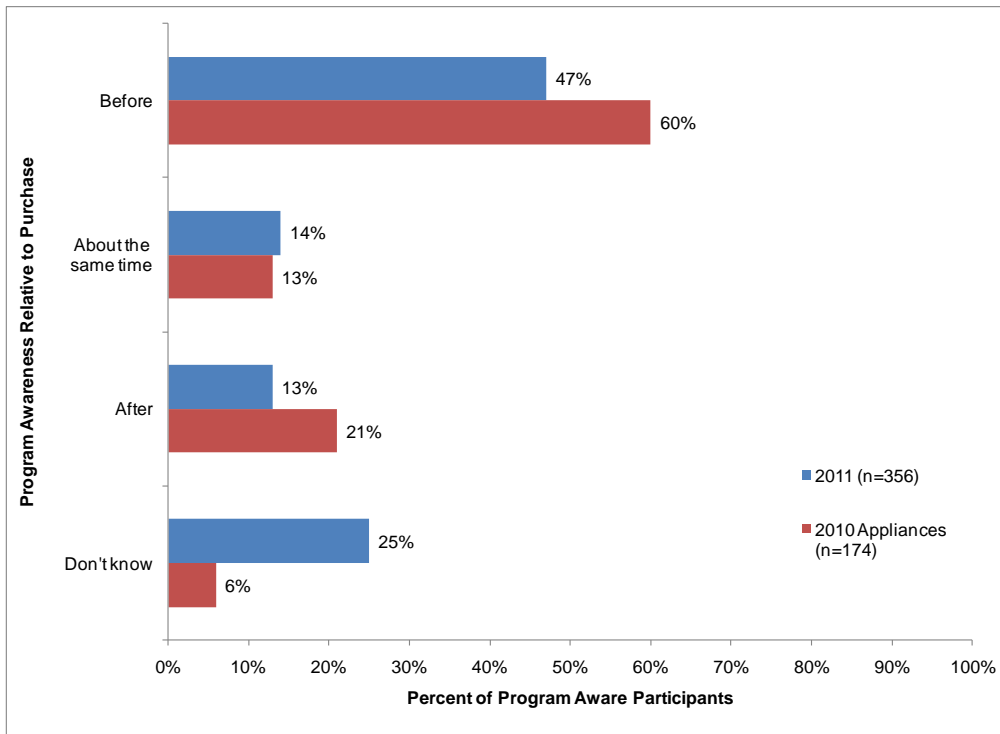


We also asked the ESP participants whether they became aware of the program before, at the same time, or after they had purchased the rebated equipment. The timing of this awareness is a one indicator of potential free ridership. About half (47%) of the respondents said they heard about the program before making the rebated purchase. Another 14 percent said they heard about it at about the same time as the purchase. Fifteen percent said they heard about the program after the purchase. The participants in this last group are most likely to be free riders since the program did not influence their purchase decision in any direct way.¹² About one-fourth (25%) said they did not know or did not remember when they heard about the program relative to their purchase ([Figure 3-1](#)~~Figure 3-4~~).

Relative to 2010, this is a decrease in awareness prior to purchasing equipment and an increase in the “don’t know” responses. If respondents who purchased kits did not realize they were participating in a program, this could also account for some of these differences. There was at least a four-month lag between when the respondents purchased their equipment (prior to August 31, 2011), and when the surveys took place (January-February, 2012). This lag may partially explain why there was such a high incidence of “don’t know” for this question.

¹² We say that they are likely free riders because it is possible that the program still influenced their purchases in some way that the customers were unaware of – e.g., encouraged the retailer to stock the items, encouraged the retailer to give the items more prominent placement in the store, etc.

**Figure 3-1:
Awareness Relative to Equipment Purchase**



There were statistically-significant differences as to when respondents heard about the program depending on which program they participated in, their education, and their primary source of information about the program.

- Program:** Respondents who were part of Energy Optimization (EO) were more likely (51% of respondents) than those in Efficiency United (EU; 35%) to hear about the program prior to purchasing equipment. EU participants were more likely (21%) than EO participants (12%) to hear about the program at about the same time as the purchase. This aligns with information from the in-depth interviews with the utilities and program implementers that the EO utilities were doing some of their own marketing to supplement the efforts of CLEAResult.



- *Education:* Respondents with a four year college degree or more were more likely (21%) than those with some college (14%) to hear about the program after their purchase. Respondents with some college were more likely (21%) than those with four year degrees or more (14%) to hear about the program at about the same time as their purchase.
- *Information source:* Respondents who heard about the program through bill stuffers were more likely (17%) than those with other information sources (10%) to hear about the program after the purchase. Respondents who heard about the program through community or school events were more likely (29%) than those with other information sources (12%) to say they heard about the program at about the same time as their purchase. This latter result is probably due to some respondents receiving information and equipment (kits) at the same meetings.

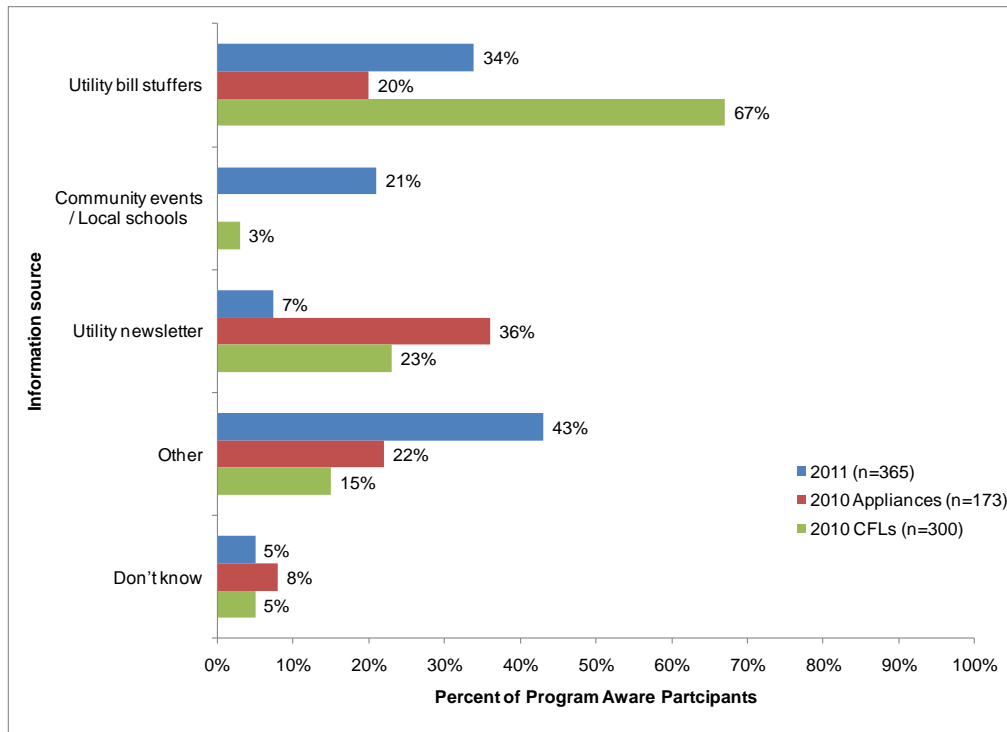
3.1.2.5 Sources of Information

The survey asked program aware respondents how they heard about the ESP program. [Figure 3-2](#) shows the sources of information that they reported. Utility bill stuffers (34%) were the most-cited sources of information, followed community events (21%).

In 2011, the importance of utility newsletters (*Country Lines*) as an information source decreased markedly. This finding occurred in most of the other programs KEMA evaluated this year as well. Based on interviews with program administrators, it appears that there may have been communication problems between CLEAResult and the *Country Lines* editors that prevented the newsletter from getting information necessary to fill the reserved advertisement space. This may have adversely affected the content of *Country Lines* and the number of people that heard about the program this way

At the same time, community events increased in importance in 2011. This may have been an effect of filling the void left by the utility newsletters – if respondents could not get program information from the newsletters, they may have gotten it from the events. It is also possible that the availability of a wider range of measures at events, and the fact they were sold in 2011 rather than given away, improved respondents' memory for those events.

**Figure 3-2:
Source of Information about ESP Program**



Notes: Other sources of information in 2011 included: non-utility internet, state or national newspaper, TV/radio, other printed advertisements, workplace, utility website, local newspaper, salesperson, and word of mouth.

Other sources of information in 2010 Appliances included: local newspaper, TV/radio, community/school events, workplace, utility website, salesperson, and word of mouth.

Other sources of information in 2010 CFLs included: state or national newspaper, home improvement show, home inspector, workplace, utility website, local newspaper, salesperson, and word of mouth.

Totals exceed 100% because multiple responses were accepted.

There were statistically significant differences in sources of information depending on respondents' characteristics.

- *Bill stuffers*: EO participants were more likely (37% of respondents) than EU participants (22%) to cite bill stuffers as a source of program information. Respondents with a high school diploma or less education were more likely (41%) than those with four year degrees or more education (27%) to cite utility bill stuffers as an information source. Respondents



who heard about the program before or at the same time as their purchase were more likely (36%) than those who heard about it after their purchase (23%) to get program information from bill stuffers.

- *Community events:* Households with two or fewer residents were more likely (17%) than those with three or more residents (9%) to hear about the program through community events or local schools. Respondents with some college were more likely (22%) than those with high school diplomas or less (10%) to hear about the program through community events. Respondents who were not aware of ENERGY STAR were more likely (30%) to than those who were aware (12%) to hear about the program through community events. These three classifications of respondent: two or fewer residents, some college education, and not aware of ENERGY STAR probably indicate an older demographic getting information through community events.
- *Other information sources:* There were several statistically significant differences between different classifications of respondents for the individual information sources included in the “Other” in [Figure 3-2](#)~~Figure 3-2~~.
 - *Utility website:* EO participants were more likely (5%) than EO participants (1%) to cite their utility website as a program information source.
 - *Non-utility Internet:* EU participants were more likely (8%) than EO participants (2%) to cite the Internet other than utility websites.
 - *Local newspapers:* Respondents with two or fewer household residents were more likely (7%) than those with more residents (3%) to cite local newspapers as information sources. KEMA often finds a correlation between household size and age such that older respondents tend to have fewer household members. The older demographic is also more likely to read papers, so this finding probably represents an effect of respondent age.

3.1.2.6 Reasons for Participating

The survey asked respondents why they decided to participate in the rebate program. [Figure 3-3](#)~~Figure 3-3~~ shows the reasons respondents gave. About half (43%) of respondents said they wanted to reduce their energy bills or consumption. Another 35 percent said they wanted to get

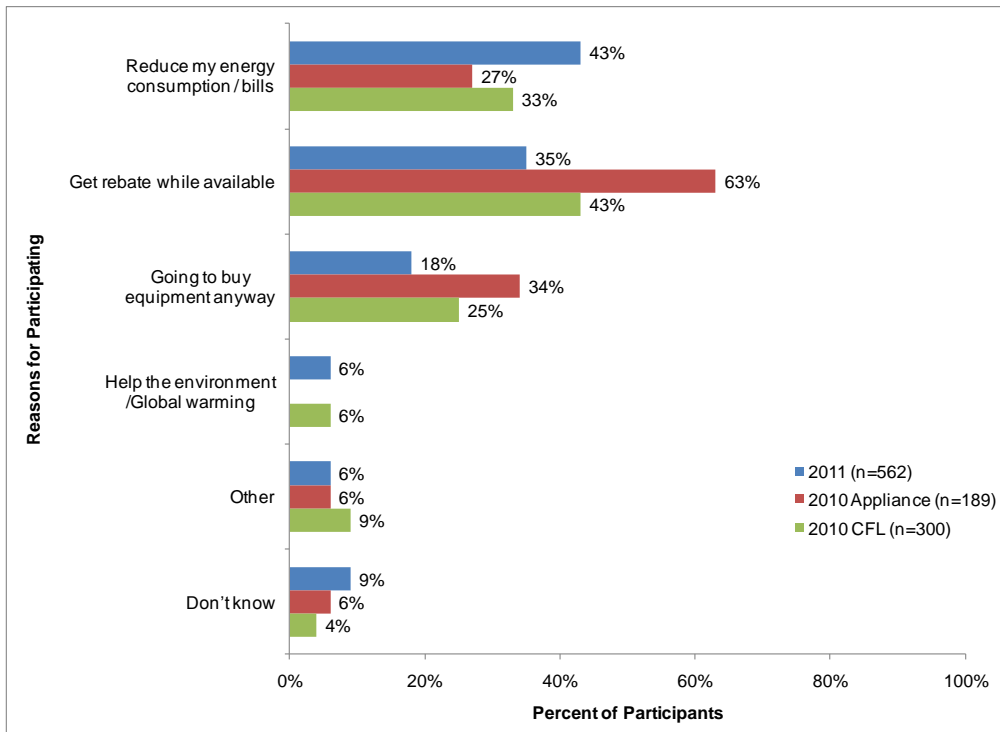


the rebate while it was available. Another 18 percent said they probably would have bought the equipment anyway. The participants in this latter group are also likely free riders.¹³

2011 participants were more likely than 2010 participants to say they wanted to reduce their energy bills and to get the rebate while it was available. This change may be due to ongoing sluggishness in the economy causing people to look for ways to decrease their bills and good deals on energy using equipment. The 2011 participants were also less likely to say they would purchase the equipment anyway. Because the purchase anyway group is more likely to contain free riders, the decrease is a positive sign for program attribution.

¹³ We say “likely” because even though these customers said they were going to purchase the equipment regardless of the program, this does not mean that the program did not influence their purchase decision in some of the ways mentioned in the previous subsection.

**Figure 3-3:
Reason for Participating in Rebate Program**



Notes: Other reasons in 2011 included: free bulbs, peer pressure, trying out equipment, and getting equipment at a trade show or fair.

Other reasons in 2010 Appliances included: environmental/global warming concerns, trying out the equipment, and making the equipment affordable.

Other reasons in 2010 CFLs included: free bulbs, try out CFLs, and it seemed like a good program.

The total exceeds 100% because respondents were allowed to give multiple responses.

There were statistically significant differences in the stated reasons for participating in the program depending on respondent characteristics:

- *Reduce energy bill/consumption:*
 - Respondents with some college were more likely (48% of respondents) than those with a high school diploma or less (38%) to say they wanted to reduce their bills or consumption.



-
- Respondents with incomes less than \$50,000 per year and \$50,000 or more (48% and 45% respectively) were more likely than those who did not report their income (35%) to say they participated to reduce their energy consumption or bills.
 - Respondents who were aware of ENERGY STAR were more likely (44%) than those who were not aware (35%) to say they wanted to reduce their energy consumption or bills.
 - First time CFL purchasers were more likely (67%) than repeat purchasers (44%) to say they wanted to reduce their energy consumption or bills.
 - Respondents who got program information from bill stuffers were less likely (40%) than those who got information from other sources (51%) cite energy consumption/bill reduction as a purpose for participating in the program.
 - *Get the rebate:*
 - Respondents who were aware of ENERGY STAR were more likely (37%) than those not aware (27%) to say they participated to get the rebate.
 - First time CFL purchasers were less likely (19%) than repeat purchasers (39%) to say they participated to get the rebate.
 - *Going to buy equipment anyway:*
 - Respondents who were aware of ENERGY STAR were less likely (16%) than those not aware (28%) to say they were going to buy the equipment anyway.
 - First time CFL purchasers were less likely (6%) than repeat purchasers (17%) to say they were going to buy the equipment anyway.

The pattern of reasons for ENERGY STAR-aware respondents (reduce consumption, get the rebate, and was not going to buy anyway) suggests that knowledge of energy efficiency could reduce free ridership. The pattern for repeat CFL purchasers (more likely buy equipment anyway, did it for the rebates, and not as interested in reducing energy consumption) suggests that these respondents may have been stockpiling bulbs while they could get a discount.

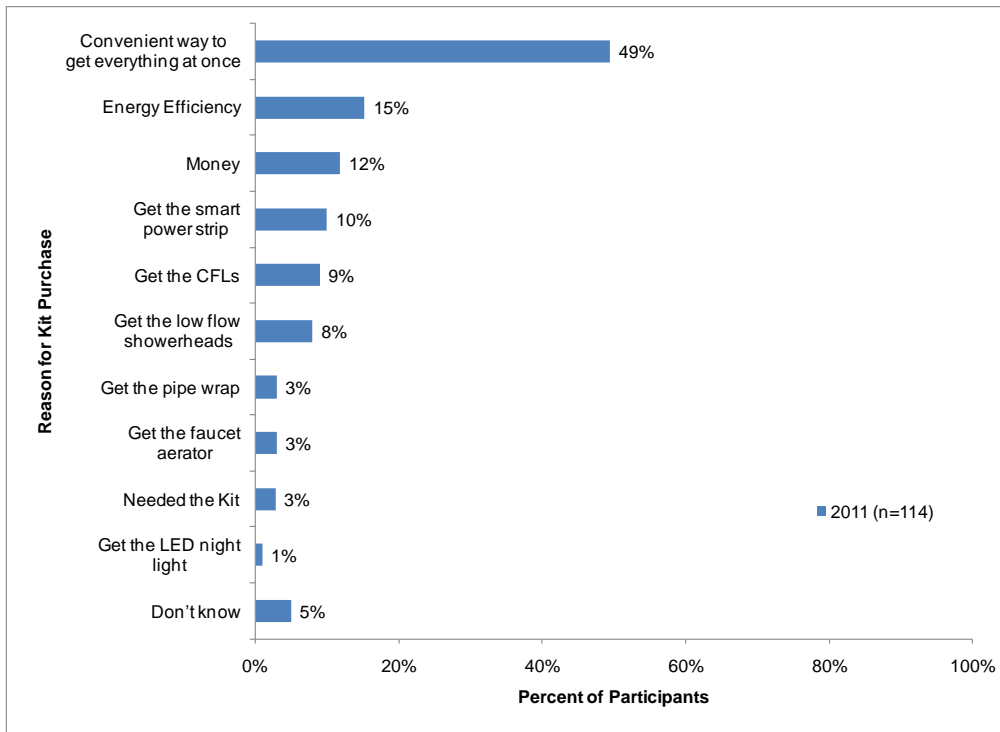


3.1.2.7 Reasons for Purchasing Kits

The survey asked respondents who purchased kits containing multiple measures¹⁴ why they chose to purchase one. About half (49%) of the respondents said it was a convenient way to get all of the included measures at once. This was by far the most popular answer ([Figure 3-4](#)~~Figure 3-4~~). Energy efficiency (15%) and saving money (12%) were the next most popular answers. Of the specific measures contained in the kits, the smart power strips (10%), CFLs (9%), and low flow showerheads (8%) were the most often cited singular measures that motivated the kit purchases. The results for individual measures should be interpreted with caution, however, because not all measures were included in all kits.

¹⁴ The “kits” that contained only a single measure were not asked about in this question.

**Figure 3-4:
Reason for Purchasing Kit**



The total exceeds 100% because respondents were allowed to give multiple responses.

There were statistically-significant differences in the stated reasons for purchasing the kits depending on respondent education, awareness of ENERGY STAR, program information sources, and whether the respondent was concerned with reducing their home energy use:

- *Education:* Respondents with four year college degrees or more education were more likely (62% of respondents) than those with some college (34%) or a high school diploma or less (28%) to say they purchased the kits because it was convenient to get all the measures at once.
- *ENERGY STAR awareness:* Respondents who were aware of ENERGY STAR prior to the survey were more likely (48%) than those unaware of ENERGY STAR (23%) to say they purchased the kits for the convenience.

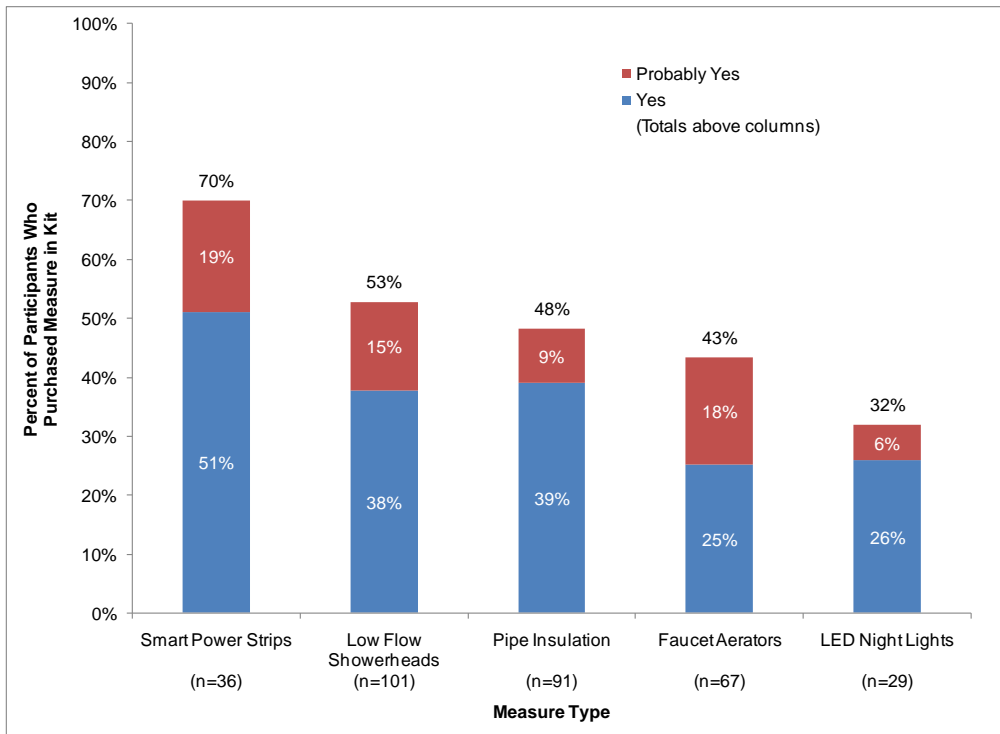


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- *Program information sources:* Respondents who got program information from bill stuffers were less likely (20%) than those who got information from other sources (52%) to say they purchased the kits because it was a convenient way to get all the measures at once. This result is probably due to participants being able to get both program information and the kits at utility-sponsored meetings.
 - *Concerned with reducing home energy use:* Respondents who were concerned with reducing their home's energy use were less likely (8%) than those who were not concerned (100%) to purchase the kits in order to get the CFLs.

3.1.2.7.1 Effect of Kits on Purchase Decision

The survey asked respondents who purchased measures in kits how likely they would have been to purchase the measures if they were sold separately. Most respondents would purchase smart power strips (70%) or low flow showerheads (53%) separately from kits. A minority of respondents said they would purchase pipe insulation (48%), faucet aerators (43%), or LED night lights (32%) separately from the kits.

**Figure 3-5:
Likelihood of Purchase without Kits**



There were several statistically significant differences based on respondent characteristics.

- Respondents with one or two household residents were more likely (52% of respondents) than those with more residents (22%) to say they would buy faucet aerators separately from kits.
- Respondents who bought energy from EU participating utilities were more likely (44%) than those from EO utilities (21%) to say they would buy LED night lights separately from kits.
- Men were more likely (53%) than women (20%) to say they would purchase LED night lights separately from the kits.



3.1.2.8 Purchase Environment - Appliances

The survey asked respondents a series of questions about their purchasing experience. These questions included what type of store they purchased the rebated equipment from, whether they recalled any signs or other marketing materials at the store when they purchased the equipment, and whether they received any sales pitch or product information from salespeople at the time of purchase.

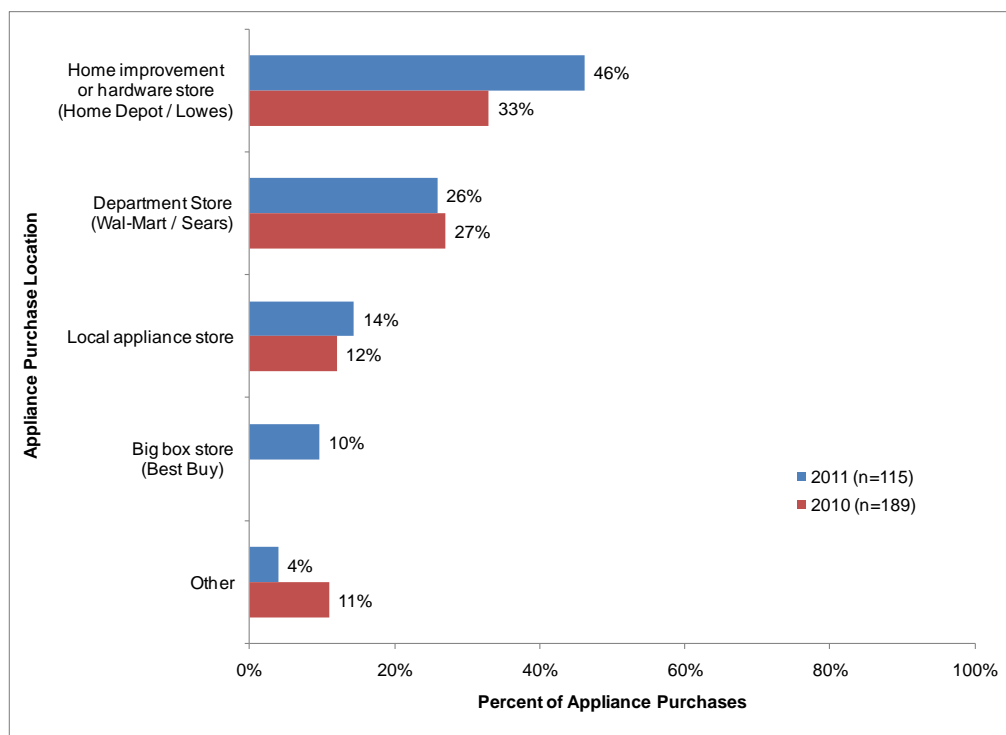
The survey asked about the purchase environment of dishwashers, washing machines, clothes dryers, and ceiling fans individually. The results in this section are dominated by purchasers of washing machines and clothes dryers – only nine respondents purchased dishwashers, and only four purchased ceiling fans. The results in this section show the combined data for all four types of appliances compared to the 2010 Appliance survey.

3.1.2.8.1 Purchase Location

Close to one half (46%) of respondents purchased appliances at a home improvement or hardware store such as Home Depot or Lowes. About one-fourth (26%) purchased appliances from department stores such as Wal-Mart or Sears. ~~Figure 3-6~~ ~~Figure 3-6~~ shows the full range of responses.

Appliance purchasers in 2011 were more likely to purchase their appliances from home improvement or big box (e.g. Best Buy) stores than in 2010. These differences are most likely due to the differences between the measures covered in each sets of results (true appliances rather than appliances and kit measures combined; ~~Table 3-3~~ ~~Table 3-3~~).

**Figure 3-6:
Appliance Purchase Location**



Note: 2011 Other purchase locations included: warehouse stores, manufacturers, and unspecified other locations. 2010 Other purchase locations included: supermarkets, drug stores, contractors, the Internet, and from the utility. The totals exceed 100% because respondents were allowed to give multiple responses.

There were several statistically significant differences in purchase locations for washing machines based on respondent characteristics.

- *Education:* Respondents with a four year college degree or more were less likely (20% of respondents) than those with some college (47%) or a high school diploma or less (63%) to purchase washing machines at home improvement stores.
- *Program:* EU participants were more likely (23%) than EO participants (7%) to purchase washing machines at big box stores.

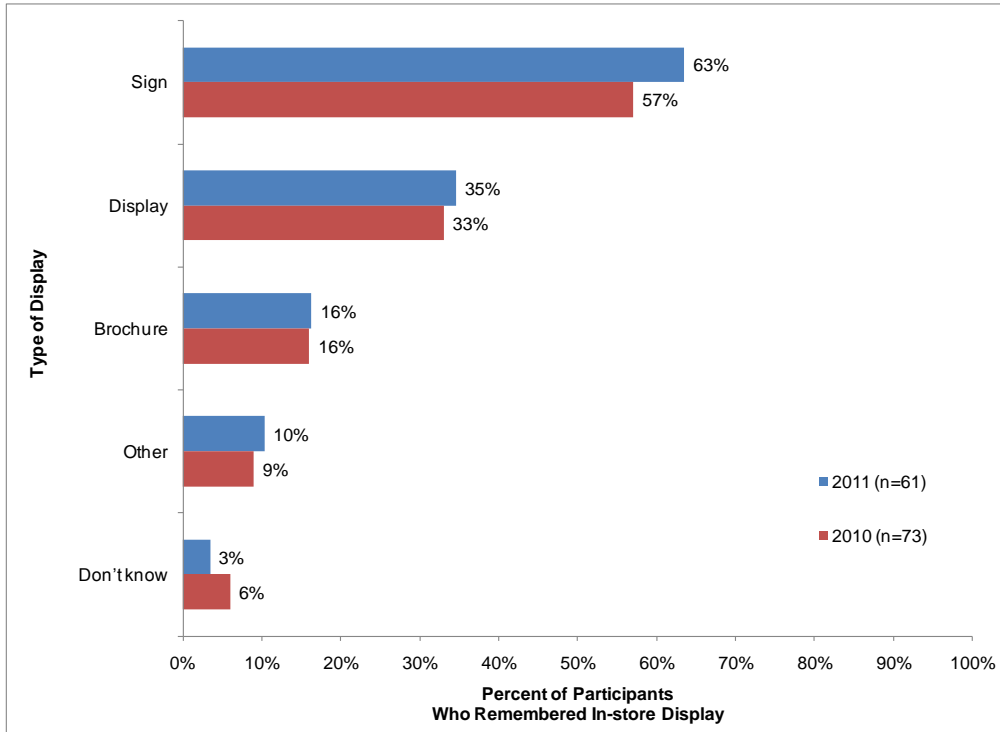


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- *Household size:* Respondents with two or fewer household residents were more likely than those with three or more residents to purchase washing machines at local appliance stores (21% vs. 7%) and less likely to purchase them at big box stores (7% vs. 25%). These differences are probably due to age and children demographics.
 - *ENERGY STAR awareness:* Respondents who were aware of ENERGY STAR (45%) were more likely than those unaware of ENERGY STAR (15%) to purchase washing machines at home improvement stores.
 - *Equipment satisfaction:* Respondents who less than satisfied with their equipment (78%) were more likely than those who were satisfied (40%) to purchase their washing machine at a home improvement store. This might be a reflection of poor customer service at the home improvement stores.

3.1.2.8.2 In-store Promotions - Appliances

The survey asked whether respondents recalled any signage, prominent placement or other promotional materials at the store when they bought the rebated equipment. The majority (55%) of respondents said they did remember some kind of promotional materials. Respondents that remembered seeing in-store promotional materials were asked what kind of materials they remembered seeing (Figure 3-7). About two-thirds (63%) who remembered an in-store promotion said they saw a sign and a third (35%) said they saw a display. These results were similar to 2010.

**Figure 3-7:
In-Store Information Displays
Appliances**



Note: Other in-store promotions included: stickers and online information. The total exceeds 100% because respondents were allowed to give multiple responses.

The survey further asked if there were any special rebates or price discounts in the store when the respondent purchased the equipment. About half (43%) of respondents said yes. These respondents were asked who offered the rebate or price discount. Over three-fourths (82%) of the respondents who remembered a special rebate or price discount said it came from the store where they purchased their equipment. Other sources of price discounts included Efficiency United, Energy Optimization, or a utility (13%), the manufacturer (11%), and others (2%). The attribution of the price discounts to EU, EO, or utilities is an increase from 2010 when no respondents made this connection. This difference is probably due to the year to year equipment differences. The other results are similar to 2010.



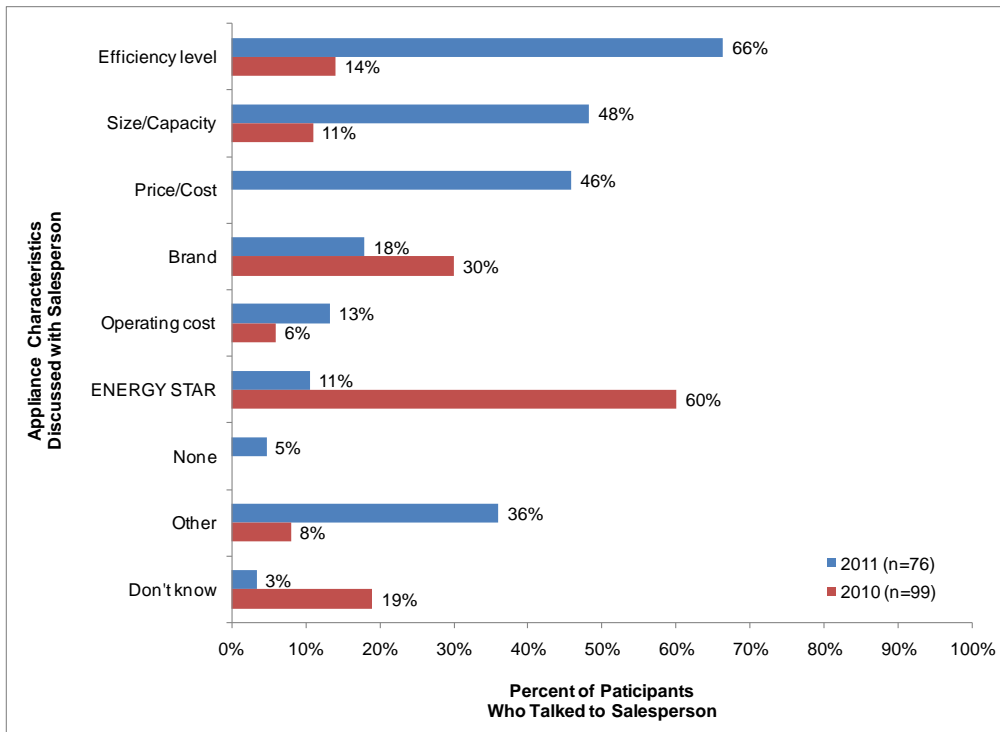
3.1.2.8.3 Interaction with Salespersons

The survey asked whether the respondent spoke with any salespersons at the time of purchase. Over two-thirds (68%) of respondents said they had. This was a significant increase over 2010 when only 45 percent of respondents said they spoke to salespeople. This change is most likely due to the year to year differences in equipment covered by the evaluation (true appliances rather than appliances and kit measures).

Respondents who indicated they talked to a salesperson were asked what characteristics of the equipment, if any, the salesperson talked to them about. Most (66%) salespersons discussed equipment efficiency levels with respondents. Other frequently-cited equipment characteristics they discussed included size or capacity (48%), price (46%), and other characteristics including rebates, durability/warranty, color, quality upgrade, ease of installation, and availability. [Figure 3-8](#) shows the full range of responses.

These responses are considerably different than those provided in 2010. These differences are most likely due to the different types of measures included in each report's results.

**Figure 3-8:
Equipment Characteristic Discussed with Salesperson**



Note: Other included: Rebates, durability/warranty, color, quality upgrade, ease of installation and availability.

3.1.2.8.4 Effect of Rebates on Purchase Decision

Almost all respondents who purchased rebated appliances said they would have bought the appliance with or without the rebates. All (100%) of the respondents who purchased dishwashers or ceiling fans said they would have purchased those appliances without the rebate. Ninety-five percent of the respondents who purchased clothes washers or clothes dryers would have purchased them without the rebates.

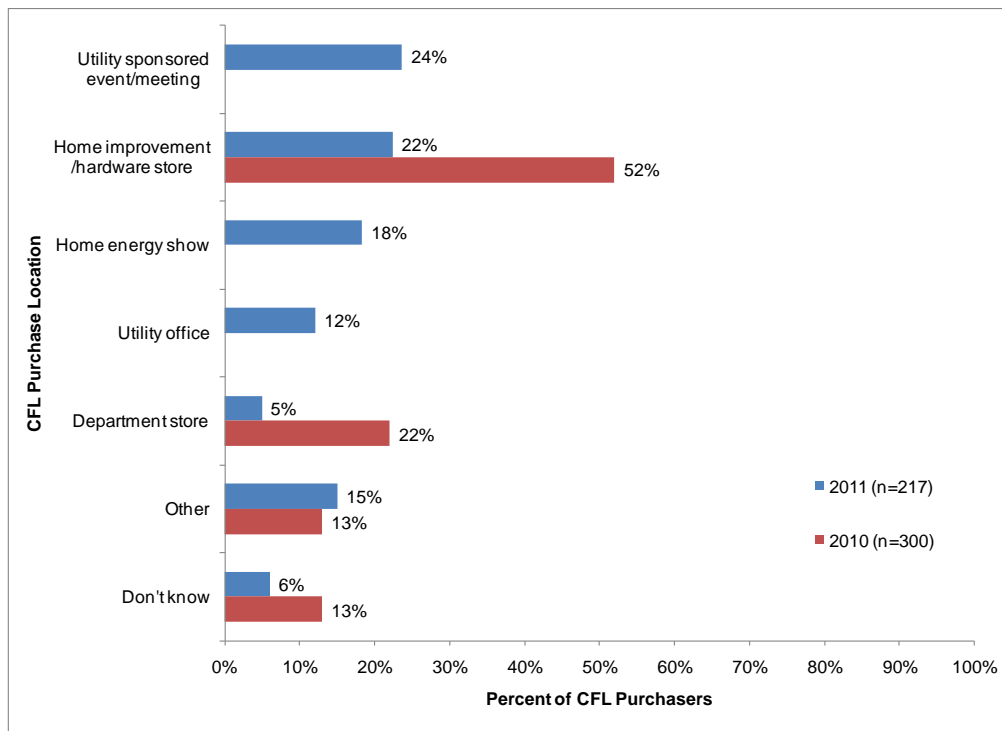
3.1.2.9 Purchase Environment – CFLs

3.1.2.9.1 Purchase Location



In 2011, respondents purchased CFLs at a fairly evenly distributed mix of: utility sponsored meetings (24%), home improvement stores (22%), home energy shows (18%), and utility offices (12%), or other locations (15%; [Figure 3-9](#)). In 2010, most respondents purchased CFLs at home improvement or hardware stores, or department stores. The major reason for this change was the sale of CFLs in the kits and at events – utility sponsored events, home energy show, and utility offices.

**Figure 3-9:
CFL Purchase Location**



Note: Other included: department stores, community events/fairs, big box stores (Best Buy), warehouse stores, Internet, mail-order catalog, kit, and supermarket

There were several statistically significant differences in CFL purchase locations based on several respondent characteristics including sources of program information, gender, awareness of ENERGY STAR, and reasons for purchasing CFLs.



-
- *Source of information:*
 - Respondents who got program information from utility bill stuffers more likely (46% of respondents) than those who used other information sources (13%) to purchase CFLs at a hardware or home improvement store and less likely to purchase CFLs at utility sponsored events/meetings (5% vs. 35%).
 - Respondents who got information from community/school events were more likely than those who got program information from other sources to purchase CFLs at utility sponsored meetings (57% vs. 18%) and less likely to purchase CFLs at hardware or home improvement stores (12% vs. 27%). This pattern suggests that these respondents bought CFLs at the same meeting where they got the information.
 - *Gender:* Women were more likely than men to purchase CFLs at a utility meeting or event (30% vs. 17%) and less likely to purchase them at hardware or home improvement stores (14% vs. 32%).
 - *ENERGY STAR awareness:* Respondents who had heard of ENERGY STAR prior to the survey were more likely than those without prior knowledge to purchase CFLs at a home improvement stores (25% vs. 10%) and less likely to purchase them at a utility office (9% vs. 24%).
 - *Program:* Respondents in EO participating utilities were more likely than those in EU participating utilities to purchase CFLs at hardware or home improvement stores (25% vs. 14%) and less likely to purchase them at a home energy show (12% vs. 40%).
 - *ESP awareness timing relative to purchase:* Respondents who heard about the ESP program at the same time or prior to purchase were more likely (33%) than those who heard about it after the purchase (4%) to buy CFLs from home improvement stores.
 - *Reasons for purchasing:* Respondents who purchased the CFLs in order to get the rebate were less likely (12%) than those who purchased for other reasons (22%) to get the CFLs from a home energy show.
 - *First time purchasers:* Respondents buying CFLs for the first time were more likely (33%) than repeat purchasers (15%) to purchase CFLs from home energy shows.

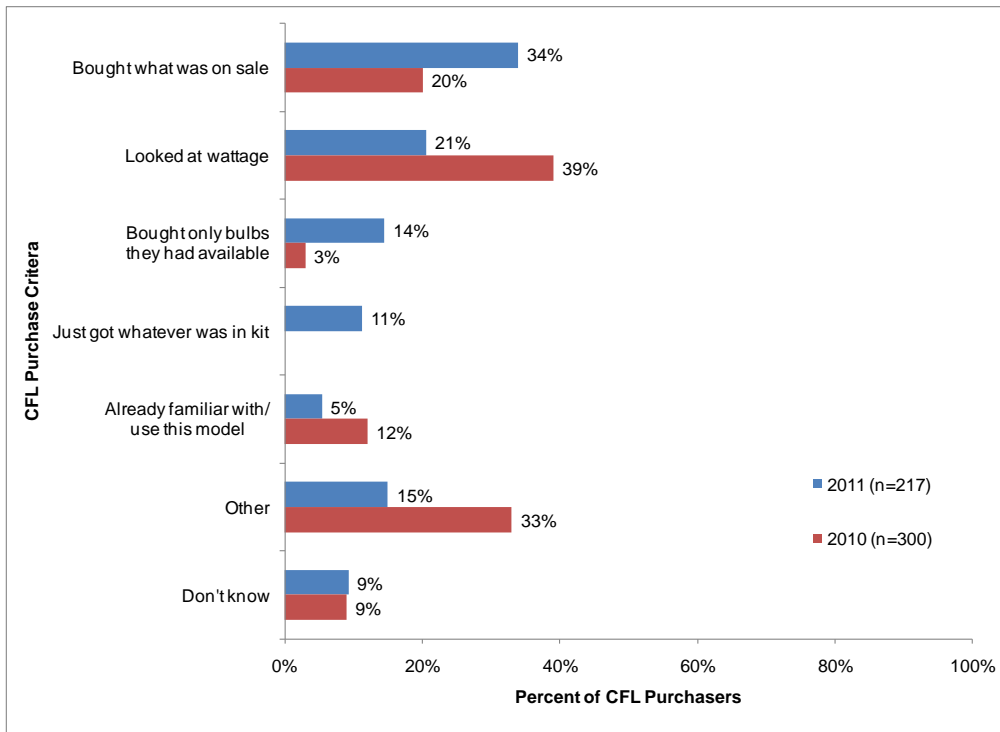
3.1.2.9.2 Purchase Criteria



The survey asked respondents whether several different criteria were a reason for purchasing the CFLs. The most commonly reported criterion was that respondents purchased whichever CFLs were on sale (34%). About one-fifth (21%) said they looked at the wattage. Another 14 percent said they bought the only bulbs available at the purchase location. About one-tenth (11 percent of respondents said they got the bulbs that were included in an energy saving kit ([Figure 3-10](#)~~Figure 3-10~~).

The distribution of purchase criteria provided by 2011 participants differed substantially from the one given by 2010 participants. 2010 participants were much more likely than 2011 participants to look at wattage. In contrast, 2011 participants were more likely to buy what was on sale, buy the only available bulbs, or take the bulbs included in the kits. These differences are probably caused mostly by the high number of CFLs purchased through the energy saving kits or events in 2011.

**Figure 3-10:
CFL Purchase Criteria**



Other included: lumens, store staff recommendation, friend/family recommendation, brand name, need, utility logo/sticker, and unspecified other reasons.

There were several statistically significant differences in respondents' reasons for purchasing CFLs based on ESP awareness and ENERGY STAR awareness. Taken together, these differences suggest that knowledge of energy efficiency or the program allowed participants to shop around, but ignorance resulted in them buying CFL bulbs based on chance.

- *ENERGY STAR awareness:* Respondents who heard of ENERGY STAR prior to the survey were more likely than those unaware to buy the bulbs that were on sale (37% vs. 18%) and less likely to purchase the only bulbs available (12% vs. 26%).
- *ESP program awareness:* Respondents who heard about the ESP program at the same time or before their purchase were more likely than those who heard about it after to buy the



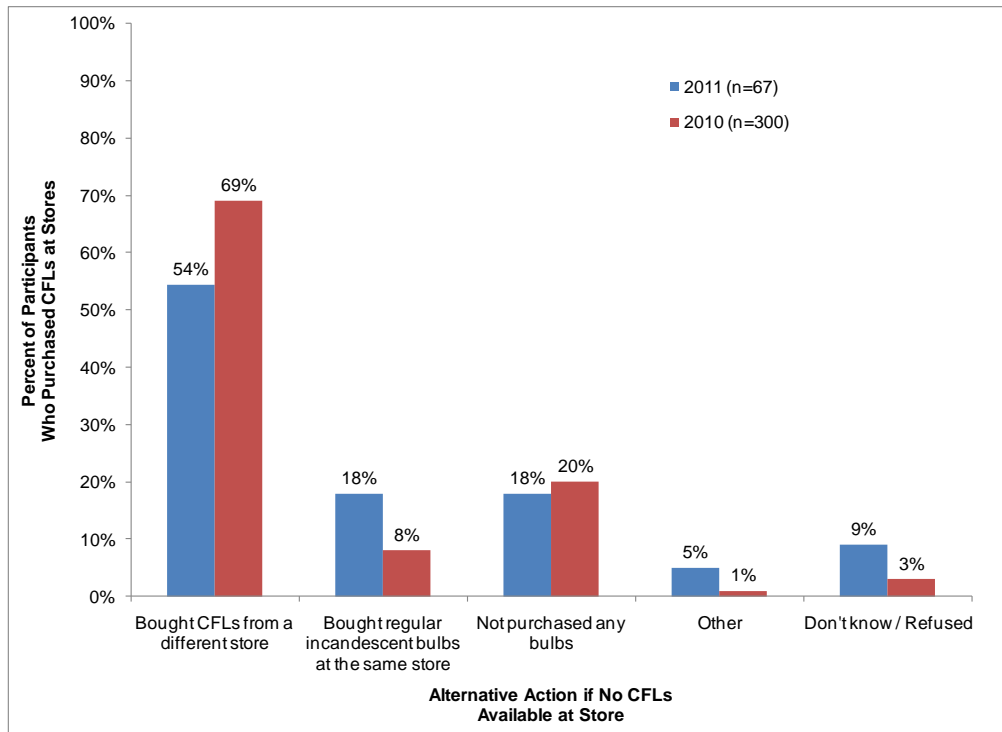
bulbs that were on sale (37% vs. 18%) and less likely to purchase the only bulbs available (8% vs. 33%).

- *ESP program information source:* Respondents who got information about the ESP program from community or school events were more likely (30%) than those who got information from other sources (11%) to purchase the only bulbs available.

The survey further asked respondents who purchased CFLs at a store what they would have done if the location where they purchased their CFLs did not have the ones they were looking for. Provided options included: buy regular incandescent at the same store, buy CFLs from a different store, or not purchase any bulbs at that time. Most (54%) of respondents said they would buy CFLs from a different store, and about one-fifth each said they would buy incandescent from the same store (18%), or not purchase any bulbs at that time (18%; [Figure 3-11](#)).

2011 participants were more willing than 2010 participants to purchase incandescent bulbs from the same location and less willing to go to another store to get CFLs. This finding suggests that 2011 participants were less motivated specifically to purchase CFLs than 2010 participants. It is unclear why this change occurred, but it may be due to backlash against the recently passed federal standards to increase lumens to watts ratios to levels that current incandescent technology does not achieve. This law is often interpreted as meaning that incandescent bulbs will only be available for a limited time, which may cause people to be more interested in buying them now while they still can.

**Figure 3-11:
CFL Purchase Alternatives**



3.1.2.9.3 CFL Packaging

Some of the energy saving kits included CFLs. The survey asked respondents who purchased CFLs as part of the kits whether they would have purchased the CFLs separately. About three-fourths (76%) of respondents said they would or possibly would do so.

The survey asked respondents whether they purchased CFLs in individual or multi-packs. About two-thirds (63%) of respondents said they got them in multi-packs. Another 15 percent said they purchased individual bulbs, and another 15 percent said they purchased both individual and multi-packs. About eight percent of respondents did not know or would not answer the question.

There were two statistically significant differences in the reported size of CFL packs depending on respondents' source of information about the ESP program. Respondents who heard about



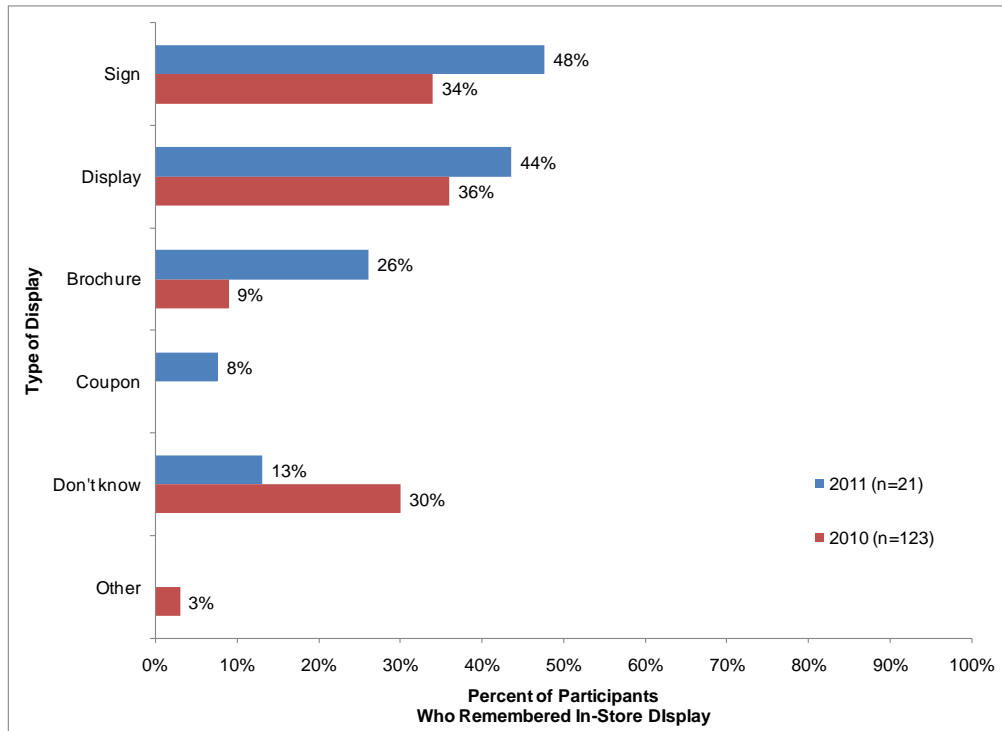
the program from community or school events (77%) were more likely than those who heard about it through other sources (7%) to purchase individual packs. In contrast, respondents who heard about the program from community or school events (23%) were less likely than those who heard of it through other sources (71%) to purchase multi-packs. This probably reflects sales of single-pack CFLs at the utility events.

3.1.2.9.4 In-store Promotions

The survey asked respondents who purchased their CFLs at a store whether they remembered any signage or marketing materials at the store at the time they purchased the bulbs. About one-third (36%) of respondents said they did remember signage or promotions.

The survey followed up by asking any respondent who remembered a special promotion what kind of promotion they remembered. The most common answers were signs (48%) or displays (44%), followed by brochures (26%; [Figure 3-12](#)~~Figure 3-12~~). 2011 respondents were more likely to remember a specific promotion, a sign, or brochure than 2010 respondents.

**Figure 3-12:
In-store Information Displays
- CFLs**



The survey further asked if the respondents remembered any special promotions at the store at the time they purchased the CFLs. A majority (53%) of respondents said they did. The majority of respondents who remembered a special promotion attributed it to the store (55%). Respondents attributed the promotions to their utility (15%), Efficiency United or Energy Optimization (13%) less often. About 16 percent of respondents did not know or remember who offered the special promotion.

3.1.2.10 Purchase Environment – Kit Equipment

The survey included several questions for equipment that could have been bought as part of an energy saving kit or sold at utility sponsored events. All of the equipment included in kits or sold at events is also available at retail stores. We assumed any measure included in a kit was sold



at utility sponsored event or a utility office. For measures that were not parts of kits, including singular measures sold at events, the survey asked where respondents purchased the equipment.

3.1.2.10.1 Purchase Location

The majority of these measures were purchased via some direct interaction between customers and utilities or CLEAResult, rather than at retail stores. ~~Table 3-5~~Table 3-5 shows where respondents said they purchased the measures. The “Other” category is the only one that includes retail stores. We assumed that any measure that was part of a kit was purchased at a utility sponsored event or office.

Table 3-5
Purchase Location
Non-CFL Kit Measures

Purchase Location	Smart Power Strips (n=333)	LED Night Lights (n=74)	Faucet Aerators (n=95)	Low Flow Shower-heads (n=104)	Pipe Insulation (n=93)
Kit	11%	39%	70%	99%	99%
Utility sponsored event or meeting	30%	32%	11%	0%	0%
Home energy show	18%	14%	7%	0%	0%
Utility office	13%	3%	0%	0%	0%
Other	22%	4%	9%	1%	1%
Don't know / Refused	7%	9%	2%	0%	0%

Other included: Community event/fair, Internet, mail order catalog, home improvement/hardware store, warehouse store, department store, drug store, and big box stores.

3.1.2.10.2 In-store Promotions

The survey asked any respondent who purchased this equipment in stores whether they remembered any special information or promotions at those stores. However, very few of these measures were purchased at stores. Only eight respondents (38%) who purchased kit measures at the stores remembered any special information in the store. Of these respondents, about half (44%) remembered a brochure, 32 percent remembered a sign, 16 percent remembered some other kind of information, and 26 percent did not remember what kind of information they saw.

About half (52%) of the respondents who purchased kit measures at the store remember a special promotion. About one-third (30%) attributed the promotion to the store. Another 28



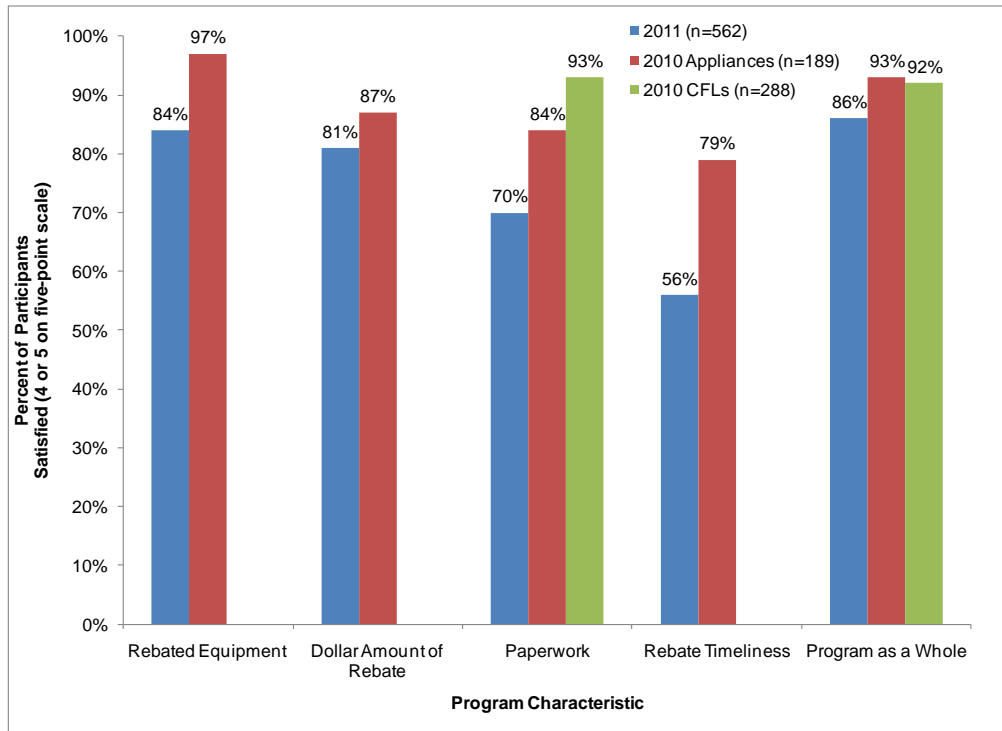
percent said a utility sponsored the promotion. Only 11 percent said Efficiency United or Energy Optimization was responsible for the promotion. Eleven percent said some other organization provided the promotions. Twenty percent did not remember specifically who sponsored the promotion.

3.1.2.11 Satisfaction

The survey asked how satisfied respondents were with several characteristics of the rebate program including the rebated equipment, the dollar amount of the rebate, the timeliness of the rebate payment, the rebate application, and the program as a whole. Respondents indicated their satisfaction using a five-point scale where 5 meant "very satisfied" and 1 meant "not at all satisfied."

Based on our years of experience evaluating many such rebate programs, we consider satisfaction percentages (the combined % of customers giving ratings of 4 or 5 on a 5-point scale) at 90 percent or above to be very good, those between 80 and 89 percent to be good, and those below 80 percent to indicate a need for program improvement. [Figure 3-13](#) ~~Figure 3-13~~ shows that appliance participants gave good ratings for the program as a whole, the rebated equipment, and the dollar amount of the rebate. Respondents' satisfaction ratings for the paperwork and the timeliness of the rebate payment are at levels that reflect a need for improvement. Furthermore, all satisfaction ratings decreased relative to those given by the 2010 respondents.

**Figure 3-13:
ESP Program Satisfaction
(4 or 5 on five-point scale)**



The survey followed-up with any respondents who provided a satisfaction rating of three or less to ask them why they were less than satisfied. Reasons provided for lack of satisfaction included the following:

- *Rebated equipment:* Reasons for dissatisfaction included the equipment being difficult to use, the equipment producing less energy savings than expected, and the respondent not receiving the rebate.
- *Dollar amount of rebate:* Reasons for dissatisfaction were that the rebate should be higher and they did not receive the rebate.



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- *Paperwork:* Reasons provided by respondents for dissatisfaction with the paperwork were that there was too much paperwork, it was complicated or confusing, it took too long to fill out, it was difficult to read, and the respondent had difficulty getting their rebate.
 - *Rebate timeliness:* Reasons for dissatisfaction with the timeliness of the rebate program were that the respondent never received their rebate or it took too long. This issue might be due to respondents who purchased CFLs and kit measures at events not understanding they were already sold at a discounted price and expecting to get rebates for those purchases.
 - *Program as a whole:* Reasons provided by respondents for dissatisfaction with the program as a whole included they did not receive their rebate, there is not enough advertising of the program, the equipment did not work, energy or monetary savings were lower than expected, monetary savings were lower than expected, and the program is too complex.

Satisfaction with the rebated equipment depended on respondent education. Respondents with at least four year college degrees were more likely (90% of the respondents) than those with a high school diploma or less (80%) to be satisfied (4 or 5 on the five-point scale).

Satisfaction with the dollar amount of the rebate depended on respondent education, income, and ENERGY STAR awareness.

- *Education:* Respondents with at least four year college degrees or some college were more likely (88% and 82% of respondents respectively) than those with a high school diploma or less (73%) to be satisfied with the dollar amount of the rebate.
- *Income:* Respondents with reported incomes of \$50,000 or more were more likely (88%) than those with incomes less than \$50,000 (78%) or those who did not report incomes (77%) to say they were satisfied with the dollar amount of the rebate.
- *ENERGY STAR awareness:* Respondents who were aware of ENERGY STAR prior to the survey were more likely (83%) than those not aware of ENERGY STAR (69%) to say they were satisfied with the dollar amount of the rebate.

Satisfaction with the paperwork depended on respondent income, and awareness of ENERGY STAR.



-
- *Income:* Respondents with reported incomes of \$50,000 or more were more likely (69%) than those with incomes less than \$50,000 (55%) or those who did not report incomes (54%) to say they were satisfied with the rebate paperwork.
 - *ENERGY STAR awareness:* Respondents who were aware of ENERGY STAR prior to the survey were more likely (63%) than those not aware of ENERGY STAR (39%) to say they were satisfied with the program paperwork.

Satisfaction with the timeliness of the rebate payment depended on respondent education, income, gender, and program information sources.

- *Education:* Respondents with at least four year college degrees were more likely (75%) than those with a high school diploma or less (66%) to be satisfied with the dollar amount of the rebate.
- *Income:* Respondents with reported incomes of \$50,000 or more were more likely (78%) than those with incomes less than \$50,000 (66%) or those who did not report incomes (69%) to say they were satisfied with the dollar amount of the rebate. As noted, education and income tend to be highly correlated.
- *Gender:* Women were more likely (74%) than men (66%) to be satisfied with the timeliness of the rebate program.
- *Source of program information:* Respondents who got ESP program information from contractors or salespeople were more likely (94%) than those who got information from other sources (72%) to be satisfied with the timeliness of the rebate payments. This result is probably a result of contractors or salespeople helping make sure the respondents get the rebates.

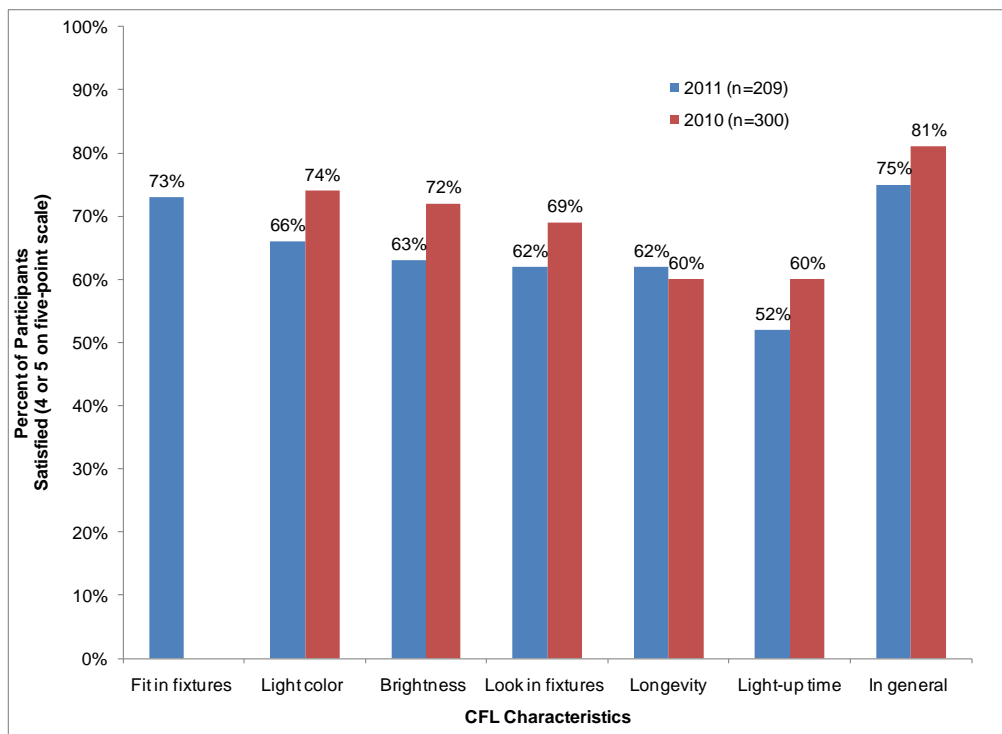
Satisfaction with the program as a whole depended on respondent education and income:

- *Education:* Respondents with at least four year college degrees were more likely (89%) than those with a high school diploma or less (83%) to be satisfied with the program as a whole.
- *Income:* Respondents with reported incomes of \$50,000 or more were more likely (89%) than those who did not report incomes (82%) to say they were satisfied with the program overall.

3.1.2.11.1 Satisfaction with CFLs

The survey asked how satisfied respondents were with several characteristics of CFLs, including in general, the color of the light they provide, the brightness of the light they provide, how long they take to light up, how they fit into fixtures, the way they look in fixtures, and how long they last before burning out. Respondents indicated their satisfaction using a five-point scale where 5 meant “very satisfied” and 1 meant “not at all satisfied.” Overall, respondents were well-satisfied with most characteristics of CFLs (Figure 3-14). However, satisfaction rates have slightly declined, across the board, relative to 2010. The decline in satisfaction is unfortunate, but there is not much the program can do about the characteristics of CFLs.

Figure 3-14:
CFL Characteristics Satisfaction
(4 or 5 on five-point scale)





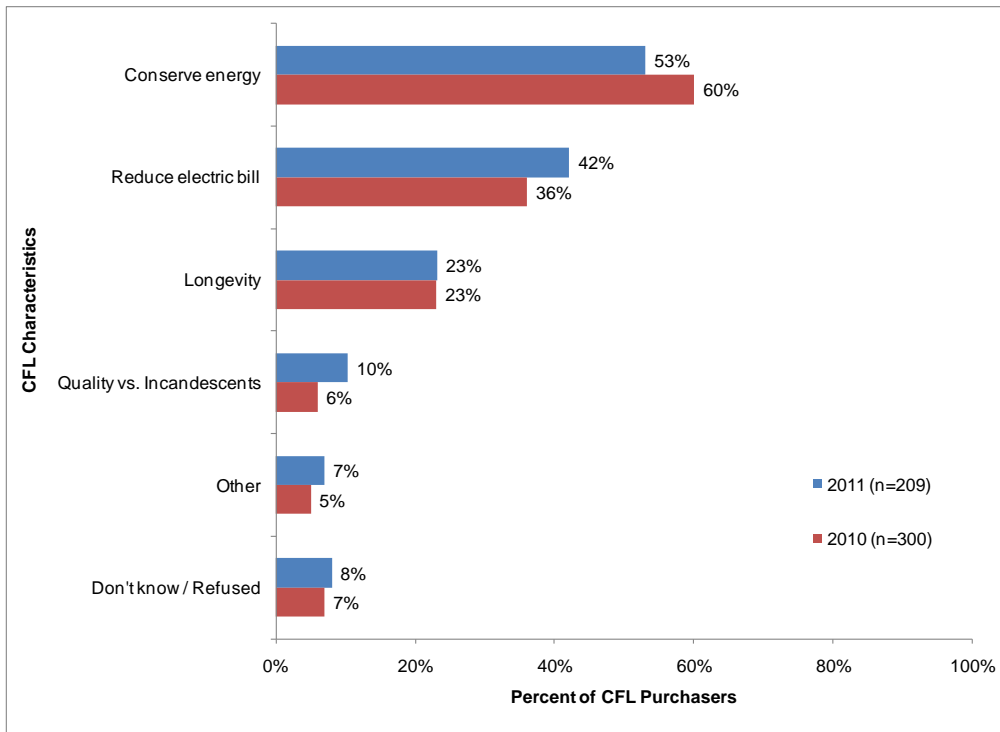
Satisfaction with CFLs depended on reasons for purchasing the CFLs, and ESP program information sources:

- *Reason for purchase:* Respondents who purchased the CFLs for some reason other than to get the rebate were more likely than those who purchased them to get the rebate (66%) to say they were satisfied (4 or 5 on the five-point scale) with the CFLs in general (81% versus 66%) and with the brightness (69% versus 54%). The CFLs probably appealed to the non-monetary motivations of these individuals, so they liked them better, even if they had some issues or problems with the bulbs.
- *Information sources:* Respondents who heard about the ESP program at community or school events were more likely (91%) than those who got program information through other sources (73%) to be satisfied with CFLs in the general (4 or 5 on the five-point scale). The event probably informed their expectations about the CFLs. More accurate expectations about CFLs are more likely to be met, which tends to lead to higher satisfaction.

Almost all (98%) customers who said they were less than satisfied (3 or less on the five-point scale) with brightness said the CFLs were not bright enough. The remainder said they did not know whether they CFLs were too bright or not bright enough.

The survey also asked respondents what are the best features of CFLs. Most (53%) mentioned that CFLs save energy. Another 42 percent said that CFLs reduce their electricity bill, and about one-fourth (23%) said CFLs last a long time before burning out. These responses are similar to those provided by 2010 participants ([Figure 3-15](#)~~Figure 3-15~~).

**Figure 3-15:
Best Features of CFLs**



Other includes: less heat, style, easy installation, and brightness. The total exceeds 100% because respondents were allowed to give multiple responses.

There were several differences in what respondents said were the best features of CFLs depending on their education, income, and their awareness of ENERGY STAR.

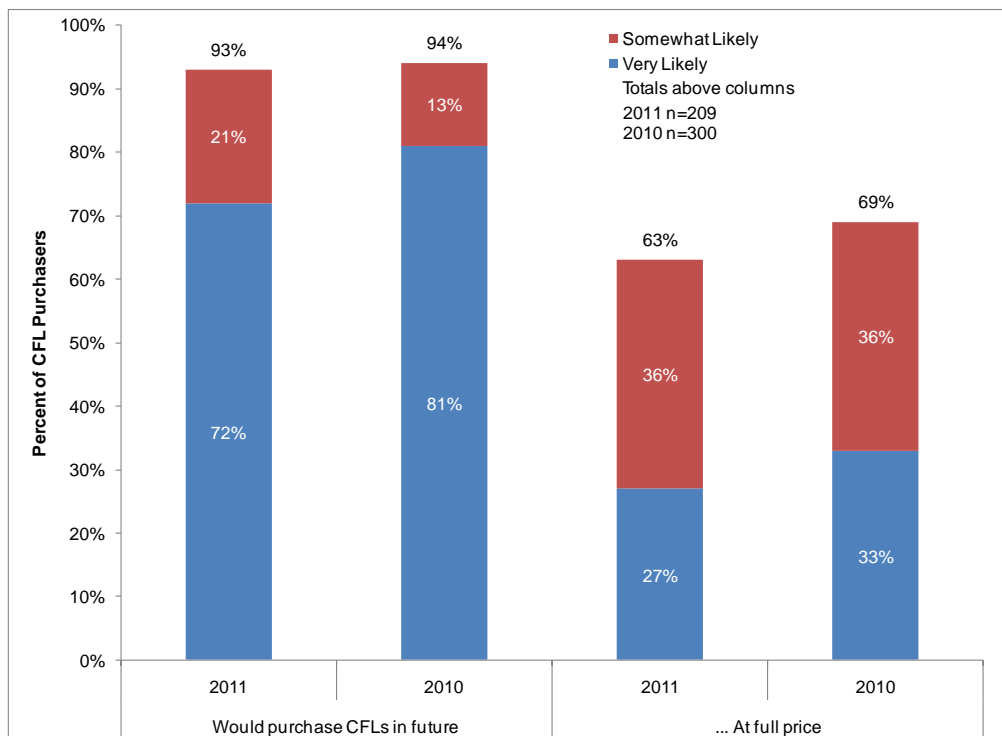
- **Education:** Respondents with a four year degree or more education were less likely (1% of respondents) than those with some college (13%) or a high school degree or less (19%) to say that CFLs were higher quality than incandescent bulbs.
- **Income:** Respondents who reported incomes of \$50,000 or more were more likely (62%) than those who reported less income (47%), or did not report income (43%) to say energy conservation was the best feature of CFLs.



- **ENERGY STAR awareness:** Respondents who were aware of ENERGY STAR were more likely (54%) than those not aware of ENERGY STAR (32%) to say that energy conservation was the best feature of CFLs. This survey uses ENERGY STAR awareness as a proxy for energy efficiency knowledge, so this result is probably due to an increased knowledge of energy efficiency among the people who are aware of ENERGY STAR.

Respondents' experience with the rebated CFLs has made them very likely to purchase CFLs in the future. About three-fourths (72%) said they were "very likely," and another 21 percent said they were "somewhat likely" to purchase CFLs in the future. When asked how likely they were to purchase CFLs in the future at full prices of three or four dollars each, about one-fourth (27%) said they were "very likely," and another 36 percent said they were "somewhat likely" to purchase them. These findings are similar to 2010 participants ([Figure 3-16](#) ~~Figure 3-16~~).

Figure 3-16:
Likelihood of Purchasing CFLs in Future

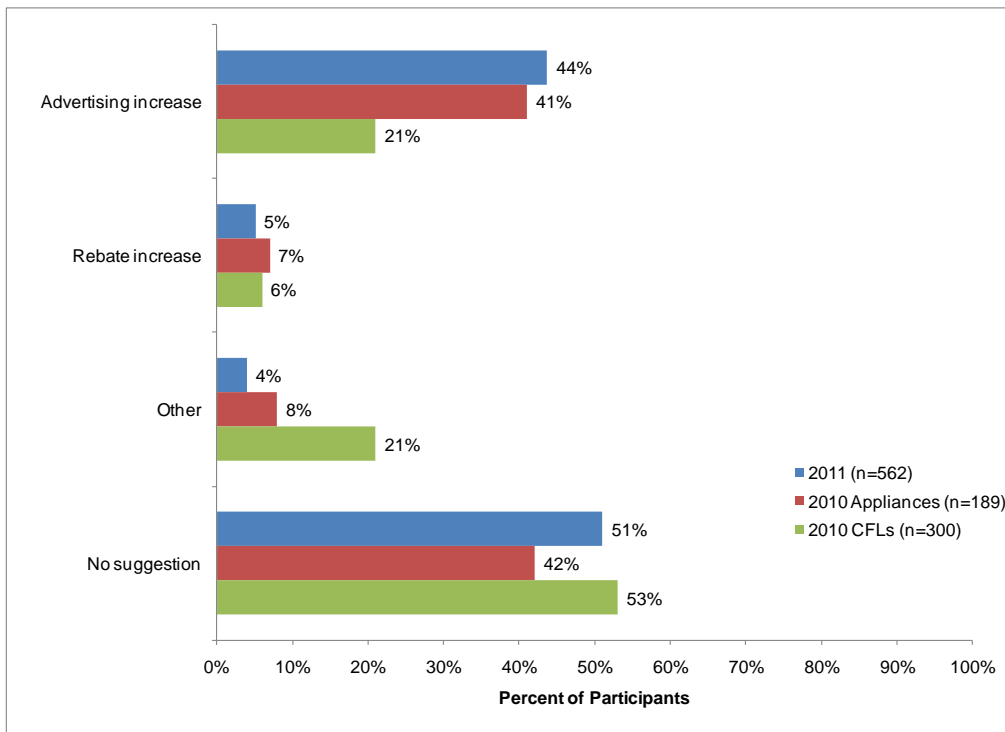




3.1.3 Suggestions for Program Improvement

The survey asked respondents if there was anything their utility could do to get more people to participate in the appliance rebate program. ~~Figure 3-17~~ ~~Figure 3-17~~ summarizes the responses. The majority of respondents (51%) did not provide a suggestion. Those that did provide suggestions usually mentioned more advertising (44%). These suggestions are similar to the ones made by 2010 Appliance and CFL participants.

**Figure 3-17:
Suggestions for Increasing Program Participation**

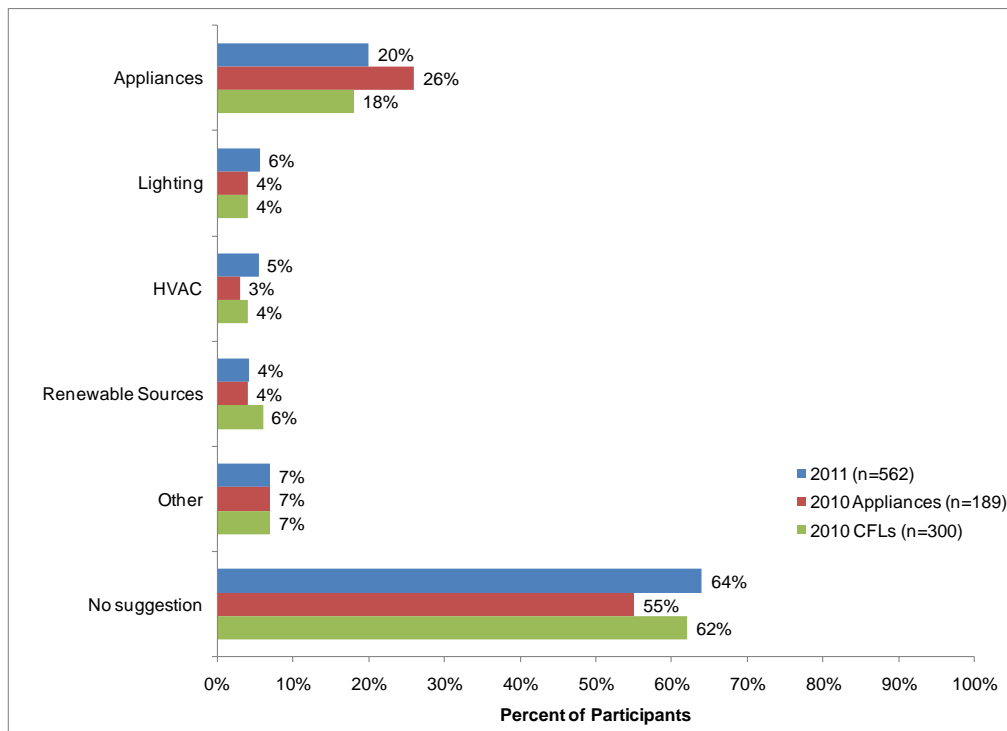


Notes: In the 2011 survey other suggestions included: energy efficiency calculators and unspecified suggestions. In the 2010 Appliance survey other suggestions included: providing more information about rebated equipment, instant rebates, extending the rebates, bill credits, and unspecified other suggestions. In the 2010 CFL survey other suggestions included: more information about CFLs, extend rebates, and unspecified other suggestions. The totals exceed 100% because respondents were allowed to give multiple responses.



The survey also asked respondents if there were any energy efficiency technologies that they would like their utility to offer rebates for. [Figure 3-18](#) summarizes the responses. Most (64%) respondents did not provide a suggestion. The most often suggested rebate was additional appliances (20%). The next-most-often-suggested rebates were for lighting (6%), HVAC rebates (5%), and renewable energy sources (4%). These suggestions were similar to those provided by 2010 Appliance and CFL participants.

Figure 3-18:
Suggestions for Additional Rebates



Notes: In the 2011 survey other suggestions included: consumer electronics, windows/doors, gas, home audits, and unspecified suggestions. In the 2010 Appliance survey other suggestions included: insulation, weather sealing, any energy efficient technology, and unspecified other suggestions. In the 2010 CFL survey other suggestions included: other rebates and unspecified other suggestions. The totals exceed 100% because respondents were allowed to give multiple responses.



3.2 Residential HVAC

3.2.1 Summary

The following are some highlights from the survey of 2011 Residential HVAC program participants:

- *Most respondents heard about the rebate program before (66%) or at about the same time as (16%) purchasing their equipment.* This is good because respondents who heard about the program after purchasing the equipment are generally free-riders.
- *Contractors were the most common source of information about the program.* This is a typical finding for HVAC rebate programs. However, respondents, especially those with utilities in MCAAA, frequently suggested that the program should advertise more. In-depth interviews with program administrators revealed that MCAAA and its participating utilities may not be doing much advertising of the program, instead relying on contractors to promote it.
- *The rebates were the most common reason provided for participation in the rebates.* Relative to 2010, more respondents cited contractor recommendations as a reason for participating. Also fewer 2011 respondents said they would have purchased the equipment with or without the program.
- *Rebated programmable thermostats are replacing other programmable thermostats more often than they did in 2010.* This may indicate that the 2010 programmable thermostat installs replaced many of the “low-hanging fruit” of non-programmable thermostats. As the programmable thermostat installations continue, there may not be many non-programmable thermostats left to replace.
- *Satisfaction with the program decreased slightly from the levels measured in 2010.* Reasons for lack of satisfaction included: needing more information, the rebates should be higher, the program is wasteful, they did not receive or it took too long to receive the rebate, and the application was difficult.
- *Requests for water heater rebates were common in 2011.* This is probably due to the discontinuation of the water heater rebates.



3.2.2 Program Description

The Residential HVAC (HVAC) Program was launched in November 2009. The program is offered in all utility service territories except Bayfield Electric Cooperative and Daggett Electric Department. The HVAC program is a relatively small part of the MCAAA portfolio. Incentives are provided to customers through mail-in rebates for installing high efficiency heating, cooling, and water heating equipment in residential buildings. The program applies to existing homes installing new equipment and new homes only when they do not qualify for the Residential New Construction Program incentives. Not all measures are offered in all utility service territories. Table 3-6 shows the measure combinations offered by the given utilities.



**Table 3-6:
Measures Offered through HVAC Program by Utility Territory**

Group of Measures	Utilities Offering Measure Group
ECM Drives Hot Water Pipe Wrap Water Heater Programmable Thermostats	Cloverland
ECM Drives Hot Water Pipe Wrap Water Heater Programmable Thermostats Furnace with ECM drive Air Conditioner	Great Lakes
ECM Drives Central Air Conditioner	Alpena Indiana Power UP Power We Energies
ECM Drives Hot Water Pipe Wrap Water Heater Central Air Conditioner	Edison Sault
ECM Drives Hot Water Pipe Wrap Water Heater Central Air Conditioner Programmable Thermostats	HomeWorks Tri-County Alger Midwest Energy Ontonagon Presque Isle Thumb Electric
ECM Drives Hot Water Pipe Wrap Central Air Conditioner	Escanaba Marquette Newberry Stephenson
ECM Drives Central Air Conditioner Programmable Thermostats Furnace	WPS Corp Xcel
Programmable Thermostats Furnace Water Heater Boiler	Michigan Gas Utilities SEMCO



3.2.3 Methodology

CLEAResult provided KEMA with a sample population of 1,021 program participants as of August 31, 2011. KEMA contracted Research America (RA) to conduct computer-aided telephone interviews (CATI) of program participants. RA completed interviews with 300 in January and February 2011. This was a final response rate of 37 percent (Table 3-7). Phone numbers were called at least eight times over at least two weeks before being considered unreachable. The 37 percent response rate was similar to the response rate achieved in the 2010 evaluation.

**Table 3-7:
HVAC CATI Dispositions**

Sample Description	Number	Percent
Starting Sample	1,021	
Never Called	26	
Sample Used	995	
Known Not Eligible	112	
Estimated additional not eligible	69	
Sample-Valid	814	
Complete	300	37%
Refused	198	24%
Not Completed - Eligible	6	1%
Not Completed - Est. Eligible	310	38%

The CATI survey covered the following topics:

- Sources of information about program;
- Reasons for participation;
- Verification of equipment installation;
- Thermostat replacement;
- Thermostat use information;
- Net-to-gross information;
- Appliance recycling;



-
- Satisfaction with several aspects of the program;
 - Energy attitudes; and
 - Demographic information.

Participants were stratified based on the type of equipment they received a rebate for. Results are weighted based on the number of participants in the population strata divided by the number of completed surveys.

3.2.4 Characterizing the Participants

The survey asked a series of demographic questions to help characterize the program participants. Highlights are summarized below:

- *Home ownership:* Most (97%) of participants said they own their homes.
- *House types:* Most homes (90%) were characterized as single family detached. There were some single family attached (3%), mobile homes (2%), and refusals (3%).
- *Housing occupancy:* Most (94%) of homes were not seasonal homes. Most (91%) of homes were occupied 12 months a year.
- *Household size:* Number of residents per home varied as follows: 1 resident (14%); 2 residents (46%); 3 residents (13%); 4 residents (12%); 5 or more residents (12%).
- *Respondent age:* Respondent age varied as follows: less than 40 years old (8%); 40 to 64 years old (52%); 65 or older (29%); refused (11%).
- *Respondent education:* Respondent education levels varied as follows: high school diploma or less (25%); some college or trade school (23%); four-year college degree (25%); some graduate school or advanced degree (17%); no answer(10%).
- *Respondent income:* Respondent pre-tax 2009 income varied as follows: less than \$20,000 (5%); \$20,000 to \$49,999 (21%); \$50,000 to \$74,999 (18%); \$75,000 or more (25%); no answer (32%).
- *Respondent gender:* Most respondents were men (54%).



For the 2011 evaluation, KEMA added several questions to assess respondents' knowledge and attitudes about energy efficiency.

- *ENERGY STAR awareness:* Most (78%) of respondents were aware of ENERGY STAR. Younger respondents were more aware of ENERGY STAR than older respondents. Respondents under 40 (96%) were more aware than respondents age 40 to 64 (84%) and respondents 65 or older (64%). The difference between the 40 to 64 and the 65 and older groups was also statistically significant.
- *Concern about energy use:* Most respondents were "very concerned" (59%) or "somewhat concerned" (34%) with reducing their home's energy use. Almost all (92%) of respondents that were very concerned or somewhat concerned with reducing their home energy use wanted to do so because of the cost of energy or financial reasons. Environmental concerns (30%) were also prevalent.

3.2.5 Program Awareness

The survey began by asking respondents if they had heard of the program prior to the survey. Most (75%) said they had. While this is a majority of respondents, it is less than the previous year's rate of 88 percent.

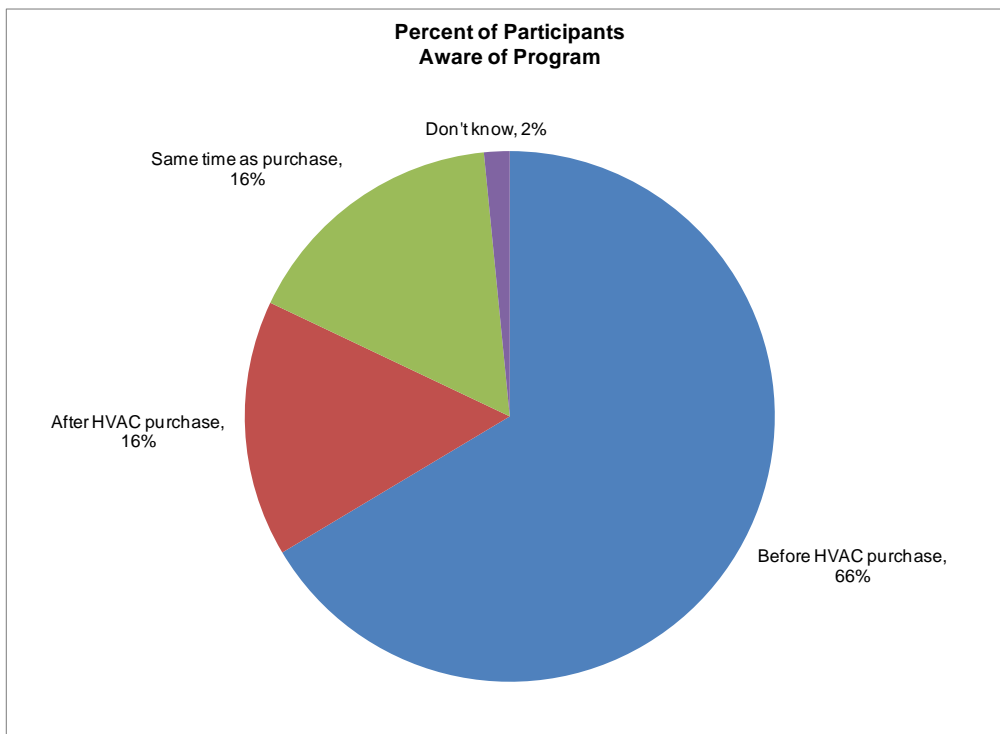
There were a few statistically significant¹⁵ differences in program awareness based on respondent education, awareness of ENERGY STAR, and participation intent. Awareness of the program depended on a number of factors including:

- *Education:* Respondents with at least a four year college degree were more likely (79% of respondents) than those with a High School degree or less (65%) to have heard of the program prior to the survey.
- *ENERGY STAR awareness:* Respondents with an awareness of ENERGY STAR were more likely (80%) than those not aware (56%) to have heard of the program prior to the survey.
- *Participation intent:* Participants who bought equipment to get the rebate were more likely (87%) than those who did not (57%) to have heard of the program prior to the survey.

¹⁵ All reported differences are statistically significant at the 90% confidence level.

The survey also asked whether respondents had heard about the program before purchasing their equipment. About two thirds (66%) said they had heard about it before purchasing the equipment. Sixteen percent heard about it after purchasing the equipment, and another sixteen percent heard about the program at about the same time. These values are not significantly different from the previous year's evaluation. Figure 3-19 shows the full range of responses.

**Figure 3-19:
When Respondent Heard about Program**



When respondents heard about the program depended on gender, income, awareness of ENERGY STAR and reason for equipment purchase.

- *Gender:* Men were more likely (72% of respondents) than woman (59%) to have heard about the program before purchasing new HVAC equipment. Conversely, women were more likely (22%) than men (10%) to hear about the program after equipment purchase.



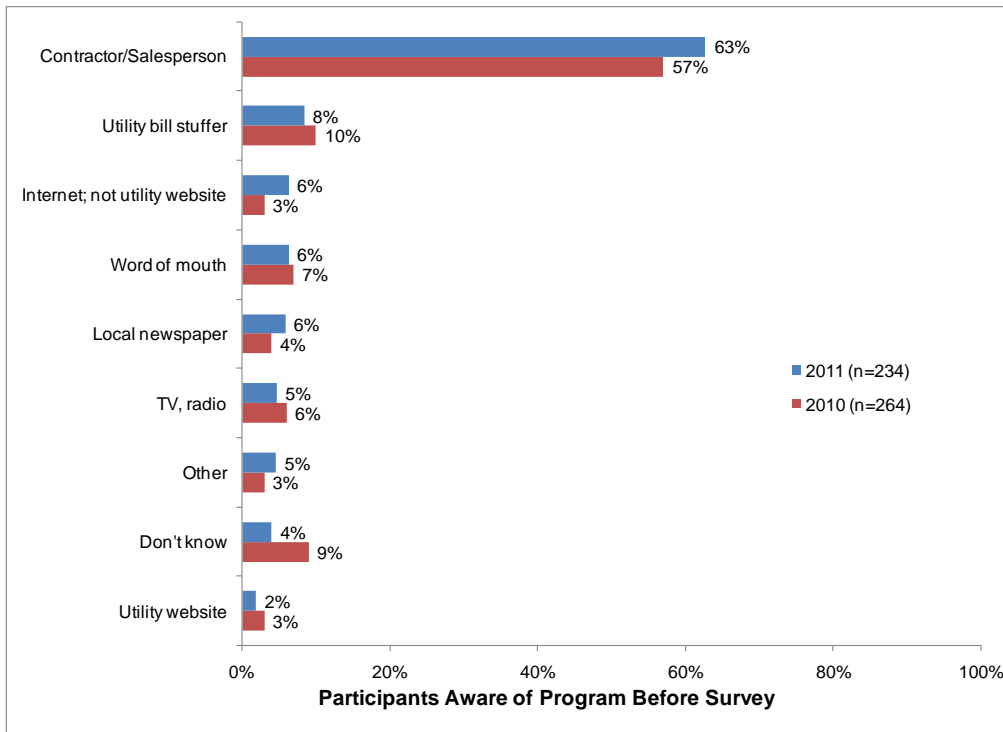
Men and women were equally likely to have heard about the program about the same time as purchasing equipment.

- *Income:* Respondents with 2010 pre-tax incomes less than \$50,000 were more likely (28%) than those who earned \$50,000 or more (13%) or who did not report their incomes (11%) to hear about the program after purchasing the new HVAC system.
- *ENERGY STAR:* Respondents aware of ENERGY STAR were more likely (69%) than those who are not aware (51%) to hear about the program before purchase of the new HVAC system.
- *Reason for purchase:* Respondents planning to purchase HVAC equipment anyways were more likely (80%) than those not going to purchase anyways (62%) to hear about the program before purchasing new HVAC equipment.

3.2.6 Sources of Information

The survey asked respondents where they heard about the program or the rebates. Most respondents (63%) said they heard about the program through their contractor or salesperson. Other sources were listed by fewer than ten percent of respondents. [Figure 3-20](#) summarizes respondents' information sources. These results are similar to 2010 and are not surprising – KEMA usually finds that contractors are the primary source of information when it comes to HVAC programs.

**Figure 3-20:
Information Sources**



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

3.2.7 Reasons for Participating

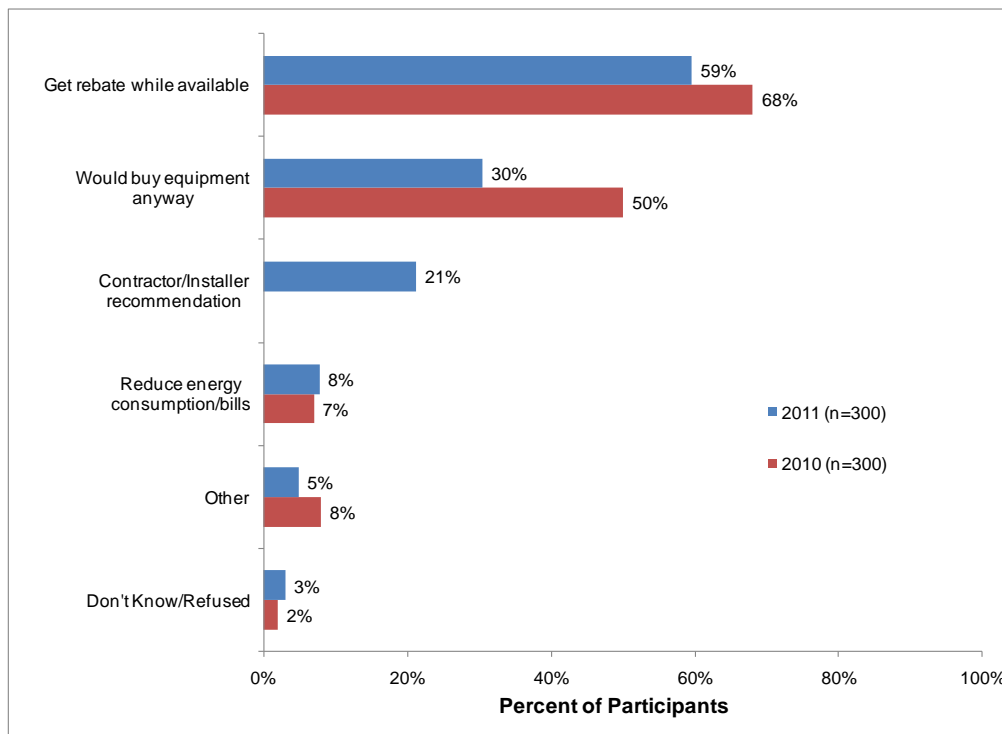
The survey asked participants why they chose to participate in the program. A majority (59%) of respondents said to get the rebate while it was available. Less than one-third (30%) said they would have bought the equipment anyway. [Figure 3-21](#) summarizes the responses and the differences from the previous year's survey.

Participants in 2011 were less likely than those in 2010 to say they would have bought the equipment anyway. This is a positive change for the program because respondents who would have bought equipment without the program are likely to be free-riders.



They were more likely to say they bought the equipment based on contractor recommendations. This is a notable result because it was so low in 2010. KEMA typically finds that contractor recommendations are one of the most important factors when it comes to HVAC equipment selection. Contractor recommendation was not a pre-coded selection in the 2010 survey, but few respondents volunteered it as an “other” response.

**Figure 3-21:
Reasons for Participation in Program**



Note: Other includes: contractor recommendation, and environmental concerns. The total exceeds 100% because respondents were allowed to give multiple responses.

There were a few statistically-significant differences in reasons for program participation based on respondent education and awareness of ENERGY STAR as well as recycling of multiple appliances.

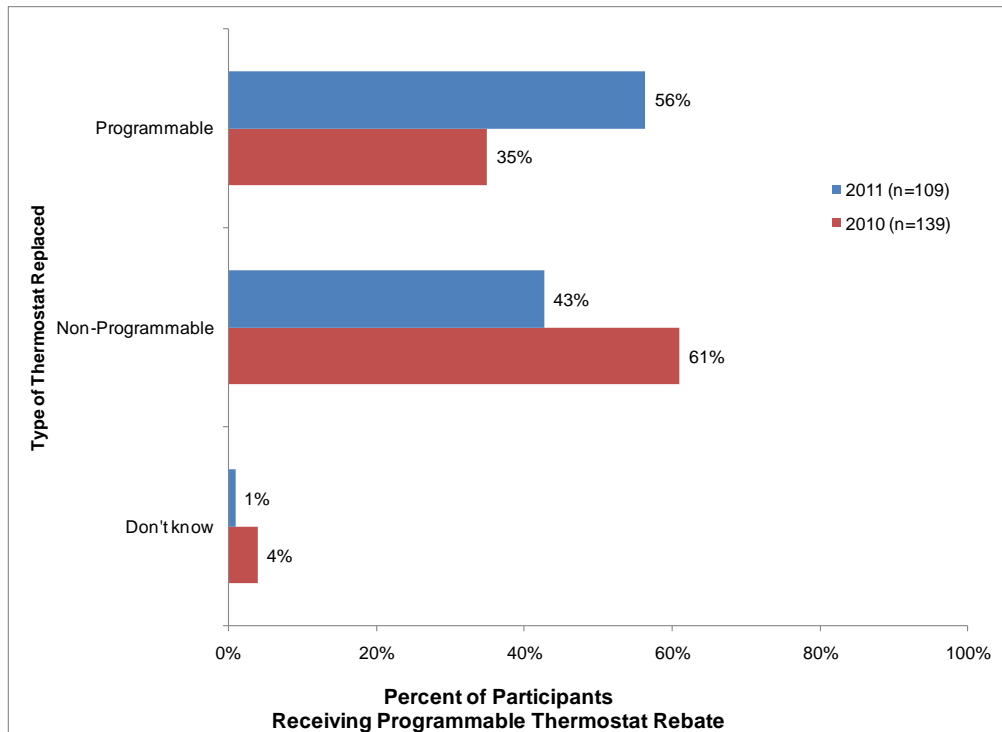


- *Get rebate while available:* Respondents who said they participated in the program in order to get the rebate while available depended on a number of factors. Respondents who stated that they were previously aware of the program (69%) were more likely than those who were not (31%) to participate to get the rebate while available, as were those aware of ENERGY STAR (65%) versus those not (38%). Younger respondents were more likely than older respondents to participate to get the rebate: Seventy-nine percent of those under 40 compared to 62 percent of those 40-64 or and 50 percent of those 65 or older.
- *Would purchase anyway:* Respondents who said they were previously aware of the program were less likely (27%) than those who were not aware (42%) to respond that they were going to get the equipment anyways. Those with household incomes greater than \$50,000/year (34%) were more likely than those with incomes below \$50,000/year (22%) to say they would have purchased the equipment anyways.

3.2.8 Programmable Thermostat Use

The survey asked respondents who received rebates for programmable thermostats (47% of all respondents) several questions to investigate the way program participants use programmable thermostats. The survey probed for what type of thermostat the programmable thermostat replaced. [Figure 3-22](#) shows their responses and compares them to the responses of the 2010 participants. Most (56%) of the 2011 participants said that their replaced thermostats were programmable. This is a change from the 2010 participants, who predominantly replaced non-programmable thermostats.

**Figure 3-22:
Type of Replaced Thermostat**



The type of replaced thermostat depended on several respondent characteristics, including gender, age, and satisfaction with both the equipment and program.

- *Gender:* Women respondents were more likely (67% of respondents) than men (46%) to have replaced a programmable thermostat.
- *Age:* Respondents over age 65 were more likely (67%) to have replaced a programmable thermostat than respondents 40-64 (56%) or those under 40 (32%). This finding is a bit surprising, because KEMA typically finds that older people prefer non-programmable thermostats and hold onto them as long as possible. This preference is often strong enough that HVAC contractors report to us that they do not even offer the programmable thermostats to older people.



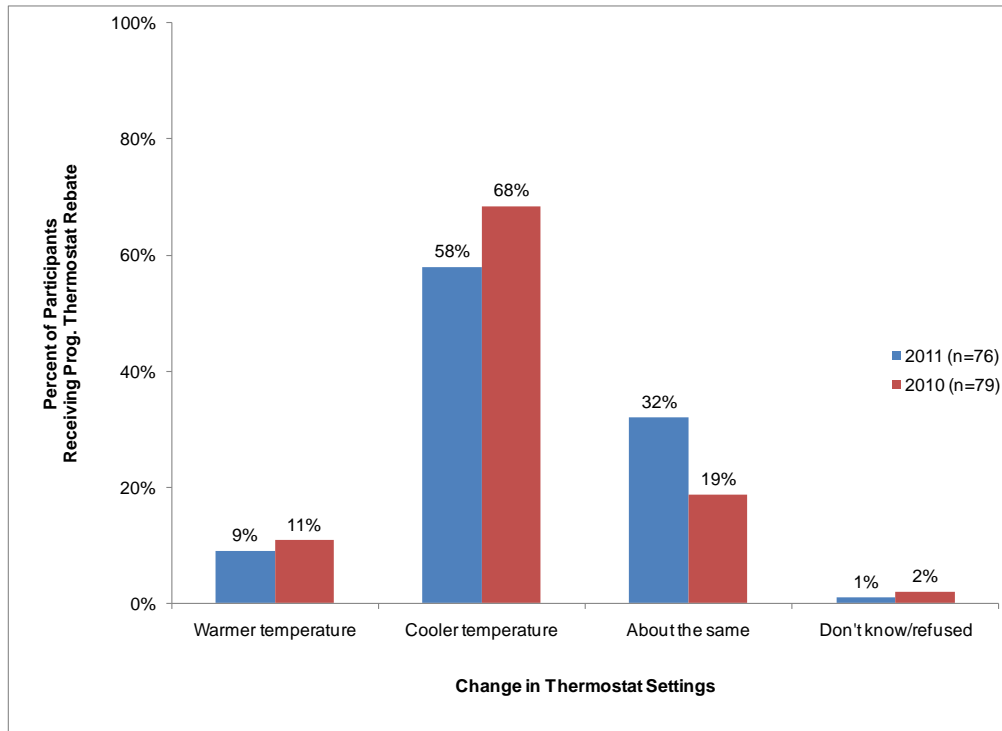
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- *Program satisfaction:* Respondents not completely satisfied with the rebate program as a whole were more likely (68%) than those less than satisfied with the program as a whole (47%) to replace a programmable thermostat.
 - *Equipment satisfaction:* Respondents who were satisfied with their rebated equipment were less likely (55%) than those who were not completely satisfied with their equipment (87%) to replace a programmable thermostat. This suggests that people who upgraded to a programmable thermostat liked it better than people who moved from one programmable to another.

Next, the survey asked respondents a series of questions to assess whether the acquisition of a new thermostat influenced the temperatures at which they set their thermostats during winter. About two-thirds (68%) of respondents reported that they used different winter temperature settings with the new thermostats. Whether a respondent reported using different settings depended on two characteristics: program awareness and awareness of ENERGY STAR. These findings suggest that people who knew more about energy efficiency were more likely to change their thermostat settings.

- *Program awareness:* Participants who were aware of the program before purchasing HVAC equipment were more likely (73% of respondents) than those who were not (53%) to use different wintertime temperature settings than they did before.
- *ENERGY STAR awareness:* Participants who were aware of ENERGY STAR were more likely (77%) than those not aware (35%) to use different wintertime settings than they did before.

If a respondent said they changed their wintertime thermostat settings, the survey included several follow-up questions to assess how they changed the settings at night, during the day when the home was occupied, and during the day when the home was unoccupied. [Figure 3-23](#) summarizes the responses for overnight settings, illustrating differences with the 2010 evaluation.

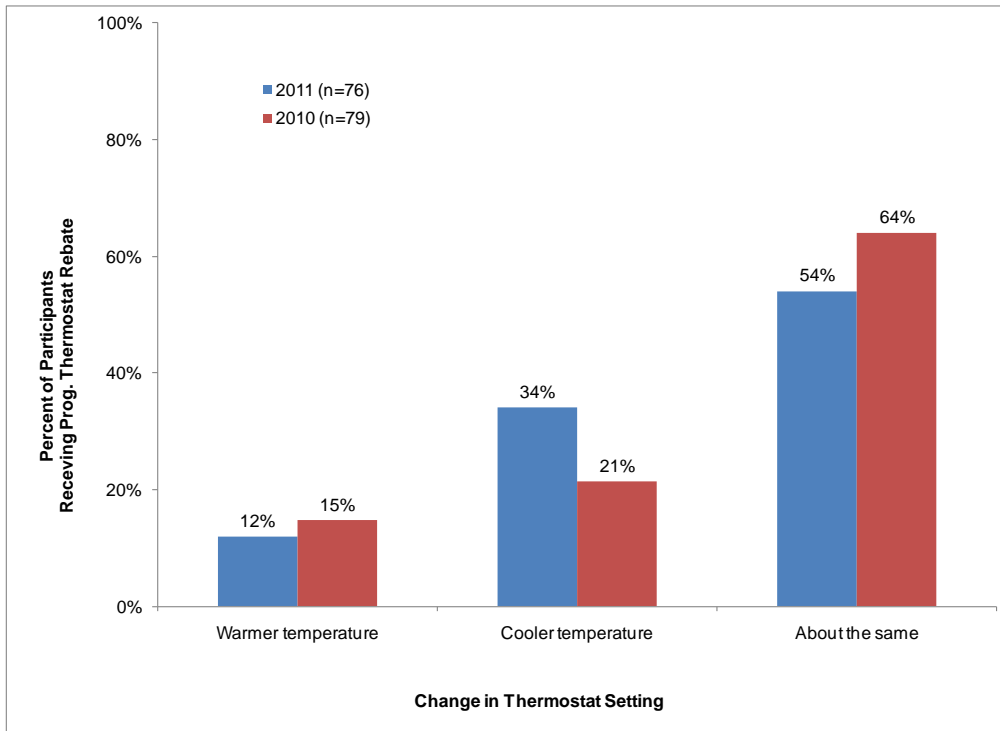
**Figure 3-23:
Wintertime Temperature Changes
Overnight**



Overall patterns remained largely the same from 2010 to 2011. The only significant difference was that 2011 respondents were more likely to say they used about the same overnight setting as they did before getting the new thermostat.

Respondents were asked if they set the thermostat higher, lower or about the same during the day when the home was occupied. As with the overnight settings, the general pattern of responses was similar across the two years (Figure 3-24). 2011 participants were more likely to report they used a cooler daytime temperature after installing the new thermostats.

**Figure 3-24:
Wintertime Temperature Changes
Daytime - Occupied**



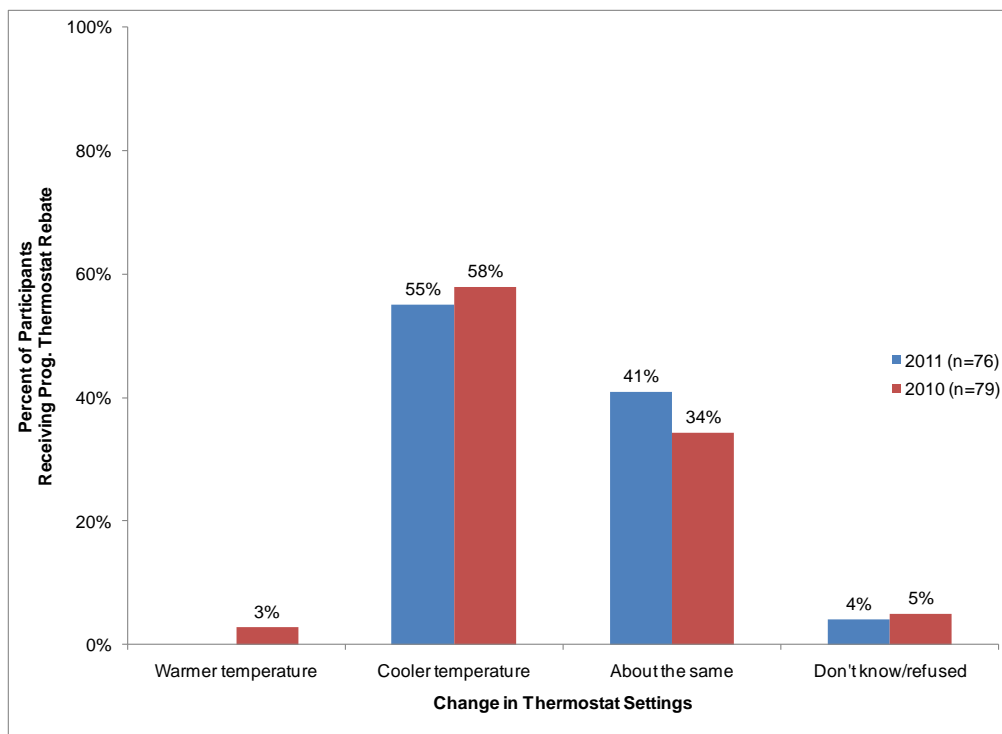
A number of factors influenced changes to the settings after getting a new thermostat, including previous program awareness, the number of residents, and whether the respondent was concerned with reducing energy use.

- *Concern for energy reduction:* Respondents claiming no existing concern for energy reduction were more likely (100%) to leave the occupied daytime temperature about the same as before than those who stated they had an energy reduction concern (62%).
- *Number of residents:* Households with one or two residents were more likely (28%) to set the thermostat lower during days that the home was occupied than households with more than two people (8%).

- *Program Awareness:* Respondents aware of the program prior to purchasing their HVAC equipment were more likely to set the thermostat about the same (71%) than those not previously aware (35%). Those who were not previously aware were more likely (35%) to set the thermostat higher than those aware of the program prior to HVAC equipment purchase (10%).

Most respondents (55%) reported changing their daytime unoccupied settings cooler with the new thermostat, demonstrated in [Figure 3-25](#). This does not represent a significant change from 2010 levels.

**Figure 3-25:
Wintertime Temperature Changes
Daytime - Unoccupied**



Factors which influenced changes in setting the thermostat included age, ENERGY STAR awareness, and energy reduction concerns.



-
- *Concern for energy reduction:* Respondents claiming no existing concern for energy reduction were more likely (86%) than those who stated they had an energy reduction concern (32%) to leave the unoccupied daytime temperature about the same as before.
 - *Age:* Respondents 65 years old and older were less likely (40%) than respondents 40-64 (63%) or those under 40 (76%) to set the thermostat cooler on unoccupied days. Conversely, those over 65 were more likely than those 40-64 (28%) or those under 40 (5%) to leave the thermostat about the same (58%) as previously set.
 - *ENERGY STAR awareness:* Respondents with an awareness of ENERGY STAR were more likely (61%) than those without ENERGY STAR awareness (29%) to set the new thermostat lower during the day when the house was unoccupied.

3.2.9 Satisfaction

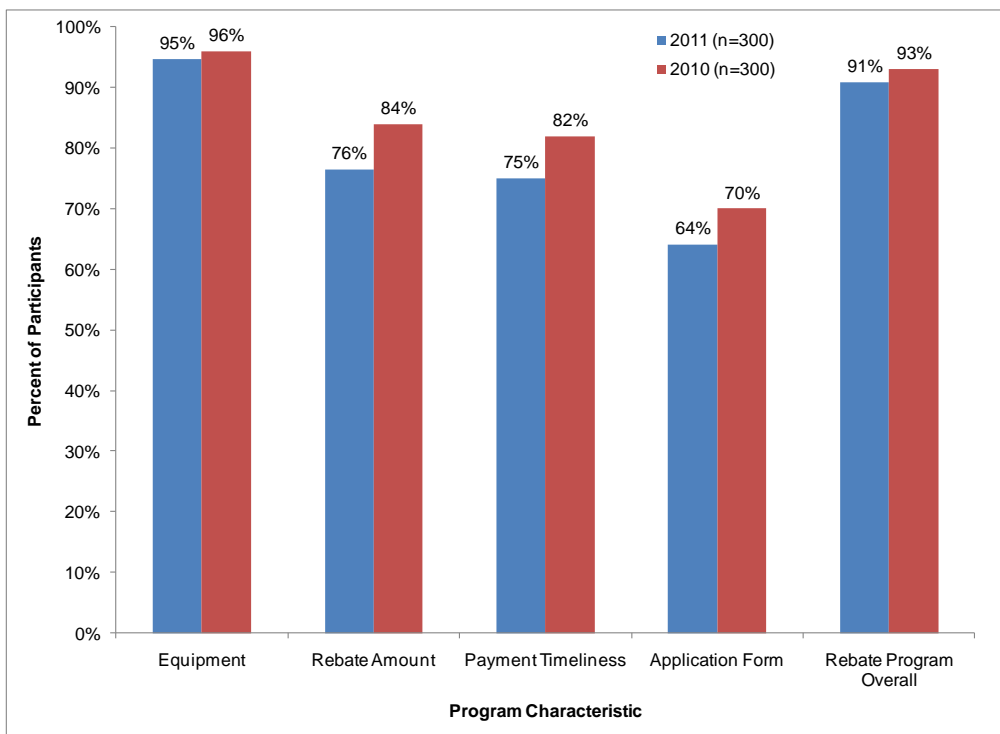
All respondents were asked how satisfied they were with several different aspects of the program including the rebated equipment, the dollar amount of the rebate, the timeliness of the rebate payment, the application form and other program paperwork, and the program overall. Respondents rated their satisfaction on a five-point scale anchored at five for “very satisfied” and 1 for “not at all satisfied.” Levels of satisfaction with the program overall and with the rebated equipment were both good, with over 90 percent of respondents giving a rating of 4 or 5. Satisfaction with the other aspects of the program was at levels that indicate a need for improvement (less than 80% of respondents giving a rating of 4 or 5; [Figure 3-26](#)~~Figure 3-26~~). The satisfaction ratings are not statistically-significantly different than those giving in 2010, but all of them have a downward trend.

Respondents who gave satisfaction ratings of three or less were asked why they were less than satisfied. Respondents provided the following reasons for being less than satisfied:

- *Rebate amount:* Saying the rebate amount should be higher dominated the responses.
- *Payment timeliness:* The most common response was that the rebate payment was slow.
- *Application form:* Less than satisfied respondents said the process was too complicated or there was too much paperwork.

- *Program overall:* Reasons for lack of satisfaction included: needing more information, the rebates should be higher, the program is wasteful, they did not receive or it took too long to receive the rebate, and the application was difficult.

Figure 3-26:
% Satisfied with Program Characteristics
(4 or 5 on five-point scale)





**Table 3-8:
Satisfaction with Program Characteristics**

	Equipment	Rebate Amount	Payment Timeliness	Application Form	Rebate Program Overall
5 - very satisfied	79%	56%	55%	41%	70%
4	15%	20%	20%	23%	21%
3	3%	16%	11%	6%	5%
2	1%	2%	5%	2%	1%
1 - not at all satisfied	0%	2%	4%	1%	1%
Don't know/refused	1%	3%	5%	3%	2%

n=300 for all program characteristics.

There were several statistically-significant differences in satisfaction with the program as a whole based on respondents' income, gender, concern for energy reduction, satisfaction with equipment, and reason for buying the equipment.

- *Income:* Respondents who did not report their income were less likely (67% of respondents) than those with incomes less than \$50,000 (80%) and those with incomes \$50,000 or more (79%) to report being very satisfied with the program as a whole.
- *Gender:* Women were more likely (94%) than men (88%) to be satisfied with the program as a whole.
- *Concern for energy reduction:* Respondents claiming no existing concern for energy reduction were more likely (100%) to be satisfied with the program as a whole than those claiming existing concern with energy reduction (92%).
- *Satisfaction with equipment:* Respondents who were satisfied with the rebated equipment were more likely (94%) than those not satisfied with the rebated equipment (59%) to report being very satisfied with the program as a whole.
- *Reason bought equipment:* Respondents reporting that they would have bought the equipment with or without the rebate program were more satisfied (96%) than those who reported that they would not have bought the equipment without the program (89%).



Respondents' satisfaction (95%) with the rebated equipment depended on income, concern with energy reduction, and satisfaction with the rebate program as a whole:

- *Income:* Respondents with household income greater than \$50,000 per year were more likely (98%) than those who did not report annual household income (90%) to be satisfied with the rebated equipment.
- *Concern with energy reduction:* Respondents who did not express a concern with energy consumption were more likely (100%) than those with a concern for energy consumption (95%) to be satisfied with the rebated equipment.

Respondents' satisfaction with the rebate amount depended on income levels, satisfaction with the rebated equipment and satisfaction with the program as a whole:

- *Income:* Respondents who did not report their income were less likely (69%) than those who earned \$50,000 or more (84%) to report being very satisfied with the rebate amount.
- *Satisfaction with equipment:* Respondents who were satisfied with the rebated equipment (80%) were more likely than those who were less than satisfied (20%) to say they were very satisfied with the rebate amount.

Satisfaction with the rebate application and paperwork (64%) depended on respondents' income levels, age, reason for program purchase, equipment satisfaction, and satisfaction with the program as a whole.

- *Income:* Respondents with household incomes greater than \$50,000 were more likely (72% of respondents) than those who did not report annual household income (56%) to be satisfied with the rebate application and paperwork.
- *Age:* Respondents 40 years old or younger were more likely (78%) than those 65 or older (59%) to be satisfied with the rebate application and paperwork.
- *Program motivation:* Respondents who purchased equipment for the rebate were more likely (69%) than those who did not (57%) to be satisfied with the rebate application and paperwork.

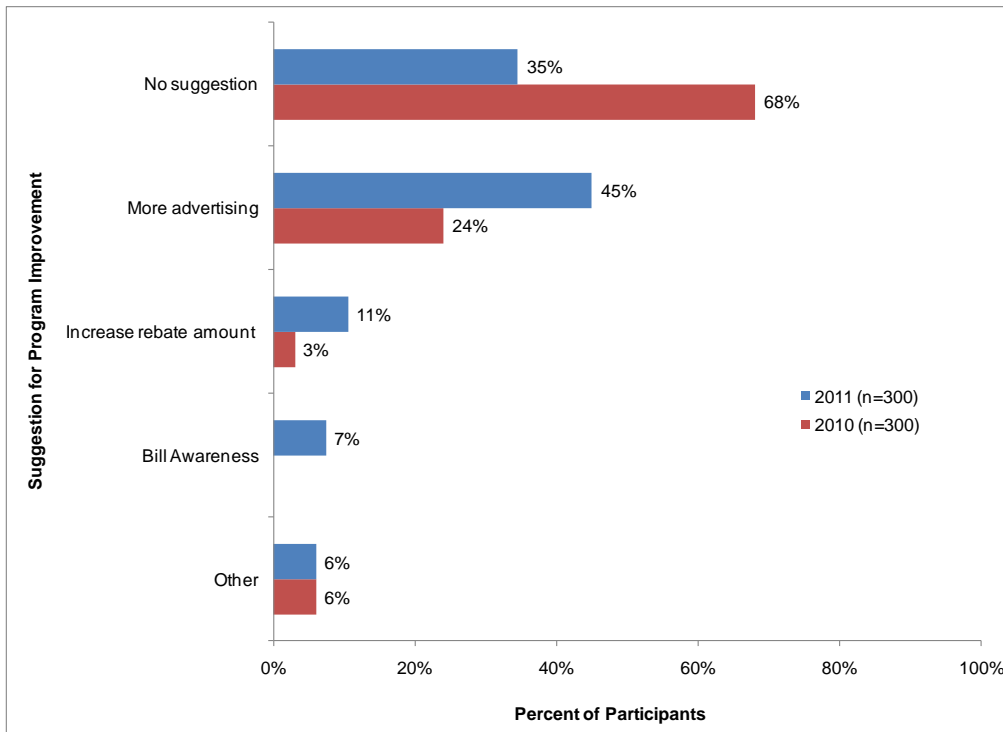


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- *Satisfaction with equipment:* Respondents who were satisfied with the rebated equipment were more likely (66%) than those who were less than satisfied (37%) to say they were very satisfied with the rebate application and paperwork.

3.2.10 Suggestions for Program Improvement

The survey asked respondents if there was anything their utility could do to improve the program. ~~Figure 3-27~~ [Figure 3-27](#) summarizes the responses. Over a third of respondents did not have a suggestion for improvement, a decrease from the 2010 evaluation value of 68 percent. Conversely, recommendations for more advertising increased from 24 percent to 45 percent. The majority of respondents who asked for more advertising were customers of MCAAA utilities. These respondents were also more likely than customers of MECA participating utilities to hear about the program from their HVAC contractors. In-depth interviews with the MCAAA program administrator revealed that neither MCAAA nor the participating utilities are doing much advertising of the program.

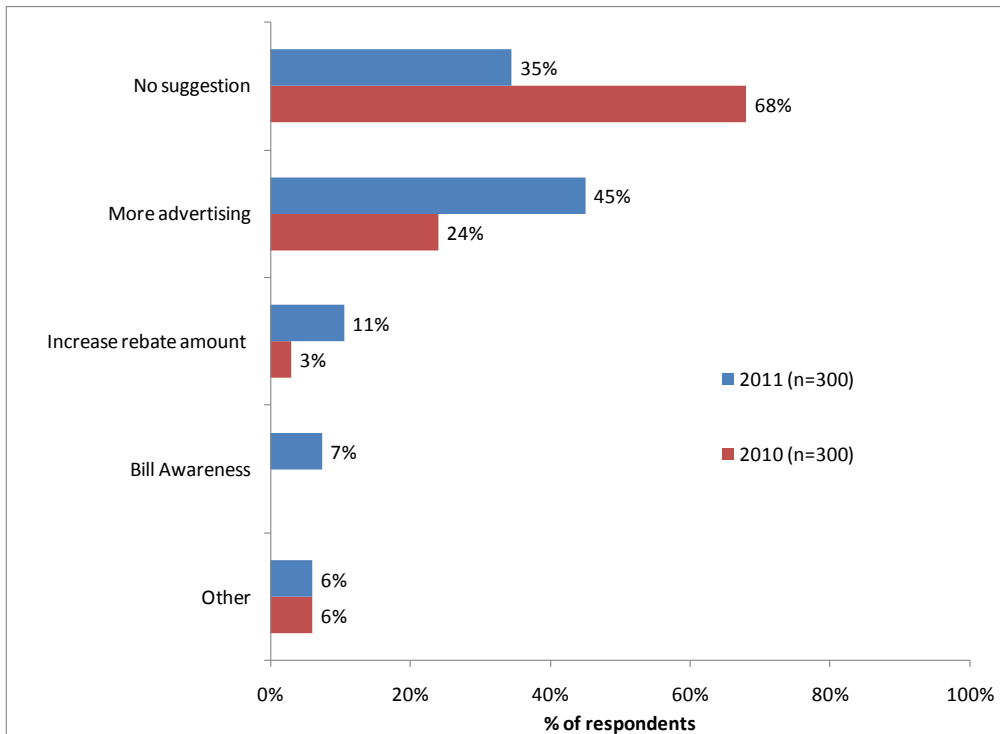
**Figure 3-27:
Suggestions for Program Improvements**



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

The survey also asked respondents if there were any energy efficiency technologies that they would like their utility to offer rebates for. [Figure 3-28](#) summarizes the responses. Most (59%) respondents did not provide a suggestion. This is similar to 2010 participants. The most often suggested rebate (22%) in 2011 was for energy efficient water heaters. This result may be due to the decision to drop rebates for water heating in 2011.

**Figure 3-28:
Suggestions for Additional Rebates**



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

3.3 Residential Appliance Recycling (RAR) Program

3.3.1 Summary of findings

The following are some highlights from the survey of 2011 RAR program participants:

- *The 2011 participants were very satisfied with the program, just as the 2010 participants had been:* Ninety-eight percent of the 2011 participants were satisfied with the program as a whole. Satisfaction levels with the various program aspects (the scheduling of the appliance pick-up, the pick-up itself, the dollar amount of the rebates, and the timeliness of the



rebates) were all above 90 percent with the exception of the rebate timeliness (89%). The 2010 participants had reported similarly high levels of satisfaction.

- *Reasons for dissatisfaction:* Respondents who provided a satisfaction rating of three or less for any program aspect were asked why they were less than satisfied. It should be noted that very few respondents fell into this category. Reasons for lack of satisfaction focused on logistical issues including difficulties scheduling a pick-up time, pick-up drivers not coming on the scheduled date, rebate payments taking too long to arrive, and that the rebates should have been larger.
- *The 2011 participants were much more likely than 2010 participants to have heard about the program through a bill insert or mailer:* We attribute this change to JACO finding that mailings were the most effective promotional channel in 2010 and therefore making greater use of these in 2011.
- *The 2011 participants were much more interested in getting the rebates and much less interested in the free or convenient pickup than the 2010 participants:* One possible explanation for this change is that 2010 was the first year of the program and the program may have tapped into some pent-up demand from customers who were especially anxious to get rid of old, inefficient secondary refrigerators. Once this subgroup was exhausted, the participants who were attracted by the rebate became a larger part of the participant population. We have noticed this pattern with other appliance recycling programs we have evaluated.
- *The 2011 participants were less likely than 2010 participants to say they would have kept the refrigerator in the absence of the program:* One possible explanation for this is that the 2011 participants were more likely than their 2010 counterparts to be recycling a main refrigerator (and thus less likely to be recycling a secondary refrigerator).
- *Most 2011 participants said they would have participated in the program without the rebate:* Despite the rebates being the dominant reason for participating in the program, most (62%) said they would have participated without the incentives.
- *Participation in the RAR program was the first time most of the respondents had disposed of a refrigerator or freezer.* This result is similar to what we found from the survey of 2010 participants.



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- *2011 participants were less likely than 2010 participants to say they would store the refrigerators unplugged and more likely to use the refrigerator as a spare:* One possible explanation for this is that the refrigerators that the 2011 participants were replacing were likely in better condition than those the 2010 participants were replacing and thus more suitable to be used as a spare. The reason for this is that the 2011 participants were more likely to be replacing main refrigerators and the 2010 participants were more likely to be replacing secondary refrigerators. Replaced main refrigerators are generally newer than secondary refrigerators.

3.3.2 Program Description

The Residential Appliance Recycling (RAR) program was launched in March 2010. The program is implemented in all electric utilities except Bayfield Electric Cooperative and Daggett Electric Department. The RAR program is the second-largest residential program in the MCAAA/MECA portfolio and the third largest overall. Incentives are provided to the customer for removing and recycling secondary appliances in working condition and within a given size range. Some utilities offer rebates for removing refrigerators and freezers and some for removing refrigerators only. [Table 3-9](#) shows the appliance removal options for each utility.

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**Table 3-9:
Appliances Removed by RAR Program by Utility**

Appliances Eligible	Utilities
Refrigerator	Alpena Edison Sault Michigan Indiana Power UP Power We Energies WPS Corp Xcel Electric
Refrigerator/ Freezer	Alger Delta Cloverland Escanaba Great Lakes Marquette Midwest Energy Newberry Ontonagon Presque Isle Stephenson Thumb Electric Tri-County Home Works

In 2011, the program planned to participate in recycling events with the Michigan Recycling Coalition. A small (\$10) incentive was to be provided to customers that brought room air conditioners or dehumidifiers to a collection event. However, in 2011 CLEAResult was unable to recruit any local agencies to participate in this room air conditioner and dehumidifier collection component. It does plan to re-launch this effort in 2012.¹⁶ This was the only change from the 2010 program.

3.3.3 Methodology

CLEAResult provided KEMA with a sample population of 892 customers who received rebates for recycling appliances from the RAR program. KEMA contracted Research America (RA) to conduct computer-aided telephone interviews (CATI) of program participants. RA called 840 participants from December 1, 2011 to January 31, 2012. They completed 400 interviews for a

¹⁶ December 14, 2011 email from Mikki Droste of CLEAResult



final response rate of 57 percent ([Table 3-10](#)~~Table 3-10~~). RA dialed phone numbers at least eight times over at least two weeks before being considered unreachable. The 57 percent response rate is comparable to the 61 percent response rate achieved in the 2010 evaluation.

Table 3-10:
Appliance Recycling CATI Dispositions

Sample Description	Number	Percent
Starting Sample	840	
Never Called	-	
Sample Used	840	
Known Not Eligible	114	
Estimated additional not eligible	28	
Sample-Valid	698	
Complete	399	57%
Refused	161	23%
Not Completed - Eligible	2	0%
Not Completed - Est. Eligible	136	20%

The CATI survey covered the following topics:

- Sources of information,
- Reasons for recycling appliances,
- Recall of who offered program,
- Net-to-gross questions,
- Program satisfaction,
- Attitudes towards energy efficiency, and
- Demographics.

The only major change in the survey instrument for 2011 was the addition of the energy efficiency attitude questions. KEMA limited the sample to Energy Optimization participants because they constituted the majority of Appliance Recycling participants.



3.3.4 Characterizing the Participants

The survey asked several attitude and demographic questions to help characterize the participants. The following are some highlights.

- *Awareness of ENERGY STAR:* About three-fourths (77%) of the respondents had heard of ENERGY STAR.
- *Concerns about energy use:* Almost all of the respondents were either very concerned (69%) or somewhat concerned (27%) about reducing their home's energy use. Respondents were concerned because of the cost of energy (92%), the environment (26%), and other reasons (15%) including power availability, dependence on foreign oil, and unspecified other reasons. The four percent of respondents who were "not at all concerned" about reducing their home's energy use thought they had already done everything they could, believed they were already conserving energy, or were fine with their homes the way they were.
- *Home ownership:* Almost all (98%) of respondents said they own their home.
- *House types:* Almost all (92%) of respondents said they live in a single-family detached home. Other types of home included mobile homes (6%) and single-family attached homes (1%).
- *Occupancy patterns:* About three-fourths (77%) of respondents said the home where the recycled appliance came from was not a seasonal home. The remaining 23 percent of respondents said the home was a seasonal home. Almost all (87%) of respondents said the home where the recycled appliance came from was occupied twelve months per year. About 11 percent said that home was occupied for less than twelve months per year. Two percent did not answer the question.
- *Household characteristics:* About three-fourths (74%) of the respondent households do not have children younger than 18 years old. About half (40%) of the households have a resident aged 64 or older.
- *Respondent education:* Respondent education levels varied as follows: high school diploma or less (41%), some college or trade school (21%), four-year college degree (21%), some graduate school or advanced degree (9%), did not answer question (8%).



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- *Respondent incomes:* Respondent 2010 pre-tax income levels varied as follows: less than \$50,000 (37%), \$50,000 or more (24%), did not answer question (39%).
 - *Respondent gender:* The respondents were fifty-five percent men and forty-five percent women.

These demographics are similar to the 2010 participants.

3.3.5 Program Awareness

Almost all (85%) of respondents said they heard about the RAR program before taking the survey. There were a few statistically significant¹⁷ differences in program awareness based on respondent education and awareness of ENERGY STAR as well as recycling of multiple appliances. The pattern of these relationships suggests that general awareness of energy efficiency is positively correlated with awareness of the RAR program.

- *Education:* The more education a respondent had, the more likely they were to say they had heard of the program prior to the survey. Eighty-one percent of respondents with a high school diploma or less said they heard of the program. In contrast, 92 percent of respondents with a four-year degree, and 97 percent with some graduate school or an advanced degree said they had heard of the program.
- *Awareness of ENERGY STAR:* Respondents who had heard of ENERGY STAR were more aware of the RAR program (90% of respondents) than those who had not heard of ENERGY STAR (69%).
- *Recycled multiple appliances:* Respondents who disposed of multiple appliances were more aware of the program (96%) than those who disposed of a single appliance (85%).

Overall RAR program awareness was slightly lower in 2011 than in 2010, when 91 percent of respondents said they had heard of the program before taking the survey. The relationship between education and program awareness was similar in 2010. The 2010 evaluation did not include the ENERGY STAR awareness question or analyze the effects of recycling multiple appliances.

¹⁷ All reported differences are statistically significant at the 90% confidence level.



3.3.6 Sources of Information

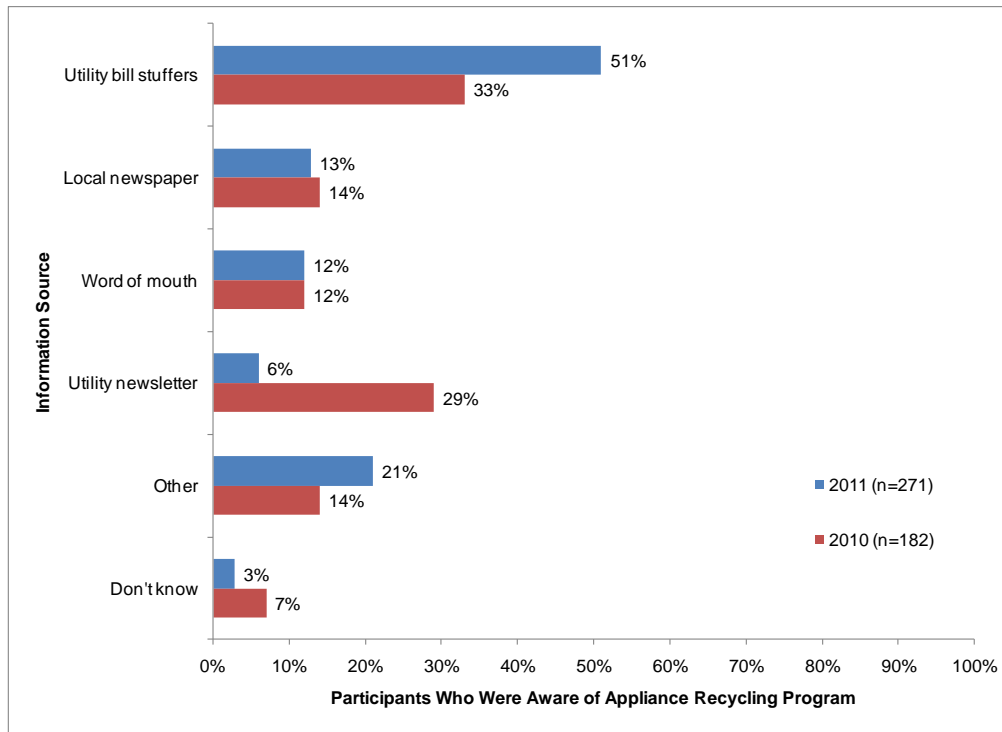
The survey asked respondents who said they were aware of the program how they first heard of it. About half (51%) said they first heard of it through utility bill inserts. Local newspapers and word-of-mouth sources were each mentioned by about one-tenth of the respondents. Only six percent of the 2011 participants reported first hearing about the program through a utility newsletter. Other sources of information, including state or national newspaper, utility website, the internet other than a utility's website, contractor, TV/radio, community events, magazines, and unspecified utility contacts were together mentioned by about 21 percent of participants (Figure 3-29).

A major difference between the 2011 and 2010 participants' source of information was that 2011 participants reported getting information from utility bill stuffers much more often and from utility newsletters much less often than 2010 participants. A JACO representative told the evaluators that mailers have been their most effective promotional activity for the program. For example, JACO had done a fairly large promotional mailing (25,000 pieces) in the Michigan Indiana service territory which produced "a pretty convincing spike in the number of orders taken weekly once that mailer went out." The increase in 2011 participants citing mailers/bill stuffers¹⁸ as their program information source may be an outcome of JACO learning in 2010 which marketing strategies were most effective for the EU/EO program and then relying more on those strategies (e.g. mailers) in 2011.

It is less clear why the number of participants citing utility newsletters/periodicals as their first source of program information declined in 2011. One possibility is that JACO's increased use of mailers simply meant that participants who might otherwise have heard about the program first by a utility newsletter are now hearing about the program first via a mailer. Another possibility is that some of the 2011 CATI surveyors may have simply miscoded a utility newsletter as a utility bill insert since these information sources are fairly similar.

¹⁸ We have found from previous evaluations that program participants usually cannot reliably distinguish between a program promotional piece that appears as a utility bill stuffer and a program promotional piece that appears as a separate mailer, especially when utility logos are appearing on the mailers.

**Figure 3-29:
Sources of RAR Program Information**



Note: Other includes a state or national newspaper, utility website, the internet other than a utility's website, contractor, TV/radio, community events, magazines, and unspecified utility contacts. The total exceeds 100% because respondents were allowed to give multiple responses.

There were several statistically-significant differences in the frequency with which different classes of 2011 participants cited their first sources of program information.

- **Newspapers:** Respondents in smaller households, with lower incomes, and without graduate degrees were more likely to read about the program through a newspaper. Although we did not look specifically at age-based differences in response level for this particular survey, there was evidence in the survey that having a small household was correlated with having a participant who was a senior. For example, only 17 percent of the households with three or more residents included a senior. In other evaluations we have also found that small



household size and having a lower income are correlated with program participants who are seniors.

- Households with three or more residents were less likely (8% of respondents) than those with two or fewer (15%) to hear about the program through local newspapers.
- Respondents who reported earning less than \$50,000 per year were more likely (17%) than those earning \$50,000 or more (8%) to cite local newspapers as their information source.
- Respondents with a high school degree or less or a four-year degree were more likely (16% and 15% respectively) than those with an advanced degree (3%) to say they heard about the program through local newspapers.
- *Word-of-mouth:* Respondents with higher incomes and larger households were more likely to hear about the program via word-of-mouth.
 - Households with three or more residents were more likely (17% of respondents) than those with two or fewer residents (8%) to hear about the program through word of mouth.
 - Those earning \$50,000 or more were more likely (18%) than those earning less than \$50,000 (9%) or who did not provide income (6%) to cite word of mouth information sources.
- *Utility bill inserts* Respondents who participated in order to get the rebates were more likely (55%) than those who did not participate for the rebate (46%) to hear about the program through utility bill inserts.
- *Utility website:* Respondents who recycled only freezers were more likely (8%) than those who recycled only refrigerators (1%) to hear about the program through a utility website.
- *Community events/local schools:* Respondents who were not aware of ENERGY STAR were more likely (6%) than those who were aware (<1%) to hear about the program from community events or local schools.



3.3.7 Reasons for Participation

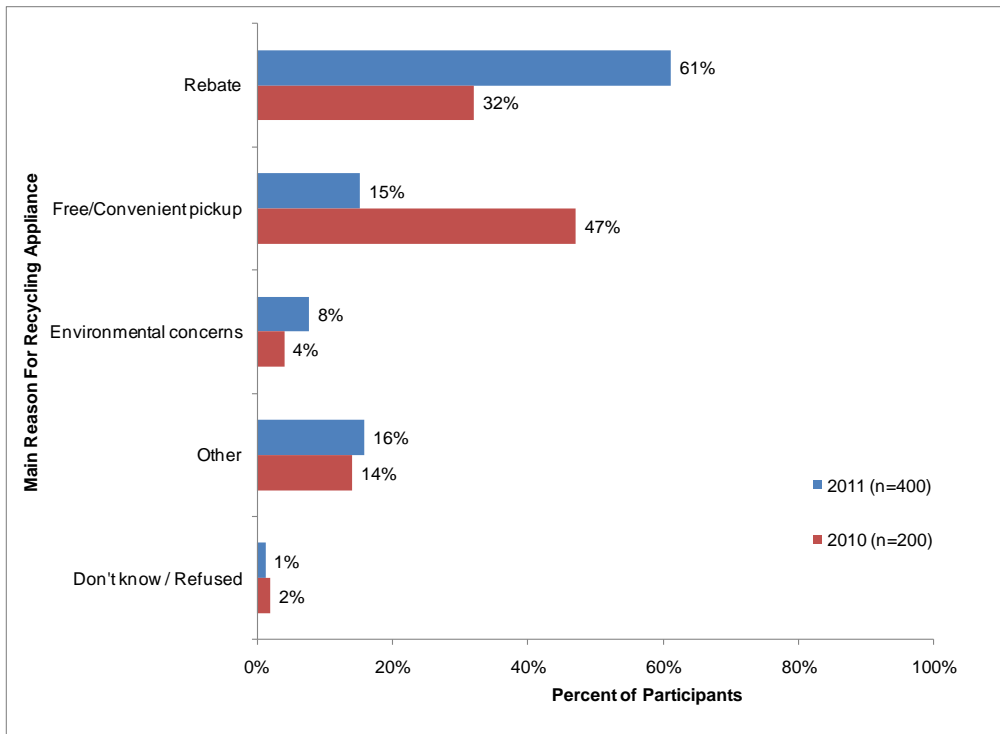
The survey asked respondents what was the main reason they chose the program to dispose of their appliance. ~~Figure 3-30~~Figure 3-30 summarizes the responses. The most common answer was to get the rebate (57%). The next most common answer was to get the free or convenient pickup of the old appliances (15%). A JACO representative told the evaluators that for most appliance recycling programs nationwide the convenience of appliance pickup is the most-cited reason for participation with getting the rebate usually being the second-most-cited reason (and this was the pattern for the EU/EO program in 2010). However, he also observed that in cases where the program rebates are on the high end, the rebate can be the most-cited motivation.

Eight percent of participants also cited pro-environmental reasons (e.g.: prevent Freon from entering the atmosphere). Sixteen percent of the participants cited other reasons such as lowering their electric bills, needing space, getting rid of old or broken appliances, and unspecified other reasons.

The figure also shows that participants in 2011 had different reasons for participating than those in 2010. 2011 participants were much more interested in getting the rebates and much less interested in the free or convenient pickup. One possible explanation for this change is that 2010 was the first year of the program and the program may have tapped into some pent-up demand from customers who were especially anxious to get rid of old, inefficient secondary refrigerators. Once this subgroup was exhausted, the participants who were attracted by the rebate became a larger part of the participant population. We have noticed this pattern with other appliance recycling programs we have evaluated. There was also evidence of this in the EU/EO survey. As discussed below, 2010 EU/EO participants were more likely to be recycling secondary refrigerators than the 2011 participants.

2011 participants also had many fewer secondary reasons for participating than their 2010 participants. Environmental concerns and other reasons for participating were comparable between the two years.

**Figure 3-30:
Primary Reason for Participating in Program**



Note: Other included: lowering electric bills, needing space, appliance was old or broken, and unspecified other reasons.

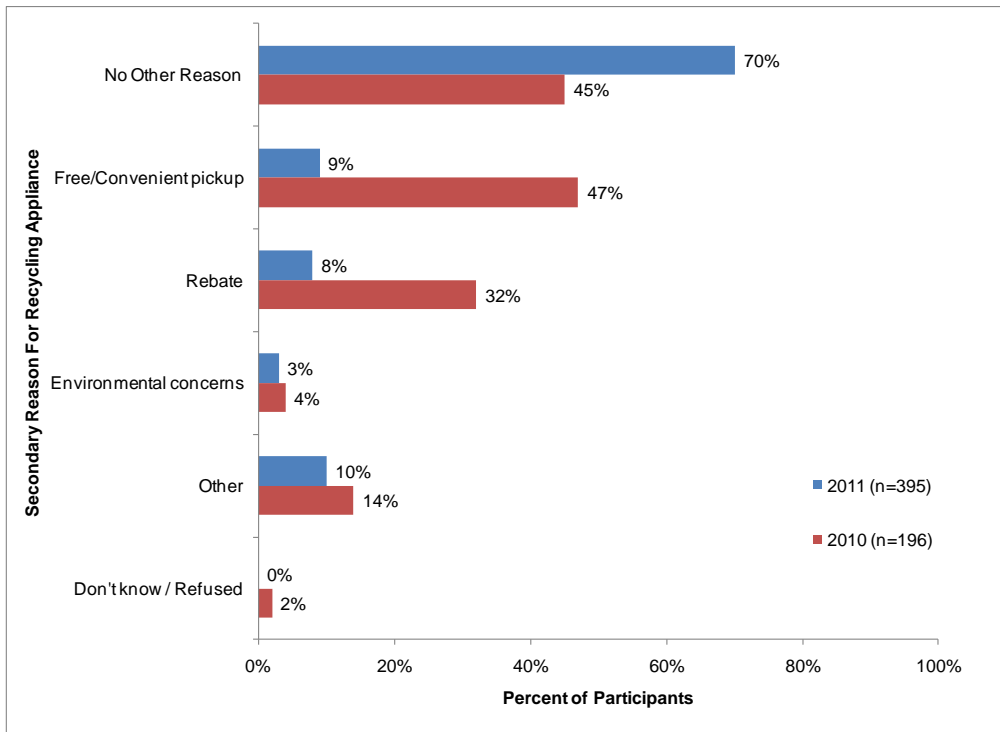
Whether the 2011 participants cited the program rebate as their primary reason for participating in the program was related to whether they were concerned about reducing their home's energy use. 2011 respondents who were concerned about reducing their home's energy use (56%) were less likely than those that were not concerned (79%) to state the rebate as their primary reason for participating in the program.

After the respondents provided their primary reason for using the program to dispose of their appliance, the survey asked if they had any other reasons for using the program. [Figure 3-31](#) summarizes the responses. Most (71%) respondents did not have any other reasons for participating in the program. About one-tenth of the respondents said the



free/convenient pickup (9%) or the rebate (8%) were secondary reasons for participating. A small number (3%) said environmental concerns were a secondary reason.

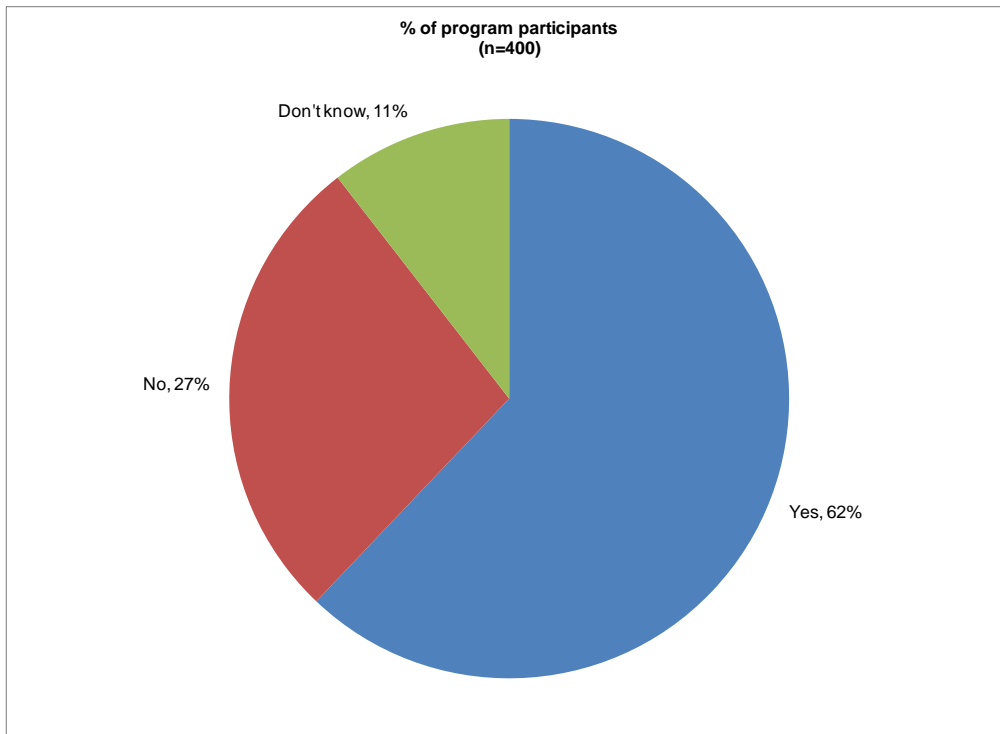
**Figure 3-31:
Secondary Reasons for Participating in Program**



Note: Other included: lowering electric bills, needing space, appliance was old or broken, and unspecified other reasons. The total exceeds 100% because respondents were allowed to give multiple responses.

The survey asked whether the respondents were aware of the program incentive before they scheduled the pickup of their appliance. Most (91%) said that they were. The survey also asked whether respondents would still use the disposal service if there were no incentive offered. About two-thirds (62%) of respondents said they would. About one-fourth (27%) said they would not and the remainder (11%) said they did not know (Figure 3-32). These responses are similar to the 2010 evaluation.

Figure 3-32:
Would Respondents Use Program Without Incentives



There were several statistically-significant differences in respondents' interest in using the program without the incentive depending on household size, program satisfaction, and awareness of ENERGY STAR.

- *Household size:* Households with one or two residents were more likely (66% of respondents) than those with three or more residents (56%) to say they would use the program without the incentive. This finding probably may have to do with transportation capability – the households with two or fewer members have a higher percentage of elderly residents who would not be able to move a refrigerator without help.
- *Program satisfaction:* Respondents who were satisfied with the program were more likely (67%) than those who were less than satisfied with the program (47%) to say they would use the program without the incentive.

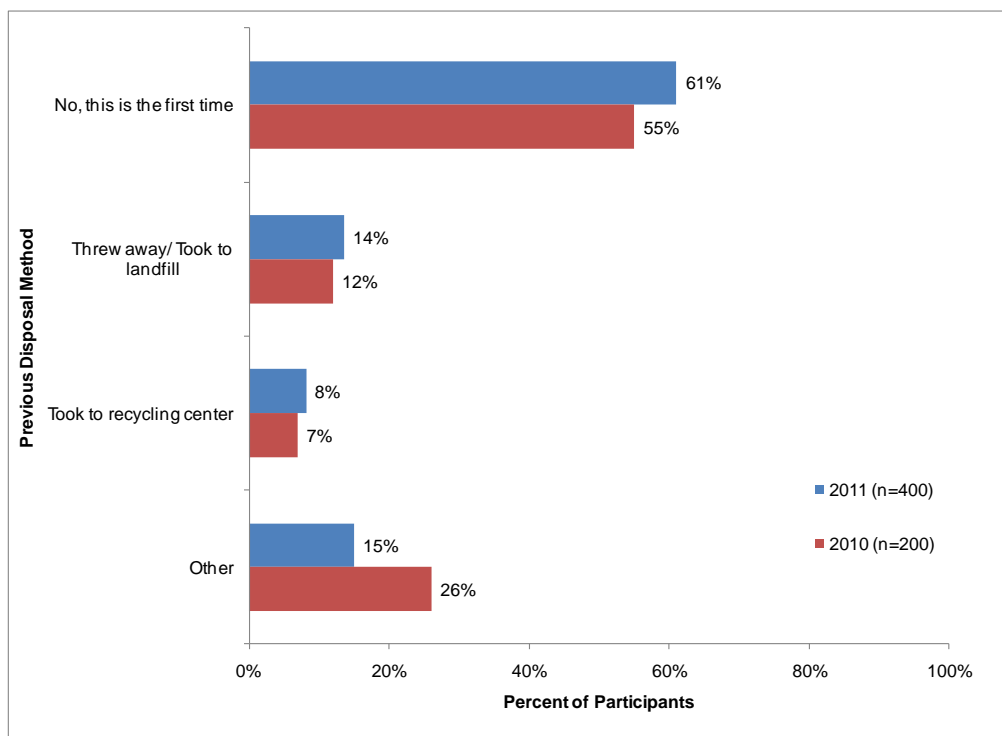


- *Awareness of ENERGY STAR:* Respondents who were aware of ENERGY STAR were less likely (59%) than those not aware of ENERGY STAR (74%) to use the program without the incentive.

The survey asked how respondents disposed of refrigerators or freezers in the past. The majority (61%) of respondents said this was the first time they had disposed of one. About a tenth said they had thrown away or taken old appliances to a landfill (14%), or taken them to a recycling center (8%; [Figure 3-33](#)). These responses are similar to the 2010 evaluation.

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**Figure 3-33:
Previous Means of Disposing of Appliances**

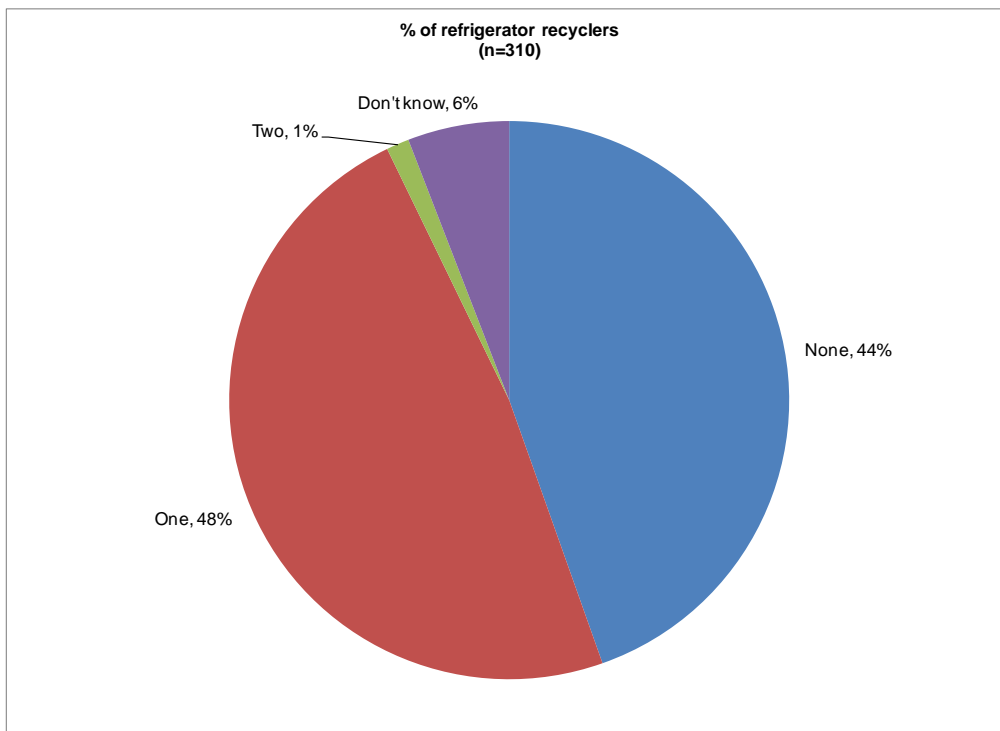


Note: Other answers included: sold to used appliance dealer, set out on the curb, taken by installer of new unit, donated to charity, sold to individual, and gave to an individual. The total exceeds 100% because respondents were allowed to give multiple responses.

3.3.8 Use of Disposed Appliances

The survey included a series of questions to assess how the respondents were using the recycled refrigerators and freezers before disposing of them through the program. Respondents said that about one-half (49%) of recycled refrigerators were being used as main refrigerators immediately prior to disposal ([Figure 3-34](#)). Respondents in the Upper Peninsula (65%) were more likely than those in the Lower Peninsula (43%) to recycle a main refrigerator. 2011 participants (49%) recycled a higher percentage of main refrigerators than 2010 participants (31%).

Figure 3-34:
Number of Recycled Refrigerators Used as Main Refrigerators

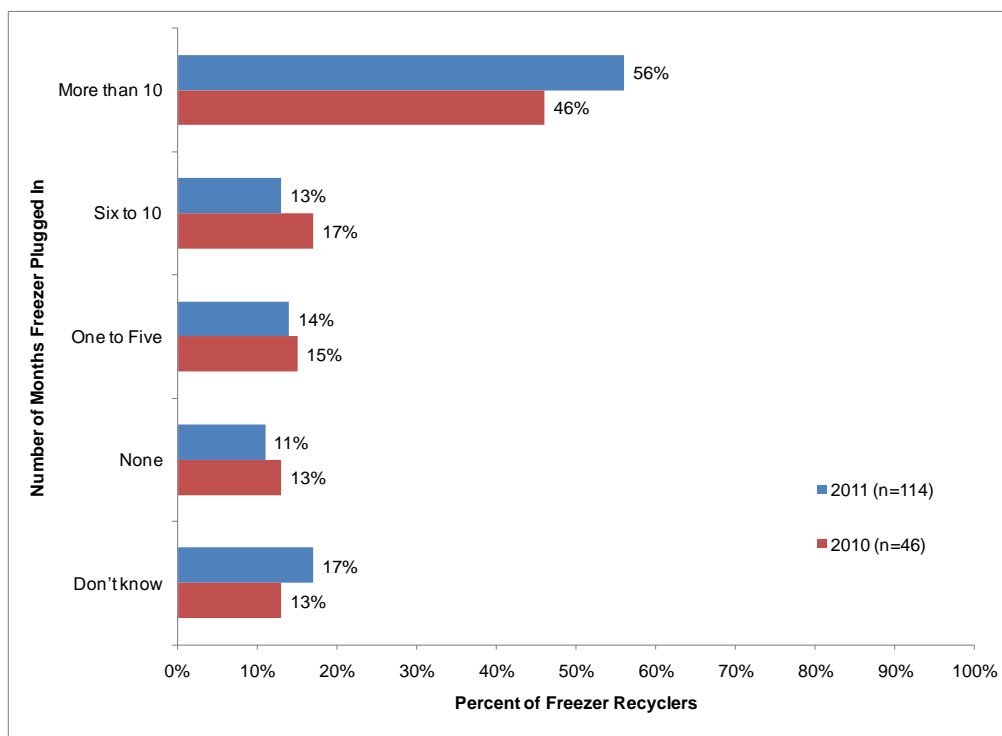


The survey did not ask if recycled stand-alone freezers were being used as main freezers. Instead, it asked whether the recycled freezers were plugged in and running immediately prior to disposal. Almost all (89%) of respondents who recycled a freezer said that the recycled unit

was plugged in and running immediately prior to being recycled. Respondents who recycled a single appliance (95%) were more likely than those who recycled multiple appliances to recycle a freezer that had been plugged in (67%).

A follow-up question asked freezer recyclers how many months per year the recycled unit was plugged in. Over half (56%) said that it was plugged in more than 10 months per year. Thirteen percent said it was plugged in for six to ten months, 13 percent said it was plugged in one to five months. Eleven percent of respondents said the recycled refrigerator was never plugged in (Figure 3-35). These findings are similar to those in the 2010 evaluation.

**Figure 3-35:
Months per Year Recycled Freezers Plugged In**





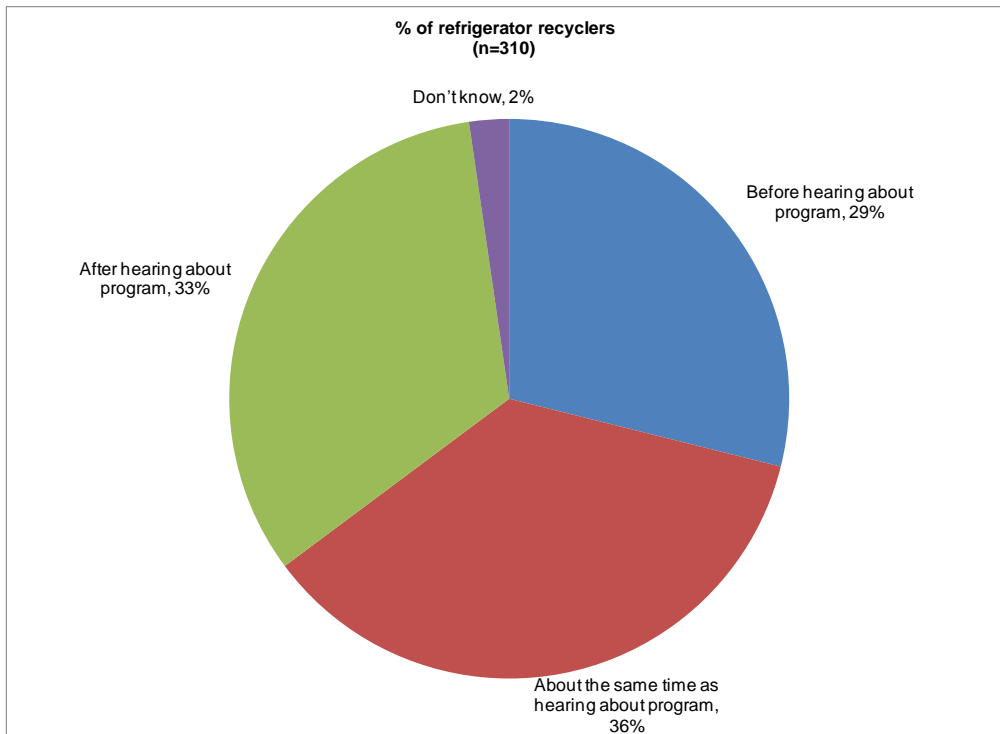
3.3.9 Program Attribution

A full report of program attribution and net-to-gross ratio will be included in the impact report. However, the survey asked several process questions relevant to program attribution. The survey asked when respondents decided to dispose of their refrigerator relative to when they heard about the RAR program. Responses were roughly evenly distributed between making the decision before hearing about the program (29%), making the decision at about the same time as hearing about the program (36%), and making the decision after hearing about the program (33%; [Figure 3-36](#)). These findings are about the same as for 2010 participants.

There were statistically significant differences depending on respondent income and the necessity of the incentive.

- *Income:* Respondents who earned less than \$50,000 were more likely (38%) than those who earned \$50,000 or more (21%) or did not provide their income (25%) to decide to dispose of their refrigerator before hearing about the program.
- *Necessity of incentive:* Respondents who would have used the program without the incentive were more likely (32%) than those who would not have used the program without the incentive (23%) to decide to dispose of their refrigerator before hearing about the program.

**Figure 3-36:
Refrigerator Disposal Decision Timing**



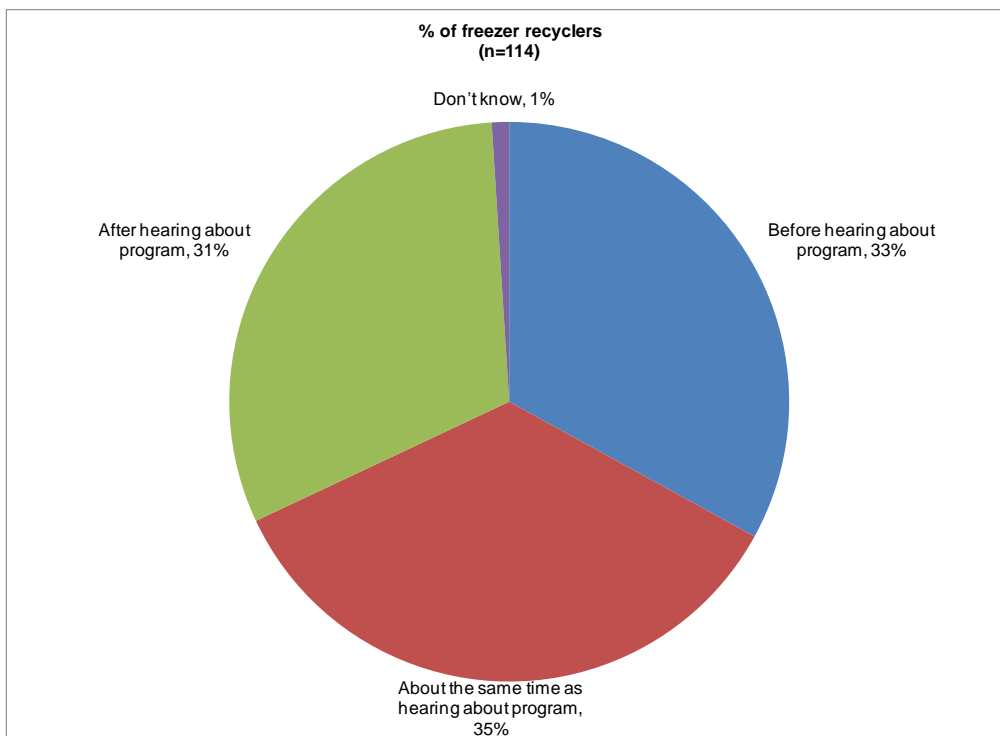
The survey also asked respondents who recycled a freezer when they decided to dispose of the unit relative to hearing about the program. As for refrigerators, responses were evenly distributed among before hearing about the program (33%), about the same time (35%), and after hearing about the same program (31%; [Figure 3-37](#)). These results are also similar to 2010.

There were a few statistically significant differences in freezer disposal decision timing depending on household size and disposal of multiple appliances.

- **Household size:** Respondents with one or two household members were more likely (36% of respondents) than those with three or more members (20%) to decide to dispose of the freezer after hearing about the program.

- *Multiple appliance disposal:* Respondents who disposed of multiple appliances were more likely (42%) than those who disposed of only one freezer (30%) to decide to dispose of the freezer(s) after hearing about the program.

**Figure 3-37:
Freezer Disposal Decision Timing**



Next, the survey asked participants who had refrigerators picked up what they would have done with the refrigerator if the program did not exist. About one-fourth (27%) said they would have kept it. Twenty-one percent said they would have thrown it away or taken it to a landfill, and 18 percent said they would have taken it to a recycling center. About 13 percent of respondents said they did not know what they would have done without the program ([Figure 3-38](#)).

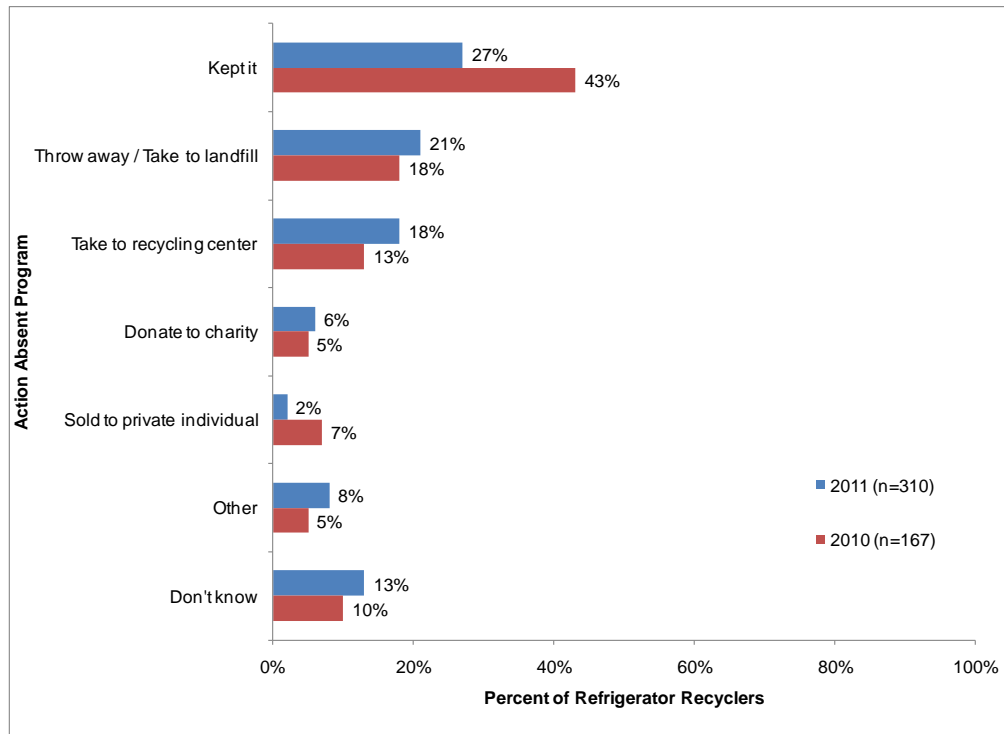


There were a few statistically significant differences in whether the respondent would have taken the refrigerator to a recycling center depending on household size and respondent education.

- *Household size:* Respondents with three or more household members were more likely (35%) than those with one or two household members (23%) to say they would take the refrigerator to a recycling center. This finding probably has to do with transportation capability – the households with two or fewer members have a higher percentage of elderly residents who would not be able to move a refrigerator without help.
- *Education:* Respondents with some graduate school or an advanced degree were less likely (7%) than those with a four-year degree (32%), some college (36%), or no college (23%) to say they would have taken the refrigerator to a recycling center.

2011 participants were less likely than 2010 participants to say they would have kept the refrigerator in the absence of the program. One possible explanation for this is that, as mentioned above, the 2011 participants were more likely than their 2010 counterparts to be recycling a main refrigerator (and thus less likely to be recycling a secondary refrigerator). When one is replacing an old main refrigerator with a new one, if one does not have the space or the need to turn the old main refrigerator into a spare refrigerator, then there will likely be more urgency in getting rid of this refrigerator. However, if one already has a secondary refrigerator set up in one's basement or garage, there is likely less urgency to get rid of it. Other actions of the 2011 participants were similar to those of the 2010 participants.

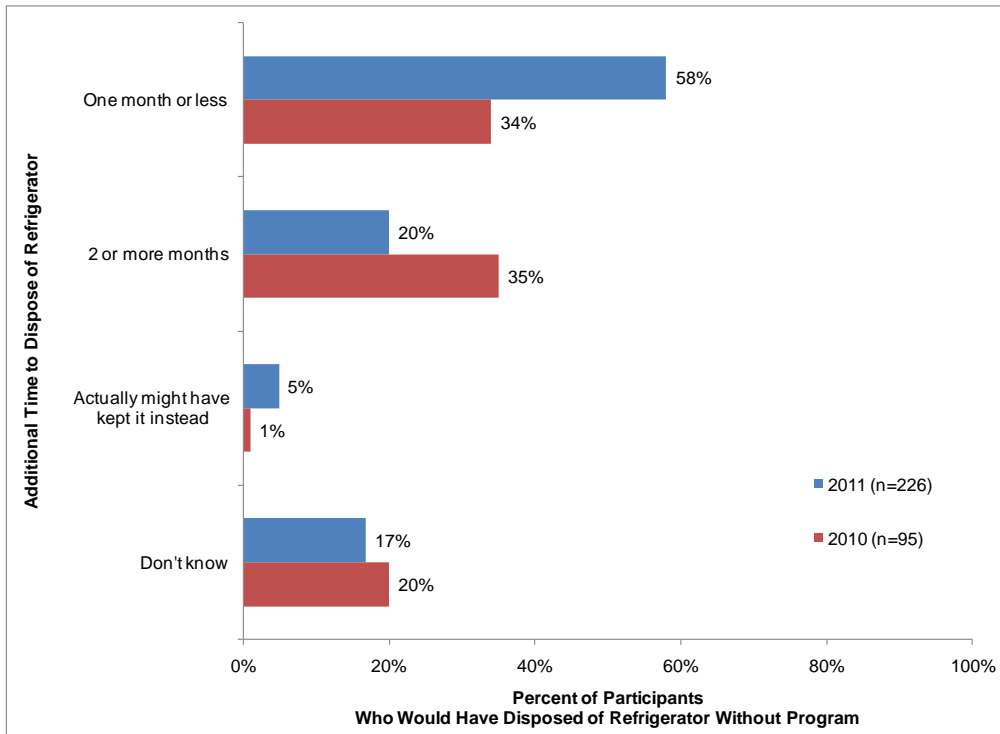
**Figure 3-38:
Refrigerator Recyclers' Likely Actions Absent Program**



Note: Other includes: removed by installer, sold to used appliance dealer, and give to friend/relative.

The survey included several questions to help determine how much the program accelerated refrigerator disposal. Respondents who said they would have disposed of the refrigerator without the program were asked how many months it would have taken them to do so. The majority (58%) said it would have taken them one month or less to dispose of the refrigerator with another 20 percent saying. [Figure 3-39](#) shows the full range of responses. The results show much less acceleration of the disposal process in 2011 than in 2010.

**Figure 3-39:
Refrigerator Disposal Acceleration
Additional Months to Dispose**



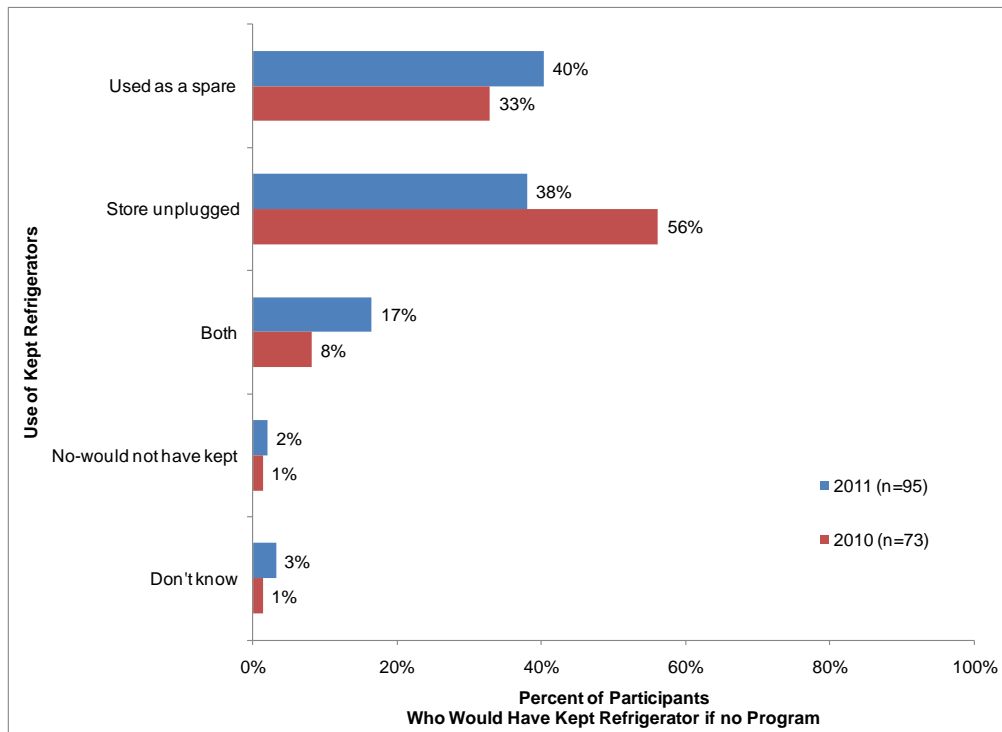
The survey asked participants who said they would have kept the refrigerator without the program how they would have used it. The most common answer was to use it as a spare (40%), followed closely by storing it unplugged (38%). Seventeen percent said they would have used it as an unplugged-in spare ([Figure 3-40](#)).

2011 participants were less likely than 2010 participants to say they would store the refrigerators unplugged and more likely to use the refrigerator as a spare. One possible explanation for this is that the refrigerators that the 2011 participants were replacing were likely in better condition than those the 2010 participants were replacing and thus more suitable to be used as a spare. The reason for this is that the 2011 participants were more likely to be replacing main refrigerators and the 2010 participants were more likely to be replacing

secondary refrigerators. Replaced main refrigerators are generally newer than secondary refrigerators.

But if the refrigerators that the 2011 participants were taking out were likely to be newer and in better condition than the secondary refrigerators that the 2010 participants were taking out, why did the 2011 participants say they were less likely to keep their refrigerators in the absence of the program (see [Figure 3-38](#) ~~Figure 3-38~~)? One explanation for this is that whether one turns a replaced main refrigerator into a spare refrigerator is dependent not only on the condition of the refrigerator but also on whether one has room for or need for a spare. As noted, when one is replacing an old main refrigerator with a new one, if one does not have the space or the need to turn the old main refrigerator into a spare refrigerator, then there will likely be more urgency in getting rid of this refrigerator than if the refrigerator one is replacing is a spare one in one's basement or garage.

**Figure 3-40:
How Participants Would Have Used Refrigerators**





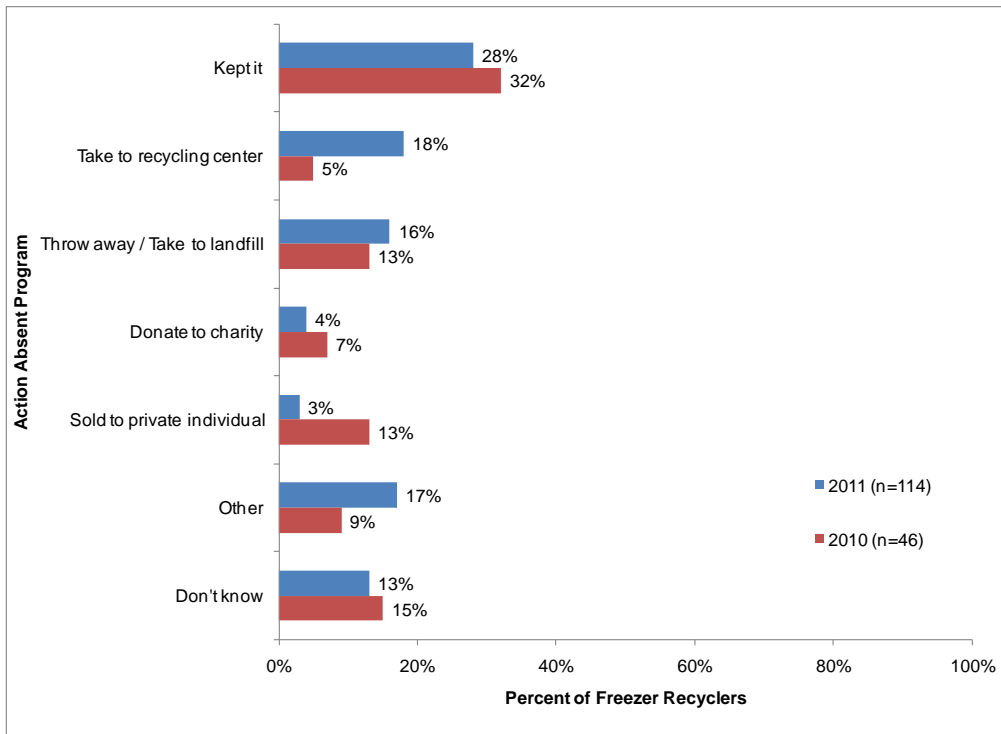
The 2011 participant responses differed based on household size and ENERGY STAR awareness.

- *Household size:* Respondents with three or more household residents were more likely (62% of respondents) than those with one or two residents (32%) to say they would store the refrigerator unplugged.
- *ENERGY STAR awareness:* Respondents who were aware of ENERGY STAR were less likely (30%) than those not aware (61%) to say they would store the refrigerator unplugged.

The survey asked a similar series of questions of freezer recyclers. First, it asked freezer recyclers what they would have done with the freezer absent the program. If they said they would have disposed of it anyway, the survey asked how many additional months they would have kept it. For those who said they would have kept it without the program, the survey asked how they would use it.

About one-fourth (25%) of freezer recyclers said they would have kept the freezer if the program did not exist. The next-most-cited actions included taking it to a recycling center (18%) and throwing it away or taking it to a landfill (16%). [Figure 3-41](#) shows the full range of responses. 2011 participants were more likely than 2010 participants to say they would take their freezer to a recycling center and less likely to sell to a private individual if the program did not exist.

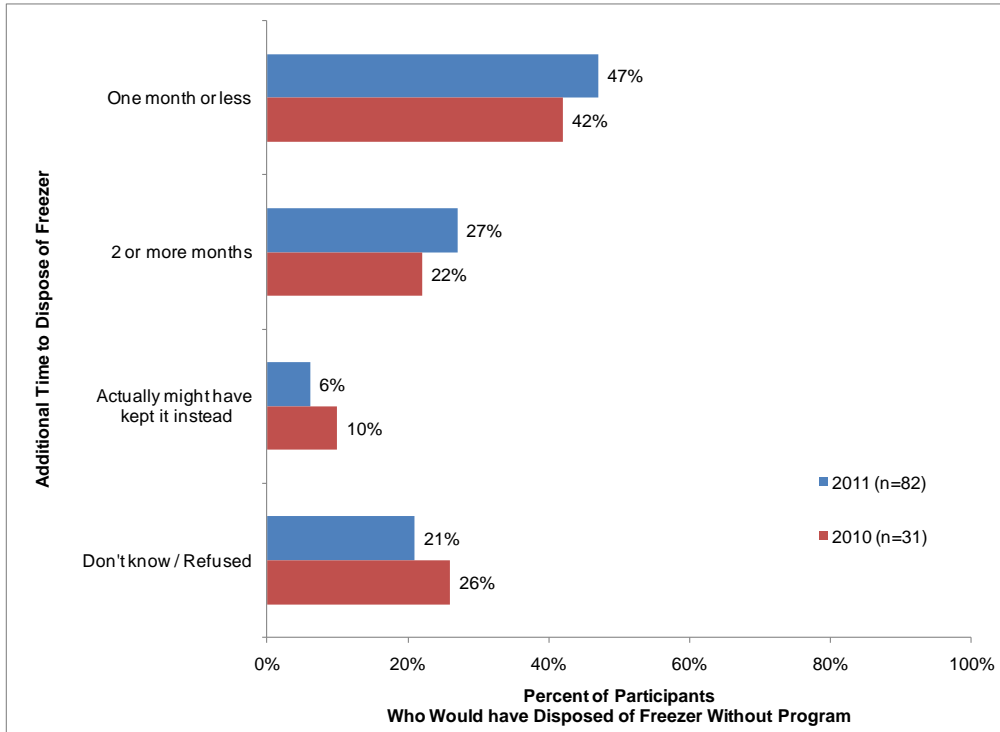
**Figure 3-41:
Freezer Recyclers' Likely Actions Absent Program**



Note: Other included: picked up by installer of new appliance, sold to used appliance store, give it to a friend or relative, and unspecified other actions.

The survey asked respondents who said they would have disposed of the freezer without the program and how many months it would have taken them to dispose of the freezer. Almost half (47%) said it would have taken them one month or less. Another quarter (27%) said it would have taken them two or more months. [Figure 3-42](#) shows all the responses. These results are similar to 2010.

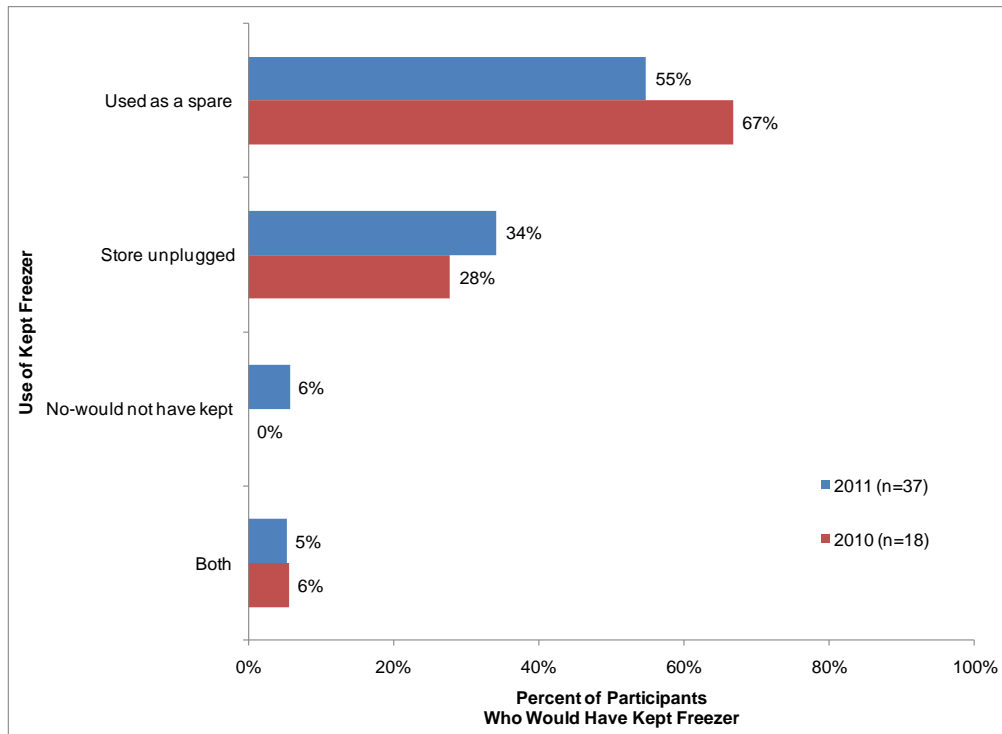
**Figure 3-42:
Freezer Disposal Acceleration
Additional Months to Dispose**



The survey asked respondents who said they would have kept the freezer how they would have used it. About half (55%) said they would have kept it as a plugged-in spare and about one third (34%) said they would have kept it unplugged. [Figure 3-43](#) shows all the responses. These findings are similar to 2010 participants.

In 2011, respondents whose primary reason to participate in the program was to get the rebates (19%) were less likely than those who participated for other reasons (53%) to say they would have stored their freezer unplugged.

**Figure 3-43:
How Participants Would Have Used Freezers**



3.3.10 Satisfaction

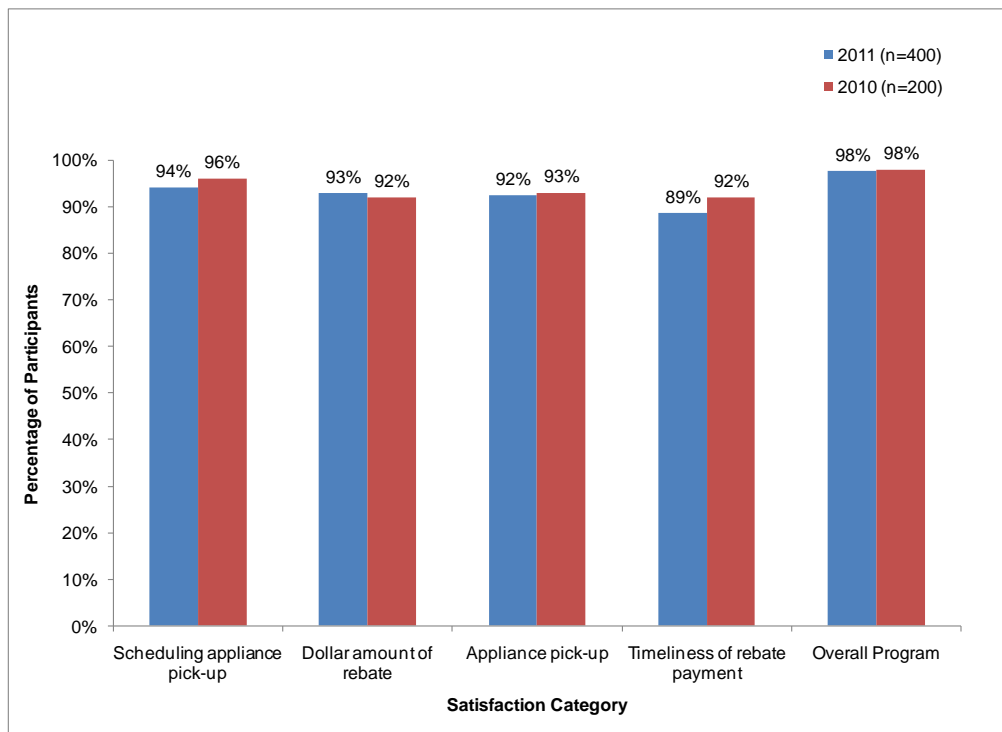
The survey asked a series of questions about respondents' satisfaction levels with several characteristics of the program. Respondents answered on a five-point scale where 5 meant "very satisfied" and 1 meant "not at all satisfied." Satisfaction with the program was high for all questions asked ([Figure 3-44](#)). Almost all respondents were satisfied (4 or 5 on the five-point scale) with the scheduling process (94%), the payment amount (93%), the pickup itself (92%), the timeliness of the rebate payment (89%), and the program overall (98%). These results are similar to 2010.

Respondents who provided a satisfaction rating of three or less (on a five point scale) for any program aspect were asked why they were less than satisfied. It should be noted that very few respondents fell into this category. Reasons for lack of satisfaction focused on logistical issues



including difficulties scheduling a pick-up time, pick-up drivers not coming on the scheduled date, rebate payments taking too long to arrive, and that the rebates should have been larger.

Figure 3-44:
% Satisfied with Program Characteristics
(4 or 5 on five-point scale)



There were a few statistically significant differences in satisfaction depending on the type of appliance recycled and respondent education:

- *Type of appliance recycled:* Respondents who recycled both a refrigerator and freezer were more likely (96%) than those who recycled only a refrigerator (86%) or only a freezer (85%) to say they were satisfied with the length of time they had to wait for their scheduled pick-up appointment.



-
- *Respondent education:* Respondents with an advanced degree were less likely (87%) than those with a four year degree (99%), some college (98%), or a high school diploma or less (99%) to say they were satisfied with the program overall (4 or 5 on the five-point scale).



3.4 Residential Low Income Program

3.4.1 Program Description

The Residential Low Income (RLI) Program is implemented through a pre-existing and ongoing assistance program that aids income-qualified customers in obtaining weatherization products and services and high efficiency appliances. Electric measures include refrigerators and CFLs. Natural gas measures include air sealing, insulation, programmable thermostats, furnaces, and furnace tune-ups. The MCAAA/MECA portion of the program began implementation in November 2009. The program is offered through community action agencies and is available in all utility service territories. The RLI Program is the fourth largest program in the MCAAA portfolio. Key program changes for 2011 included the addition of furnace tune-ups as a qualified measure and the exclusion of high efficiency water heaters.

3.4.2 Methodology

3.4.2.1 Program Survey Results

CLEAResult provided KEMA with a sample population of 1,048 participants in the RLI Program as of September 9, 2011. KEMA contracted with Research America (RA) to conduct computer-aided telephone interviews (CATI) of program participants. RA completed interviews with 250 program participants in November and December, 2011. The final response rate was 38 percent. About 10 percent of the sample was ineligible, mostly due to disconnected phone numbers. RA dialed numbers at least eight times over at least two weeks before considering the number unreachable. Table 3-11 summarizes the call dispositions.

The 38 percent response rate attained in this phase of the evaluation was substantially better than the response rate attained in the 2010 evaluation (29 percent).



**Table 3-11:
Low Income CATI Call Dispositions**

Sample Description	Number	Percent
Starting Sample	1,048	
Never Called	184	
Sample Used	864	
Known Not Eligible	132	
Estimated additional not eligible	80	
Sample-Valid	652	
Complete	250	38%
Refused	148	23%
Not Completed - Eligible	7	1%
Not Completed - Est. Eligible	247	38%

The CATI survey included questions on the following topics:

- Sources of information about the RLI Program;
- Satisfaction with the installed equipment;
- Satisfaction with the installation contractors;
- Satisfaction with the program overall; and
- Demographics.

A key update to the survey instrument for 2011 was the exclusion of questions about programmable thermostat use. KEMA excluded these questions at the request of the MCAAA program administrator.

KEMA stratified the population based on the type of equipment participants received. The reported results are weighted by the number of participants in the population strata divided by the number of completed surveys.

3.4.3 Characterizing the Participants

The survey asked a series of demographic questions to help characterize the Low Income program participants. Highlights are summarized below:

- *Home ownership:* Most (89%) participants own their homes.



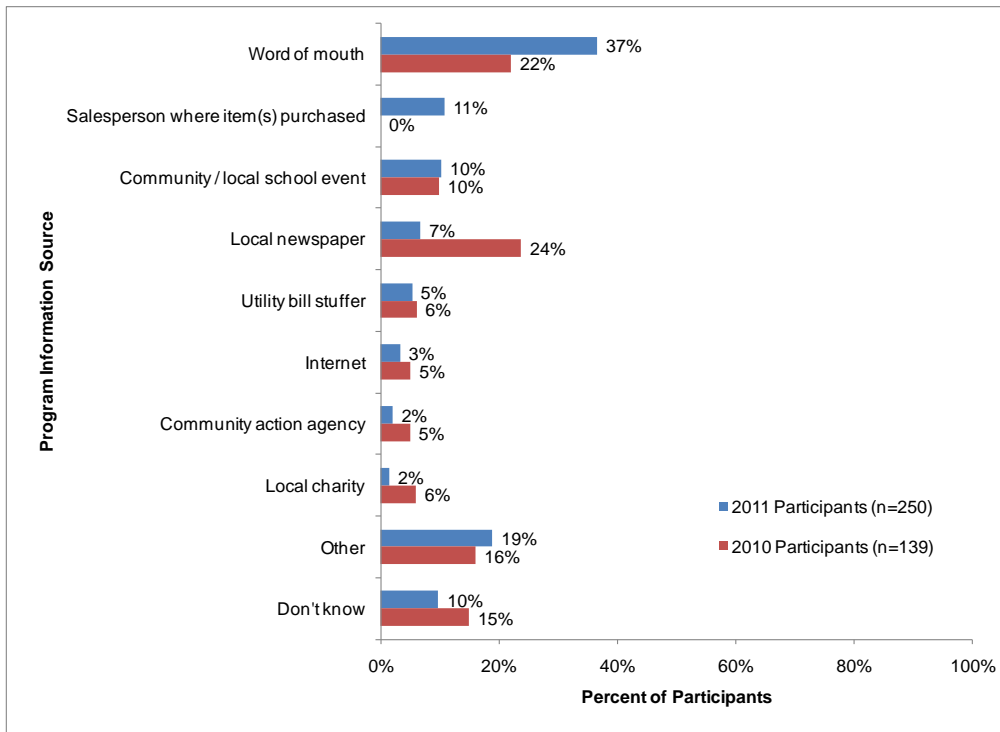
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- *House characteristics:* A majority (63%) of participants live in detached, single-family homes. Some (20%) live in mobile homes, or attached, single-family homes (6%). Four percent live in apartment buildings.
 - *Home occupancy:* Virtually all (99+%) participants live in their homes 12 months per year.
 - *Household size:* The participants covered a range of household sizes: 1 resident (30%); 2 residents (30%); 3 residents (14%); four residents (9%); five or more residents (13%).
 - *Respondent age:* Respondent age was fairly evenly distributed: 18-46 years old (29%); 47 to 64 years old (32%); 65 or older (35%).
 - *Respondent education:* Respondent education level was weighted toward the low end: high school diploma or less (54%); some college or trade school (31%); four-year college degree (10%); some graduate school or an advanced degree (4%); did not answer (1%).
 - *Respondent income:* Respondent 2010 pre-tax income levels varied as follows: less than \$5,000 per year (5%); \$5,000—\$9,999 per year (17%); \$10,000—\$14,999 (23%), \$15,000—\$19,999 (17%), \$20,000—\$29,999 (15%), \$30,000—\$49,999 (7%), \$50,000 or more (0%); did not answer (15%).

Compared to 2010, 2011 participants are slightly less likely to own their own homes, less likely to live in single-family detached homes, more likely to live in mobile homes, and have slightly lower incomes.

3.4.4 Sources of Information

The survey asked respondents where they first heard about the program. Word of mouth (from family, friends or relatives) was the dominant mode in 2011, with 37 percent of interviewees citing it as their primary source of information. The next most-cited sources were a salesperson at the store where the rebated product was purchased and a community or local school event, at 11 percent and 10 percent, respectively. Another seven percent indicated they read about the program in a local newspaper, while five percent said they read about it in a utility bill insert, and three percent found out about it on the Internet. A variety of other sources of information, including TV, radio, government agencies, state or national newspapers, and other (unspecified) sources accounted for a combined 19 percent of responses. Roughly 10 percent of respondents did not know or did not remember where they heard of the program ([Figure 3-45](#)~~Figure 3-45~~).

**Figure 3-45:
Sources of Information about Program**



Note: Other includes TV, radio, government agency, state/national newspaper, and other (unspecified). The totals exceed 100% because respondents were allowed to give multiple responses.

Relative to 2010, the importance of word of mouth and salesperson referrals increased substantially in 2011. In contrast, the importance of ads or articles in local newspapers decreased substantially. This pattern suggests that the program is maturing and some “buzz” may be developing. The Low Income program manager theorized that this drop in the percentage of participants citing newspapers may have been a result of the declining media attention on the American Recovery and Reinvestment Act (ARRA - Public Act 295). She said that in 2010 there were many ARRA-related stories in the local newspapers and since a significant portion of ARRA dollars were going to fund low-income energy efficiency projects, these news articles provided some publicity for these low-income programs. When the frequency of these ARRA-focused newspaper articles declined in 2011, this meant that fewer customers heard about the Low Income Program from this source.



The frequency with which program participants cited these first sources of program information did vary, to a statistically-significant degree based on their age, income, and whether they were with Efficiency United or Energy Optimization.

- *Word-of-mouth*: Participants in the youngest age group (< 47 years old) were more likely to have heard about the program through word-of-mouth (48% of respondents) than those in the middle 47-64 age group (29%) or seniors (34%).
- *Newspapers*:
 - Participants in the 47-64 age group and seniors (8% of respondents in each group) were more likely to have heard about the program through newspapers than those in the youngest age group (1%).
 - Efficiency United participants were more likely to have heard about the program from local newspapers (9%) than Energy Optimization participants (2%).
- *Government agencies*: Participants from the 47-64 age group were most likely (13%) to have heard about the program from a government agency than seniors (2%) or those in the youngest age group (6%).
- *Radio/TV*: Participants in the slightly higher income group (>\$15K in 2010 household income) were more likely (7% of respondents) to have heard about the program through radio or TV than those who earned less than \$15,000 annually (<1%).

3.4.5 Satisfaction

3.4.5.1 Satisfaction with Installed Equipment

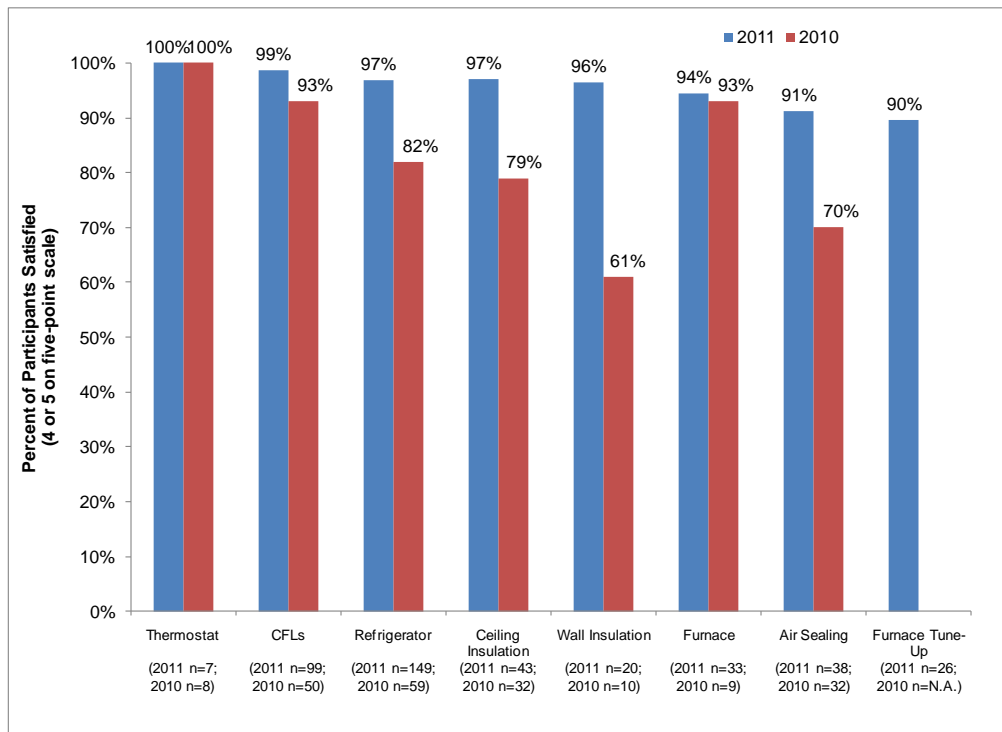
The survey asked how satisfied respondents were with the installed equipment. The respondents answered using a five-point scale anchored at five for “very satisfied” and one for “not at all satisfied.” In general, participants were well-satisfied: at least 90 percent of participants were satisfied with every type of measure installed in 2011.

[Figure 3-46](#) compares the percentage of satisfied (4 or 5 on the five-point scale) respondents by measure type in 2011 and 2010. [Table 3-12](#) shows the full range of equipment satisfaction ratings for the 2011 participants. Satisfaction with most measure types

increased in 2011. This increase was most notable for wall insulation and air sealing. There are several possible explanations for these improvements.

- They reflect real improvements in the quality or performance of the measures themselves.
- It is also possible that the agencies did a better job of educating recipients about the measures they received.
- The differences could be statistical artifacts caused by a low number of completes. The number of completes for some measures, particularly wall insulation, are low in 2011 and even lower in 2010. Fewer completes means outliers (or their absence) can have a strong effect on the results.

**Figure 3-46:
% Satisfied with Equipment
2011 vs. 2010 Participants**





**Table 3-12:
2011 Participants
Equipment Satisfaction Ratings**

Satisfaction	Thermostat (n=7)	CFLs (n=99)	Refrigerator (n=149)	Ceiling Insulation (n=43)	Wall Insulation (n=20)	Furnace (n=33)	Air Sealing (n=38)	Furnace Tune-up (n=26)
5 - Very satisfied	63%	87%	84%	85%	74%	91%	69%	80%
4	37%	12%	13%	12%	22%	4%	22%	9%
3	0%	0%	2%	0%	0%	6%	0%	10%
2	0%	0%	0%	1%	4%	0%	0%	0%
1 - Not at all satisfied	0%	1%	1%	0%	0%	0%	0%	0%
Don't know	0%	0%	0%	1%	0%	0%	9%	0%

3.4.5.2 Satisfaction with Contractors and Program

The survey also asked how satisfied the 2011 participants were with the installation contractors and the program in general, using the same five-point scale. [Table 3-13](#) shows that 87 percent of respondents said they were satisfied (4 or 5 on the five-point scale) with the contractors. KEMA considers satisfaction levels below 90 percent to represent a need for improvement. Reasons cited for dissatisfaction with the contractors fell into four categories: poor workmanship, unprofessional behavior such as rudeness or showing up late, failing to install a promised measure, and low quality or faulty materials/equipment.

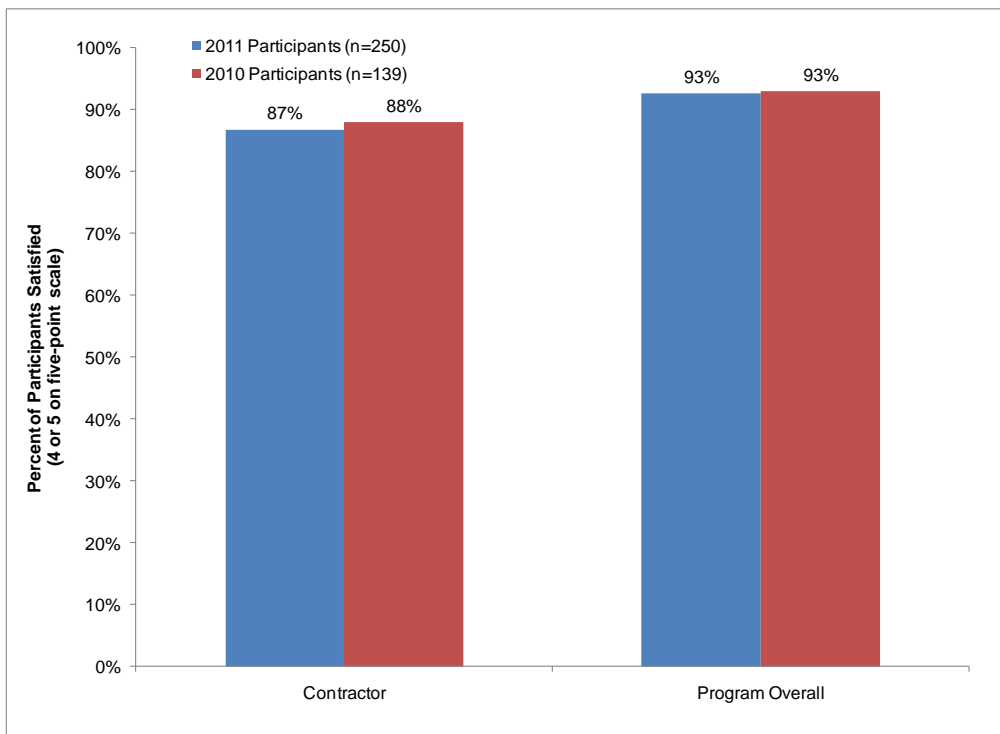
**Table 3-13:
2011 Participants
Contractor and Overall Program Satisfaction Ratings (n=250)**

Satisfaction	Contractor	Program Overall
5 - Very satisfied	79%	83%
4	8%	9%
3	4%	5%
2	2%	1%
1 - Not at all satisfied	3%	0%
Don't know	4%	1%

However, over 90 percent of participants said they were satisfied with the program overall, which KEMA considers a good level of satisfaction. Negative comments about the contractors who performed the work dominated the cited reasons for dissatisfaction with the program overall. This suggests a need to improve the quality control procedures related to contractors who do work for the RLI program.

Figure 3-47 compares respondent satisfaction with contractors and the overall program in 2010 and 2011. Unlike the satisfaction levels reported for specific installed measures, recipients' opinions in 2011 regarding the contractors and the program as a whole were virtually unchanged from the previous year. Complaints about the contractors in 2010 were similar to those collected in 2011. This pattern suggests a persistent problem that the program was unable to successfully address in 2011.

Figure 3-47:
% Satisfied with Contractor and Overall Program
2011 vs. 2010 Participants



There were a few statistically-significant differences in satisfaction ratings depending on the demographic characteristics of the respondents.

- *Senior participants were more satisfied than those in younger age groups:* For example, 88 percent of senior participants were “very satisfied” with the installation contractors compared



to only 70 percent for participants in the under-47 age group. Ninety-four percent of seniors were also satisfied with the program as a whole compared to only 81 percent of those in the middle age group and 79 percent of those in the under-47 age group.

- *Smaller households tended to be more satisfied with the program:* Ninety percent of participants with household of 1-2 persons were very satisfied with the program compared to 74 percent of participants with households of three or more persons. Since seniors had much smaller average household sizes than other age groups, this result is likely related to the previous one.
- *Less-educated participants also were more likely to be satisfied with the program:* Ninety-one percent of those with a high-school education or less were very satisfied with the program compared to 76 percent of those with more than a high school education who were very satisfied. This less-educated group, like the smaller household group, was highly correlated with the senior group. Nearly 70 percent of the seniors had a high school education or less compared to only 38 percent for those in the under 47 group.

There also appeared to be a correlation between satisfaction with the installed equipment and high satisfaction with the program as a whole. Eighty-seven percent of participants who were satisfied with all their installed equipment were also “very satisfied” with the program as a whole. In comparison only 66 percent of those who were less than satisfied with the equipment were also “very satisfied” with the program as a whole.

3.5 Residential Audit and Weatherization (RAW) Program – Online Audit

3.5.1 Summary of findings

The following is a high-level summary of the more detailed findings that appear below:

- *Participant characteristics:* Most participants who used the online audit owned their single-family detached homes. They were aware of ENERGY STAR and were concerned with reducing their energy consumption primarily to reduce their utility bills (vs. environmental motivations).



-
- *First sources of program information:* Utility bill stuffers were the most commonly-cited first sources of information about the program. The importance of utility magazines decreased in 2011 compared to 2010.
 - *Reasons for participation:* Reducing energy consumption was the most important reason for using the online audit tool, but it lost importance relative to 2010. Getting the free kit and getting free information were almost as important as reducing energy consumption, and became more important in 2011 than in 2010. We think these changes in participant motivations are due to two factors: 1) the 2010 participant population having a higher proportion of “early adopters”; and 2) CLEAResult’s increased marketing of the online audit tool is reaching a broader customer base that has more diverse motivations for using the online tool.
 - *Ease of use:* Most respondents found the tool very easy or easy to use. It should be noted that these survey responses do not capture the streamlining of the online tool that CLEAResult introduced in November 2011.
 - *Information which participants received from the tool:* Getting energy saving tips was the information category that participants were most likely to say they received from the tool, but it was less important in 2011 than in 2010. Getting information about how much electricity appliances use and how much it costs to run appliances were also frequently-cited information categories 2011. Their importance increased relative to 2010.
 - *Installation of kit measures:* Most respondents installed at least one of the kit measures. CFLs and LED nightlights were much more likely to be installed than the other measures.
 - *Likelihood of buying the kit measures in the store:* Most respondents said they would buy CFLs in the store, but only about one-third of respondents would buy any of the other measures they received in the kit in a store.
 - *Energy savings actions after the audit:* About two-thirds of respondents said they took an energy saving action after the audit. The most common actions were furnace maintenance and air sealing.
 - *Program satisfaction:* Ninety-one percent of the participants were satisfied with the program. However, there were several instances of respondents saying they had not received an energy saving kit yet.



3.5.2 Program Description

The Residential Audit and Weatherization (RAW) Program was launched in March 2010. The program is offered in all Efficiency United (EU)/ Energy Optimization (EO)/ utility service territories except Bayfield Electric Cooperative and Daggett Electric Department. The RAW Program is a small part of the EU/EO electric portfolio and a larger part of the gas portfolio. The program provides a free online self-auditing tool for residential buildings of four units or less. Participants that complete the full audit receive an energy kit consisting of five CFLs, one low-flow showerhead, and two faucet aerators. In 2010 the program first began offering onsite audit rebates for customers of participating natural gas utilities.

3.5.3 Methodology

CLEAResult provided KEMA with a sample population of 748 users of the online audit tool as of August 31, 2011. About one-third of the sample was missing phone numbers. KEMA successfully looked up about half of the missing numbers. KEMA contracted Research America (RA) to conduct computer-aided telephone interviews (CATI) of program participants. Of the 748 online audit tool users in the population, RA called 570 with usable phone numbers. RA completed interviews with 200 in December, 2010 and January, 2011. This was a final response rate of 45 percent (Table 3-14). Phone numbers were called at least eight times over at least two weeks before being considered unreachable. The response rate for 2011 participants was about the same as that achieved for 2010 participants.

Table 3-14:
CATI Survey Dispositions

Sample Description	Number	Percent
Starting Sample	570	
Never Called	-	
Sample Used	570	
Known Not Eligible	92	
Estimated additional not eligible	37	
Sample-Valid	441	
Complete	200	45%
Refused	111	25%
Not Completed - Eligible	5	1%
Not Completed - Est. Eligible	125	28%

The CATI survey was similar to the one used for the 2010 evaluation and covered the following topics:



-
- How users found out about the online audit tool;
 - How easy the tool was to use;
 - Whether the tool provided useful information;
 - Whether the customers had any unanswered questions after using the tool;
 - Whether they had installed the measures provided in the kit (and in the case of the CFLs – where they had installed them);
 - Whether they had installed any other energy-efficient measures (or take any other energy-efficient actions) besides those provided in the kit and what these other measures/actions were;
 - Energy efficiency knowledge and attitudes; and
 - Demographic information.

3.5.4 Characterizing the Participants

The survey asked a series of demographic questions to help characterize the program participants. Highlights are summarized below:

- *Home ownership:* Almost all (99%) participants own their home.
- *House types:* Almost all (92%) of participating homes were detached single family homes. Other home types included mobile homes (4%), attached single-family homes (duplexes or condos; 2%), and buildings with two or more apartments (<1%).
- *Occupancy patterns:* A few (6%) participating homes were seasonal homes.
- *Household characteristics:* Fourteen percent of participating homes had one resident, 49 percent had two residents, 14 percent had three residents, 13 percent had four residents,



and 10 percent had five or more residents. About one third of the homes had at least one resident age 65 or older. Another one third had at least one resident under the age of 18.¹⁹

- *Respondent education levels:* Twenty-seven percent of participants had a high school diploma, equivalent, or less; 29 percent had some college or trade school, 29 percent had a four-year degree, and 11 percent had some graduate school education or a graduate school degree.
- *Respondent incomes:* Seven percent of participants said they earned less than \$20,000 in 2010 before taxes. 37 percent said they earned between \$20,000 and \$49,999, 20 percent said they earned from \$50,000 to \$74,999, and twelve percent said they earned \$75,000 or more. The remaining 24 percent did not know or refused to answer the question.
- *Respondent gender:* Fifty-six percent of respondents were female and 44 percent were male.

These demographic characteristics are similar to those of the 2010 participants.

In addition to demographics questions, the 2011 survey also asked a few questions to assess participants' knowledge and attitudes about energy efficiency.

- Almost all (92%) had heard of ENERGY STAR prior to completing the survey.
- Almost all were very concerned (61%) or somewhat concerned (34%) with reducing their home's energy use.
- Reasons for concern over reducing home energy use included the cost of energy or reducing the utility bill (95%), environmental concerns (27%), concern about power availability or reliability (7%), and reducing dependence on foreign oil (3%).

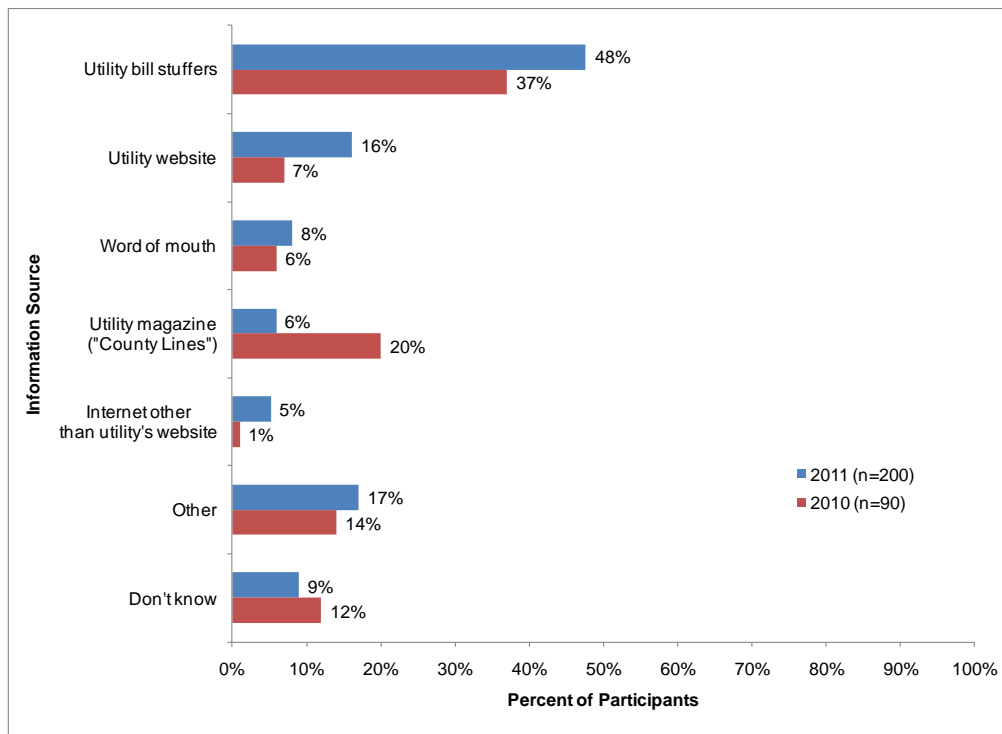
3.5.5 First Sources of Information about the Online Tool

The survey asked respondents how they first heard about the online audit tool. [Figure 3-48](#) shows the sources of first program information which respondents reported.

¹⁹ The 65 and older and 18 or younger categories were not mutually exclusive, so some homes may have both as residents.

Utility bill stuffers were the most often cited source (48%), followed by utility websites (16%). Respondents cited other sources of information less often.

Figure 3-48:
Source of Information about Online Audit Tool



Note: Totals exceed 100% because multiple responses were accepted. Other sources includes: salesperson where equipment was purchased, TV/radio, community events or local schools, utility-sponsored meeting, local newspaper, state/national newspapers, and unspecified others.

The most noticeable change from 2010 to 2011 was the increase in the percent of respondents citing the utility bill stuffers as their first source of information and the decrease in the percent of respondents citing utility newsletters. Yet the similarity between utility bill stuffers and utility newspapers as information sources makes it possible that some of this change may be due to inconsistencies between 2010 and 2011 in how surveyors and post-coders classified these information sources.



There were also more statistically significant differences between sub-groups of participants in 2011 compared to 2010. This is likely due to the larger sample size (200 in 2011 vs. 90 in 2010) which increases the statistical power of the tests.

Among the 2011 participants there were statistically-significant differences²⁰ in cited information source depending on respondents' education level, income, whether they installed any of the kit measures, reasons for taking the online audit, ENERGY STAR awareness, and concern about reducing home energy use:

- *Utility websites:* Participants who were highly-educated, had higher household incomes (which is usually correlated with education), and who said they did the online audit for reasons other than getting the free kit, were more likely to have heard about the program through utility websites.
 - *Education:* Respondents with an advanced degree or some graduate school were more likely (31% of respondents) to report utility websites as an information source than those with a high school degree, equivalent or less (12%).
 - *Income:* Respondents who reported earning \$50,000 or more per year were more likely (25%) than those with less income (12%) or who did not report income (12%) to cite utility websites as a source of information.
 - *Reasons for taking audit:* Respondents who said they took the audit for reasons other than receiving the free kit were more likely (19%) than those who took the audit to get the free kit (9%) to hear about the audit from a utility website.
- *Utility bill stuffers:*
 - *Energy Star awareness:* Respondents who said they were aware of ENERGY STAR prior to taking the survey were more likely (49% of respondents) of than those unaware of ENERGY STAR (29%) to hear about the program from utility bill stuffers.

²⁰ For all results, differences were considered statistically significant if they exceeded the 90% confidence level.

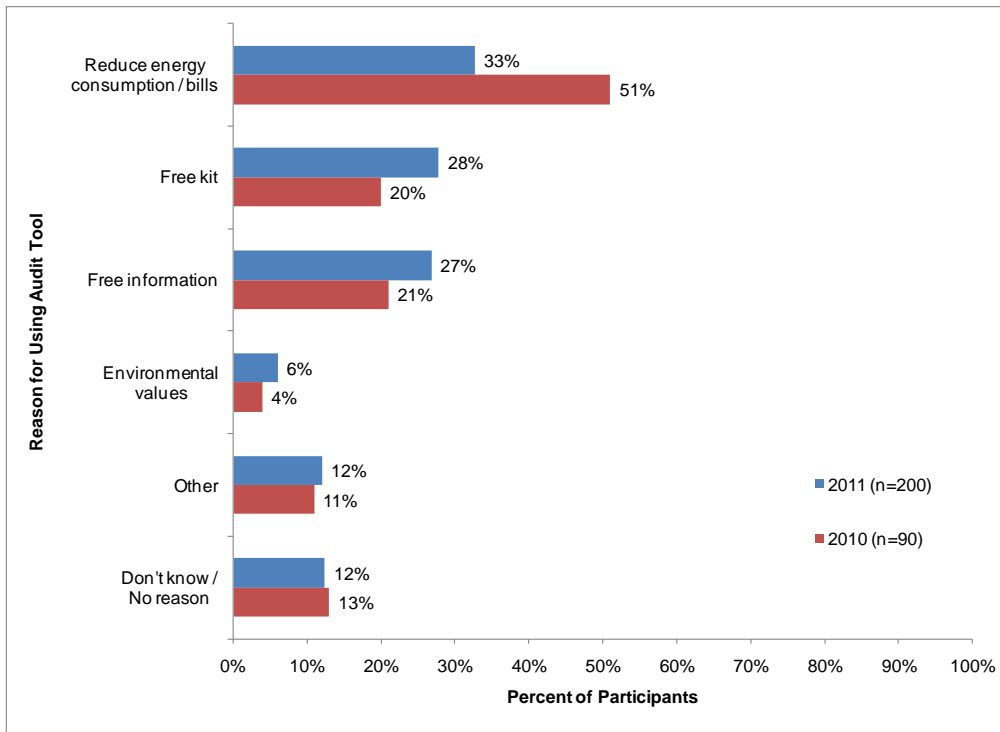


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- *Concern about reducing home energy use:* Respondents who were somewhat or very concerned about reducing their home's energy use were more likely (49%) than those not concerned (25%) to hear about the program from utility bill stuffers.
 - *Word-of-mouth:* Respondents who installed at least one of the kit measures were more likely (12% of respondents) than those who did not (4%) to say they heard about the program through word of mouth.
 - *Utility magazines:* Respondents who said they took the audit for reasons other than receiving the kit were also more likely (8%) than those who did take it for the kit (2%) to cite utility magazines as a source of information.

3.5.6 Reasons for Using Online Audit Tool

The survey asked respondents why they decided to use the online audit tool. [Figure 3-49](#) shows the reasons respondents gave for using the tool. One-third (33%) said they used the tool to help them reduce their energy consumption or reduce their energy bills. Other oft-cited reasons included getting the kit with free measures (28%) and getting free information (27%).

**Figure 3-49:
Reasons for Using Online Audit Tool**



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

The chart shows that respondents in 2011 were less likely to say they used the online tool to learn how to reduce their energy consumption or bills than respondents from 2010. There are two possible explanations for this:

- The “early adopter” phenomenon:* It is well known in the program evaluation literature that there are adoption curves for new technologies or programs and usually the customers that are “early adopters” are different than those who adopt the technologies or programs later. Since the online audit program was not introduced until March 2010 and our sample of 2010 participants only covered participants through the August 2010 period, it is likely that a large proportion of the participants in the first six months of the program life were “early adopters.” It is reasonable to assume that these 2010 early adopters were more interested in using the online audit tool to learn how to reduce their energy consumption rather than just seeking to



get a free kit. As the program matured in 2011 and participation increased, however, there was naturally a broader diversification in the motives for participation. While there were still many 2011 participants who chose to use the online tool to learn how to reduce their energy use, their share of the overall participant population was naturally reduced as new types of participants, with different motivations, came to the fore.

- *CLEAResult's increased marketing of the online tool:* Our in-depth interview with the RAW program manager in November 2011 indicated that CLEAResult viewed the broader promotion of the online audit tool as an important part of their strategy for reaching their electric savings goals. The program manager mentioned "a big push for the modified online audit." "One of my goals is to drive as much traffic to that as possible," he said. "The online audit is the biggest lever [for achieving electric savings goals] we have at this point," he added. This increased marketing of the online audit tool will allow the program to reach a broader audience of customers than it would if it relied more on customers finding the audit tool on their own initiative. This broadening of the customer audience through intensive marketing should accelerate and intensify the natural diversification of motives for participation that is mentioned in the discussion of the early adopter phenomenon above.

Among the 2011 respondents there were statistically-significant differences in the stated reasons for using the online audit tool depending on respondents' age, gender, whether respondents took energy saving actions after the audit, and whether they installed faucet aerators or showerheads from the kits.

- *Age:* Respondents aged 40 to 64 were more likely (47% of respondents) than younger respondents (24%) or older respondents (17%) to say they used the tool to reduce their energy consumption or bills. The 40 to 64 age group (9%) was also more likely than the younger group (2%) and older group (5%) to cite environmental concerns.
- *Gender:* Male respondents were more likely (35%) than female respondents (20%) to say they did the online audit to get free information.
- *Energy saving actions after audit:* Respondents who did not report taking energy saving actions after the audit were more likely (48%) than those who said they did take actions (25%) to take the audit to get the free kit.



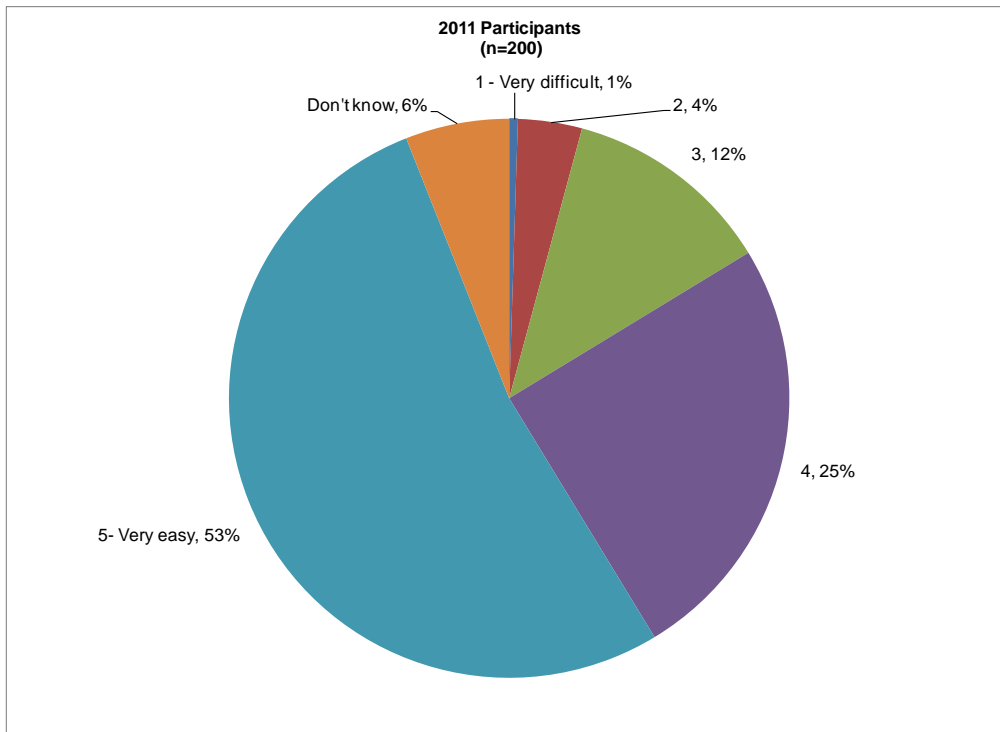
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- *Installation of faucet aerators:* Respondents who installed faucet aerators were more likely (46%) than those who did not (22%) to say they used the audit tool to learn how to reduce their energy consumption or bills.
 - *Installation of showerheads:* Respondents who installed showerheads from the kits were more likely (43%) than those who did not (27%) to say they used the audit tool to learn how to reduce their energy consumption or bills.

3.5.7 Ease of Use

The survey asked respondents to rate how easy or difficult the online audit tool was to use. It had them use a five point scale where 1 meant “very difficult” and 5 meant “very easy.” [Figure 3-50](#) shows their responses. Over three quarters of the respondents thought the tool was easy to use. Most (53%) of the respondents thought the tool was “very easy” to use. Another 25 percent gave a rating of 4 on the five-point scale. These results are similar to 2010.

It is important to note that these survey results do not reflect the modifications that CLEAResult made to the online tool in November 2011. These modifications allowed customers who were more interested in the free kit than in identifying energy savings opportunities to take a more streamlined version of the online audit tool.

**Figure 3-50:
Ease of Use of Tool**



There were some statistically-significant differences among respondent sub-groups including:

- Not surprisingly respondents who thought the tool was very useful were more likely (82%) than those who did not think the tool was very useful (40%) to say it was very easy to use (5 on the five point scale).
- More interestingly, respondents who were not concerned about reducing their home's energy use were more likely (92%) than those who were concerned (50%) to say the tool was very easy to use. One possible explanation for this is that participants who had strong motivation to use the tool to learn how to reduce their house's energy consumption (as opposed to just wanting a free kit, for example) likely have higher expectations or demands for the type of information they seek to get out of the tool. Some of these customers may



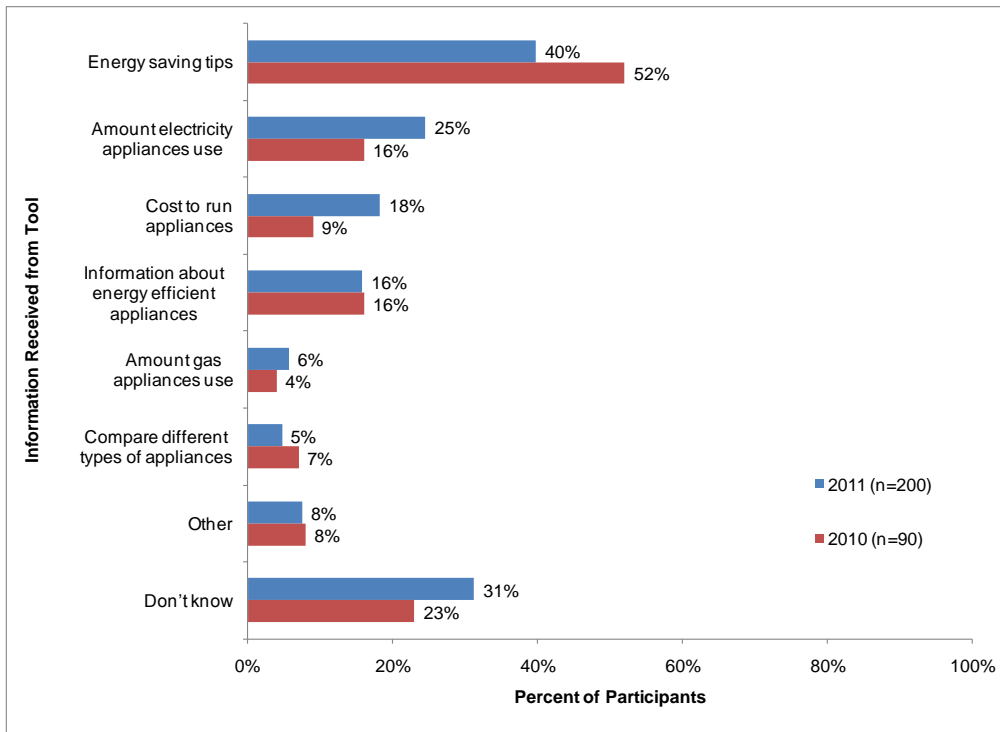
deem the tool not easy to use because it is not providing the more detailed information they are seeking.

- Finally how easy respondents found the online tool was related to age. Respondents under the age of 40 were more likely (67%) than those 65 or older (43%) to rate the tool as “very easy” to use.

3.5.8 Information Provided by Tool

The survey asked respondents what type of information they received from the tool. [Figure 3-51](#) shows the information respondents reported receiving from the tool. The most common answer provided was energy saving tips (40%), followed by how much electricity appliances use (25%) and the cost to run appliances (18%). Almost one-third (31%) of respondents said they did not know or did not remember what information they received from the tool.

**Figure 3-51:
Information Received from Tool**



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

The chart also shows that respondents who used the tool in 2011 were less likely than 2010 users to say they got energy saving tips from the tool. 2011 users were more likely to say they got information about how much electricity appliances use and how much it costs to run appliances.

What types of information the 2011 participants reported getting from the tool depended on whether they thought the tool was easy to use, the information it provided was useful, awareness of ENERGY STAR, and their reason for using the audit tool.

- *Reason to use tool:* Respondents who said they used to tool in order to get the free kit were more likely (42%) than those who used the tool for other reasons (27%) to say they did not know or remember what information they got from the tool.

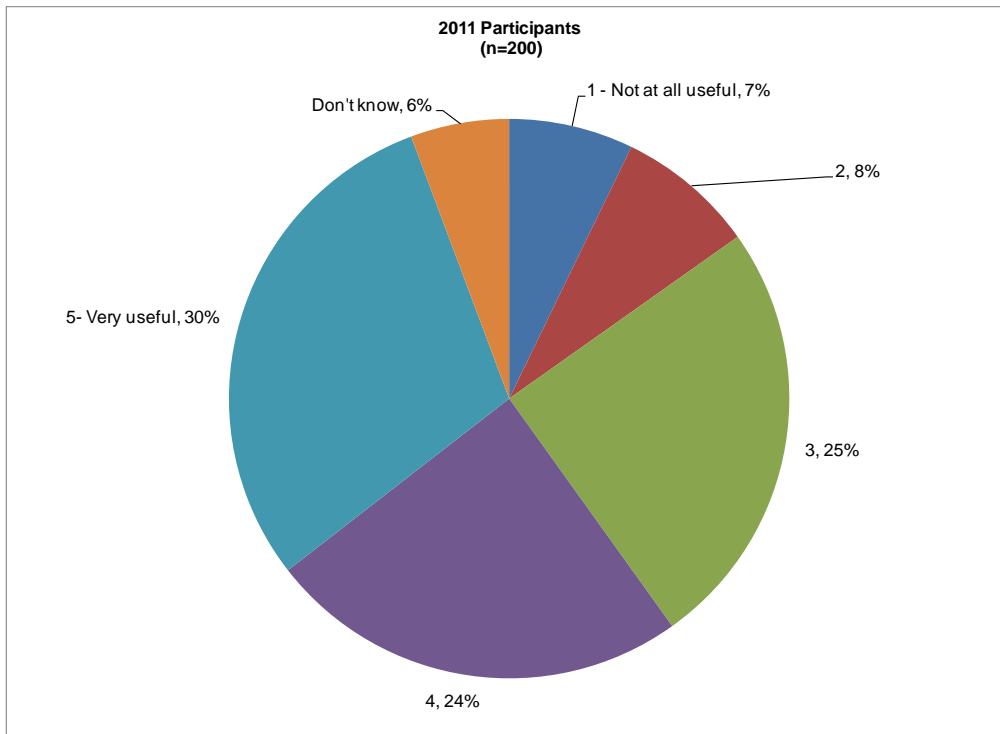


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- *Ease of use:* Respondents how found the tool very easy to use (5 on the five-point scale) were more likely (21% of respondents) than those who did not find it very easy to use (11%) to say they got information about energy efficient appliances from the tool.
 - *Usefulness of information:* Respondents who found the information from the tool very useful (5 on the five-point scale) were more likely (27%) than those who did not find it very useful (12%) to say they got information about energy efficient appliances.
 - *ENERGY STAR awareness:* Respondents who had heard of ENERGY STAR were more likely (19%) than those who had not (5%) to say they got information about how much appliances cost to run.

3.5.9 Usefulness of Information

KEMA asked respondents to rate the usefulness of the information provided by the tool on a five-point scale anchored at one for “not at all useful” and five for “very useful.” About one-third (30%) of respondents said the information from the tool was very useful (5 on the five-point scale). Another fourth (24%) gave a rating of four on the five-point scale. [Figure 3-52](#) shows all the responses. This pattern of responses is similar to what the 2010 participants reported.

**Figure 3-52:
Usefulness of Information Received from Tool**



The usefulness of the information is associated with energy saving actions:

- *Got energy saving tips:* Respondents who said they got energy saving tips from the tool were more likely (41% of respondents) than those who did not get energy saving tips (22%) to provide a rating of five.
- *Age:* Respondents aged 40 to 64 were more likely (37%) than those age 65 or older (18%) to say the information they received from the tool was “very useful.”
- *Installation of faucet aerators:* Respondents who said they installed the faucet aerators from the kits were more likely (41%) than those who did not report installing the faucet aerators (17%) to provide a usefulness rating of five.



- *Installation of showerheads:* Respondents who said they installed the showerhead from the kits were more likely (40%) than those who did not report installing the showerhead (17%) to provide a usefulness rating of five.
- *Likelihood of buying CFLs at store:* Respondents who said they would or probably would buy CFLs at the store were less likely (26%) than those who said they wouldn't or probably wouldn't buy CFLs at the stores (47%) to provide a usefulness rating of five.

3.5.10 Installation of Equipment in Kits

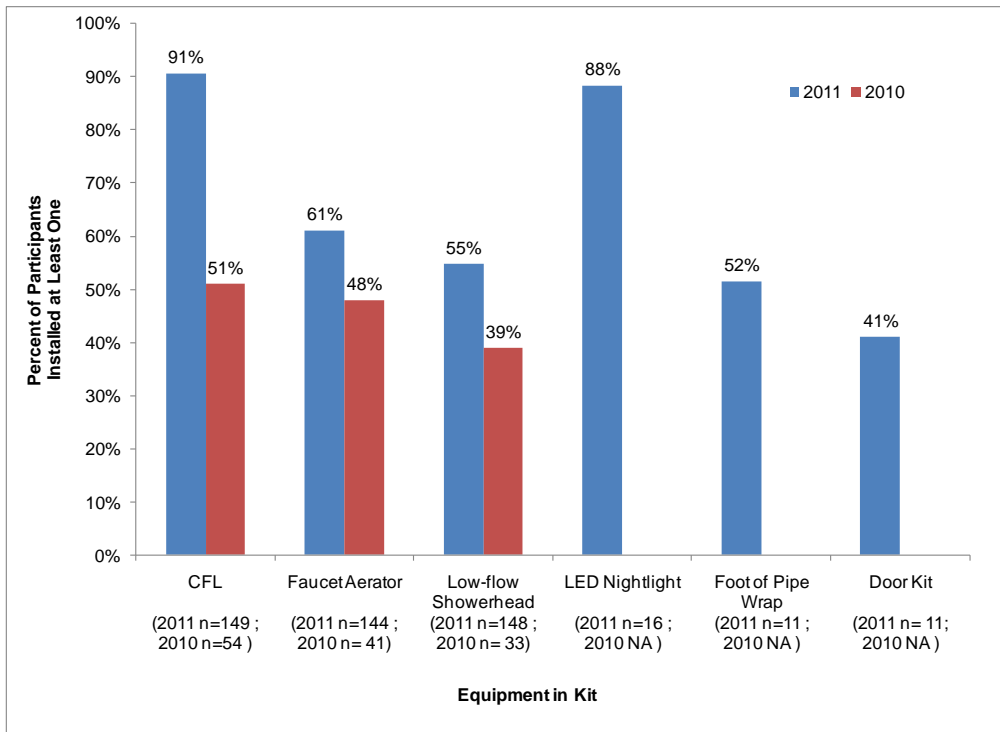
People who completed the online audit were supposed to receive a kit that contained several energy saving measures. The specific contents of the kits depended on the audit-user's utility, and most kits included compact fluorescent light bulbs (CFLs), two faucet aerators, and a low-flow showerhead. Some kits also included LED nightlights, pipe insulation, and/or door sealing kits.

The survey asked respondents who remembered receiving the kit whether they had installed the equipment included in the kit. [Figure 3-53](#) shows the percent of survey respondents who said they installed equipment included in the kit. Almost all respondents (91%) who receive a kit containing them installed at least one of the CFLs, about two-thirds (61%) installed one or both of the faucet aerators, and the majority (56%) installed the low-flow showerhead.²¹ These installation numbers are all an increase over installation rates of 2010 audit-users.

In 2011, most (88%) of respondents who received them installed LED nightlights. About half (52%) installed pipe wrap and 41 percent installed the door kits. The 2010 evaluation did not include questions about the installation rates of LED nightlights, pipe insulation, or door kits.

²¹ These installation rates percentages may differ slightly from those reported in the impact evaluation because savings-based weights were used in the impact evaluation and sampling weights were used in the process evaluation.

**Figure 3-53:
Installation of Equipment in Kits**



Note: The total exceeds 100% because respondents were allowed to give multiple responses. LED nightlights, pipe wrap, and door kits were not included in the 2010 evaluation.

There were some statistically-significant differences in these installation rates based on which participant subgroups the survey respondents belonged to:

- **Number of CFLs installed:** The survey asked respondents how many CFLs from the kits they installed. Answers ranged from zero to five bulbs, with 48 percent of respondents saying five bulbs. Respondents who got energy saving tips from the online tool were more likely (99% of respondents) than those who did not get energy saving tips (91%) to install at least one CFL from the kit.



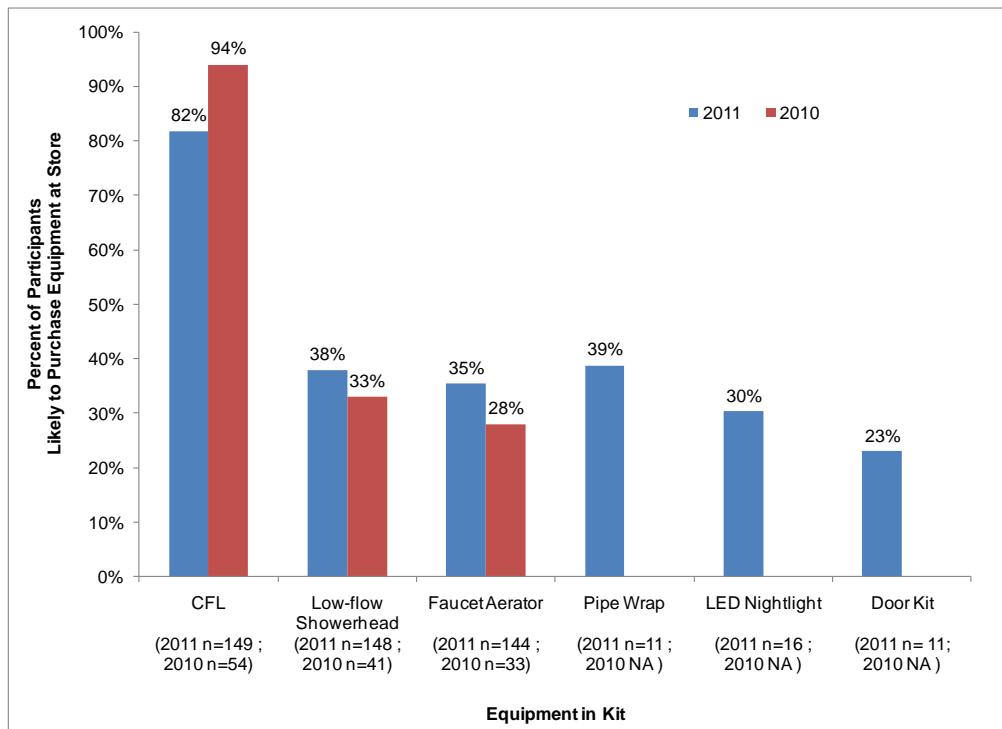
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- *Faucet aerator installation:* Participants who found the tool useful, had prior knowledge of Energy Star, and who also had installed the low-flow showerheads were more likely to have installed the faucet aerators.
 - *Usefulness of the tool:* Respondents who found the online tool very useful (5 on the five-point scale) were more likely (79%) than those who found it less than very useful (51%) to install at least one faucet aerator.
 - *ENERGY STAR knowledge:* Respondents who heard of ENERGY STAR prior to the survey were more likely (64%) than those not aware of ENERGY STAR (20%) to install faucet aerators from the kits.
 - *Showerhead installation:* Respondents who installed low-flow showerheads were more likely (84%) than those who did not install showerheads from the kit (33%) to install faucet aerators.
 - *Low-flow showerhead installation:* Participants who had lower incomes, were female, found the online tool to be useful and who had also installed faucet aerators were more likely to have installed the low-flow showerheads.
 - *Income:* Respondents who reported earning less than \$50,000 in 2010 were more likely (66%) than those reporting higher incomes (44%) or not reporting income (47%) to install the showerhead from the kit.
 - *Gender:* Women were more likely (62%) than men (46%) to install the showerhead.
 - *Usefulness of the tool:* Respondents who found the online tool very useful were more likely (75%) than those who did not find it very useful (44%) to install the showerhead.
 - *Aerator installation:* Respondents who installed a faucet aerator were more likely (78%) than those who did not install a faucet aerator (24%) to install a showerhead.

3.5.11 Likelihood of Purchasing Kit Contents at Store

The survey asked respondents whether they would purchase any of the equipment included in their kit at a store. Possible answers were yes, probably yes, probably not, and no. Over three-fourths (82%) of respondents said they would or probably would buy CFLs at the store. Respondents were much less likely to say they would or probably would purchase low-flow

showerheads (38%), faucet aerators (35%), pipe insulation (39%), or LED nightlights (30%). About one-fourth (23%) said they would or probably would purchase door sealing kits at the store (Figure 3-54).

Figure 3-54:
Likelihood of Purchasing Kit Contents at Store



Note: The total exceeds 100% because respondents were allowed to give multiple responses. LED nightlights, pipe wrap, and door kits were not included in the 2010 evaluation.

As the chart shows, the 2010 survey also asked about CFLs, showerheads, and faucet aerators. Willingness to purchase CFLs at the store decreased in 2011 respondents. Willingness to purchase showerheads and faucet aerators in 2011 was similar to 2010.

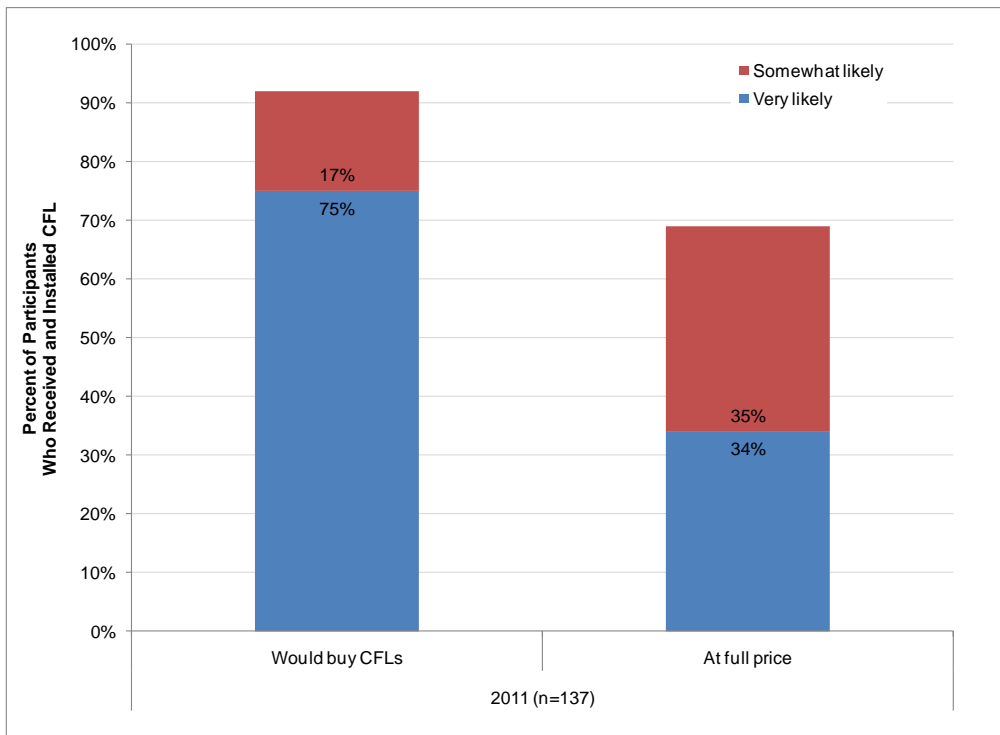
Among the 2011 participants there were several significant differences in willingness to purchase kit equipment at the store, depending on respondents' household size, showerhead installation, awareness of ENERGY STAR, respondent age, and gender.



-
- *Household size:* Respondents with three or more residents were more likely (73% of respondents) than those with two or fewer (58%) to say they would buy CFLs at the store. Respondents with two or fewer residents were more likely (30%) than those with more (11%) to say they would purchase a faucet aerator at the store.
 - *Showerhead installation:* Respondents who installed a showerhead from the kits were more likely (72%) than those who did not install showerheads (57%) to say they would buy CFLs at the store.
 - *ENERGY STAR awareness:* Respondents who were aware of ENERGY STAR before taking the survey were more likely (66%) than those not aware of ENERGY STAR (43%) to say they would purchase CFLs at the store.
 - *Age:* Respondents under 40 were more likely (59%) than those aged 40 to 64 (37%) or over 64 (26%) to say they would not purchase faucet aerators at the store.
 - *Gender:* Men were more likely (48%) than women (33%) to say they would not purchase faucet aerators at the store. Men were also more likely (50%) than women (34%) to say they would not purchase a low-flow showerhead.

The survey also asked respondents who received CFLs if they would purchase CFLs in the future and if they would them full price of three or four dollars each. Almost all (92%) of respondents said they would purchase CFLs in the future, and the majority of respondents (69%) said they were either somewhat likely or very likely to do so at full price ([Figure 3-55](#)).

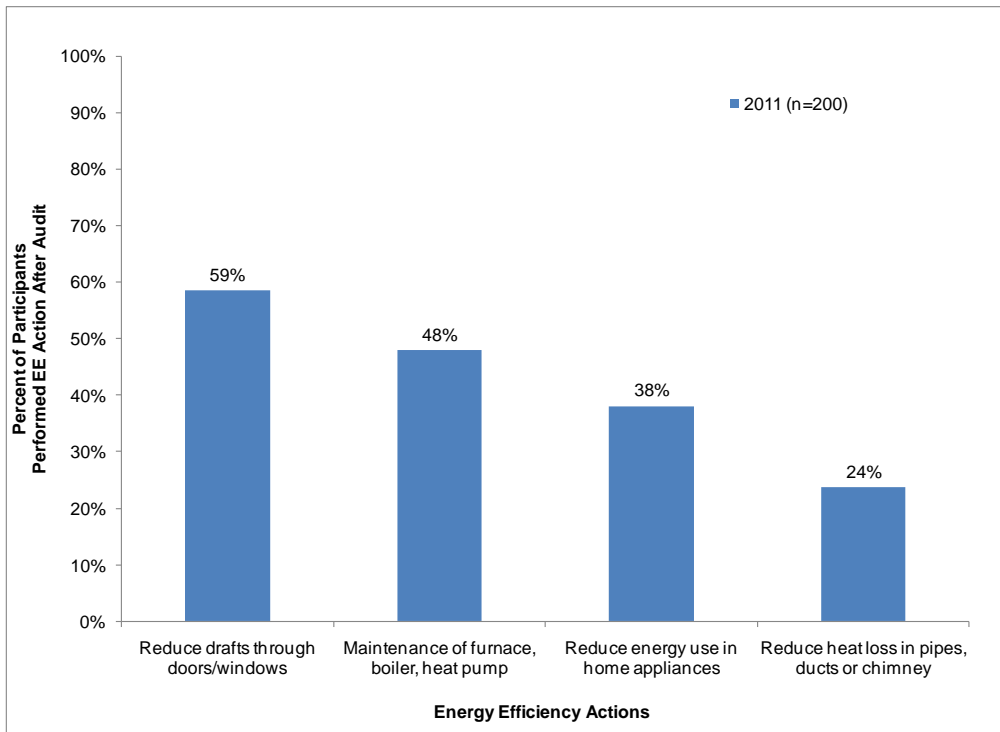
Figure 3-55:
Likelihood of Purchasing CFLs in Future



3.5.12 Energy Efficiency Actions after Audit

The survey asked whether respondents had taken any actions related to energy efficiency after the audit. The survey first asked respondents whether they had taken any actions to reduce the drafts coming in through the doors or windows of their home, performed or hired a professional to do maintenance on their home's heating system, reduced the energy used by their home appliances, or reduced heat loss in their pipes, ducts, or chimney. The majority (59%) of respondents said they had reduced drafts and about half (48%) said they had maintenance done on their heating system. [Figure 3-56](#) shows the full range of responses.

Figure 3-56:
Energy Efficiency Actions Performed after Audit



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

There were several statistically significant differences for each of these energy saving actions.

- *Reducing drafts through doors/windows:* Respondents who tended to take other energy saving actions tended to also take this action. Knowledge and attitudes about energy efficiency also affected this behavior.
 - *Aerator installation:* Respondents who installed a faucet aerator from the kit were more likely (66%) than those who did not install one (45%) to also say they reduced drafts.
 - *Showerhead installation:* Respondents who installed a showerhead from the kit were more likely (66%) than those who didn't (40%) to say they reduced their home's drafts.



-
- *Audit motivations:* Respondents who took the audit for reasons other than receiving the free kit were more likely (63%) than those who did it only for the kit (48%) to say they reduced drafts.
 - *Energy Star awareness:* Respondents aware of ENERGY STAR were more likely (60%) than those unaware (39%) to say they reduced their home's drafts.
 - *Concerns about energy consumption:* Respondents who were concerned about their home's energy consumption were more likely than (60%) those unconcerned (33%) to say they reduced drafts in their home after the audit.
 - *Heating system maintenance:* Respondents with two or fewer residents were more likely (53%) than those with three or more residents (38%) to say they had performed maintenance on their home's heating system.
 - *Reducing energy use of home appliances:* Respondents who reported earning less than \$50,000 and those earning \$50,000 or more were more likely (48% and 40% respectively) than those who did not report their income (17%) to say they reduced the energy use of their home appliances.
 - *Reduce heat loss in pipes, ducts, or chimneys:*
 - *Income:* Respondents who reported incomes less than \$50,000 in 2011 were more likely (33%) than those who reported higher incomes (13%) to say they took this kind of action.
 - *Aerator installation:* Those who installed faucet aerators from the kit were more likely (33%) than those who didn't (12%) to take this kind of action.
 - *ENERGY STAR:* Respondents who were aware of ENERGY STAR were more likely (25%) than those not aware (11%) to take action to reduce the heat loss in their pipes, ducts, or chimneys.
 - *Concerns about energy consumption:* Respondents who were concerned with reducing their home's energy use were more likely (25%) than those unconcerned (8%) to take this kind of action after the audit.



The survey asked any respondent who said they took any of the four types of energy saving actions listed above to specify which actions they took. This question was asked as an open-ended question, so there were a wide variety of responses. Table 3-15 shows the actions and the percent of all respondents who reported taking that action.

Table 3-15:
Specific Energy Efficiency Actions
Taken After Audit

Energy Efficiency Action	Percent (n=200)
Replaced furnace or heat pump filter	29%
Installed weather stripping on windows/doors	26%
Caulked windows/doors	24%
Furnace/boiler tune-up by professional	22%
Insulated hot water pipes	15%
Replaced/Cleaned dryer vent	12%
Added window shades or curtains	12%
Set back thermostat temperature	12%
Installed door sweeps	11%
Added weather stripping to attic access doors	9%
Lowered water heater temperature	9%
Used clothesline to dry clothes	8%
Installed new threshold	7%
Put plastic over windows	7%
New windows/doors	7%
Added insulation (unspecified)	5%
Installed water heater blanket	4%
Insulated air ducts	4%
Installed damper or chimney seal	4%
Sealed air ducts	3%
Installed crawl space vapor shield	3%
Increased refrigerator/freezer temperature	3%
Added occupancy or daylight sensors	2%
Insulated attic access doors	2%
Other	19%
Don't know	12%

Note: The total exceeds 100% because respondents were allowed to give multiple responses.



3.5.13 Satisfaction

The survey included an overall satisfaction question. Respondents rated their satisfaction with the program overall on a five-point scale, anchored at “very satisfied” and “very dissatisfied.” Almost all (91%) of respondents said they were very satisfied or somewhat satisfied with the program. KEMA considers this level of satisfaction to be good (Table 3-16). The survey of 2010 participants did not collect overall satisfaction.

**Table 3-16:
Program Satisfaction**

Program Satisfaction	Percent (n=200)
Very satisfied	75%
Somewhat satisfied	16%
Neither satisfied or dissatisfied	5%
Somewhat dissatisfied	2%
Very dissatisfied	2%
Total	100%

The survey asked any respondent who gave an answer of less than “somewhat satisfied” why they were less than satisfied. Reasons for dissatisfaction included the following:

- Respondent did not receive kit;
- The audit was not beneficial;
- The online audit tool was difficult to use; and
- The respondent did not remember the audit.

3.5.14 Unanswered Questions after Using Tool

The survey asked respondents if they had any unanswered questions after using the tool. About ten percent of respondents had a question. These questions fit into the following categories:

- Respondent did not receive kit;
- Why did utility provide the audit and how will it use the information?;

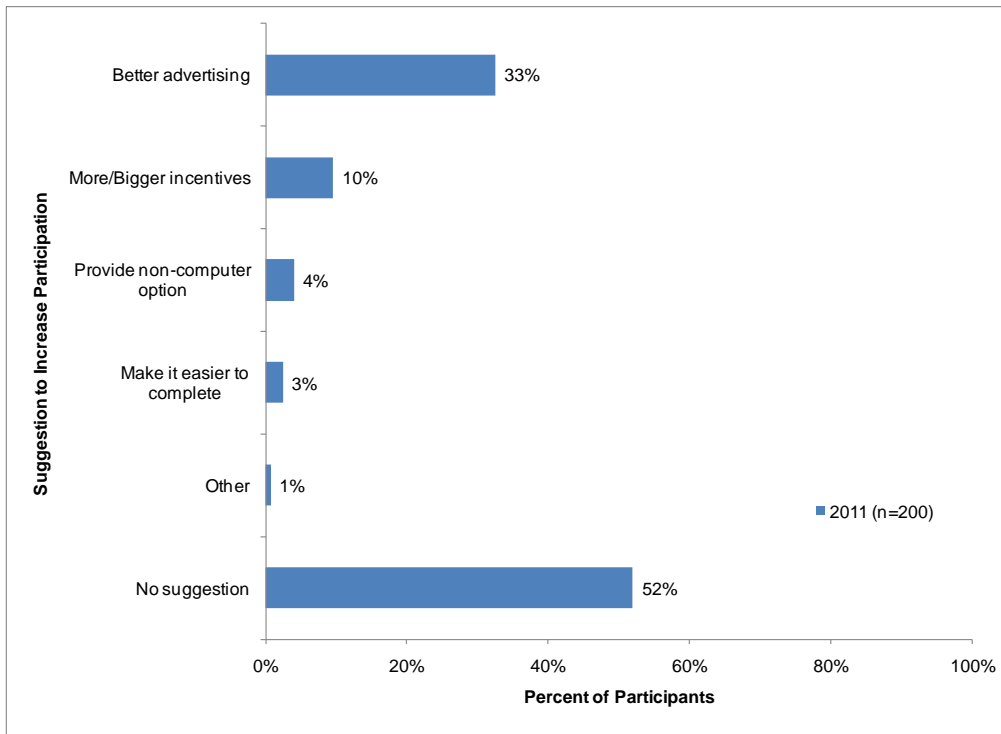


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- Respondent expected a follow-up onsite audit;
 - Respondent would like more savings information; and
 - Various other comments.

3.5.15 Suggestions for Program Improvement

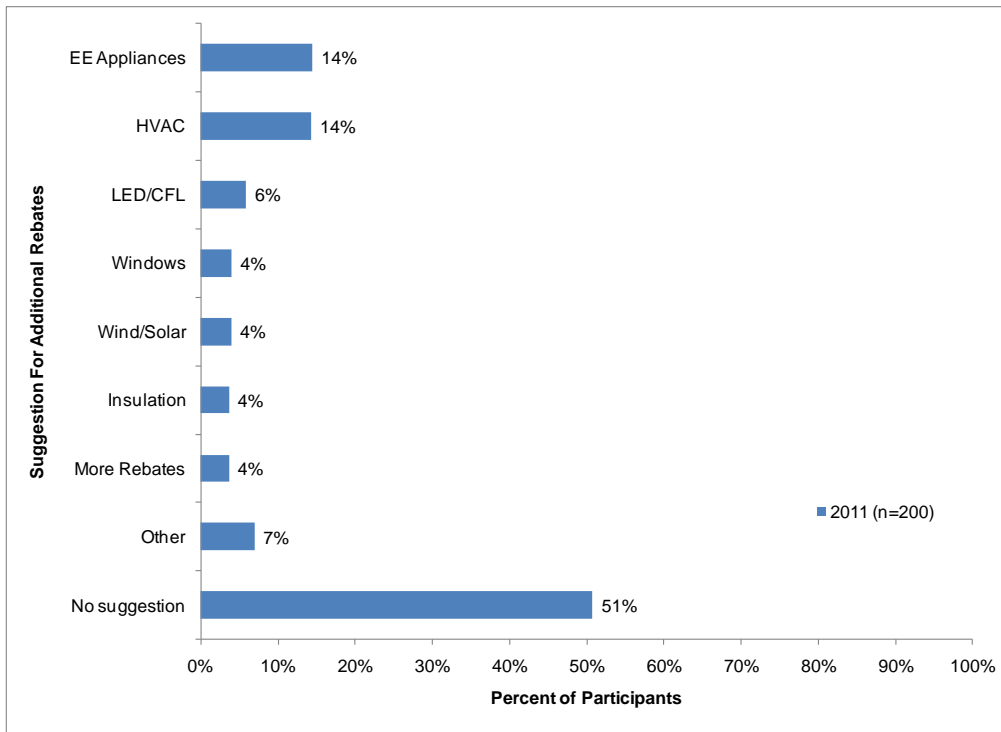
The survey asked respondents if there was anything their utility could do to get more people to use the online audit tool. ~~Figure 3-57~~ ~~Figure 3-57~~ summarizes the responses. Most respondents (52%) did not provide a suggestion; those that did usually mentioned better advertising (33%). Some (10%) suggested increasing the size of incentives. Other suggestions included offering a non-computerized audit option (4%) and making it easier to complete the audit (3%). These responses are similar to 2010.

Figure 3-57:
Suggestions for Program Improvements



The survey also asked respondents if there were any energy efficiency technologies that they would like their utility to offer rebates for. ~~Figure 3-58~~ summarizes the responses. Most (51%) respondents did not provide a suggestion. The most often suggested rebate was appliances or HVAC equipment (14% each). The next most often suggested rebate (6%) was for high efficiency light bulbs such as CFLs or LEDs. Other suggestions included windows, renewable energy, insulation and “more rebates” generally (4% each). More respondents provided suggestions in 2011 than in 2010. HVAC equipment gained popularity and renewable energy lost popularity relative to 2010.

**Figure 3-58:
Suggestions for Additional Rebates**



3.6 Residential Audit and Weatherization Program – Onsite Audit Participants

3.6.1 Summary

The following are some of the findings from the survey responses of the Onsite Audit participants:

- *Participant characteristics:* Most Onsite Audit program participants said that they own their single-family detached homes, they are aware of ENERGY STAR, and are concerned with reducing their energy consumption primarily to reduce their energy bills.



-
- *How they heard about the audit program:* Word of mouth (family, friends) followed by equipment salespeople were the most common method of hearing about the program.
 - *Motives for participation:* Reducing energy consumption was the most important reason for having an audit performed.
 - *Response to the audits:* Most respondents found the audit useful or very useful, and chose to accompany the auditor through the audit.
 - *Post-audit EE measure installation:* While most respondents had at least one measure, such as CFL bulbs, installed during the audit, they were not likely to install rebate qualifying measures (windows, insulation) after the audit. Only a small number of participants took these actions. Most participants were likely to take some sort of (non-rebated) energy efficient action after the audit. The most common measures were installing sweeps under doors or installing weather stripping.
 - *Satisfaction with the program was good:* However, there were a small number of instances of respondents saying they had not received promised measures (CFLs) or that they did not receive enough information from the auditor.

3.6.2 Program Description

The Residential Audit and Weatherization (RAW) Program was launched in March 2010. The program is offered in all utility service territories except Bayfield Electric Cooperative and Daggett Electric Department. The RAW Program is a small part of the MCAA/MECAelectric portfolio and a larger part of the gas portfolio. As of mid-May, 2010, the program provides a free online self-auditing tool for residential buildings of four units or less. Participants that complete the full audit will receive an energy kit consisting of five CFLs, one low-flow showerhead, and two faucet aerators.

In 2011, the program began offering onsite audits. These audits consist of an hour-long visual inspection of the participant's house, during which the auditor installs the measures provided in the same kit as online audit participants receive. CLEAResult manages the audits, and subcontracts them out to several other organizations. The auditor also educates the participants about rebates available for insulation and high efficiency windows. The rebates for these measures count towards the Audit and Weatherization goals, whether or not the participants got an audit before installing the measures. To increase participation, CLEAResult went door to



door in the latter part of 2011 to offer the audits to households in the territories of participating utilities. Because the onsite audits are new for 2011, this is the first year they have been evaluated.

3.6.3 Methodology

CLEAResult provided KEMA with a sample population of 380 customers who received in-home audits from the Audit and Weatherization program. KEMA contracted Research America (RA) to conduct computer-aided telephone interviews (CATI) of program participants. KEMA could not find phone numbers for 19 of the participants, so RA called 361 participants between December 2011 and February 2012. They completed 96 interviews for a final response rate of 37 percent (Table 3-17). RA dialed phone numbers at least eight times over at least two weeks before being considered unreachable.

Table 3-17:
Onsite Audits (A&W) CATI Dispositions

Sample Description	Number	Percent
Starting Sample	361	
Never Called	-	
Sample Used	361	
Known Not Eligible	75	
Estimated additional not eligible	28	
Sample-Valid	258	
Complete	96	37%
Refused	84	33%
Not Completed - Eligible	9	3%
Not Completed - Est. Eligible	69	27%

The CATI survey covered the following topics:

- Sources of information,
- Reasons for getting the audit,
- Usefulness of the information provided by the audit,
- Confirmation of direct install measures,
- Energy efficiency actions taken after audit,



-
- Program satisfaction,
 - Attitudes towards energy efficiency, and
 - Demographics.

3.6.4 Characterizing the Participants

The survey asked a series of demographic questions to help characterize the program participants. Highlights are summarized below:

- *Home ownership:* A majority (89%) of participants own their home.
- *Housing type:* Almost all (92%) of homes were detached single family homes. Other home types included attached single-family homes (duplexes or condos; 4%), mobile homes (3%), and buildings with two or more apartments (1%).
- *Home occupancy:* A few (2%) homes were seasonal homes.
- *Household size:* Twenty-one percent of homes had one resident, 46 percent had two residents, 18 percent had three residents, seven percent had four residents, and six percent had five or more residents. About one-third (36%) of the homes had at least one resident age 65 or older. Another one-quarter had at least one resident under the age of 18.²²
- *Respondent education:* Nearly half (49%) of participants have a high school diploma, equivalent, or less, 23 percent have some college or trade school, 19 percent have four-year degree, and 6 percent have some grad school or grad school degree.
- *Respondent income:* Nineteen percent of participants said they earned less than \$20,000 in 2010 before taxes. 36 percent said they earned between \$20,000 and \$49,999. Twelve percent said they earned from \$50,000 to \$74,999, and 9 percent said they earned \$75,000 or more. Twenty-five percent did not know or refused to answer the question.
- *Respondent gender:* Sixty percent of respondents were women. Forty percent were men.

²² The 65 and older and 18 or younger categories were not mutually exclusive, so some homes may have both as residents.



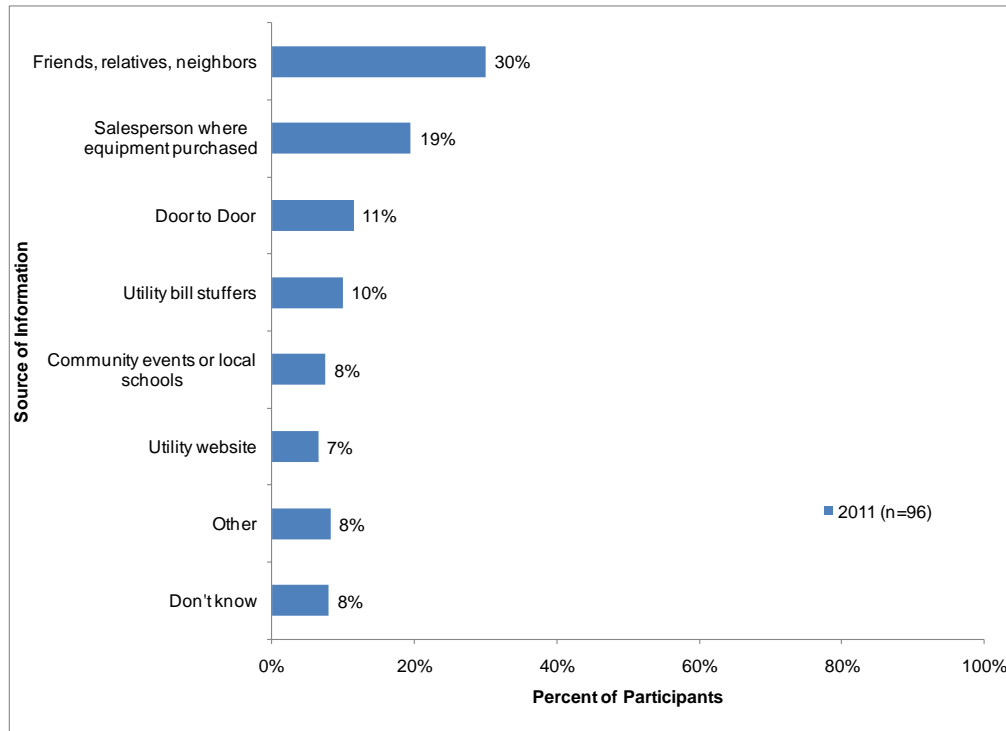
In addition to demographics questions, the 2011 survey also asked a few questions to assess participants' knowledge and attitudes about energy efficiency.

- *ENERGY STAR awareness:* Over half (60%) had heard of ENERGY STAR prior to completing the survey.
- *Energy usage concerns:* Almost all were very concerned (65%) or somewhat concerned (28%) with reducing their home's energy use. Reasons for concern over reducing home energy use included the cost of energy or reducing the utility bill (97%), environmental concerns (18%), and concern about power availability or reliability (2%).

3.6.5 Sources of Information

The survey asked respondents how they first heard about the home energy audit. Figure 3-59 shows the first sources of program information that the respondents reported. Friends, relatives, neighbors (word-of-mouth) were the most often-cited source (30%), followed by equipment salespeople (19%). Respondents cited other sources of information less often. Eleven percent said that they received an audit from someone going door to door.

**Figure 3-59:
First Source of Information
about Home Energy Audit Program**



Note: Totals exceed 100% because multiple responses were accepted. Other includes:

There were statistically significant differences²³ in cited information source depending on respondents' education level, income, whether they installed any of the kit measures, ENERGY STAR awareness, and concern about reducing home energy use.

- *Education:* Respondents with some college, trade or technical school were more likely (23%) to report utility websites as an information source than those with a high school degree, equivalent or less (3%).

²³ For all results, differences were considered statistically significant if they exceeded the 90% confidence level.

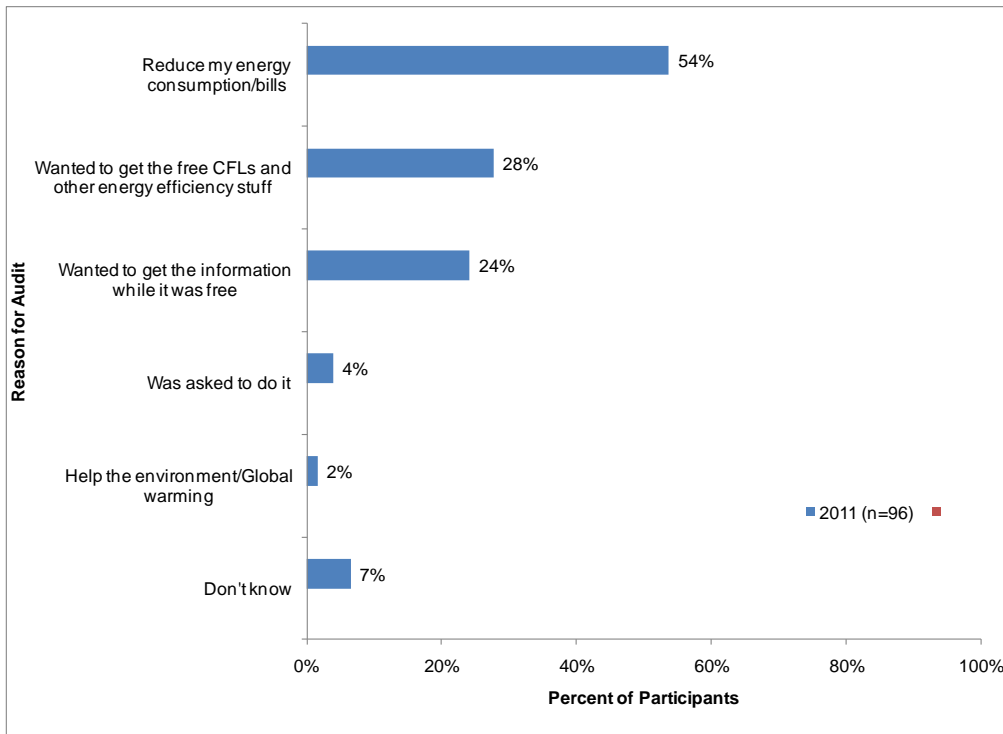


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- *Income:* Respondents who reported earning \$50,000 or more per year or those with less income were more likely (39% and 32% respectively) than those who did not report income (10%) to cite utility websites as a source of information. Respondents who reported earning \$50,000 or more per year (39%) or those who did not report income (27%) were more likely than those with less income (32%) to cite a salesperson as a source.
 - *ENERGY STAR awareness:* Respondents who said they were unaware of ENERGY STAR prior to taking the survey were more likely (31%) than those aware of ENERGY STAR (12%) to hear about the program from a salesperson.
 - *Concerned about reducing home energy use:* Respondents who were not concerned about reducing their home's energy use were more likely (59%) than those somewhat or very concerned (17%) to hear about the program from a salesperson.

3.6.6 Reasons for Participation

The survey asked respondents why they decided to get an audit. Over one-half (54%) said they wanted to reduce their energy consumption or reduce their energy bills. Another one-fourth each said to get the free measures (28%) or to get free information (24%). [Figure 3-60](#) shows the full range of responses.

**Figure 3-60:
Reasons for Audit**



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

There were statistically-significant differences in stated reasons for getting an audit depending on respondents' age, gender, education level, income, and the likelihood of purchasing CFLs at full price.

- **Age:** Respondents aged 40 to 64 were more likely (36%) than younger respondents (11%) or older respondents (19%) to say they used the tool to get the free measures.
- **Gender:** Female respondents were more likely (30%) than male respondents (14%) to say they got the audit to get free information. Men were more likely (67%) than women (37%) to say they got the audit to reduce their energy bill.

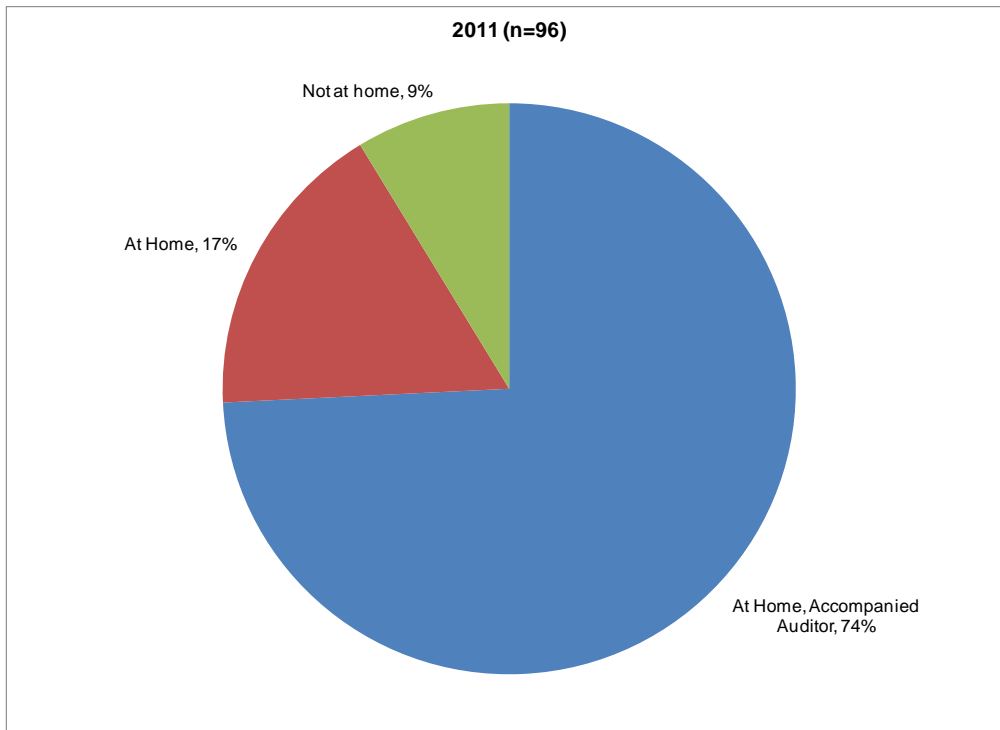


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- *Education level:* Respondents with a some college, trade or technical school or those with a high school degree or less were more likely (59% and 51% respectively) than those with a college degree (25%) to say they did the online audit to reduce their energy bill.
 - *Income:* Respondents who reported earning less than \$50,000 per year were more likely (40%) than those who reported earning \$50,000 per year or more (15%) or those who did not report income (10%) to say they got the audit to get the free measures. Respondents who reported earning \$50,000 per year or more were more likely (40%) than those who reported earning less than \$50,000 per year (16%) to say they wanted the free information.
 - *CFL purchase:* Respondents who reported that it was likely they would purchase CFLs at full price were more likely (47%) than those who reported it was not very likely (12%) to do the audit for the free CFLs and other measures. It is likely that the former group is composed of free-riders.

3.6.7 Recommendations Provided by Auditor

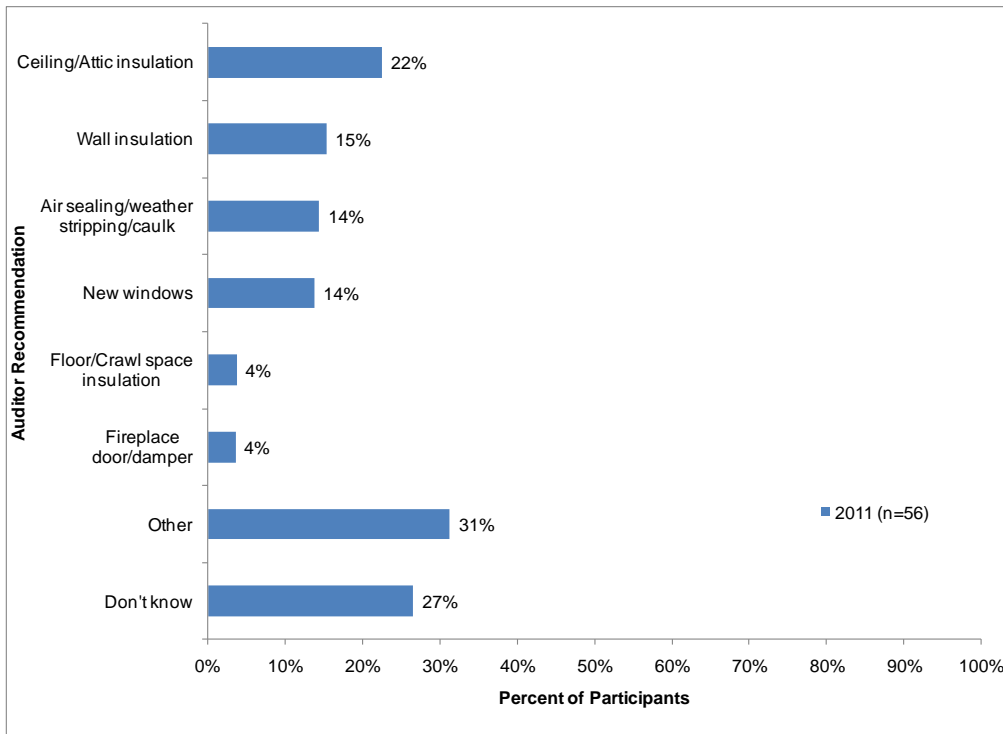
The survey asked respondents a series of questions to determine how involved they were with the audit process. The majority of respondents (74%) were home for the audit and they accompanied the auditor. Another seventeen percent were at home but did not report accompanying the auditor. [Figure 3-61](#) ~~Figure 3-61~~ shows the full range of responses to questions about audit participation.

**Figure 3-61:
Involvement with Audit Process**



The survey asked respondents what type of recommendations they received from the audit. Over one-quarter (27%) did not know or did not remember what recommendations were given by the auditor. Nearly one-third (31%) cited a wide array of miscellaneous recommendations such as smart strips, change furnace filters, and turn off lights in unoccupied rooms. The most common single answer provided was ceiling or attic insulation (22 %), followed by wall insulation (15%), air sealing (14%) and new windows (14%). [Figure 3-62](#) shows the full range of recommendations.

**Figure 3-62:
Recommendations Received from Audit**



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

There were statistically-significant differences in respondents' reports of auditor recommendations depending on respondents' age, gender, concern with reducing home energy use, perceived helpfulness of the audit, the likelihood of purchasing CFL bulbs in the future, and whether insulation was installed after the audit,

- **Age:** Respondents aged 40 to 64 were more likely (20%) than older respondents (3%) to recall the auditor recommending air sealing or weather stripping.
- **Gender:** Male respondents were more likely (36%) than female respondents (13%) to recall the auditor recommending ceiling or attic insulation.

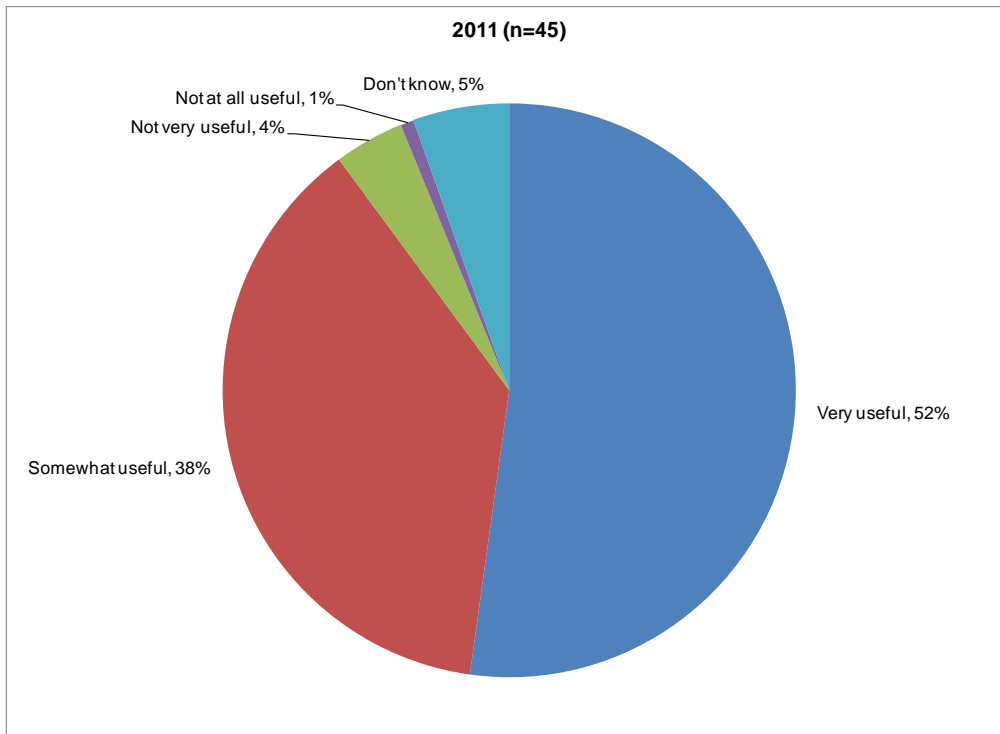


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- *Concerned about reducing home energy use:* Respondents who reported not being concerned with reducing home energy use were more likely (100%) than those who were concerned (25%) to not recall what recommendations were made by the auditor.
 - *Helpfulness of the audit:* Respondents who found the audit very helpful were more likely (47%) than those who found the audit less than very helpful (13%) to recall ceiling or attic insulation being recommended by the auditor. In addition, respondents who found the audit very helpful were more likely (45%) than those who found the audit less than very helpful (5%) to recall wall insulation being recommended by the auditor.
 - *Installed Insulation after audit:* Respondents who reported installing attic or ceiling insulation after the audit were more likely (100%) than those who did not (14%) to recall ceiling or attic insulation being recommended by the auditor. Those who installed attic or ceiling insulation were more likely (100%) than those who did not (6%) to recall wall insulation being recommended by the auditor.

3.6.8 Usefulness of Information

KEMA asked respondents to rate the usefulness of the information provided by the auditor on a five-point scale anchored at one for “not at all useful” and five for “very useful.” A small majority (52%) of respondents said the information was very useful (five on the five-point scale). More than one- third (38%) gave a rating of four on the five-point scale.

Figure 3-63:
Usefulness of Information Received from Auditor



The usefulness of the information is associated with energy saving actions:

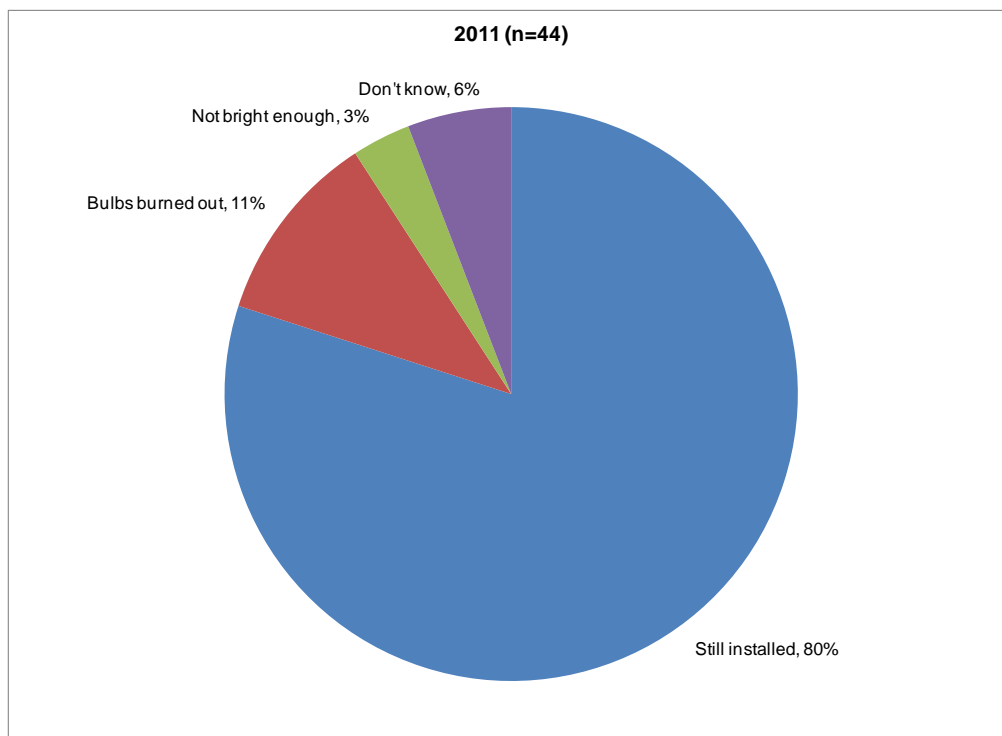
- *Future purchase of CFL bulbs:* Respondents who said it was likely or somewhat likely they would buy CFLs in the future were more likely (100%) than those who said they would not or probably would not buy CFLs at the stores (19%) to find the information somewhat useful (4 or 5 on the five-point scale).
- *Installation of pipe wrap:* Respondents who reported that the auditor installed pipe insulation were more likely (100%) than those who did not (40%) to find the information somewhat useful (4 or 5 on the five-point scale).

- *Installed insulation after audit.* Respondents who reported installing attic or ceiling insulation after the audit were more likely (100%) than those who did not (45%) to find the information very useful (5 on the five-point scale).

3.6.9 Installation of CFLs

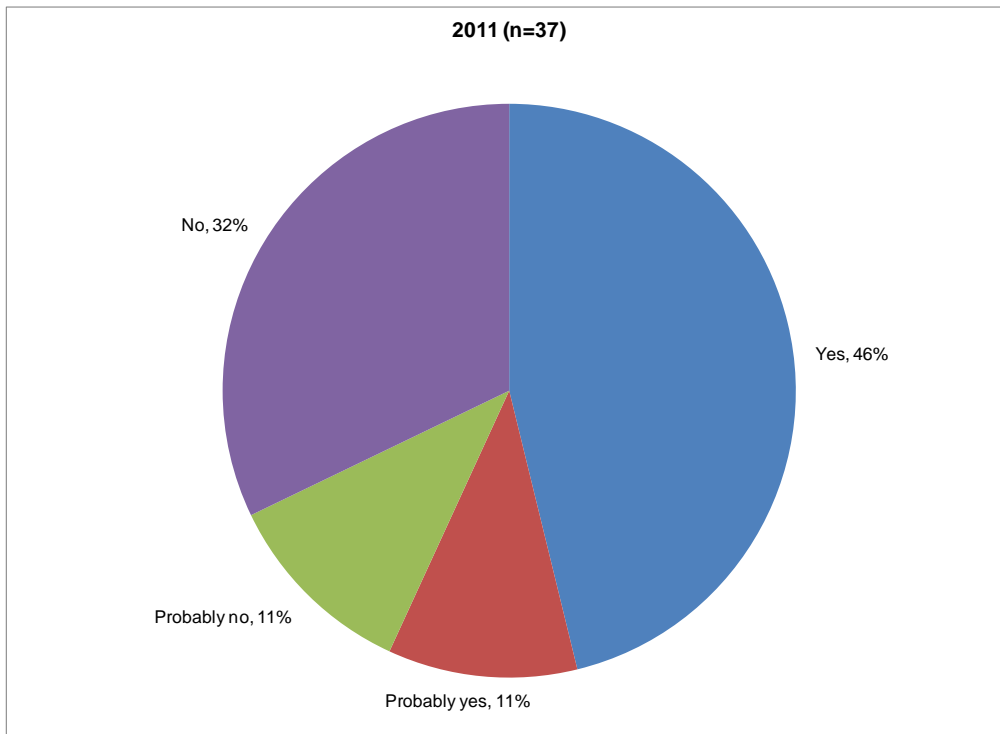
Auditors installed CFL bulbs in the homes of some respondents. KEMA asked respondents if they remembered how many bulbs were installed. Almost all respondents (90%) who had CFL bulbs installed recalled having the same number installed as records indicated. KEMA then asked if bulbs were still installed and why any were removed. [Figure 3-64](#) shows the percent CFL bulbs still installed and reasons for removal. Eighty percent of respondents who reported having CFL bulbs installed still had them installed at the time of interview.

Figure 3-64:
CFL Bulbs Still Installed And Reason For Removal



The survey asked respondents whether they would purchase CFLs at the store if the auditor had not installed them during the audit. Possible answers were yes, probably yes, probably not, and no. Over half (57%) of respondents said they would (46%) or probably would (11%) buy CFLs at the store. Eleven percent said that they probably would not, and nearly one-third (32%) said that they would not ([Figure 3-65](#)).

**Figure 3-65:
Likelihood of Purchasing CFLs at Store**



There were several significant differences in willingness to purchase CFLs at the store, depending on respondents' education level and income.

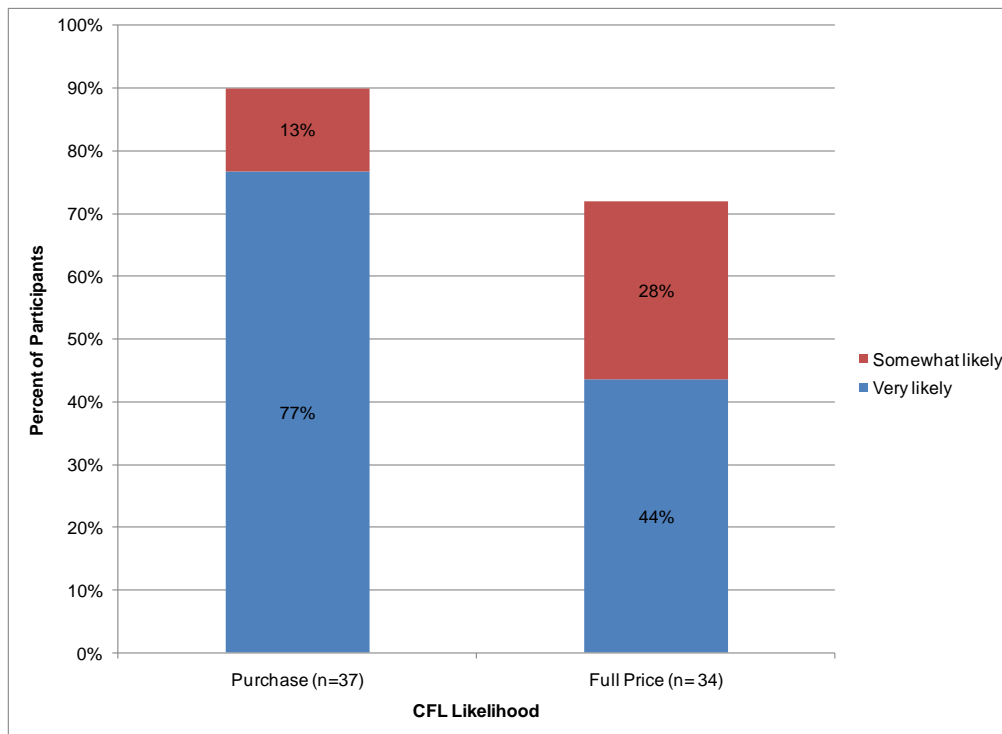
- *Education level:* Respondents with a high school diploma or less were more likely (61%) than those with a four-year degree (12%) to say that they would have bought CFL bulbs. Respondents with some college, trade or technical school were more likely (67%) than those with a high school diploma or less (24%) to say that they would not have bought CFL

bulbs. Respondents with some graduate school or an advanced degree were more likely (67%) than those with a college degree (18%) or a high school diploma (8%) to say that they probably would not have bought CFL bulbs.

- **Income:** Respondents with income less than \$50,000 per year were more likely (58%) than those who did not report their income (12%) to say that they would have bought CFL bulbs.

The survey also asked respondents who received CFLs if they would purchase CFLs in the future and if they would pay full price of three or four dollars each. Almost all (90%) of respondents said they would purchase CFLs in the future, and the majority of respondents (72%) said they would do so at full price ([Figure 3-66](#)).

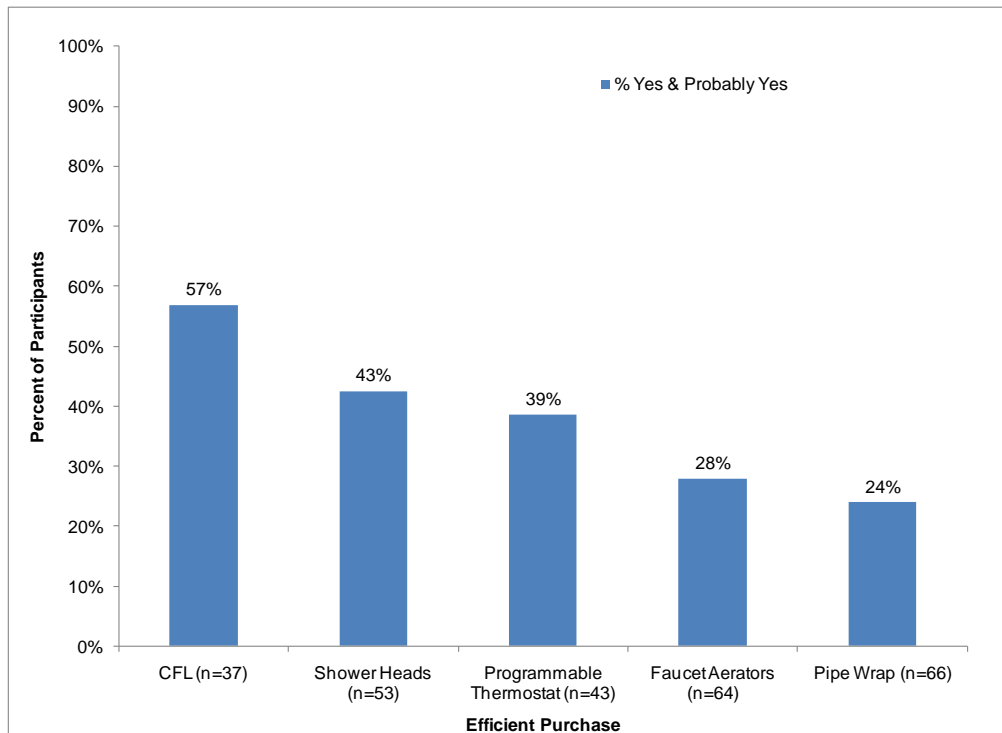
**Figure 3-66:
Likelihood of Purchasing CFLs Full Price**



3.6.10 Installation of Other Measures

Respondents were asked about whether they would have bought any of the measures installed by auditors, if the auditors had not installed them. Measures installed include shower heads, faucet aerators, hot water pipe wrap, and programmable thermostats. CFLs were the measure most likely to be installed if the auditor had not installed them. Pipe wrap was the least likely measure (Figure 3-67).

Figure 3-67:
EE Measures that Audit Participants Said They Would Have Purchased
if the Onsite Audit Program Had Not Installed Them



There were statistically-significant differences in response rates depending on the type of measure.

- *Shower heads:*



-
- *Household income:* Respondents who did not report their income (40%) were less likely than those who reported income less than \$50,000 per year (8%) to say that they would have bought a shower head. Respondents with income less than \$50,000 per year were more likely (54%) than those who did not report income (25%) to say that they would not have bought a new shower head.
 - *Education:* Respondents with a high school diploma or less (54%) were more likely than those with some college, trade or technical school (28%) to say that they would have bought a new showerhead. Respondents with some graduate school or advanced degree (66%) were more likely than those with a 4-year degree (15%), some college, trade or technical school (14%), or high school diploma or less (16%) to say that they probably would not have bought a new showerhead. Respondents with some college, trade or technical school (42%) were more likely than those with a high school degree (12%) to say that they probably would have bought a shower head.
 - *Reviewed audit report:* Respondents who did not review the audit report (70%) were more likely than those who did (15%) to say that they probably would not have bought a shower head.
 - *Concern with reducing home energy use:* Respondents concerned with reducing energy use (66%) were more likely than those who were not (18%) to say that they would have bought a shower head.
 - *Programmable thermostat:*
 - *Age:* Respondents under 40 years old and those 40-64 years old were more likely (56% and 36% respectively) than those 65 years old and older (4%) to say that they probably would have bought a programmable thermostat. Respondents 65 years old and older were more likely (59%) than those under 40 (15%) to say that they would not have bought a programmable thermostat. KEMA usually finds that older respondents are less interested in programmable thermostats.
 - *Furnace/boiler tune-up:* Respondents who reported having a furnace or boiler tune up since the home audit were more likely (48%) than those who did not (18%) to say that they probably would have bought a programmable thermostat. Participants who reported not having a furnace or boiler tune up since the home audit were more likely (57%) than those who did (26%) to say that they would not have bought a programmable



thermostat. This finding likely was an effect of the contractors who did the tune-ups recommending programmable thermostats.

- *ENERGY STAR awareness:* Respondents reporting awareness of ENERGY STAR were more likely (39%) than those who did not (8%) to say that they probably would have bought a programmable thermostat. Respondents reporting no awareness of ENERGY STAR were more likely (68%) than those with an awareness (35%) to say that they would not have bought a programmable thermostat. This finding suggests that increased knowledge of energy efficiency increases motivation to install programmable thermostats.
- **Faucet Aerators:**
 - *Reviewed audit report:* Respondents who reviewed the audit report were more likely (67%) than those who did not (10%) to say that they probably would not have bought a faucet aerator.
 - *Auditor installed pipe wrap:* Respondents who reported that an auditor did not install hot water pipe wrap were more likely (100%) than those who did (57%) to say they would not have bought a faucet aerator. These respondents might have already had pipe wrap and faucet aerators.
 - *ENERGY STAR awareness:* Respondents reporting awareness of ENERGY STAR were more likely (22%) than those who were not (4%) to say that they would probably buy a faucet aerator.
- **Pipe Wrap:**
 - *Audit satisfaction:* Participants who reported not being completely satisfied with the audit were more likely (57%) than those who were satisfied (7%) to say that they probably would not have bought pipe wrap.

3.6.11 Rebated Energy Efficient Actions

The survey confirmed rebate records for respondents on a number of rebated elements. These elements include energy efficient window installation, attic insulation, above-ground wall insulation, band joist insulation, basement wall insulation, crawl space insulation, and floor



insulation. Only a small number of individuals chose to install energy efficient equipment and apply for program rebates, shown in [Table 3-18](#)~~Table 3-18~~.

**Table 3-18:
Rebated Measures Installed After Audit**

Installed Rebate Measure	#
Energy Efficient Windows	0
Attic or Ceiling Insulation	2
Wall Insulation	1
Band Joist Insulation	2
Basement Wall Insulation	0
Crawlspace Insulation	1
Floor Insulation	1

Note: Unweighted number of respondent households of 96 contacted.

3.6.12 Energy Efficiency Actions after Audit

The survey asked whether respondents had taken any actions related to energy efficiency after the audit. The survey first asked respondents whether they had taken any actions to reduce the drafts coming into their home and if they had performed or hired a professional to do maintenance on their home heating system. Half (50%) of respondents said they had reduced drafts and 39 percent said they had maintenance done on their heating system.

There were several statistically significant differences for each of these energy saving actions:

- *Reduce drafts through doors/windows:* Respondents with a four year degree were more likely (75%) than those with a high school degree or less (42%) or those with some graduate school or an advanced degree (27%) to take actions to reduce drafts. Respondents 40 years old or less were more likely (80%) than those 40-64 years old (51%) or those over 65 (42%) to reduce drafts after the audit.
- *Heating system maintenance:* Male respondents were more likely (53%) than female respondents (29%) to have done any maintenance on their furnace, boiler or heat pump. Respondents who viewed the audit report were more likely (33%) to have done maintenance. Respondents who had the auditor install CFLs were more likely (86%) to have done maintenance than those who did not (24%). Respondents who reported the auditor



installed pipe wrap were less likely (35%) than those who did not (78%) to report HVAC maintenance.

The survey asked any respondent who said they took any of the four types of energy saving actions listed above to specify which actions they took. This question was asked as an open-ended question, so there were a wide variety of responses. Table 3-19 shows the actions and the percent of all respondents who reported taking that action.

**Table 3-19:
Specific Energy Efficiency Actions Performed after Audit**

Energy Efficient Action	%
Installed sweeps under your doors	36%
Installed weather stripping on windows or doors	23%
Replaced furnace or heat pump filter	22%
Had furnace or boiler tuned-up by a professional	20%
Caulked windows or doors	12%
Installed a new threshold	7%
Installed damper or internal seal on chimney	2%
Added weather stripping to attic access doors	2%
New heating system	2%
Insulated attic access doors	2%
Installed crawl space vapor shield	2%
Other	2%

Note: The total exceeds 100% because respondents were allowed to give multiple responses.

3.6.13 Satisfaction

The survey included an overall satisfaction question. Respondents rated their satisfaction with the program overall on a five-point scale, anchored at “very satisfied” and “very dissatisfied.” Almost all (96%) of respondents said they were very satisfied or somewhat satisfied with the program ([Table 3-20](#)). KEMA considers this level of satisfaction to be very good.

**Table 3-20:
Program Satisfaction**

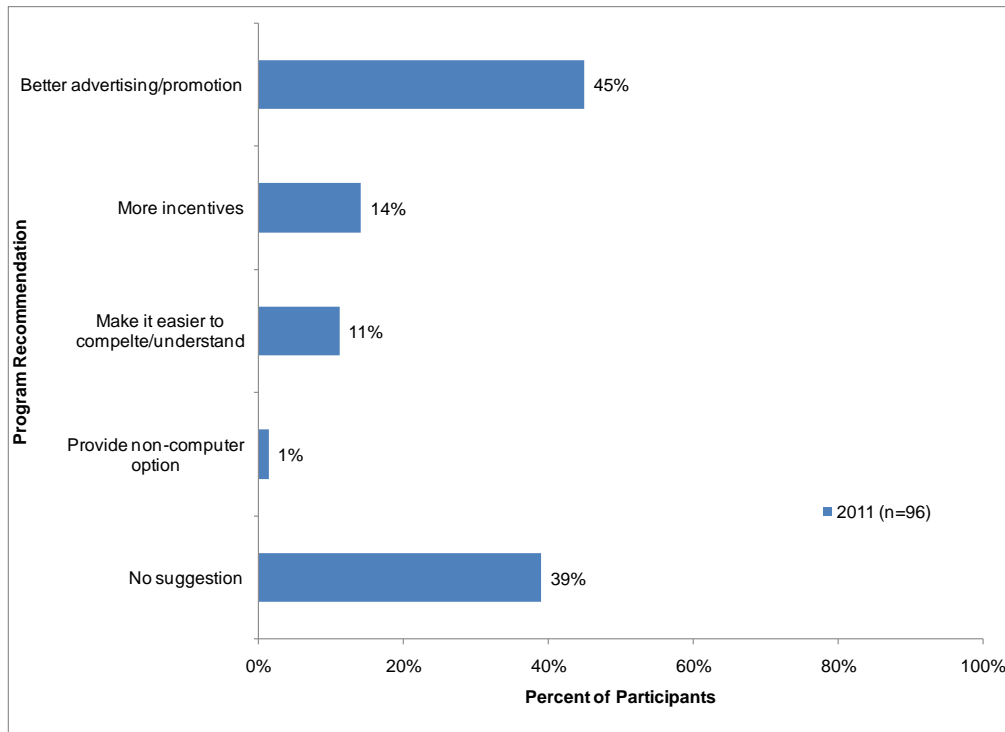
Program Satisfaction	Percent (n=96)
Very Satisfied	57%
Somewhat satisfied	38%
Nerither satisfied or dissatisfied	2%
Somewhat dissatisfied	0%
Very dissatisfied	0%
Don't Know	3%
Total	100%

The survey asked any respondent who gave an answer of less than “somewhat satisfied” why they were less than satisfied. Reasons for dissatisfaction included the respondent not receiving the promised equipment (e.g., CFLs) or the respondent not receiving enough information or help on weatherization.

3.6.14 Suggestions for Program Improvement

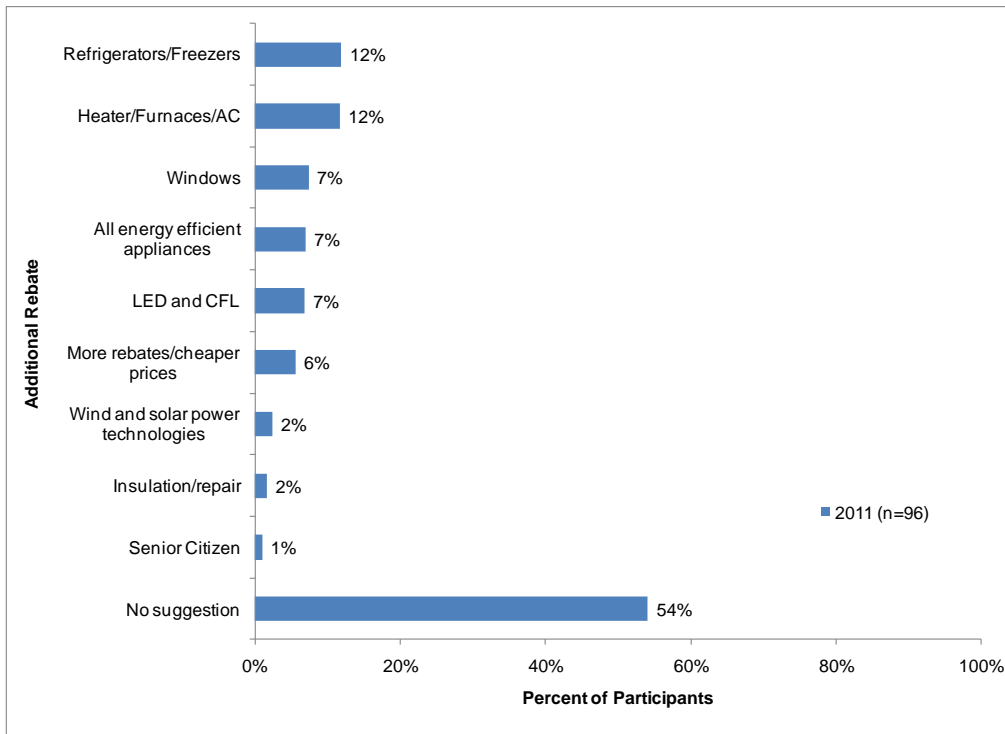
The survey asked respondents if there was anything their utility could do to get more people to get audits. ~~Figure 3-68~~Figure 3-68 summarizes the responses. Many respondents (39%) did not provide a suggestion. Those that did usually mentioned better advertising (45%). Some (14%) suggested increasing the size of incentives. A few (11%) asked to make it easier to complete the audit.

Figure 3-68:
Suggestions for Program Improvements



The survey also asked respondents if there were any energy efficiency technologies that they would like their utility to offer rebates for. ~~Figure 3-69~~ summarizes the responses. Most (54%) respondents did not provide a suggestion. The most often-suggested rebate were refrigerators/freezers or HVAC equipment (12% each). The next most often suggested rebate (7% each) were for windows, all energy efficient appliances and high efficiency light bulbs such as CFLs or LEDs. Other less-cited suggestions included more rebates, renewable energy, insulation and “senior citizen help.”

**Figure 3-69:
Suggestions for Additional Rebates**





3.7 Commercial and Industrial Programs

3.7.1 Summary of Findings

In the second phase of the EU/EO C&I program evaluation we compared the survey responses of the 2011 participants to those of the 2010 participants.

- *Firmographics:* The firmographics questions revealed no major changes between 2010 and 2011 in the characteristics of the companies participating in the program.
- *How participants heard about the program:* The 2011 participants were less likely than their 2010 counterparts to cite their utility as their first source of program information. However, the 2011 participants were more likely than those from 2010 to cite contractors, equipment vendors and suppliers as their first sources of program information. This is an encouraging sign since leveraging trade allies to spread word-of-mouth is a cost-effective way to increase program outreach.
- *Motivations for doing EE projects:* A higher percentage of 2011 participants pointed to improving equipment and operational efficiencies as reasons for initiating energy efficiency projects than the 2010 participants did. However, in 2011 the proportion of participants identifying renovation, and planned upgrades or maintenance declined.
- *EE decision-making:* On the subject of energy efficiency decision making, the results were mixed.
 - On one hand, the 2011 responses were similar to those in 2010 on the subject of guidelines and management structure impinging on the decision.
 - But when pressed to characterize how frequently life-cycle costs were considered when such decisions are taken, only about half of the 2011 respondents said they are considered all or most of the time, compared to two-thirds who said that in 2010.
 - The proportion of respondents indicating that their decisions involving investments in new energy-using equipment had been affected by the economic slowdown fell in 2011 relative to 2010. This was somewhat surprising given that the overall economy grew at only half the rate in 2011 that it had in 2010.



-
- *The location of measure installation:* One curious change in 2011 was a rise in the number of measures installed at an address other than the expected one. Whereas 98 percent of measures investigated in the survey in 2010 were installed at the address recorded in the CLEAResult database, the corresponding share in 2011 was only 89 percent.
 - *Program attribution:* Attribution in 2011 remained low. As was true in 2010, about one-third of respondents indicated that it is “very likely” that they would have installed the measure even in the absence of the rebate program, while another third said it was “somewhat likely.”
 - *Program satisfaction:* Finally, satisfaction with the program significantly improved in a number of respects in 2011 compared to 2010. While satisfaction with the rebated equipment, and with the program as a whole, were uniformly high in both years, the survey revealed substantial improvements on a number of specific program attributes, including program requirements, interactions with program staff, the financial incentives received, rebate timeliness, and the amount of paperwork involved.

3.7.2 Program Description

The Commercial and Industrial (C&I) programs include the C&I Prescriptive Program, the C&I Custom Program, the C&I New Construction Program, and the C&I RFP Program. The C&I Prescriptive Program funds were initially set aside as one program offering, while the other program funds were combined into a single C&I Custom Program. The prescriptive program was implemented in November 2009 for MCAAA and MECA cooperative utilities and in February 2010 for MECA UP municipals. The program has received permission from the MPSC to combine the incentive money for the Prescriptive and Custom programs, allowing the funds in both budgets to be used for either type of project. The C&I Prescriptive Programs are implemented by Franklin Energy (under contract to CLEAResult) in all utility service territories that offer the program. Franklin Energy also currently offers the C&I Custom Program for the MCAAA and MECA municipal utilities. The program is offered in all service territories except Bayfield Electric Cooperative. The C&I program is the second-largest program in the MCAAA/MECA portfolio and provides incentives to customers for installing high efficiency measures in commercial or industrial facilities.

The prescriptive measures offered in the C&I Programs include:

- CFL bulbs;



-
- T8 lamps and fixtures;
 - Motion sensors;
 - HVAC equipment;
 - Fans/pumps/drives;
 - Water heaters;
 - Refrigeration;
 - Food service equipment; and
 - Controls.

There were several changes in the program in 2011. First, the incentive for motors went away. High efficiency motors became standard in 2011, so Franklin Energy could no longer offer incentives for them. Secondly, the program completed more custom measures in 2011 (37 versus 9 in 2010). In-depth interviews with program administrators suggest that this was a natural outgrowth of the program being in its second year. Custom projects require longer than prescriptive projects to implement, and Franklin was able to build some relationships in 2010 that allowed them to complete more custom projects in 2011. In one utility, Franklin also moved high bay lighting from prescriptive to custom measures due to changes in that utility's savings goals.

3.7.3 Methodology

CLEAResult provided KEMA with a sample population of 147 program participants as of August 31, 2011. For the 42 participants who installed only prescriptive measures, KEMA contracted Braun Research Inc. (BRI) to conduct computer-aided telephone interviews. BRI completed interviews with 30 participants in November and December 2011. For the 105 participants who installed custom measures, KEMA engineers conducted telephone interviews and site visits. KEMA completed interviews with a total of 69 participants. This was a final response rate of 67% percent, which is comparable to the response rate achieved last year. Phone numbers were called at least eight times over at least two weeks before being considered unreachable.

The surveys covered the following topics:



-
- Sources of information,
 - Energy efficiency decision making processes,
 - Installation of the measure,
 - Previous experience with energy efficient equipment,
 - Satisfaction,
 - Suggestions for program improvements, and
 - Firmographics.

Some of the survey questions applied to the participant level. Other survey questions were at the individual rebated measure level. The survey respondents installed a total of 208 rebated measures, or two each. Some survey questions applied to the project or measure group level. There was less variety in measure groups in 2011 than in 2010. Measure groups in this year's sample included lighting, CFLs, custom, and boiler tune-ups. Survey respondents had a total of 115 measure groups, or about one each.

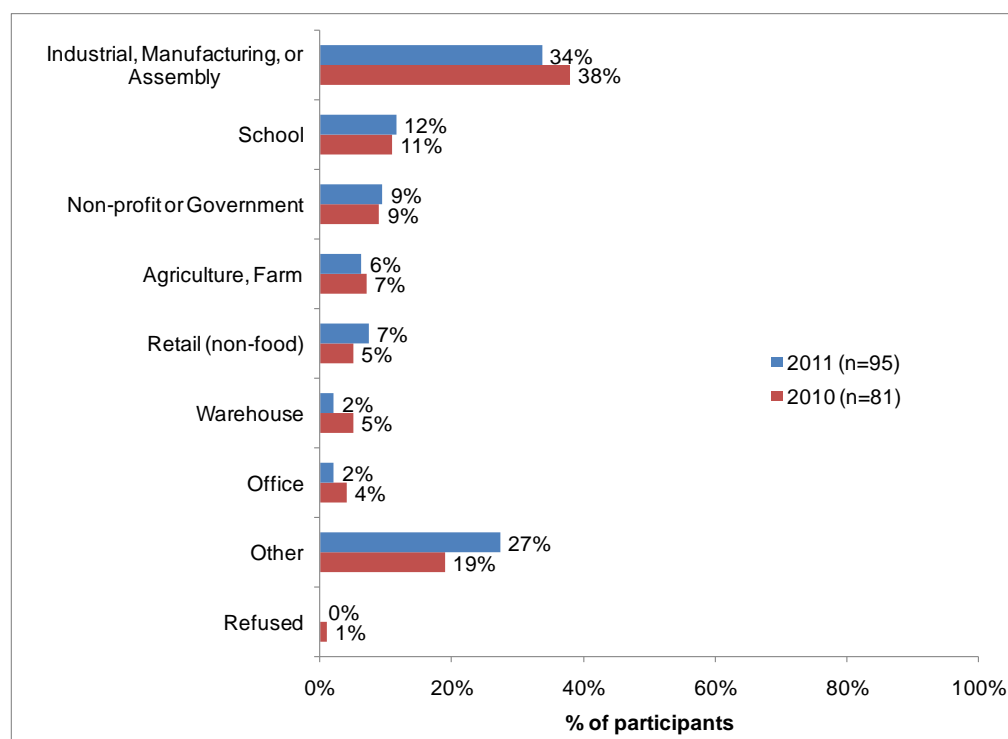
3.7.4 Characterization of the participants

The survey asked several questions to better characterize the locations where the rebated equipment was installed. These questions included the primary economic activity, ownership, whether energy costs were included in leases, square footage, and number of full-time equivalent employees (FTEs) at the location where the equipment was installed.

3.7.4.1 Principal Economic Activity

The way that participants in 2011 described the principal economic activity at the site where the rebated equipment was installed did not vary much from what the 2010 respondents said. The largest category was industrial or manufacturing, at somewhat over one-third of respondents (34% in 2011, 38% in 2010). The second-largest category consisted of the "Other" responses (27% in 2011, 19% in 2010) which included grocery, convenience store restaurant, hospital, hotel/motel, and other (unspecified) ([Figure 3-70](#)[Figure 3-70](#)).

**Figure 3-70:
Principal Economic Activity**



Highlights of participant responses to other firmographic questions are summarized below:

- Owning/leasing space:** Over three-fourths (84% in 2011, 85% in 2010) of participants said they own all of the space they occupy. A smaller share (14% in 2011, 10% in 2010) said they lease all of the space they occupy. The remainder own some space and lease some space or did not answer the question. Few if any lessees said that energy costs are included in their lease (5% in 2011, none in 2010).
- Building size:** The 2011 participants occupied between 1,200 and 4,000,000 square feet, with a mean of 201,760 square feet. (The square footage distribution is highly skewed, with a few extremely large sites and most respondents clustering nearer to the low end of the scale. In such cases, the mean and median are quite different, and the median area – 30,000 square feet – better characterizes the typical participant than the mean.)

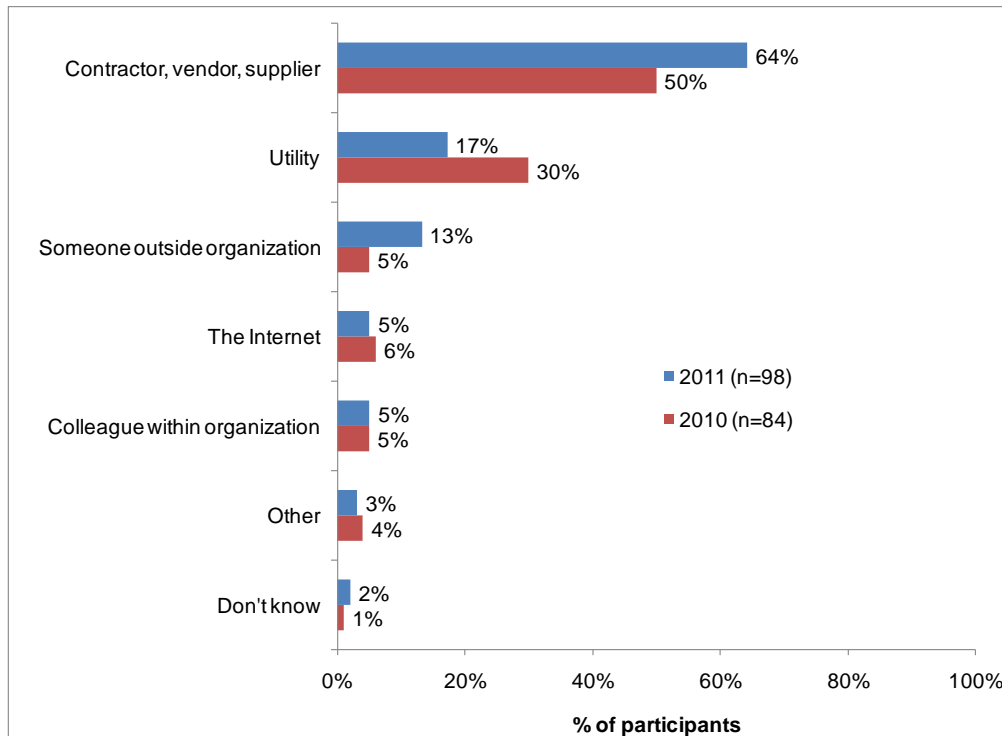


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- *# of employees:* The 2011 participants employed between 1 and 1,500 FTEs, with an average of about 165 and a median of 24.

3.7.5 Sources of Information

The survey asked how respondents heard about the program. As was true in 2010, most (about 80%) of respondents said that they heard about the program either from their contractor/vendor/supplier, or their utility. However, the distribution between these two information sources was more heavily weighted toward contractors/vendors/suppliers in 2011 – 64% heard about the program from these sources in 2011, as opposed to 50% in 2010 – and less toward the utility (17% in 2011, roughly half what it had been in 2010) (Figure 3-71). The main reason for these changes is probably maturation of the program. In-depth interviews revealed that now that the program is in its second year, Franklin has some relationships built up with contractors and suppliers that led to some of the 2011 projects. This is an encouraging sign since leveraging trade allies to spread word-of-mouth is a cost-effective way to increase program outreach.

**Figure 3-71:
Sources of Information**

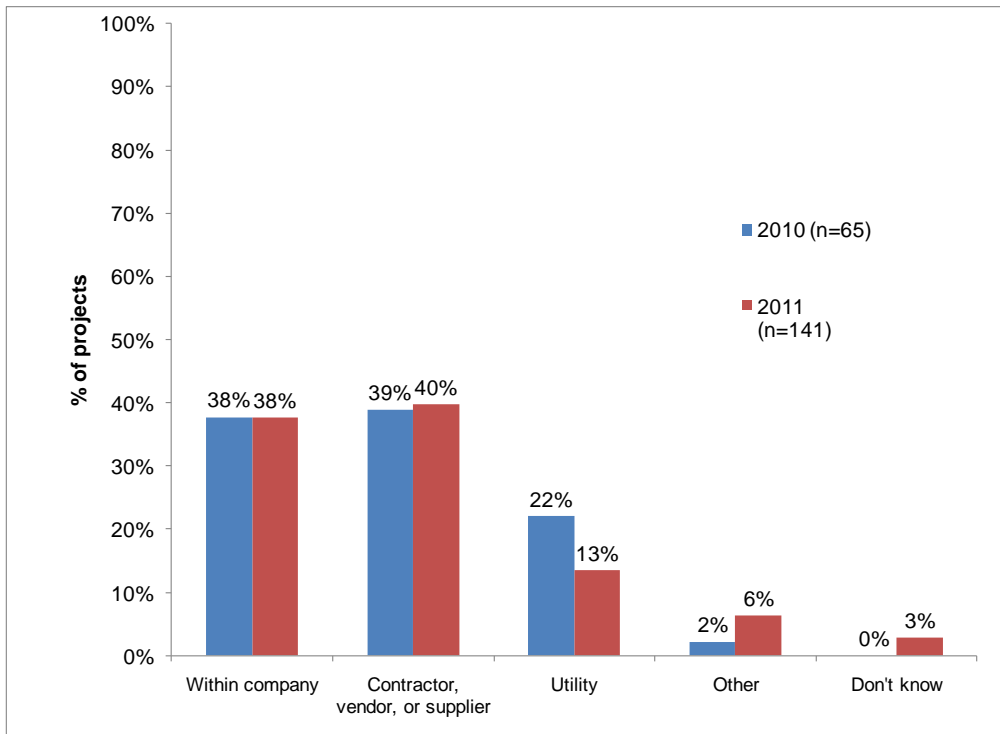


Note: The total exceeds 100% because respondents were allowed to give multiple responses.

For respondents who said they heard about the program through a contractor or vendor, the survey asked if they had completed any previous projects with that contractor or vendor. Somewhat fewer (53% of respondents) of the 2011 participants said that they had relative to 2010 (68%). This is another indication that the pool of participating trade allies is growing.

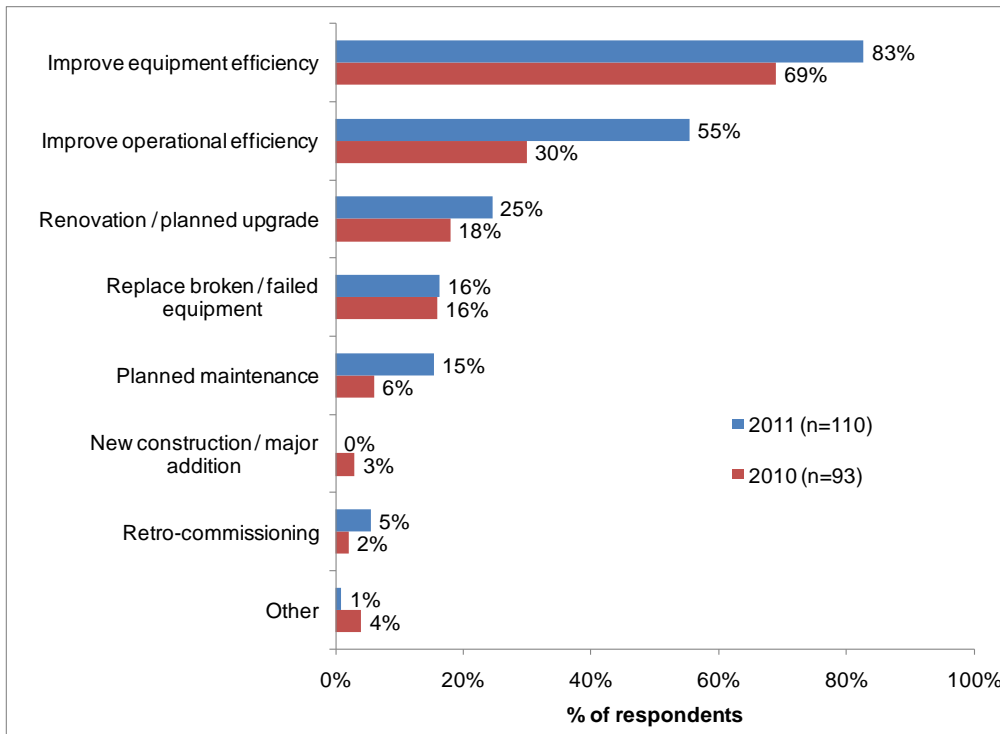
The survey asked respondents where the initial idea for the project came from. Figure 3-72 shows that the pattern of answers is similar to those in 2010. The proportions of ideas originating from the two largest categories – within the company and contractor / vendor / supplier both held steady (at 38% and around 40%, respectively). The share coming from the utility was down by nine percentage points relative to 2010.

**Figure 3-72:
Sources of Project Ideas**



The survey also asked respondents why they undertook the project. Respondents were provided with choices including: improve equipment efficiency, improve operational efficiency, renovation or planned upgrade, replace broken or failed equipment, planned maintenance, part of a retro-commissioning project, and new construction or major addition. Greater percentages said they did the project to improve equipment efficiency (83%) or operational efficiency (55%) in 2011 compared to 2010 (69% and 30%, respectively). The proportions citing a renovation or planned upgrade or to replace failed or broken equipment were similar in both years (25% and 16% in 2011 versus 18% and 16% in 2010), while planned maintenance doubled in 2011 (15%, up from 6% the previous year) ([Figure 3-73](#) [Figure 3-73](#)).

**Figure 3-73:
Reason for Project**



Note: The total exceeds 100% because respondents were allowed to give multiple responses.

3.7.6 Energy Efficiency Decision-making

The survey asked a series of questions to assess the decision-making policies and guidelines in place at the respondents' companies. The results in 2011 did not differ very much from the answers given in 2010. Ten percent of respondents in 2011 said their company had formal guidelines about the purchase of energy efficient equipment, as compared to 15 percent in 2010. Forty-one percent said their company had informal guidelines about the purchase of energy efficient equipment, compared to 35 percent in 2010. The survey also asked if respondents had a person at their facility whose job description included the management of energy at their location. About half of respondents in each of the years said they have such a person – 55 percent in 2011, and 49 percent in 2010 ([Table 3-21](#)~~Table 3-24~~).

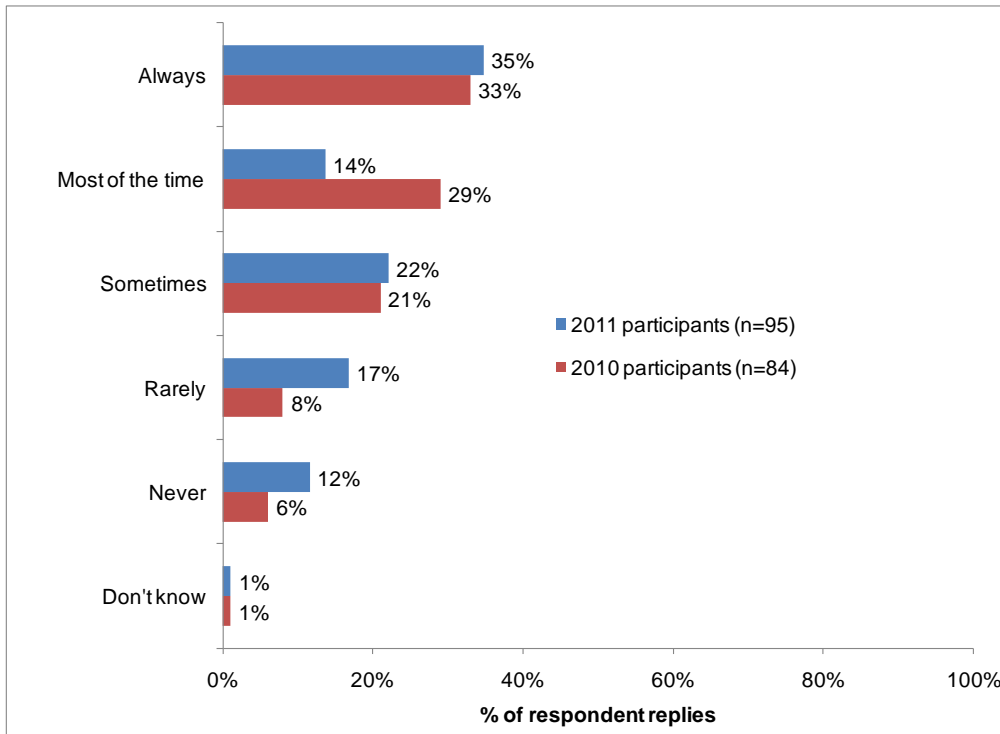
**Table 3-21:
Energy Efficiency Decision-making Component**

Component	Participants	
	2011 (n=96)	2010 (n=84)
Formal requirements	10%	15%
Informal guidelines	41%	35%
Energy efficiency manager	55%	49%

The survey asked respondents how frequently their company considers entire life-cycle costs, including fuel use, when purchasing equipment. Choices included “never,” “rarely,” “sometimes,” “most of the time,” and “always.” The 2011 responses resembled those from the previous year in most respects, although there were a few notable differences.

The frequency of considering entire life cycle costs declined in 2011. In 2010, about two-thirds of respondents said they consider entire life-cycle costs always (33%) or most of the time (29%). The combination dropped to about half in 2011 due to a decline in those responding “Most of the time.” Those saying they rarely or never consider these costs doubled in 2011 relative to 2010, going from 14 percent to 29 percent ([Figure 3-74](#)~~Figure 3-74~~).

**Figure 3-74:
Frequency of Considering Entire Life-Cycle Costs
When Purchasing Equipment**



The survey asked respondents if the recent economic downturn affected the way their company makes decisions about the purchase of energy using equipment. The proportion of respondents answering in the affirmative declined in 2011 to 64 percent compared to 74 percent in 2010. This is somewhat surprising in view of the fact that the overall economy grew more robustly in 2010 than it did in 2011. However, this may not be fully reflective of the Michigan economy.²⁴ The survey asked respondents who said they had been affected how the economy affected their

²⁴ The U.S. Bureau of Economic Analysis reports that the real (inflation-adjusted) gross domestic product in the United States grew at a 3 percent annual rate in 2010, compared to 1.7 percent in 2011. Michigan's real gross state product in 2010 was quite similar to the national figure (2.9%); the corresponding 2011 figure has not yet been released.



decisions. Almost all of the respondents said they were making fewer purchases, putting purchases off and doing more maintenance, or keeping a closer eye on their budgets because of the economic downturn. One respondent said that they were purchasing more equipment in order to lower operating costs, and another said they were purchasing more because they could get good deals at auctions. In the 2011 evaluation, we added a question about whether there were any other factors affecting their decisions about energy using equipment. Responses included: no other factors, less revenue coming in, rising fuel costs, and the incentive programs making some projects possible.

The survey also asked several open-ended questions to investigate how the company makes decisions about the purchase of energy-using equipment. Answers included that projects have to meet certain criteria or be approved by a purchasing committee; the company always looks for ways to save money, and having to meet specific criteria, such as ENERGY STAR rated.

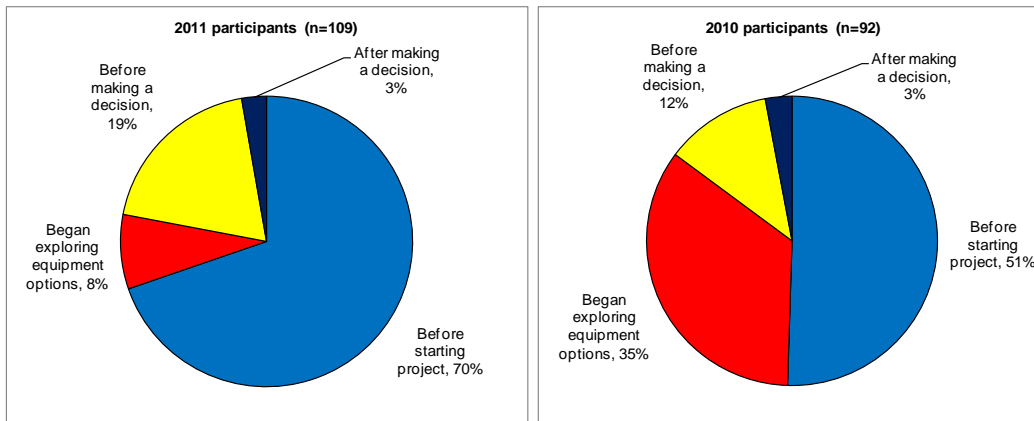
3.7.7 Measure Installation

One curious change in 2011 was a rise in the number of measures installed at an address other than the expected one. Whereas 98 percent of measures investigated in the survey in 2010 were installed at the address recorded in the CLEAResult database, the corresponding share in 2011 was only 89 percent.

3.7.8 Program Attribution

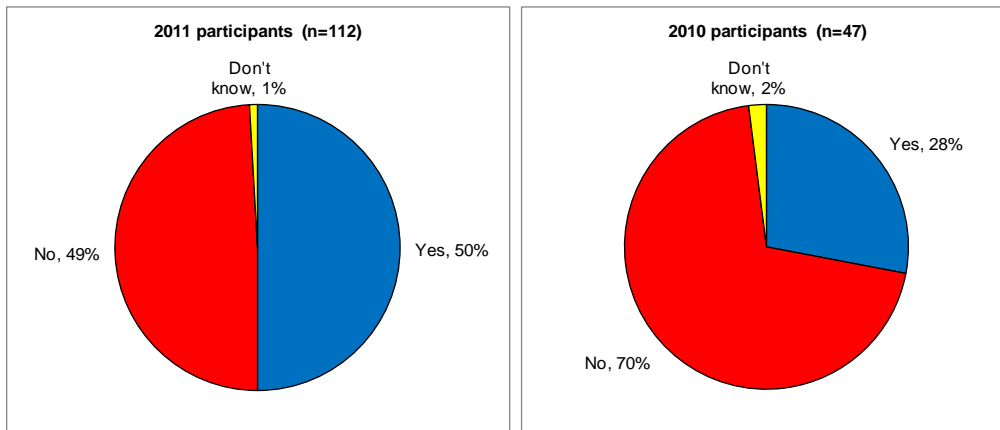
A full net-to-gross analysis will be included in the impact report. However, there were a few process-related questions asked in the survey that shed light on the question of attribution. The survey asked respondents whether they made plans for the equipment purchase or project before hearing about the program incentives. Overall, the 2011 cohort seems to have been better informed about the program than their 2010 counterparts. [Figure 3-75](#) shows that for 70 percent of the 2011 projects, respondents said they had heard about the EU/EO program before starting the project. The corresponding figure in 2010 was just 51 percent. In addition 19 percent said they heard about the program before making a decision compared to 12 percent in 2010. These changes are probably due to the maturation of the program. In-depth interviews with program administrators revealed that now that the program is in its second year, companies are more aware of them.

Figure 3-75:
When Respondent Heard about Program



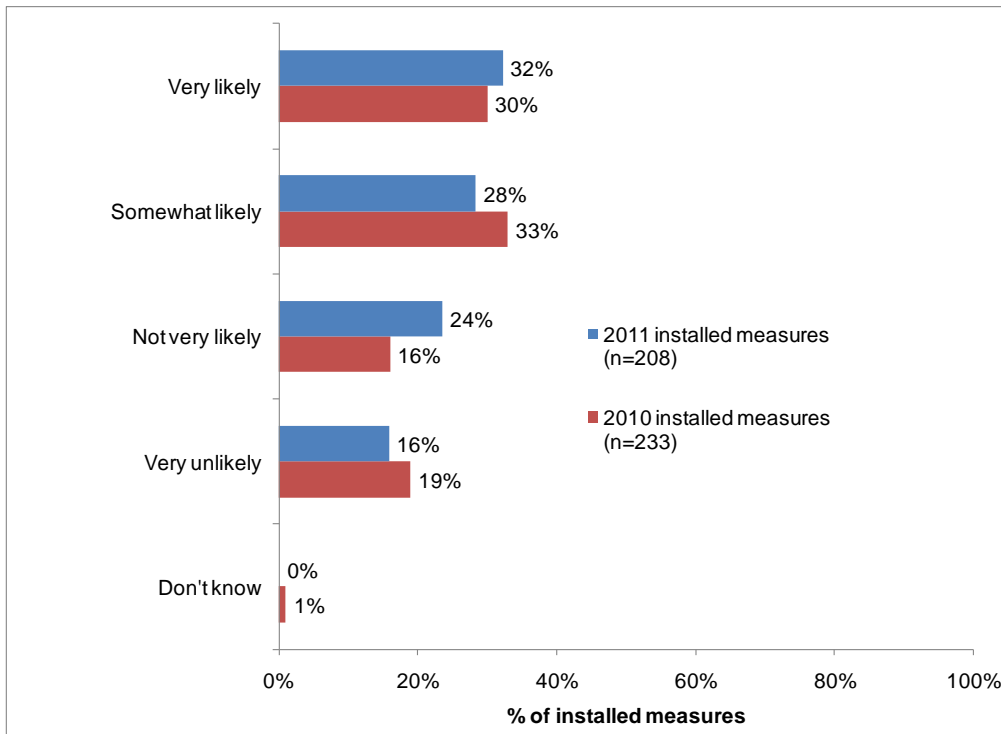
The survey also asked respondents whether they had previously installed similar energy-efficient measures in any of their other facilities. The 2011 cohort seems to have been a more experienced group than the 2010 respondents. While in 2010 the majority (70%) of respondents said they had not previously completed similar projects, in 2011 only 49 percent answered that way, while 50 percent said that they had undertaken similar projects before (Figure 3-76). Interviews with program administrators revealed that there are some customers who participated in both years of the program (which was impossible in the first program year of 2010). The in-depth interviews did not gather information about the magnitude of the repeat participation, so it is unclear if this accounted for all of the differences observed this year.

**Figure 3-76:
Previously Installed Similar Measures**



The survey asked respondents how likely it is that they would have installed each measure without program incentives or assistance. Choices included “very likely,” “somewhat likely,” “not very likely,” and “very unlikely.” About one-third of respondents in each year said they were very likely to install the measure without the program, while roughly another third said they were somewhat likely to install the measure without the program. The remainder said they were not very likely or very unlikely to install the measures. This pattern of answers indicates low program attribution in both years. If nearly two-thirds of the respondents were likely to install the measures anyway, then the program did not strongly affect respondent decisions ([Figure 3-77](#)).

Figure 3-77:
Likelihood of Installing Measure Without Program



3.7.9 Satisfaction

The survey asked respondents how satisfied they were with several characteristics of the program, including the rebated equipment, the dollar amount of the rebate, the timeliness of the rebate payment, program applications and paperwork, program requirements, interactions with program staff, and the rebate program as a whole. Respondents answered each question on a five-point scale where five indicated “very satisfied” and one meant “very dissatisfied.” [Table 3-22](#) shows the full range of responses of the 2011 participants.

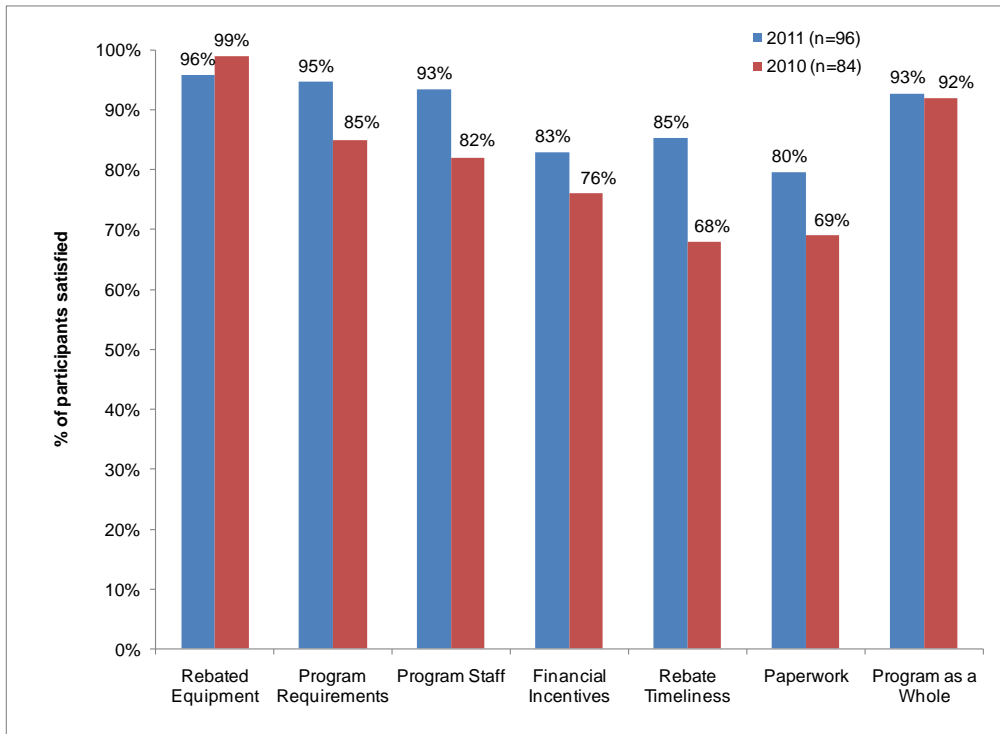


**Table 3-22:
2011 Participant Satisfaction with Program Characteristics**

Satisfaction	Program Characteristic						
	Rebated Equipment	Program Requirements	Program Staff	Financial Incentives	Paperwork	Rebate Timeliness	Program as a Whole
5 - Very satisfied	72%	61%	67%	43%	47%	50%	54%
4	24%	34%	26%	40%	32%	35%	39%
3	4%	2%	1%	13%	13%	6%	5%
2	0%	1%	2%	3%	3%	5%	2%
1 - very dissatisfied	0%	0%	0%	1%	1%	2%	0%
Don't know/refuse	0%	2%	3%	0%	3%	2%	0%

Figure 3-78 shows that satisfaction levels with the various program characteristics improved substantially in 2011 compared to 2010. While almost all respondents were satisfied (answering 4 or 5 on the five-point scale) with the rebated equipment in both years (96% in 2011, 99% in 2010), satisfaction with other aspects of the program improved in 2011. Satisfaction with program requirements rose from 85 percent to 95 percent; satisfaction with program staff and the amount of paperwork required each rose by 11 percentage points (82% to 93% and 69% to 80%, respectively); satisfaction with the size of the rebates rose by seven percentage points; and satisfaction with the timeliness of the rebate payments rose an impressive 17 percentage points (from 68% to 85%). Almost all respondents in both years (93% in 2011 and 92% in 2010) said they were satisfied with the program as a whole.

**Figure 3-78:
Percent Satisfied with Program Characteristics
(4 or 5 on five-point scale)**



In-depth interviews with program staff revealed that CLEAResult sends the checks to participants, and that they changed their procedures for 2011. In 2010, CLEAResult processed all checks in their central office in Texas. In 2011, they moved the processing to a local Michigan office. This streamlined the process, which allowed them to send out checks more quickly.

The in-depth interviews did not reveal any changes to the program paperwork for 2011. Those changes are planned for 2012. Therefore, it is unclear what caused the observed improvement in program paperwork requirements this year.

Except for program incentives, which may have actually decreased in some utility territories for 2011, the other improvements may be due to program maturation and staff learning effects. In-



depth interviews with Franklin, the primary program administrator, revealed that they managed to retain all of the employees who worked on the program in 2010. This retention means that program staff could have gotten more familiar with the program and adept at helping customers through the process.

If respondents provided an answer of three or less on the 5-point scale, the survey asked them to provide more detail about why they were less than satisfied.

- *Financial incentives:* Reasons for lack of satisfaction with the dollar amount of the rebates mostly amounted to wanting higher rebates. One respondent mentioned the program incentives changed after they signed up and they got the lesser incentive value. Another respondent was bothered when he found out his neighbor got a higher incentive than he did despite having a smaller space.
- *Paperwork:* Reasons for lack of satisfaction with the program paperwork included that the forms were hard to understand and that there was too much of it.
- *Rebate timeliness:* The only specific reason for lack of satisfaction with the timeliness of the rebate payments was that it took a long time to receive the rebate payment.
- *Program overall:* Respondents said that they were dissatisfied with the program overall because they did not save as much money as they expected, did not receive as much incentive as they expected, or there was too much paperwork.

The survey also asked respondents if there was anything the program could do to increase participation and if there were any additional technologies the program should cover. Respondents suggested increasing marketing, increasing rebate levels, making sure the funding did not run out partway through the year, involving the contractors more, and involving the contractors less. They also suggested offering rebates for heating and cooling and renewable energy sources (wind and solar).



4. Nonparticipants

4.1 Residential Nonparticipant Results

4.1.1 Summary

The following are some highlights from the survey of 2011 MCAAA/MECANonparticipants:

- *Demographic differences:* The Nonparticipants' demographics differ from the participants' in the following ways:
 - Nonparticipants were less likely than participants to own their homes, less likely to live in single-family detached homes, more likely to have one or two residents, were younger, were less educated, and had lower incomes.
 - Nonparticipants were less aware of ENERGY STAR, less concerned with reducing household energy consumption, and less concerned with the environment or global warming.
- *Awareness of EU/EO programs:*
 - About five percent of the households contacted reported that they had participated in at least one energy efficiency program.
 - About one-third of respondents were aware of the Energy Optimization or Efficiency United programs (33%) or of utility sponsored rebate programs generally (38%).
 - Utility bill stuffers were the main source of program information for those respondents that were aware of any programs.
 - If looking for information on rebate programs, respondents would prefer to get information from the utility itself, either by calling the utility, checking the utility website, or getting information in a bill stuffer or direct mail.
- *Reasons for not participating and barriers to energy efficiency participation*
 - The main reason respondents did not purchase CFLs was the price.



-
- The main reason Nonparticipant purchasers of larger equipment (clothes washers, water heaters, HVAC equipment, or dishwashers) did not participate in the rebate programs was primarily because the respondents did not know the rebates were available.
 - Almost all respondents who purchased larger equipment purchased equipment that was eligible for the rebates they were aware of.
 - *Appliance/equipment purchases:*
 - *CFLs:* Nonparticipants tend to buy light bulbs at home improvement or hardware stores or department stores. In contrast, about half of the ENERGY STAR Products (ESP) program participants purchased their CFLs from utility meetings, offices, or energy fairs.
 - *Clothes washers and dishwashers:* Nonparticipants were less likely to purchase clothes washers or dishwashers from home improvement or hardware stores than ESP program participants.
 - *Efficiency level:* Energy efficiency was the most important characteristic for clothes washers, water heaters, and HVAC equipment. It was the second most important characteristic for dishwashers. However, an ENERGY STAR rating was one of the least important characteristics for all of the larger equipment.
 - *Market penetration:*
 - About 20 percent of respondents said their home had no CFLs. About 16 percent said all of their home's light bulbs were CFLs.
 - Less than half of the respondents reported that any of their homes' major energy using equipment was ENERGY STAR rated.
 - Less than half of the respondents reported taking any of the energy savings actions recommended in the online audits available through the program.

4.1.2 Evaluation Description

In the 2011 evaluation we conducted a general population CATI survey of 800 residential customers in the MECA and MCAAA service territories. These general population surveys are sometimes informally referred to as "nonparticipant surveys" because unless a utility's energy efficiency programs are very active, most of the customers who are surveyed through random



digit dial methods will turn out to be nonparticipants. In addition, KEMA screened out program participants during the sample selection and in the initial survey questions.

The general population survey had three primary objectives:

1. *Assessing the effectiveness of the EU/EO program marketing efforts:*
 - a. Whether the demographics of the participating and nonparticipating customers are different;
 - b. Awareness of EU/EO programs;
 - c. How the program-aware nonparticipants heard about the programs;
 - d. Why program-aware nonparticipants did not participate; and
 - e. Where nonparticipants purchase their appliances and other energy-using equipment.
2. *Understanding the barriers to program participation and EE implementation in general.*
3. *Serving as a comparison group for the Residential Appliance Recycling (RAR) program.:* To find out what people would have done with their refrigerator /freezer in the absence of the program, it's best to ask customers who did not participate in the EU/EO RAR program how they disposed of their old refrigerators /freezers. Because we did not have a general population survey in the 2010 evaluation, we asked customers who participated in other EU/EO programs – but not in the Appliance Recycling Program – how they disposed of their old refrigerators /freezers. However, because participants in the EU/EO programs may be different (more enviro-friendly, etc.) than the general population, this may not have been the most ideal comparison group. This comparison is detailed in the Appliance Recycling Program Impact Report.

4.1.3 Methodology

The Residential General Population survey was intended to gather information about households within the territories of participating MCAAA/MECA utilities that had not participated in any of the rebate programs. The utilities could provide contact information for customers who participated in the programs, but not for Nonparticipants. To acquire a nonparticipating population base, KEMA contracted Relevate to provide all residential phone numbers for the zip codes within the territories of all MECA and MCAAA utilities. Relevate provided KEMA with over 670,000 phone numbers.



KEMA contracted Research America (RA) to conduct computer-aided telephone interviews (CATI) of program participants. KEMA released 30,895 phone numbers to RA. Of those numbers, about one-third (10,413) was deemed ineligible for the survey. Ineligibility resulted from several situations:

- *Disconnected phone numbers:* About 70 percent of the ineligible phone numbers were disconnected.
- *Ineligible household:* Respondents who did not purchase energy from a participating MECA or MCAAA utility and those who said they participated in an energy efficiency program were considered ineligible. This category accounted for about 15 percent of the ineligible numbers. Respondents in zip codes served by Great Lakes Energy were especially likely to fall into this category because many of these zip codes are also served by Consumer's Energy.
- *Fax/computer tones:* About eight percent of the ineligible numbers were due to fax machines or computers answering the call.
- *Non-residential:* The remaining ineligible numbers (about 6%) reported that the phone number was for a business rather than a residence.

Another 13,690 phone numbers were never answered. RA called these numbers at least eight times, across at least two weeks before considering them unreachable. Based on the ineligibility rate for the numbers for which RA did get an answer, KEMA estimates that most (8,286) of these unanswered phone numbers would have been ineligible.

The final estimated eligible sample was 12,196 phone numbers. RA completed interviews with 800 households in January and February 2011. This was a final response rate of seven percent.



**Table 4-1:
Residential General Population CATI Dispositions**

Sample Description	Number	Percent
Starting Sample	30,895	
Never Called	-	
Sample Used	30,895	
Known Not Eligible	10,413	
Estimated additional not eligible	8,286	
Sample-Valid	12,196	
Complete	800	7%
Refused	5,717	47%
Not Completed - Eligible	275	2%
Not Completed - Est. Eligible	5,404	44%

The CATI survey covered the following topics:

- Program awareness;
- Sources of information about energy efficiency programs;
- Recent purchases of energy using equipment; and
- Demographics.

Participants were stratified based on the program territory (EO, EU, or unknown) and peninsula (upper, lower) they were in based on zip code. Results are weighted based on the number of participants in the population strata divided by the number of completed surveys.

4.1.4 Characterizing the Nonparticipants

This section describes Nonparticipant demographics and knowledge and attitudes. It compares these to the participants. For comparisons to participants, KEMA computed a weighted average of all respondents who answered the same questions in the Appliance Recycling, Energy Star Products, HVAC, Online Audits, and Audit and Weatherization surveys. This section also has a description of the ENERGY STAR-rated equipment Nonparticipants reported owning.

4.1.4.1 Demographics

The survey asked several questions about Nonparticipants' demographics. Table 4-2 summarizes the results. Relative to participants, Nonparticipants were less likely to own their



homes, less likely to live in single-family detached homes, more likely to have one or two residents, were younger, were less educated, and had lower incomes.

**Table 4-2:
Nonparticipant and Participant Demographics**

	Non- participants	Participants	Sig. Difference
Home Ownership	n=800	n=1555	
Own	82%	96%	yes
Rent	17%	2%	yes
Home Type	n=800	n=1555	
Single-family detached	71%	90%	yes
Other	28%	9%	yes
Number of Residents	n=800	n=1155	
1 resident	25%	15%	yes
2 residents	34%	50%	yes
3 residents	15%	14%	no
4 residents	11%	11%	no
5+ residents	12%	8%	yes
Respondent Age	n=800	n=1155	
18-39	18%	10%	yes
40-49	46%	49%	no
65 or older	31%	32%	no
Education	n=800	n=1555	
High school diploma, GED, or less	51%	34%	yes
Trade or technical school	24%	25%	no
Four year college degree	15%	23%	yes
Some graduate school or advanced degree	8%	12%	yes
Income	n=800	n=1555	
Less than \$20,000	23%	9%	yes
\$20,000-\$49,999	33%	29%	yes
\$50,000-\$74,999	11%	16%	yes
\$75,000 or more	10%	16%	yes
Did not answer	23%	33%	yes

Note: Reported differences are statistically significant at the 90% confidence level. In most cases, the confidence of the tests was substantially higher due to the large n's.



4.1.4.2 Energy Efficiency Knowledge and Attitudes

The survey also included a battery of questions about Nonparticipants' energy efficiency knowledge and attitudes. All participant surveys contained the same battery of questions for comparisons. Table 4-3 shows the comparison. Relative to participants, Nonparticipants were less aware of ENERGY STAR, less concerned with reducing household energy consumption, and less concerned with the environment or global warming.

Table 4-3:
Nonparticipant and Participant EE Knowledge/Attitudes

	Non- participants	Participants	Sig. Difference
ENERGY STAR Awareness	n=800	n=1555	
Yes	56%	80%	yes
Concern w/ Reducing Household Energy Consumption	n=800	n=1555	
Not at all concerned	22%	4%	yes
Somewhat concerned	38%	28%	yes
Very concerned	40%	67%	yes
Don't know	1%	0%	no
Reason for Concern	n=643	n=1489	
Cost of energy/reduced energy bill	95%	94%	no
Environment/Global warming	16%	26%	yes
Power availability/reliability	4%	6%	yes
Dependence on foreign oil	5%	3%	yes
Other	1%	2%	no
Don't know	2%	0%	no

Note: Reported differences are statistically significant at the 90% confidence level. In most cases, the confidence of the tests was substantially higher due to the large n's.

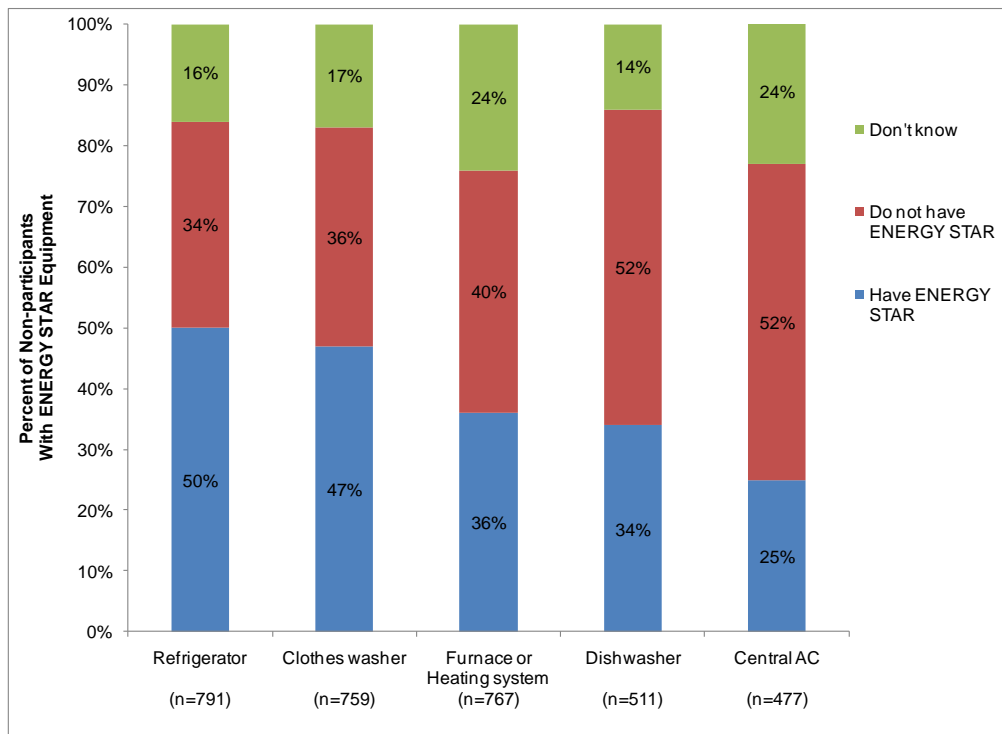
4.1.4.3 ENERGY STAR Equipment

The Nonparticipant survey included a battery of questions about what type of ENERGY STAR rated equipment the respondents owned. About half of the respondents said they had an ENERGY STAR refrigerator (50%) or clothes washer (47%). A third said their home's heating system (36%) or dishwasher (34%) were ENERGY STAR rated. A fourth (25%) said their central air conditioner was ENERGY STAR (Figure 4-1). Note, KEMA typically finds that



respondents over-estimate affirmative answers by ten percent or more on questions such as these, so the actual rate of ENERGY STAR penetration is probably lower than reported here.

**Figure 4-1:
ENERGY STAR Equipment Ownership**



There were several statistically significant differences depending on respondent demographics.

- **Refrigerator:**
 - Respondents with some college (59%) or a four year degree or more (55%) were more likely than those with a high school degree or less (42%) to have an ENERGY STAR refrigerator.



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- Respondents with incomes of \$50,000 or more (66%) were more likely than those with less income (44%) or who did not report income (46%) to have an ENERGY STAR refrigerator.
 - *Clothes washer:*
 - Respondents with some college (54%) were more likely than those with a high school degree or less (38%) to have an ENERGY STAR clothes washer.
 - Respondents with incomes of \$50,000 or more (53%) or less income (46%) were more likely than those who did not report income (34%) to have an ENERGY STAR clothes washer.
 - Respondents who owned their homes (48%) were more likely than renters (31%) to say they had an ENERGY STAR clothes washer.
 - *Heating system:*
 - Respondents who were aware of an energy efficiency program (41%) were more likely than those unaware (29%) to say they had an ENERGY STAR heating system.
 - Men (42%) were more likely than women (28%) to say their heating system was ENERGY STAR.
 - *Dishwasher:*
 - Respondents with some college (32%) or a four year degree or more (28%) were more likely than those with a high school degree or less (15%) to have an ENERGY STAR dishwasher.
 - Respondents with incomes of \$50,000 or more (40%) were more likely than those with less income (16%) or who did not report income (24%) to have an ENERGY STAR dishwasher.
 - Respondents who owned their homes (25%) were more likely than renters (14%) to say they had an ENERGY STAR dishwasher.



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- *Central air conditioner:* Respondents who live in the lower peninsula (16%) were more likely than those in the upper peninsula (6%) to say their central air conditioner was ENERGY STAR.

4.1.5 Program Participation and Awareness

The survey contained several questions about whether respondents had heard of or participated in any energy efficiency programs.

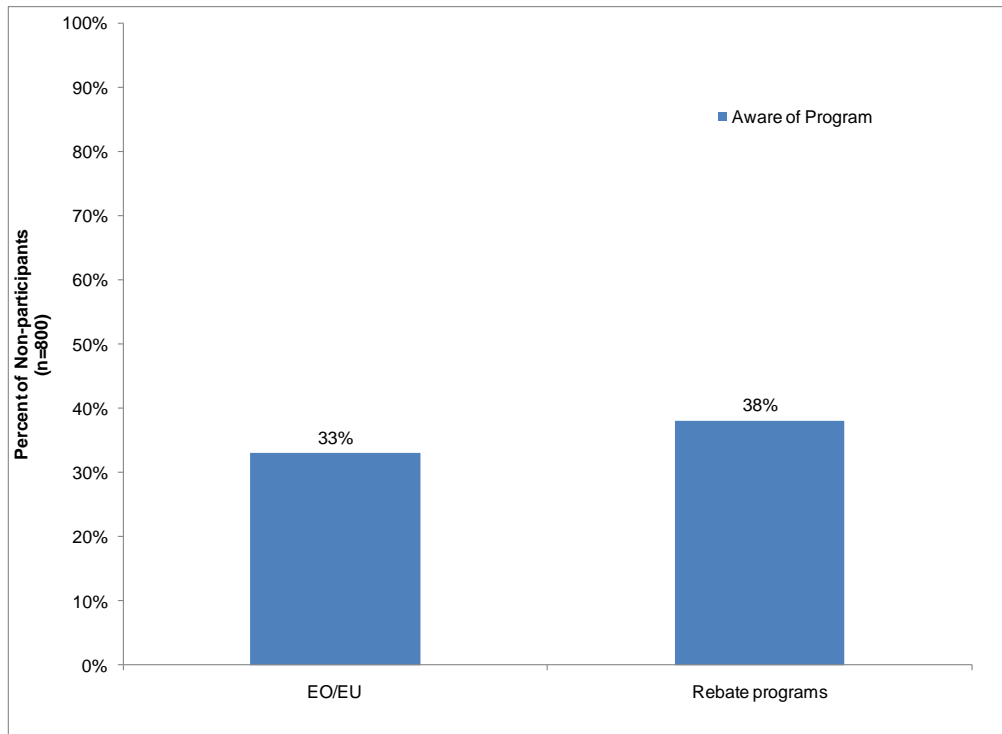
4.1.5.1 Program Participation

As explained in the methodology section, respondents who said they had participated in programs were dropped from the rest of the survey. However, we can report the proportion of those we surveyed who said they had participated in at least one energy efficiency program. About five percent of the households who RA was able to contact reported that they had participated in at least one energy efficiency program.

4.1.5.2 Program Awareness

The survey asked Nonparticipants if they had heard of Energy Optimization (EO), Efficiency United (EU), or any specific rebate programs. About one third of respondents said they were aware of EU/EO (33%) or individual rebate programs (38%; Figure 4-2).

**Figure 4-2:
EE Program Awareness**



There were several statistical differences in program awareness:

- *EU/EO*: Respondents who were also aware of ENERGY STAR (39%) were more likely than those not aware of ENERGY STAR (25%) to say they were aware of the EO or EU programs.
- *Rebate programs*:
 - Respondents who were also aware of ENERGY STAR (43%) were more likely than those not aware of ENERGY STAR (32%) to say they were aware of utility sponsored rebate programs.



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- Respondents with EO participating utilities (41%) were more aware than those with EU participating utilities (30%) to be aware of rebate programs. This difference is probably related to the finding that customers of EO participating utilities were more likely to cite utility bill stuffers as an information source.

For respondents who said they were aware of a utility-sponsored rebate program, the survey asked a follow-up question about what specific rebates the respondents were aware of. Table 4-4 summarizes respondent awareness of specific programs. The Appliance Recycling program was the best-known program, followed by HVAC, and CFL and clothes washer rebates (ENERGY STAR Products program). Other rebates were less well-known.



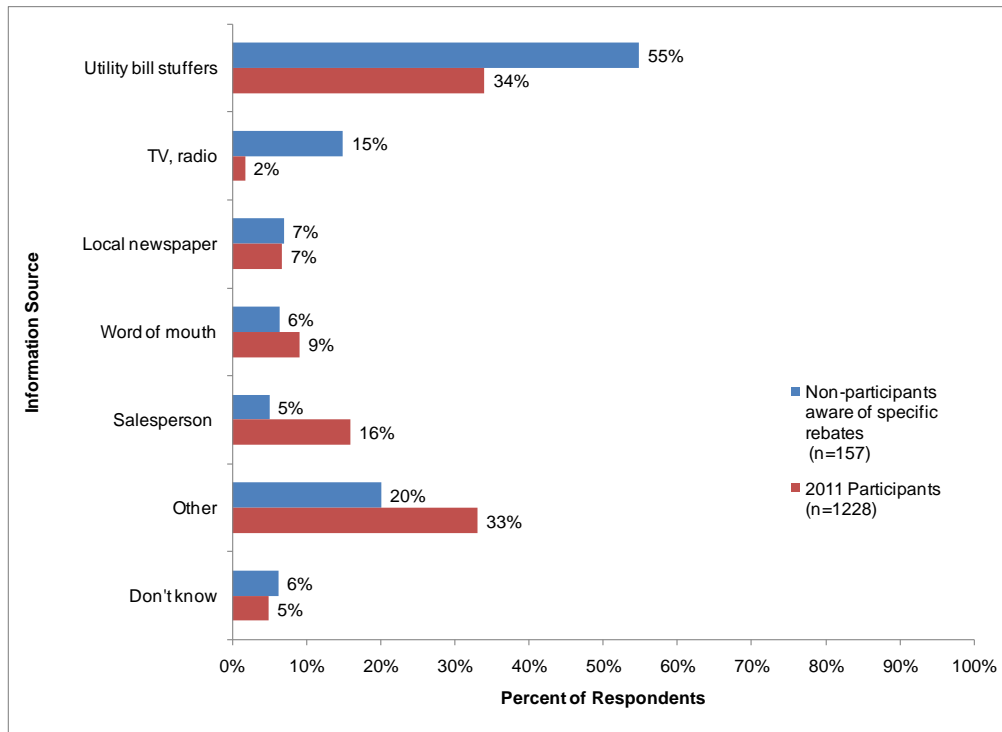
**Table 4-4:
Awareness of Specific Rebates**

Specific Program	Percent of Rebate Aware (n=259)	Percent of All Respondents (n=800)
None	18%	6%
Refrigerator/Freezer recycling	21%	7%
Furnaces or Boilers	20%	6%
CFLs	11%	3%
Clothes washers	10%	3%
Pipe insulation	7%	2%
Dishwashers	6%	2%
Clothes dryers	5%	2%
Kits with several different items	3%	1%
Gas	3%	1%
Bill Discount	3%	1%
Energy Audits (online or in-person)	3%	1%
Energy Efficient Appliances	2%	1%
Air sealing / Weather stripping / Caulking	2%	1%
Ceiling fans	2%	1%
Faucet aerators / Showerheads	2%	1%
Attic or wall insulation	2%	1%
Thermostat	1%	0%
Smart Power Strips	1%	0%
Central air conditioners	1%	0%
Renewable	1%	0%
New home construction	1%	0%
Windows and Doors	0%	0%
Other	1%	0%
Don't know	23%	7%

4.1.5.3 Sources of Information

The survey asked any respondent who was aware of a specific rebate program where they got information about those programs. Figure 4-3 compares the Nonparticipant and 2011 participant responses. For Nonparticipants, utility bill stuffers (55%) were the most popular source of program information, followed by TV or radio (15%). However, participants were much less likely to cite either bill stuffers (34%) or TV/radio (2%). Participants were more likely to hear about the program through word of mouth (9% vs. 6%) or salespeople (16% vs. 5%).

**Figure 4-3:
Information Sources – Program Aware**



Note: Totals exceed 100% because multiple answers were accepted. Other responses included: state/national newspapers, community events or local schools, non-utility Internet sites, utility websites, and uncategorized other responses.

There were several statistically significant differences depending on customer characteristics:

- **EU/EO:** Customers of EO participating utilities were more likely (55%) than those of EU participating utilities (36% of respondents) to cite utility bill stuffers as a source of program information. Customers of EU utilities were more likely (14%) than those of EO utilities (8%) to cite word of mouth sources of information.
- **Education:** Respondents with four year degrees or more education were more likely (70%) than those with some college (36%) to cite utility bill stuffers as a source of program information. Respondents with high school diplomas or less were more likely (14%) than

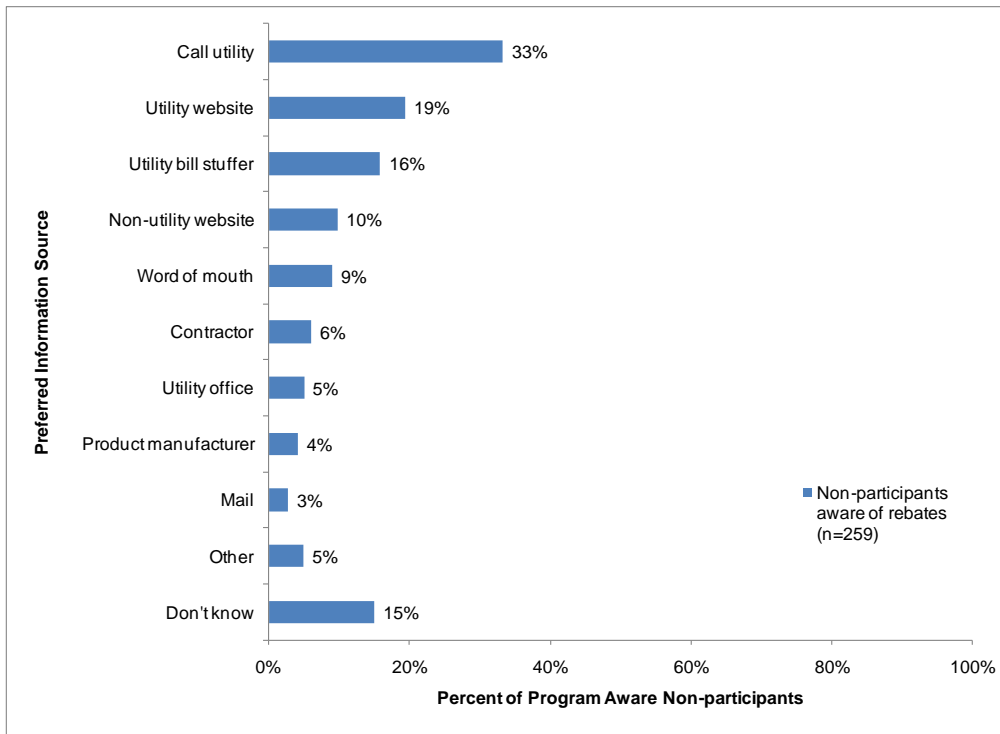


those with some college (1%) or four year degrees or more (<1%) to cite word of mouth sources of information.

- *UP/LP*: Respondents living in the Lower Peninsula were more likely (16%) than those in the upper peninsula (4%) to cite TV/radio as a program information source. Upper Peninsula residents were more likely (18%) than lower peninsula residents (0%) to cite non-utility Internet sites.
- *ENERGY STAR awareness*: ENERGY STAR aware respondents were more likely than those unaware to cite TV or radio (22% vs. 4%) or local newspapers (11% vs. <1%) as a source of program information. ENERGY STAR unaware respondents were more likely to cite word of mouth sources (14% vs. 2%).
- *Energy reduction concern*: Respondents with an energy reduction concern were more likely than those without a concern to cite TV/radio (17% vs. 1%) or local newspapers (8% vs. <1%) as sources of program information. Respondents without an energy reduction concern were more likely to cite state or national newspapers (26% vs. <1%).

The survey further asked if the Nonparticipants were looking for information about rebate programs, which information sources they would prefer. Results are summarized in Figure 4-4. The most common answer provided by Nonparticipants is that they would call their utility (33%). Other common answers included a utility website (19%), utility bill stuffers (16%), non-utility websites (9%), and word of mouth (9%).

**Figure 4-4:
Preferred Information Sources – Program Aware**



Note: Total exceeds 100% because multiple answers were accepted. Other answers included: television, nobody, government agency, advertising, and uncategorized other responses.

There were several statistically significant differences in preferred information sources depending on respondent characteristics:

- *Peninsula:* Respondents from the Upper Peninsula were more likely (38%) than those from the Lower Peninsula (15%) to say they would look for program information in utility bill stuffers.
- *Education:* Respondents with a four year degree or more education were more likely than those with a high school diploma or less to say they would look on the internet for information. This included utility websites (36% vs. 9%) and non-utility websites (20% vs. 5%). In contrast, the respondents with some college (13%) or a high school diploma or less



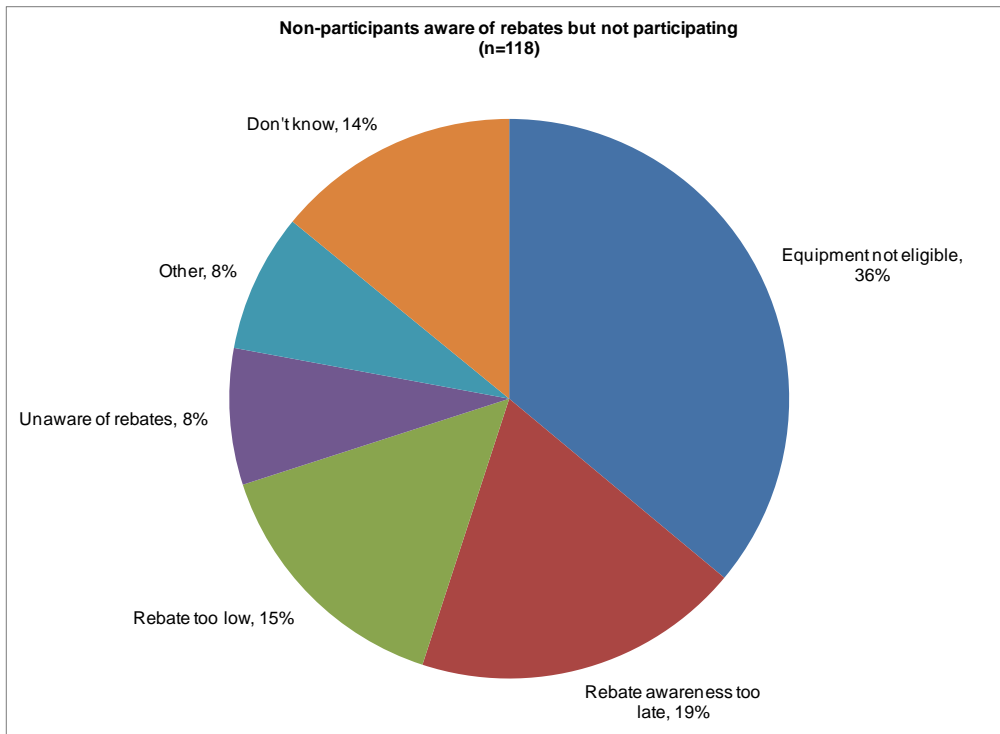
(6%) were more likely than those with a four year college degree or more (<1%) to say they would prefer to get information from contractors or trades people.

- *Income:*
 - Respondents with incomes less than \$50,000 were more likely than those with incomes of \$50,000 or more to prefer getting information from the utility. This included utility bill stuffers (22% vs. <1%) and calling the utility (40% vs. 16%).
 - Those with incomes over \$50,000 preferred non-utility websites over those earning less than \$50,000 (21% vs. 2%) and were also more likely to say they did not know (33% vs. 10%).
 - Respondents who did not report their incomes were more likely (15%) than those earning \$50,000 or more (<1%) to prefer utility bill stuffers. They were also more likely than those earning less than \$50,000 to prefer non-utility websites (16% vs. 2%).
- *Home ownership:* Respondents who owned their homes were more likely (12%) than renters (1%) to say they preferred to get information from non-utility websites.
- *ENERGY STAR awareness:* Respondents aware of ENERGY STAR were more likely (14%) than those unaware (3%) to say they prefer to get information from non-utility websites.
- *Energy reduction concern:* Respondents who were concerned with reducing their home's energy use were more likely than those not concerned to prefer getting information from utility websites (24% vs. 5%) or word of mouth (12% vs. 1%).

4.1.6 Barriers to Participation

The survey asked Nonparticipants who were aware of any rebate program why they did not participate. The most common answer was that they did not purchase eligible equipment (36%), followed by they found out about the rebates too late (19%), the rebates were too low (15%), and they were unaware of the rebates (8%). Figure 4-5 shows all the responses.

**Figure 4-5:
Reason for Not Participating**



Note: Other included: personal preference, no time, did not qualify for rebates, was going to buy equipment anyway, and uncategorized other responses.

There were several statistically significant differences based on respondent characteristics:

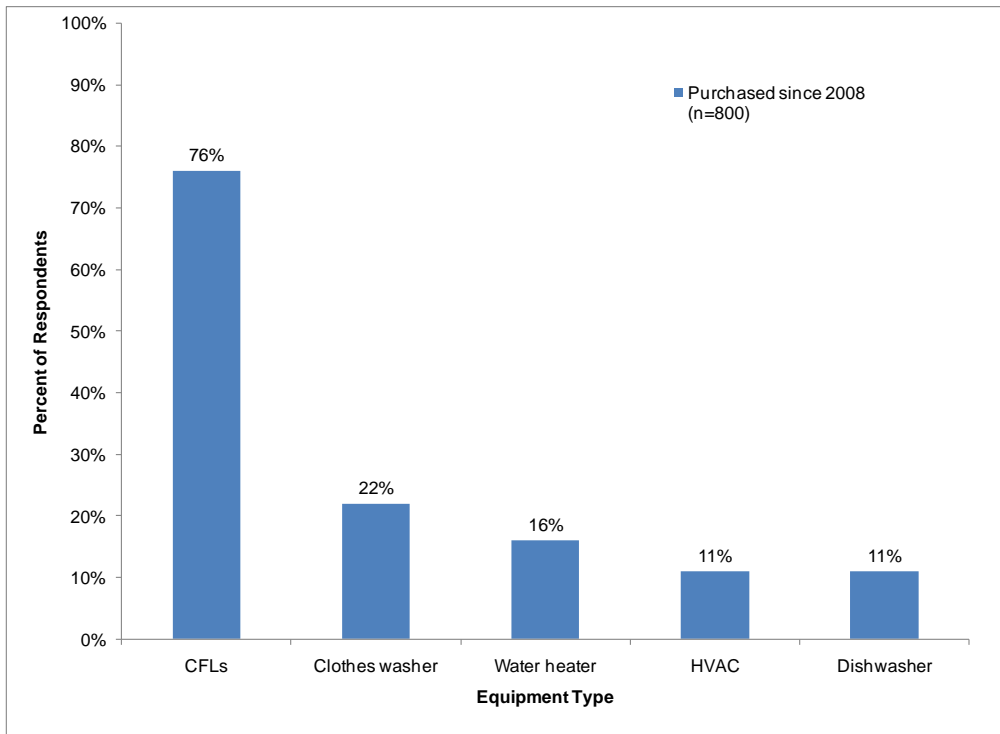
- *EU/EO*: Respondents who purchase energy from EO utilities were more likely (21% of respondents) than those who purchase energy from EU utilities (7%) to say they found out about the rebates too late. EO utilities may have been better at marketing the program than EU utilities.
- *Peninsula*: Lower Peninsula residents were more likely (20%) than Upper Peninsula residents (<1%) to say they found out about the program too late. This finding is probably related to the EU/EO finding.



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- *Gender:* Women were more likely (30%) than men (8%) to say they found out about the program too late.
 - *Energy reduction concern:* Respondents without an energy reduction concern (64%) were less likely than those with a concern (25%) to say their equipment did not qualify for a rebate. This finding suggests that respondents who do not care about reducing their home's energy use are not as concerned with energy efficiency when they purchase appliances.
 - *CFL purchase frequency:* Respondents who always purchase CFLs were more likely (30%) than those who sometimes purchase them (13%) or never purchase them (1%) to say they did not find out about the program until it was too late.
 - *Appliance purchases:* Respondents who purchased at least one appliance since 2008 were more likely (42%) than those who did not purchase an appliance (15%) to say their equipment did not qualify for the rebate. This finding is most likely an effect of answer relevance – respondents who purchased appliance are the ones for which equipment qualification is most relevant.

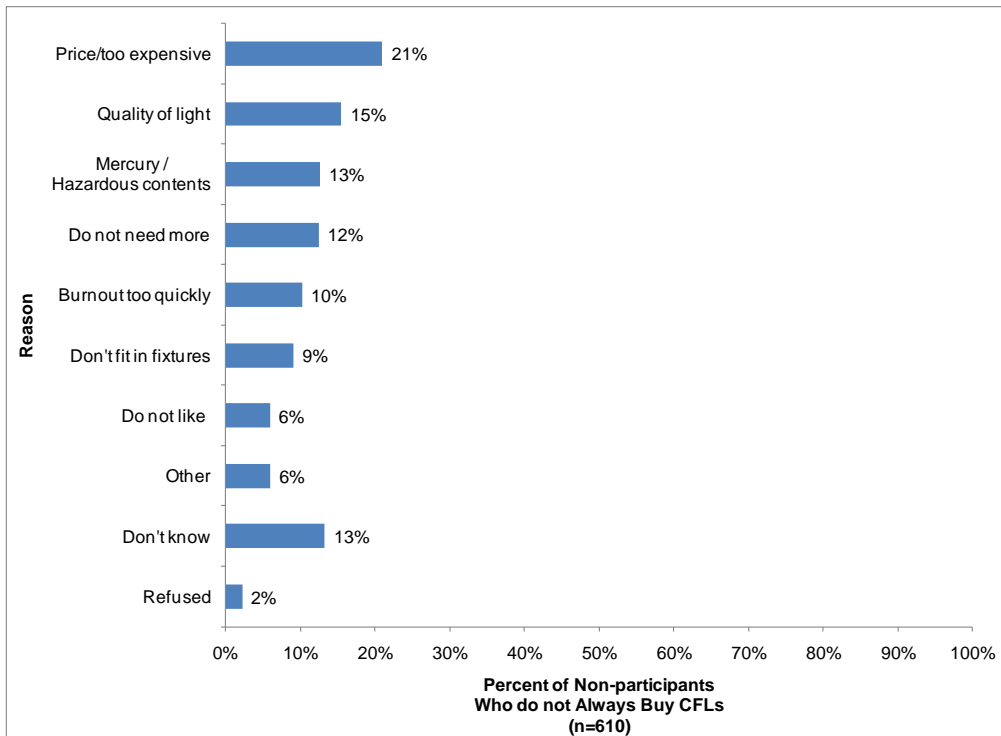
The survey asked respondents several questions about whether they purchased any energy using equipment since 2008. The survey asked respondents who purchased equipment whether they were aware of rebates at the time of purchase, and whether they purchased rebate eligible equipment. Most (76%) of the respondents purchased CFLs and less than one quarter purchased each of clothes washers, water heaters, HVAC equipment, or dish washers (Figure 4-6). Details about the purchase location, information sources, and important characteristics are covered Section 4.1.7.

**Figure 4-6:
Equipment Purchases**



For respondents who did not say they always purchase CFLs, the survey asked why they did not always purchase CFLs. The most common answer was that they were too expensive (21%), followed by quality of light (15%), mercury or hazardous contents (13%), do not need more (12%), they burn out too quickly (10%), and other reasons (Figure 4-7).

**Figure 4-7:
Reason CFLs not Purchased**



Note: Other reasons included: someone else purchases for me, need more information, flicker, look ugly in fixtures, no time, and other uncategorized answers.

For respondents who purchased any of the other types of equipment (clothes washers, water heater, HVAC equipment, or dishwashers) the survey asked them whether there were rebates available at the time of the purchase, who offered the rebates, whether they purchased a rebate eligible unit, and if not, why not. Most respondents reported that rebates were not available at the time they purchased equipment, and almost all respondents who said a rebate was available took advantage of it. Contractor or retailer rebates for clothes washers and water heaters were common. Federal government rebates for water heaters and HVAC equipment were common, and manufacturer rebates were common for dishwashers. Very few respondents mentioned a utility rebate (from either their own or another utility) was available at the time of purchase (Table 4-5).



**Table 4-5:
Rebate Availability, Use, and Offerer**

	Equipment Purchased			
	Clothes Washer (n=181)	Water Heater (n=135)	HVAC (n=86)	Dishwasher (n=81)
Rebates Available	16%	4%	8%	11%
Purchased Rebate Eligible	91%	100%	100%	99%
Rebate Offered By				
Contractor/Retailer	47%	39%	3%	5%
Utility other than respondents'	11%	0%	0%	0%
ENERGY STAR	11%	0%	0%	0%
Manufacturer	10%	1%	37%	69%
Utility	0%	2%	0%	0%
Federal gov't	0%	56%	58%	0%
Other	8%	0%	0%	<1%
Don't know	12%	2%	3%	26%

Respondents who did not take advantage of the clothes washer rebates said the eligible equipment was too expensive (86%), the rebate forms were onerous (5%), other reasons (5%), or didn't know (5%). Respondents who did not take the dishwasher rebates did not provide a reason.

4.1.7 Equipment Purchases

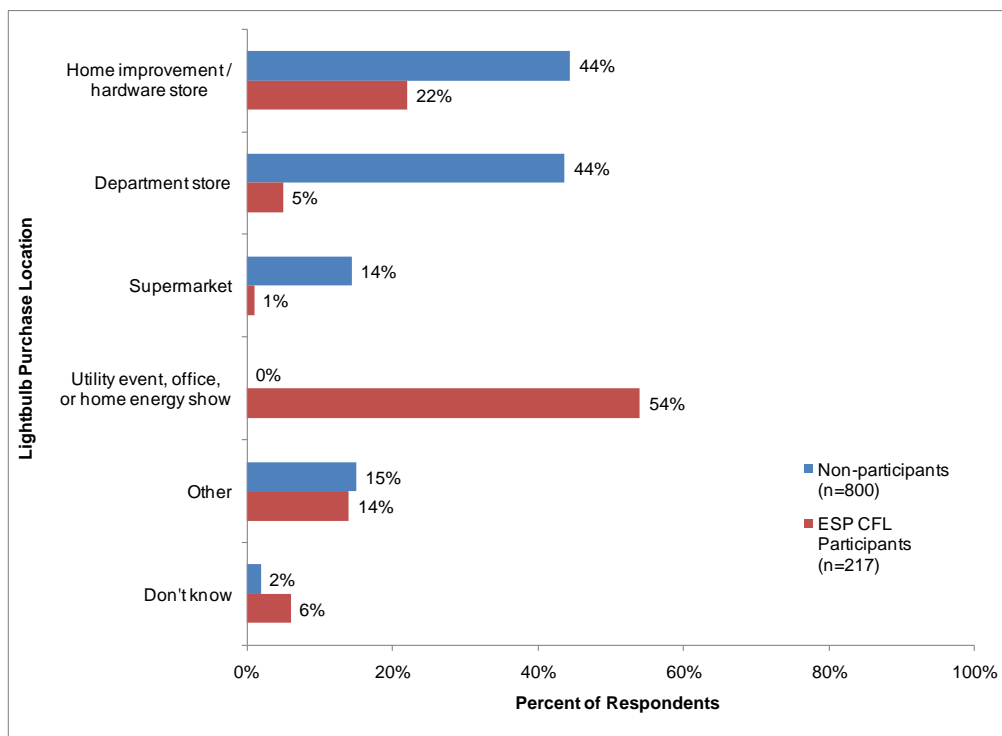
The survey asked a series of questions about whether Nonparticipants had purchased any major energy using equipment since 2008. If they did, the survey went into a series of questions about where they bought that equipment, what information sources they used when researching that equipment, which features were important and most important, whether they remembered any rebates for the equipment when they purchased it, and if they purchased rebate-eligible equipment.

4.1.7.1 Light Bulb Purchases

The survey asked respondents where they typically shop for light bulbs (not necessarily CFLs). Figure 4-8 compares their answers to the locations where 2011 ENERGY STAR Program (ESP) participants purchased their CFLs. The most common location Nonparticipants purchased light bulbs were home improvement or hardware stores (44%) or department stores (44%).

Supermarkets (15%) were also common locations. In contrast, the majority (54%) of 2011 ESP CFL purchasers purchased CFLs from utility events, utility offices, or a home energy show. The next most common location ESP participants purchased CFLs were at home improvement or hardware stores (22%).

**Figure 4-8:
Light Bulb Purchase Location**



Note: Nonparticipant other answers included: big box retailer, warehouse store, drug store, discount/\$1 dollar store, lighting supply store, and non-categorized other locations. 2011 ESP CFL participant other answers included: department stores, community events/fairs, big box stores (Best Buy), warehouse stores, Internet, mail-order catalog, kit, and uncategorized other responses.

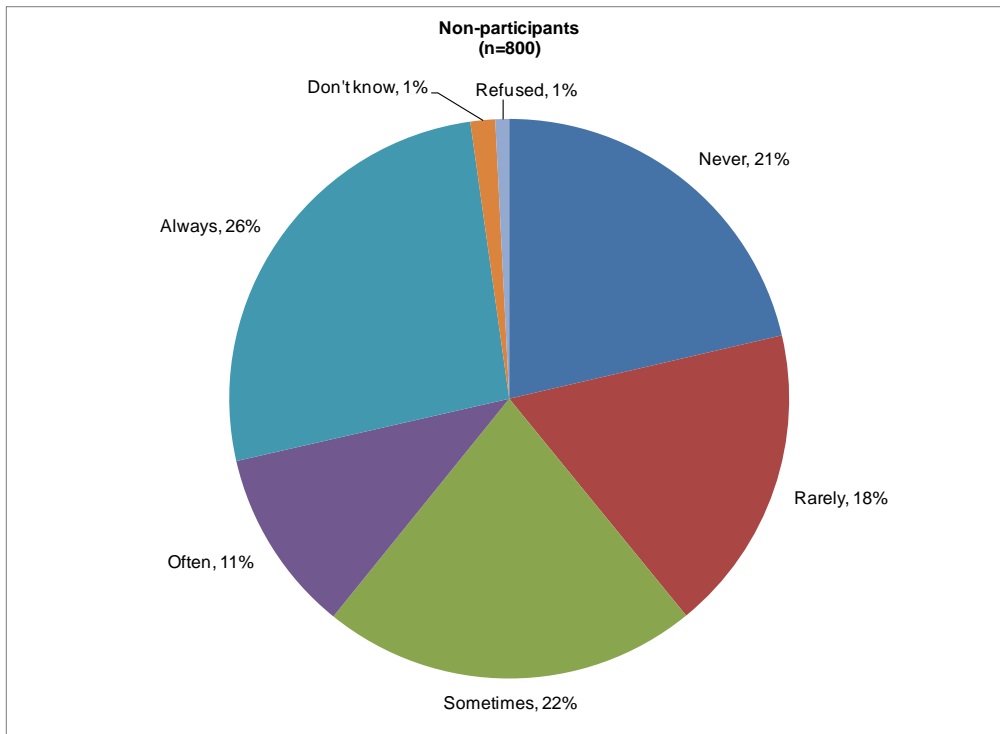
There were several statistically significant differences in CFL purchase locations depending on respondent characteristics:



-
- *EU/EO*: Respondents who purchase energy from EO utilities were more likely than those who purchase energy from EU utilities to purchase CFLs at home improvement or hardware stores (47% vs. 38%) and less likely to purchase them from discount or dollar stores (1% vs. 6%).
 - *Peninsula*: Lower Peninsula residents were more likely (15%) than Upper Peninsula residents (7%) to say they purchase CFLs from the supermarket.
 - *Program awareness*: Respondents who were aware of at least one rebate program were more likely than those without awareness to purchase CFLs from home improvement or hardware stores (56% vs. 34%) and less likely to purchase CFLs from department stores (38% vs. 49%).
 - *Income*:
 - Respondents with incomes of \$50,000 or more were more likely (62%) than those with incomes less than \$50,000 (41%) or who did not report income (37%) to purchase CFLs at home improvement or hardware stores.
 - Respondents with incomes less than \$50,000 were more likely (51%) than those with incomes \$50,000 or more (31%) or who did not report income (37%) to purchase CFLs at department stores.
 - *Home ownership*: Renters were more likely than owners to purchase CFLs at department stores (67% vs. 39%).
 - *Gender*: Men were more likely than women to purchase CFLs at home improvement or hardware stores (53% vs. 37%) and less likely to purchase them at department stores (48% vs. 38%).
 - *ENERGY STAR awareness*: Respondents aware of ENERGY STAR were more likely (51%) than those unaware (36%) to purchase CFLs at home improvement or hardware stores.

Next, the survey asked Nonparticipants how often they purchased CFLs. Responses were fairly evenly divided between the available choices of never, rarely, sometime, often, and always (Figure 4-9).

**Figure 4-9:
CFL Purchase Frequency**

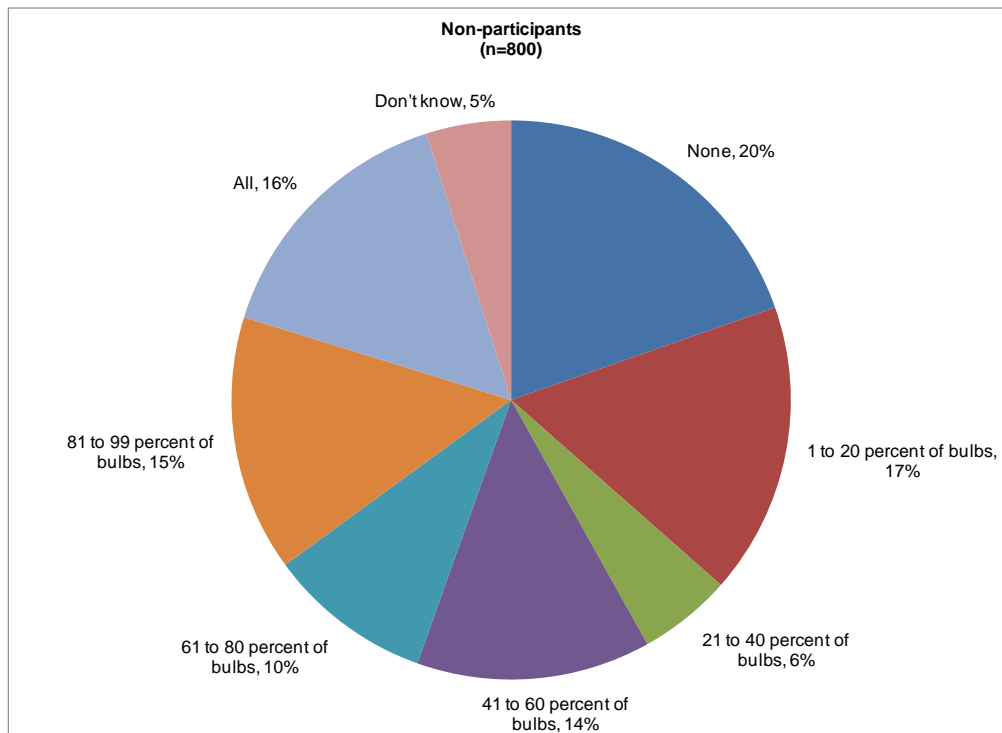


Education, ENERGY STAR awareness, and energy reduction concerns were associated with the frequency of purchasing CFLs:

- *Education:* Respondents with a four year college degree or more education were more likely (45% of respondents) than those with high school diplomas or less (33%) to say they often or always purchase CFLs.
- *ENERGY STAR awareness:* Respondents aware of ENERGY STAR were more likely (43%) than those not aware (30%) to say they often or always purchase CFLs.
- *Energy reduction concern:* Respondents with an energy reduction concern were more likely (43%) than those without an energy reduction concern (18%) to say they often or always purchase CFLs.

The survey asked all respondents what percent of the bulbs in their homes are CFLs. About 20 percent said none, another 16 percent said all. The other proportions were fairly evenly represented (Figure 4-10).

**Figure 4-10:
Percent of CFL Bulbs in Home**



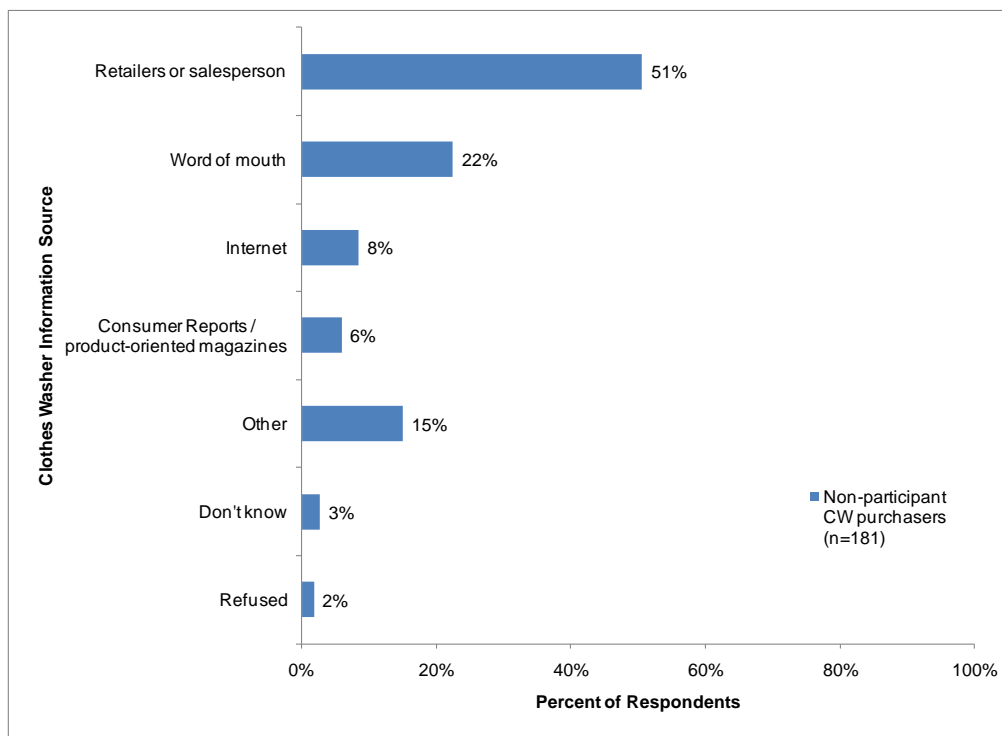
There were several statistically significant differences depending on respondent characteristics:

- *Gender:* Men were more likely than women to say that none of their home's bulbs were CFLs (25% vs. 16%) and less likely to say all of them were CFLs (10% vs. 20%).
- *Home ownership:* Home owners were less likely than renters to say all of their bulbs were CFLs (13% vs. 27%).

4.1.7.2 Clothes Washer Purchases

About 22 percent of the Nonparticipants said they had purchased a clothes washer since 2008. The most commonly mentioned source of product information was retailers or salespeople (51%). Word of mouth was also a common source of information (22%; Figure 4-11).

Figure 4-11:
Clothes Washer Information Sources

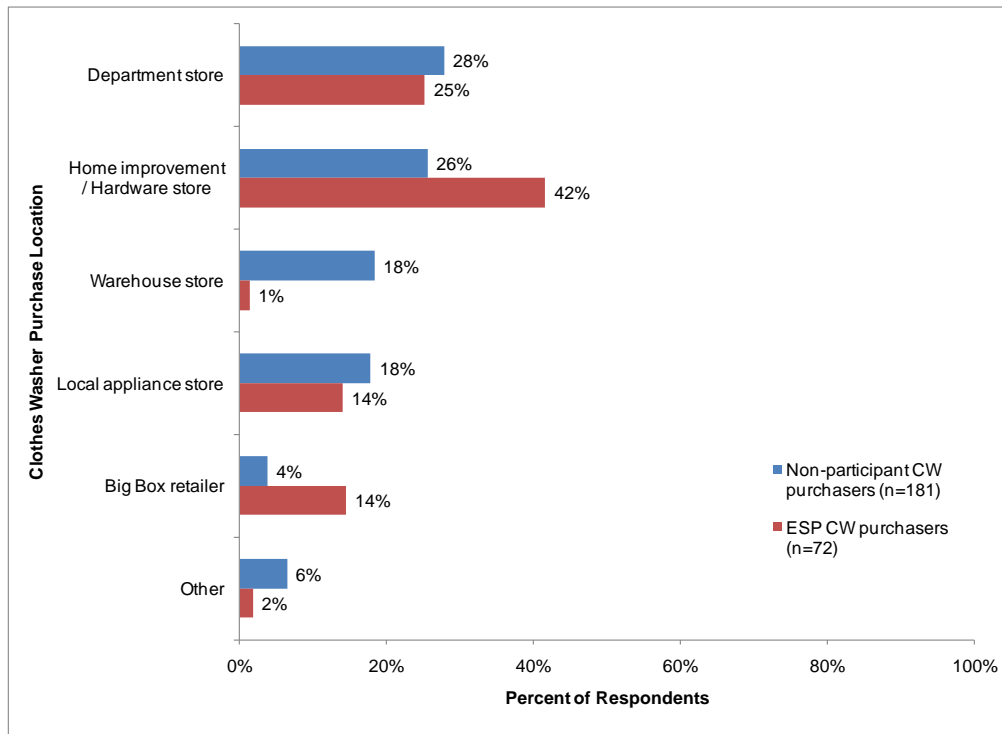


Note: Total exceeds 100% because multiple answers were accepted. Other answers included: television, contractors, other magazines, newspaper, and uncategorized other answers.

Respondents with a four year college degree or more education were more likely (27%) than those with some college (<1%) or high school diplomas or less (5%) to get clothes washer information from the Internet.

Nonparticipants tended to purchase clothes washers at department stores (28%), home improvement or hardware stores (26%), warehouse stores (18%), or local appliance stores (18%). Compared to ESP participants, Nonparticipants were less likely to purchase clothes washers at home improvement or hardware stores, or big box retailers, and more likely to purchase them at warehouse stores (Figure 4-12).

**Figure 4-12:
Clothes Washer Purchase Location**



There were several statistically significant differences depending on respondent characteristics:

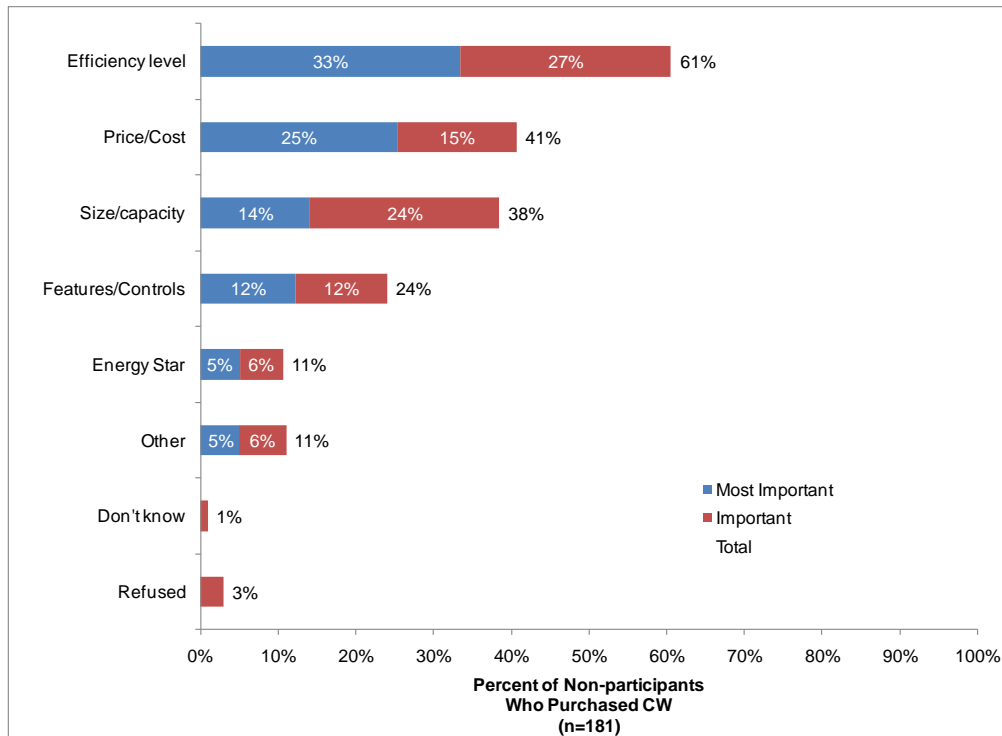
- *Peninsula*: Lower Peninsula residents were more likely (20%) than Upper Peninsula residents (<1%) to purchase clothes washers from a warehouse store.



-
- *Program awareness:* Respondents aware of a rebate program were more likely than the unaware to purchase from a home improvement or hardware store (39% vs. 14%) and less likely to purchase from a department store (12% vs. 41%).
 - *Ownership:* Home owners were more likely (30%) than renters (1%) to purchase from department stores.

When asked which clothes washer features were important to them, most Nonparticipants said efficiency level (61%). Efficiency level was also the most common most important feature (33%). Other features commonly mentioned as important were price (41%), size (38%), and features or controls (24%; Figure 4-13). Despite efficiency level being clearly the most important feature, only eleven percent of Nonparticipants mentioned ENERGY STAR as an important feature. This suggests ignorance about ENERGY STAR.

**Figure 4-13:
Clothes Washer Important Features**

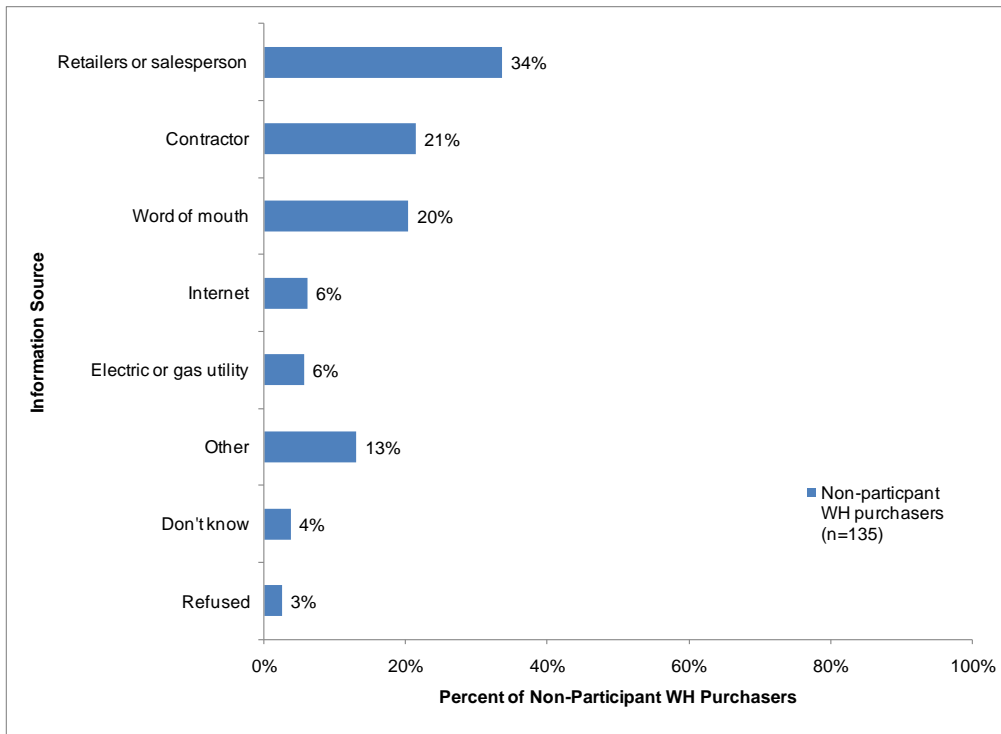


Note: Total exceeds 100% because multiple answers were accepted. Other answers included: operating cost, brand, reliability/warranty, salesperson recommendation, and uncategorized other answers.

4.1.7.3 Water Heater Purchases

The Nonparticipant survey asked about water heater purchases, even though water heaters were no longer eligible for rebates in 2011. About 16 percent of Nonparticipants said they had purchased a water heater since 2008. Nonparticipant water heater purchasers tended to get information about what to purchase from retailers or salespeople (34%), contractors (21%), or word of mouth (20%).

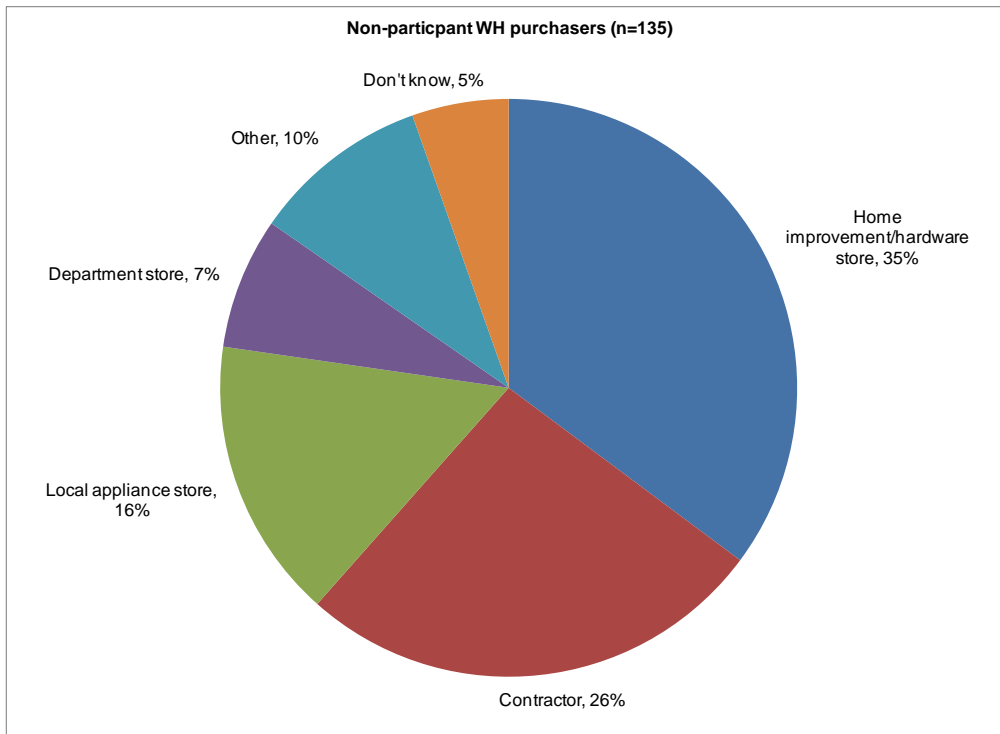
**Figure 4-14:
Water Heater Information Sources**



Other answers included: television, consumer magazines, other magazines, and unspecified other sources.

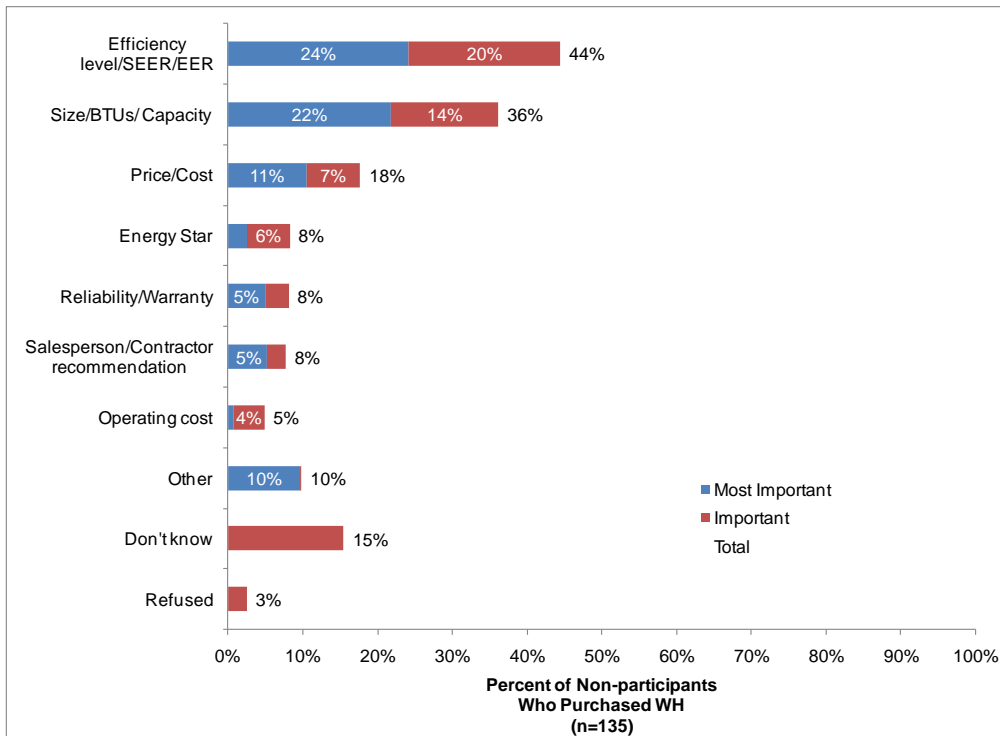
The most common location where non-respondents purchased water heaters were home improvement or hardware stores (35%). Other purchase locations were contractors (26%), local appliance stores (16%), and department stores (7%; Figure 4-15). Water heaters were not rebated in 2011, so there are no comparisons possible to rebate program participants.

**Figure 4-15:
Water Heater Purchase Location**



Efficiency was the most important water heater feature for Nonparticipants. Forty-four percent mentioned it as an important feature, and 24 percent said it was the most important feature. Not far behind was size. Thirty-six percent said size was important, and 22 percent said it was the most important feature. Price was less important (18% important, 11% most important). Similar to other appliances for which Nonparticipants valued efficiency, ENERGY STAR was an uncommonly mentioned important feature (8% important, 2% most important; Figure 4-16)

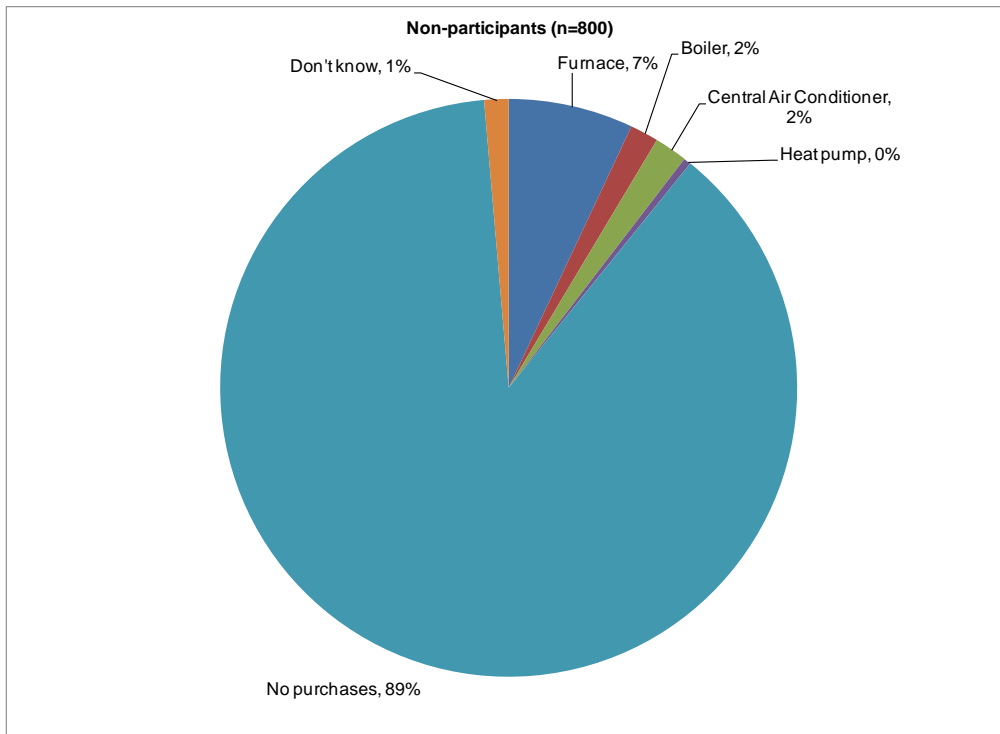
**Figure 4-16:
Water Heater Important Features**



4.1.7.4 HVAC Purchases

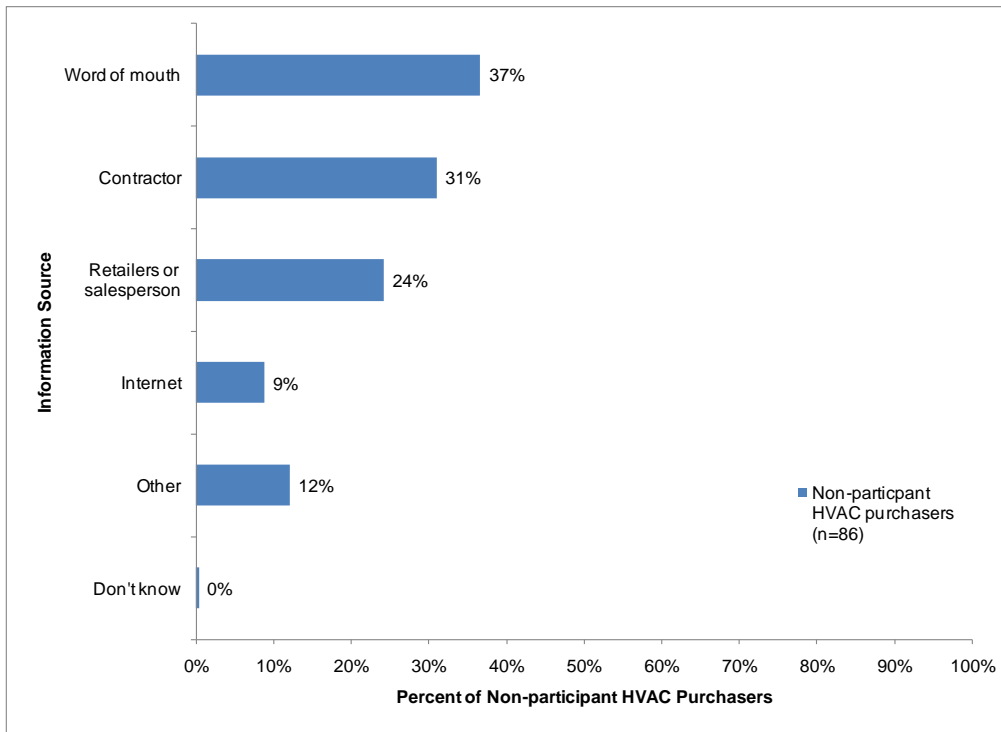
Most (89%) Nonparticipants did not purchase a new HVAC system since 2008. Those that did were most likely to purchase a furnace (Figure 4-17). Because so few respondents purchased HVAC equipment, and furnaces were the most commonly purchased equipment, this section aggregates all the findings for the different types of HVAC equipment.

**Figure 4-17:
HVAC Type Purchased**



Word of mouth (37%) was the most commonly mentioned source of information about HVAC equipment. Contractors (31%) and retailers/salespeople (24%) were also common answers (Figure 4-18).

**Figure 4-18:
HVAC Information Source**



Note: Total exceeds 100% because multiple answers were accepted. Other answers included: Consumer Reports or related magazines, electric/gas utility, newspaper, and other uncategorized responses.

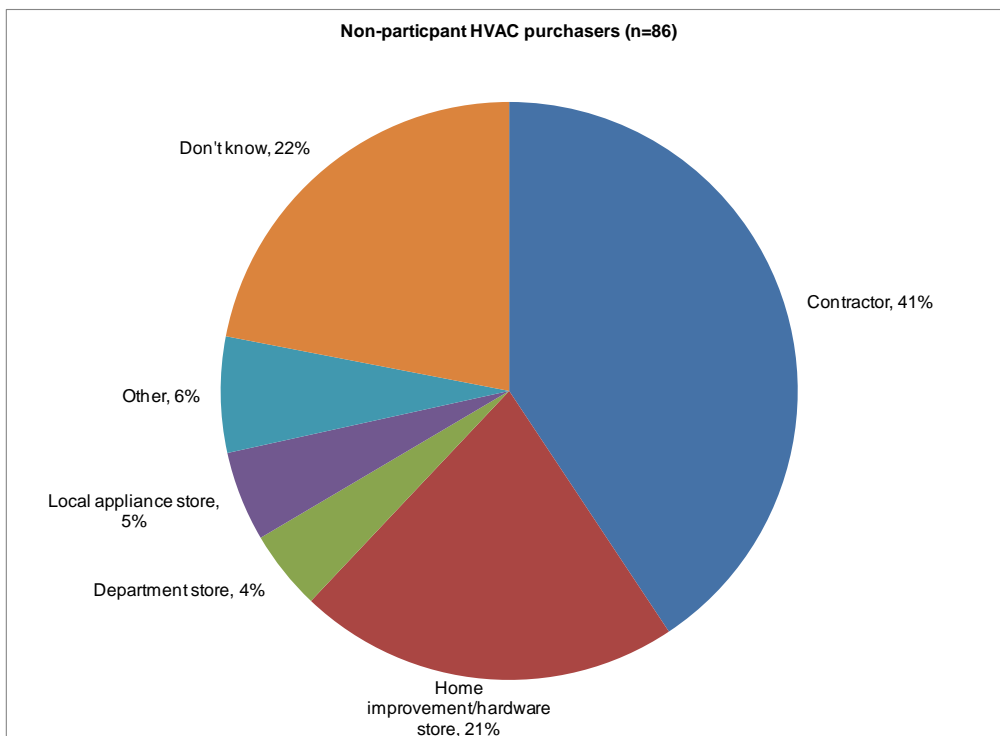
There were several statistically significant differences depending on respondent characteristics:

- *Peninsula*: Lower Peninsula residents were more likely (37% of respondents) than Upper Peninsula residents (7%) to get HVAC equipment information from word of mouth.
- *Program awareness*: Respondents aware of a rebate program were less likely than those unaware to get HVAC equipment information via word of mouth (20% vs. 52%).
- *Gender*: Men were more likely (50%) than women (15%) to get HVAC equipment information from contractors.

- *ENERGY STAR awareness*: Respondents aware of ENERGY STAR were more likely than those unaware to get information from contractors (42% vs. 6%) and less likely to get information via word of mouth (66% vs. 24%).
- *Energy reduction concern*: Respondents concerned with reducing their home's energy use were more likely (33%) than those unconcerned (4%) to get information from contractors.

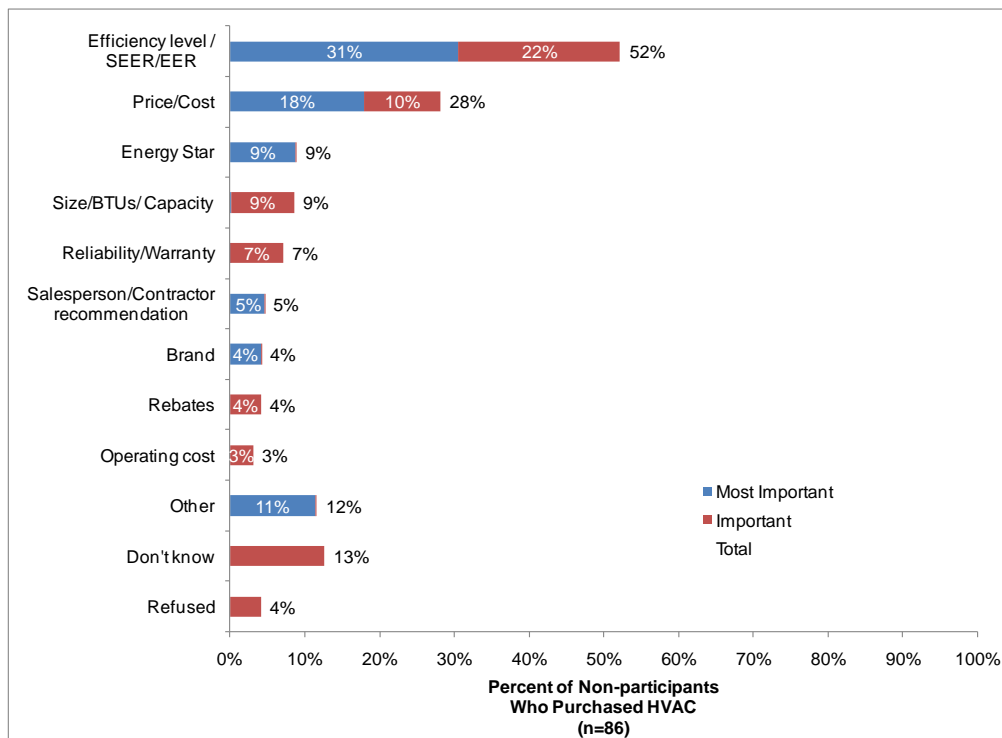
The most common source of HVAC purchases was contractors (41%). Home improvement or hardware stores were also common (21%) and a large portion (22%) of the Nonparticipants who purchased HVAC equipment since 2008 did not know or remember where they got it (Figure 4-19). Note, the 2011 HVAC rebate program evaluation did not ask about purchase location, so no comparisons to program participants are possible.

**Figure 4-19:
HVAC Purchase Location**



Efficiency was the most commonly-mentioned important feature (52%). It was also the most commonly mentioned of the “most important” features (31%). The only other feature that was of major importance was price. Like the results for clothes washers, despite efficiency being the most important feature, few (9%) respondents mentioned ENERGY STAR as being important (Figure 4-20).

**Figure 4-20:
HVAC Important Features**



Note: Total exceeds 100% because multiple answers were accepted. Other answers included: operating cost, rebates, color, consumer magazine recommendations, and other uncategorized responses.

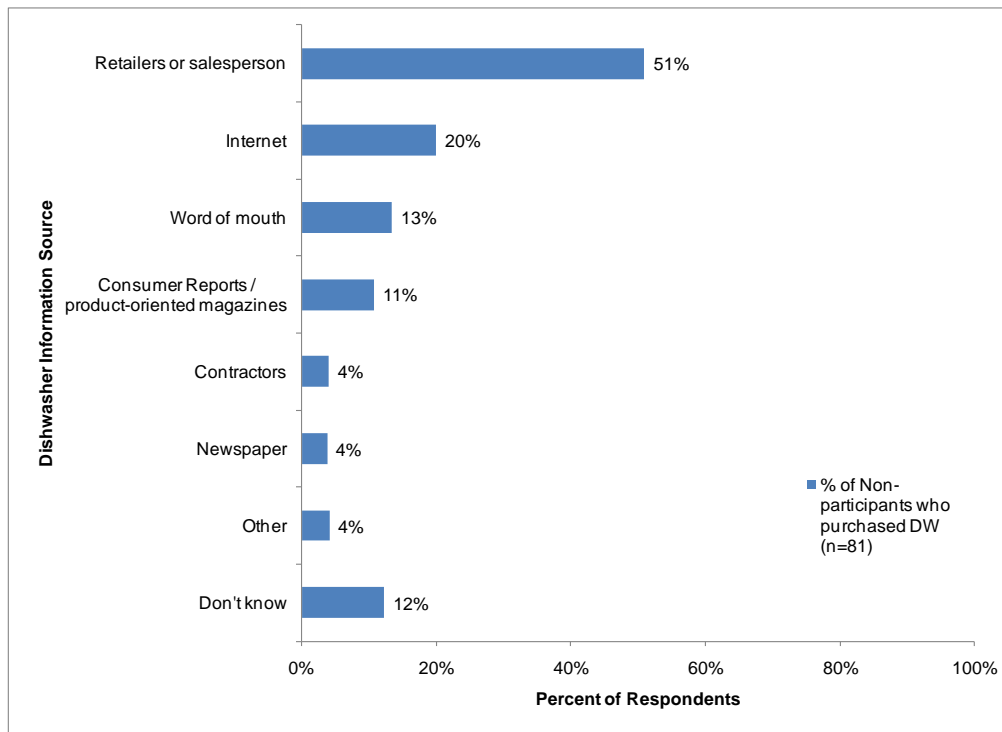
4.1.7.5 Dishwasher Purchases

The survey asked Nonparticipants whether they had purchased a dishwasher since 2008. About eleven percent had. For those Nonparticipants who purchased a dishwasher, the survey further

asked them where they got information about which one to buy, where they bought it, and what were the important features of it.

The majority (51%) of Nonparticipants got information about what to purchase from a retailer or salesperson. Internet (20%), word of mouth (13%), and Consumer Reports or related magazines (11%) were also common answers (Figure 4-21).

**Figure 4-21:
Dishwasher Information Sources**



Note: Total exceeds 100% because multiple answers were accepted.

There were several statistically-significant differences depending on respondent characteristics.

- **Education:** Respondents with a high school diploma or less were more likely (67%) than those with a four year college degree or more education (30%) to get information about what to purchase from retailers or salespeople. Respondents with a high school diploma or less

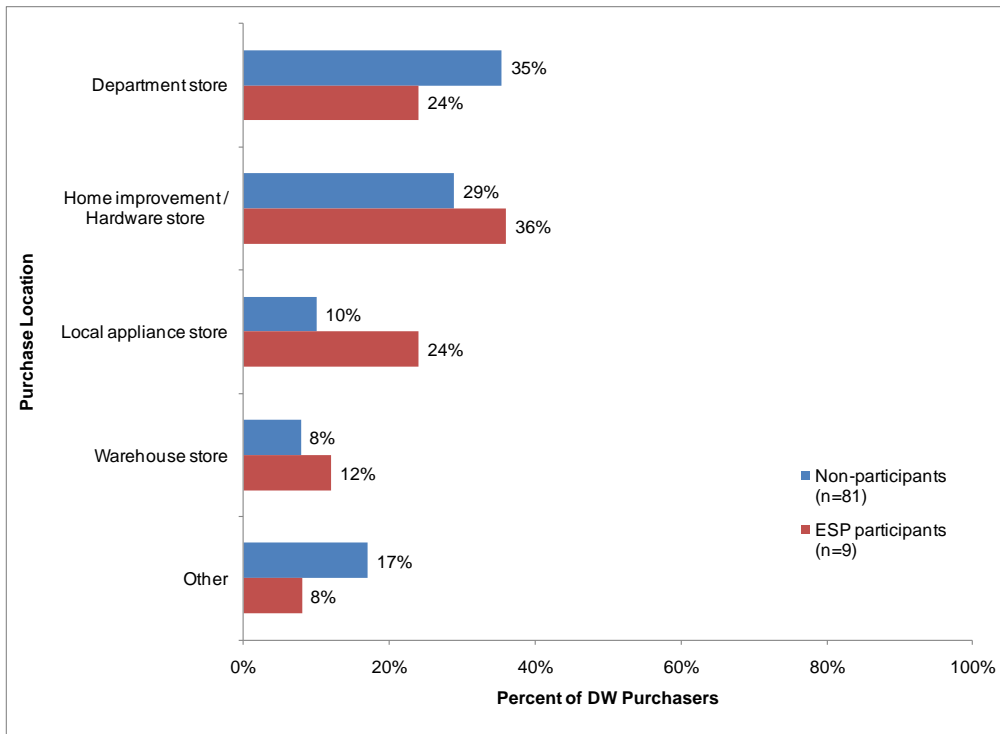


(23%) or a four year degree or more education (41%) were more likely than those with some college (<1%) to get information from the Internet.

- *Home ownership:* Renters were more likely than home owners to get information from salespeople or retailers (95% vs. 50%).
- *ENERGY STAR awareness:* Respondents aware of ENERGY STAR were more likely than those not aware to get their information from retailers or salespeople (57% vs. 15%) or from the Internet (23% vs. 2%) and less likely to get information from word of mouth sources (5% vs. 64%).
- *Energy reduction concerns:* Respondents concerned with reducing their home energy use were more likely than those not concerned to get information from Consumer Reports or similar magazines (13% vs. <1%) or from word of mouth sources (16% vs. <1%).

Nonparticipants most commonly purchased their dishwashers at a department store (35%). Home improvement or hardware stores (29%) were almost as common. They also purchased some from local appliance stores (10%) or warehouse stores (8%). Compared to ESP program participants, Nonparticipants were more likely to purchase dishwashers at department stores, and less likely to purchase them at home improvement, hardware stores, or local appliance stores (Figure 4-22).

**Figure 4-22:
Dishwasher Purchase Location**



Note: Other responses included: big box retailers, Internet, and uncategorized other responses.

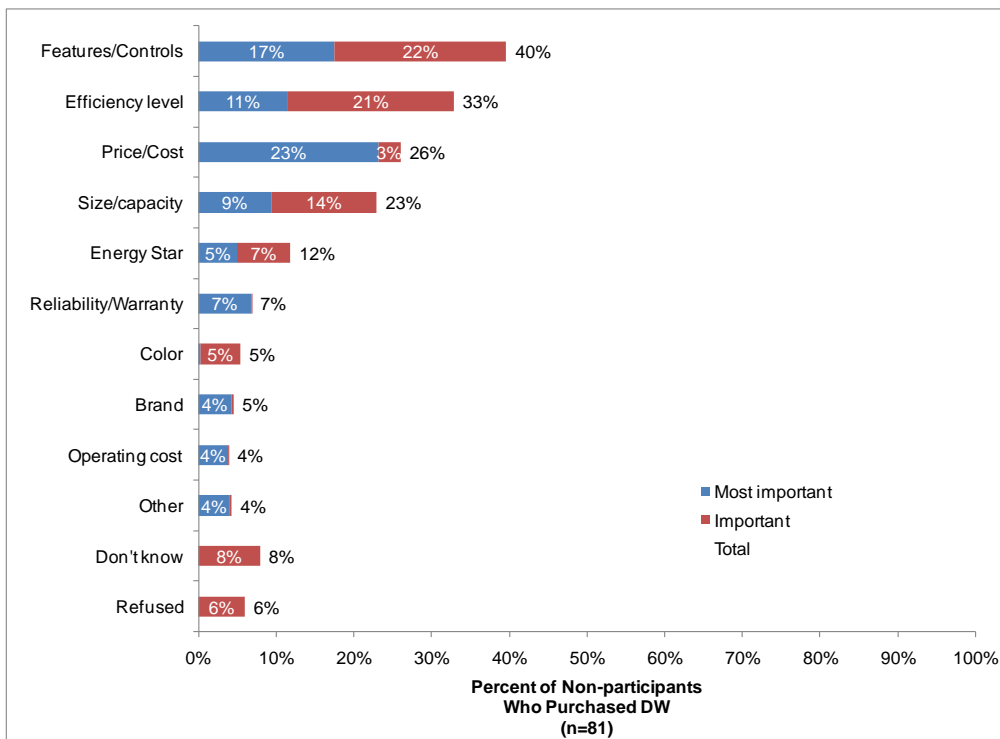
There were several statistically-significant differences depending on respondent characteristics.

- *Department store:*
 - Respondents who were aware of rebate programs were more likely (59% of respondents) than those unaware (23%) to purchase a dishwasher at a department store.
 - Renters were more likely (86%) than owners (34%) to purchase from a department store.

- ENERGY STAR-aware respondents were more likely (40%) than the unaware (9%) to purchase from a department store.
- *Home improvement / hardware stores:* Respondents unaware of ENERGY STAR were more likely (66%) than the aware (23%) to purchase dishwashers from home improvement or hardware stores.

Nonparticipants most often mentioned features and controls as an important dishwasher feature (40%), followed by efficiency (33%), and price (26%). However, price was the most commonly mentioned most important feature (23%; Figure 4-23).

**Figure 4-23:
Dishwasher Important Features**



Note: Total exceeds 100% because multiple answers were accepted.

There were several statistically significant differences depending on respondent characteristics.



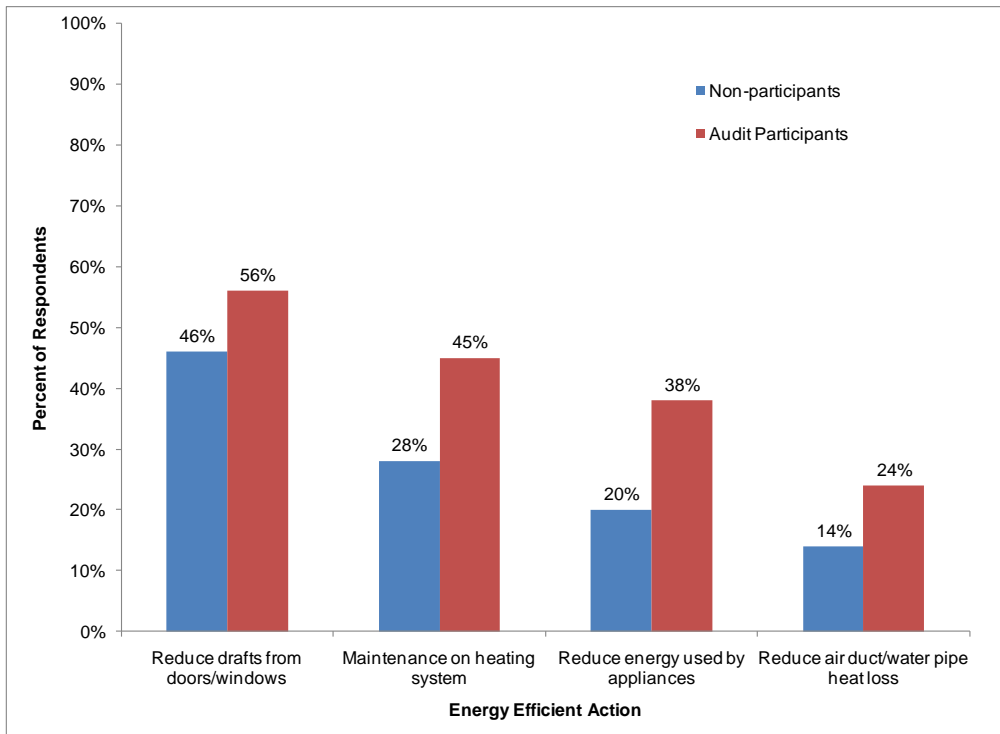
-
- *Program awareness:* Respondents who were aware of rebate programs were less likely than those unaware to say that price was an important characteristic (35% vs. 10%)
 - *ENERGY STAR awareness:* Respondents aware of ENERGY STAR were more likely than those not aware to say price was an important characteristic (30% vs. 2%).
 - *Energy reduction concerns:* Respondents concerned with reducing their home energy use were more likely than those not concerned to say price was an important characteristic (32% vs. <1%).
 - *Home ownership:* Renters were more likely than owners to say price was an important characteristic (82% vs. 24%).

4.1.8 Energy Efficiency Actions

The survey asked a series of questions to assess whether Nonparticipants had taken any energy efficiency related actions in the last two years. First, it asked a series of high-level questions to determine categories of actions that Nonparticipants could have taken. If a respondent answered yes to a category, the survey asked about whether the respondent had done any of a larger list of more specific actions. KEMA took these actions from the list recommended in the Online Audits available through the program. This entire question sequence was asked of the Online Audit participants, and half of it was asked of the In-person Audit participants. This section provides comparisons to both sets of participants wherever possible.

Less than half (46%) of the Nonparticipants took any actions to reduce drafts coming in through their doors or windows. About one-fourth (28%) said they performed maintenance on their home's main heating system. One-fifth (20%) said they took actions to reduce the amount of energy their home appliances use, and only 14 percent said they did anything to prevent heat loss in their air ducts or water pipes. Audit participants were more likely to actions in all categories (Figure 4-24).

**Figure 4-24:
Energy Efficient Actions**



Note: The audit participants in the first two categories include online and in-person audits. The audit participants in the latter two categories include online audit only.

When looking at the more specific actions (Table 4-6), the most common energy efficiency actions taken by Nonparticipants were to install weather stripping (26%), caulk (21%), other door/window sealing (18%), adding shades or curtains (16%), getting their heating system tuned by a professional (16%), replacing furnace or heat pump filters (14%), and installing door sweeps (10%). Nonparticipants were just as likely to perform most of the specific behaviors as audit participants. The few exceptions were that audit participants were more likely to replace furnace/heat pump filters, insulate hot water pipes, or replace dryer vents.



**Table 4-6:
Specific Energy Efficient Actions**

Action	Non-participants (n=800)	Online Audit (n=200)	In-person Audits (n=96)
Installed weather stripping on windows or doors	26%	27%	23%
Caulked windows or doors	21%	25%	11%
Other door/window sealing	18%	0%	21%
Added window shades or curtains	16%	13%	0%
Had furnace or boiler tuned-up by a professional	15%	20%	63%
Replaced furnace or heat pump filter	14%	27%	64%
Installed sweeps under your door	10%	12%	14%
Lowered water heater temperature	9%	12%	
Insulated hot water pipes	8%	17%	
Added occupancy or daylight sensors to lights	7%	12%	
Added weather stripping to attic access doors	7%	9%	3%
Installed a new threshold	6%	8%	1%
Other heating system maintenance	6%	8%	0%
Increase refrigerator or freezer temperature	5%	9%	
Installed a crawl space vapor shield	4%	3%	2%
Replaced or cleaned dryer vent	4%	13%	
Insulated air ducts	4%	4%	
Sealed air ducts	3%	4%	
Insulated attic access doors	3%	3%	2%
Other duct/pipe sealing	3%	4%	
Installed damper or internal seal on chimney	3%	4%	2%
Set back thermostat temperature	2%	3%	
Used clothesline to dry clothes	2%	5%	
Installed a water heater blanket	1%	3%	



4.2 Commercial General Population

4.2.1 Description

We conducted a general population CATI survey of 304 C&I customers in the MECA and MCAAA service territories, using a random-digit-dial method.

General population surveys are sometimes informally referred to as “Nonparticipant surveys” because unless a utility’s energy efficiency programs are very active, most of the customers who are surveyed through random digit dial methods will turn out to be nonparticipants. Doing a “pure” Nonparticipant survey would have been very expensive and time consuming because it would have required aggregating the participants from all the EU/EO programs and then trying to “de-dupe” these from our general population customer sample frame. This de-duping can be very difficult because the customer information in the EU/EO tracking databases would likely have been different (e.g. spelling variations in address information, etc.) than those in the general population sample frame.

Rather than a full de-duping process as described above, KEMA took two steps to remove participants from the commercial samples. First, we removed any phone number that appeared in the program tracking databases. Second, early questions in the survey asked whether the business had participated in any of the EU/EO programs. If they said they had, the call was ended and they were not counted towards the target number of completed surveys.

The general population survey had two primary objectives:

1. *Assessing the effectiveness of the EU/EO program marketing efforts:* The general population survey collected information on program marketing efforts including:
 - a. What percentage of the MCAAA/MECA participants are aware of the EU/EO programs;
 - b. How the program-aware nonparticipants heard about the programs;
 - c. Why program-aware nonparticipants did not participate;
 - d. Where nonparticipants purchased appliances and other energy-using equipment; and



-
- e. Whether the firmographics of the participating and nonparticipating customers differ (this can help us determine whether the program marketing efforts have any “underserved” customer types).

2. *Understanding the barriers to program participation and EE implementation in general:*

Some of the nonparticipants may be purchasing EE equipment but just not doing so through the program. Others may not be making any purchases of EE equipment. In either case we would like to learn about what barriers (capital constraints, inability to identify EE opportunities, etc) hinder them from purchasing EE equipment or participating in the EU/EO programs.

4.2.2 Methodology

The Commercial and Industrial (C&I) General Population survey was intended to gather information about businesses within the territories of participating MCAAA/MECA utilities that had not participated in any of the rebate programs. The utilities could provide contact information for customers who participated in the programs, but not for Nonparticipants. To acquire a nonparticipating population base, KEMA contracted Relevate to provide all business phone numbers for the zip codes within the territories of all MCAAA and MECA utilities. Relevate provided KEMA with about 180,000 phone numbers.

KEMA contracted Braun Research Incorporated (BRI) to conduct computer-aided telephone interviews (CATI) of program Nonparticipants. KEMA released 3,000 phone numbers to BRI. BRI dialed 1,801 of the released numbers. Of the dialed numbers, about one-third (590) was deemed ineligible for the survey. Ineligibility resulted from several situations:

- *Disconnected phone numbers:* About 40 percent of the ineligible phone numbers were disconnected.
- *Ineligible business:* Respondents who did not purchase energy from a participating MCAAA or MECA utility and those who said they participated in an energy efficiency program were considered ineligible. This category accounted for about 20 percent of the ineligible numbers.
- *Fax/computer tones:* About 20 percent of the ineligible numbers were due to fax machines or computers answering the call.



- *No eligible respondent:* About ten percent of the calls reached a business but were unable to reach a person at the business who could answer questions about the business's energy using equipment.
- *Residential number:* Most of the remaining ineligible numbers reported that the phone number was for a residence rather than a business.

Another 526 phone numbers were never answered. BRI called these numbers at least eight times, across at least two weeks before considering them unreachable. Based on the ineligibility rate for the numbers for which BRI did get an answer, KEMA estimates that about half of these unanswered phone numbers would have been ineligible.

The final estimated eligible sample was 968 phone numbers. BRI completed interviews with 304 businesses in January and February 2012. This was a final response rate of 31 percent (Table 4-7).

Table 4-7:
Commercial General Population CATI Dispositions

Sample Description	Number	Percent
Starting Sample	3,000	
Never Called	1,199	
Sample Used	1,801	
Known Not Eligible	590	
Estimated additional not eligible	243	
Sample-Valid	968	
Complete	304	31%
Refused	380	39%
Not Completed - Eligible	1	0%
Not Completed - Est. Eligible	283	29%

The CATI survey covered the following topics:

- Program awareness;
- Sources of information about energy efficiency programs;
- Recent purchases of energy using equipment; and
- Firmographics.



Participants were stratified based on the program territory (EO, EU, or unknown) and peninsula (upper, lower) they were in based on zip code. Results are weighted based on the number of participants in the population strata divided by the number of completed surveys.

4.2.3 Summary of Findings

- *C&I general population respondents were generally smaller than those participating in the C&I program.* Thirty-nine percent of general population respondents had 11 full-time employees or more, compared to 66 percent of C&I participating companies.
- *General population respondents were more likely to be in the retail and office sectors and less likely to be in the manufacturing sector.* These findings suggest an opportunity for the program to increase participation from the retail and office sectors. However, energy efficiency penetration of these sectors can be difficult in cases where the retail or office facilities are leased.
 - The most common type of general population respondent business was retailer (40%), but only 13 percent of the C&I Program participants were retailers.
 - The most common type of firm to participate in the C&I program were manufacturers (34%), but they only make up four percent of the general population.
 - The office sector also appears to be under-represented in the participants. Office makes up 12 percent of the general population but only two percent of the participants. Companies that chose to participate in the C&I program were likely to have some sort of energy-related policies. Participating firms were more likely to have energy managers than general population respondents (55% vs. 29%), more likely to have formal energy efficiency purchasing requirements (41% vs. 16%), and about as likely to have informal purchasing guidelines (10% vs. 7%).
- *Leasing vs. owning:* Although nearly two-thirds (62%) of the general population respondents said that they owned their space, this was a much lower ownership rate than that of the C&I program participants (84% ownership). It can be difficult to develop energy efficiency projects in leased space because of the classic split incentive barrier where the landlord controls the energy equipment purchase decisions but does not pay the energy bills.



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- *Program awareness:* About one-third (35%) of the general population respondents were aware of the EO or EU programs. Over one third (41%) had heard of at least one rebate program.
 - Contractors, vendors, and suppliers were the general population respondents' dominant source of information about energy using equipment.
 - Colleagues inside or outside their organization were also a major information source.
 - Utility contacts were not a major information source for the general population, but were for the C&I program participants. This latter difference could be an effect of the differences in company size between the general population and C&I program participants. The C&I program participants tend to be larger and manufacturing operations. Both characteristics increase the likelihood of those businesses having dedicated utility representatives.
 - *Barriers to energy efficiency:* The largest barrier to companies installing energy efficient equipment is the initial cost, with 78 percent of general population participants citing that as a barrier. The second-most-frequently cited reason was a lack of financing, at 12 percent.
 - *Equipment purchases:* The majority of the general population respondents had not made major equipment purchases since January 2008. Sixty-five percent of respondents stated that they had not purchased any new HVAC equipment, and 51 percent stated that they had not purchased new lighting equipment. For both lighting and HVAC measures, initial price and efficiency are the two most important characteristics considered in the purchase decision. For lighting, initial price is slightly more important than efficiency. For HVAC, efficiency is slightly more important than initial price.

4.2.4 Firmographics

The survey asked several questions to better characterize the general population (Nonparticipants). These questions included the number of full-time equivalent employees (FTEs), the primary economic activity, ownership, whether energy costs were included in leases, and square footage. Questions were the same as those asked of C&I participants.

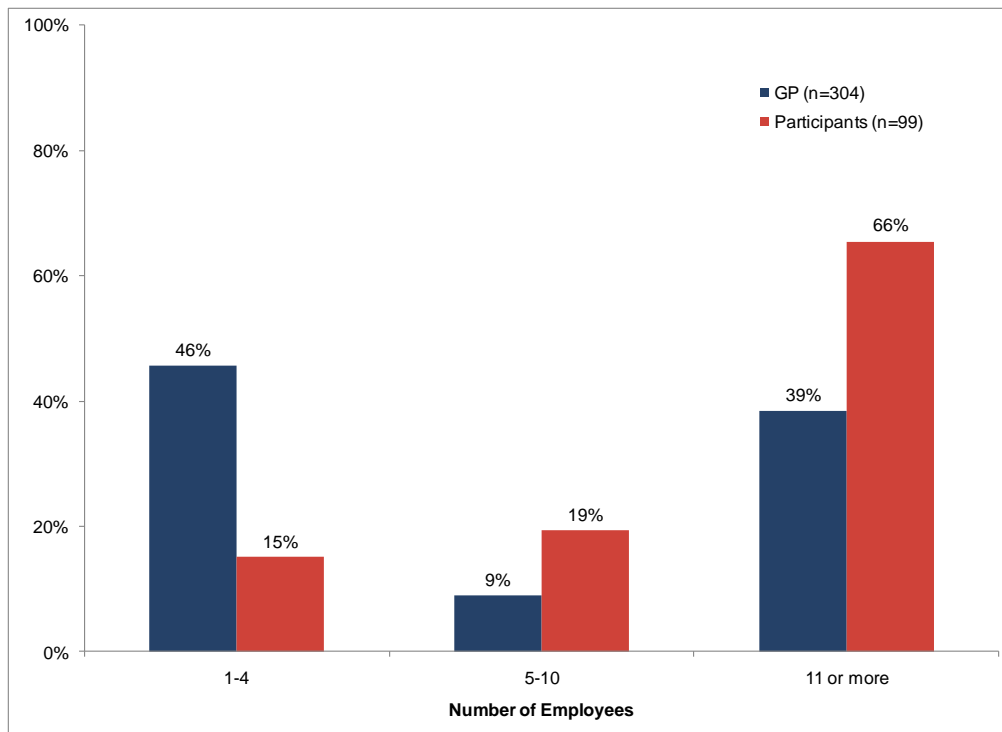


4.2.4.1 Full Time Employees

Businesses surveyed were asked how many full time employees (FTEs) work for the organization at the location contacted. The average (mean) number of FTEs at a given location was just over 84. Median FTEs reported by respondents was 6, showing a skewing of the mean by a number of very large locations.

The distribution of FTEs was different from that of the participants in the C&I rebate program, demonstrated in Figure 4-25. Forty-six percent of general population responding business locations had 1 to 4 FTEs, compared to 15 percent of C&I rebate program participants. Only 39 percent of the general population responding business locations had 11 or more employees, compared to 66 percent of C&I rebate program participants.

Figure 4-25:
Respondent Size by Full Time Employee (FTE)





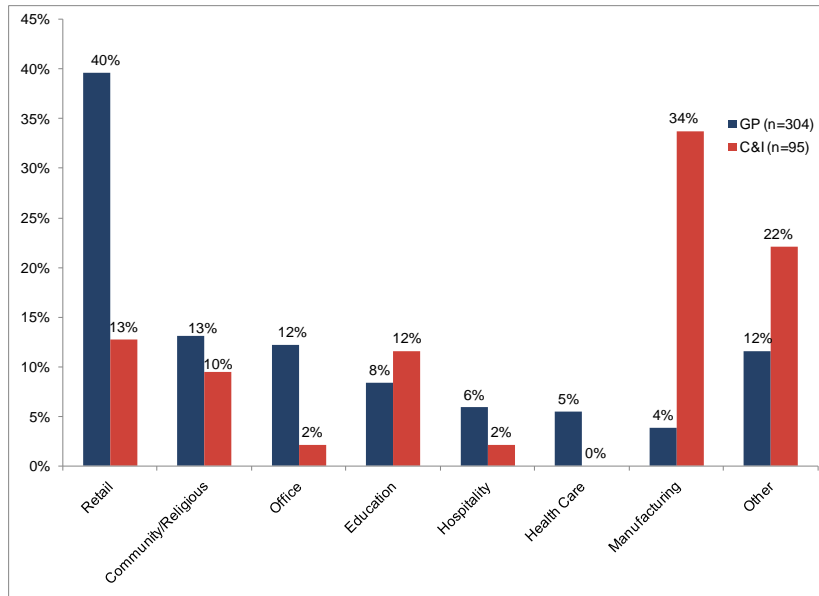
4.2.4.2 Principal Economic Activity

Businesses were asked to describe their primary economic activity at the location contacted; that is, what does the business do? As shown in [Figure 4-26](#), the majority of respondent businesses were non-food retailers (28%), community service or religious organizations (13%), business offices (12%) or grocery stores (12%). Remaining respondents included schools, restaurants, health care, and others.

General population respondent business types had a number of differences from C&I participants. Where 40 percent of GP respondents were retail businesses, compared to only 13 percent of C&I participants. General population respondents (12%) were also much more likely than C&I participants (2%) to be offices. Conversely, only four percent of the general population were manufacturing, whereas 34 percent of C&I participants were manufacturing firms.

These differences suggest that there still exists substantial opportunity for the C&I program to pursue projects in retail and office spaces. These opportunities are likely to primarily be lighting. Conversely, the program may be exhausting the opportunities for manufacturing projects. Manufacturing projects can include lighting, but also include compressed air, motors, and process heat measures.

**Figure 4-26:
Respondent Economic Activity
General Population and C&I Participants**



4.2.4.3 Energy Efficiency Policies

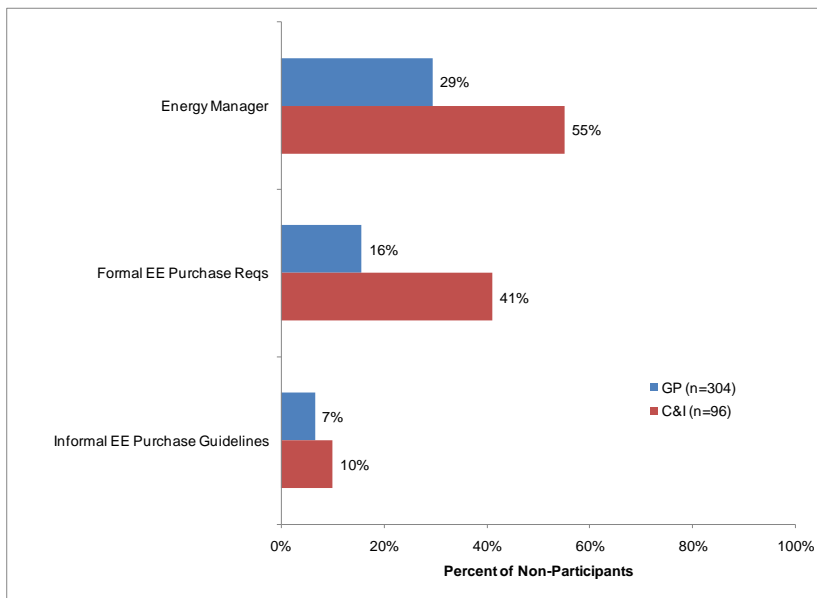
The survey asked a series of questions designed to assess the energy efficiency policies of respondent businesses. These questions included whether the organization had a person who was responsible for energy use and any formal or informal guidelines on the purchase of energy using equipment.

Over one-quarter of general population respondents reported having an energy manager or person whose job responsibilities include managing the energy use of their location, as shown in [Figure 4-27](#). Sixteen percent reported that their company location had formal guidelines for purchasing energy using equipment, and an additional seven percent reported unofficial guidelines.

These energy efficiency policies differ from those businesses that participated in the C&I Program. Energy Efficiency Managers are found nearly twice as often (55%) in locations that participated in the C&I rebate program than in the general population. C&I rebate program

participants are also more than twice as likely as the general population to have formal guidelines for purchasing energy using equipment.

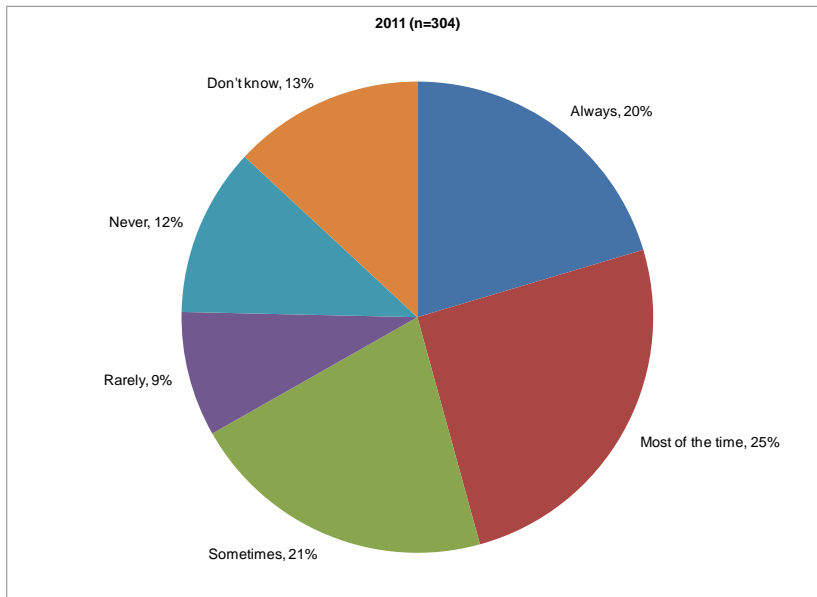
**Figure 4-27:
Energy Efficiency Policies**



4.2.4.4 Life Cycle Costs

Respondents were asked how often their organization considers the entire life-cycle cost of equipment, including fuel costs, when purchasing equipment. Choices included “never,” “rarely,” “sometimes,” “most of the time,” and “always.” Less than half (45%) considered the entire life-cycle cost “always” or “most of the time” (Figure 4-28). C&I participants reported a similar level when asked about consideration of life cycle cost (49% “always” or “most of the time”).

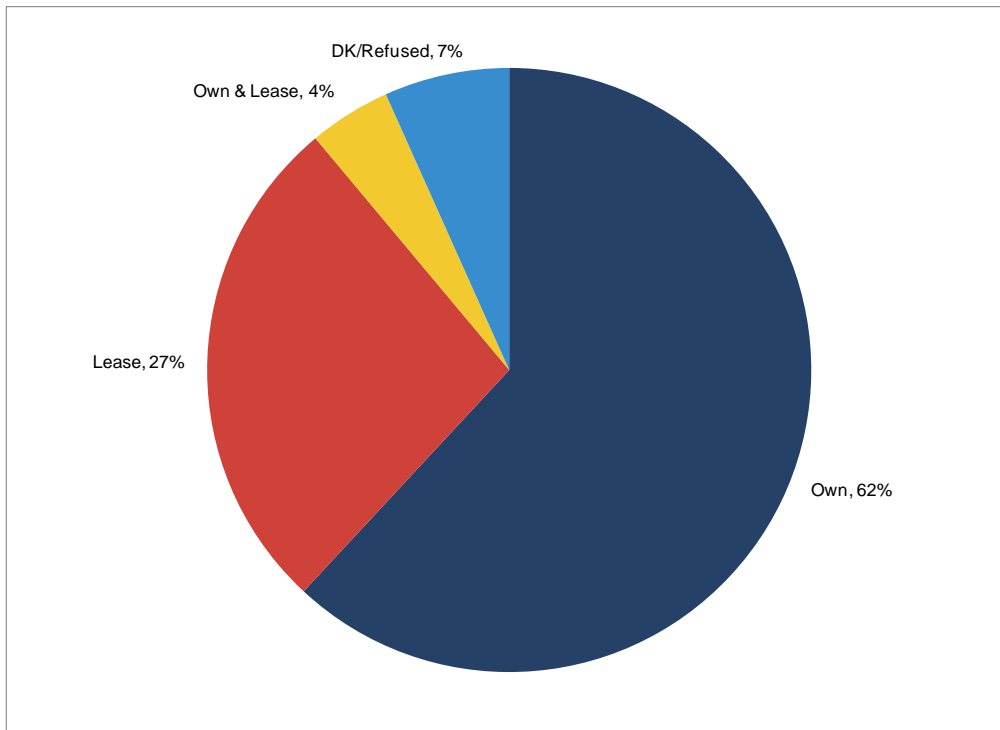
Figure 4-28:
Frequency considering life-cycle costs



4.2.4.5 Property ownership and utilities

Respondents were asked whether their company owned the space they worked in, if the space was leased, or if they owned part and leased the rest. Nearly two-thirds of respondents (62%) stated that the property or facilities were owned by the business. Just over a quarter (27%) of the respondents stated that the property was leased, the remaining 4% reported owning and leasing in combination (Figure 4-29). This is a different from C&I program participants, where 84 percent stated they owned all the space that they occupy.

**Figure 4-29:
Facility Ownership**



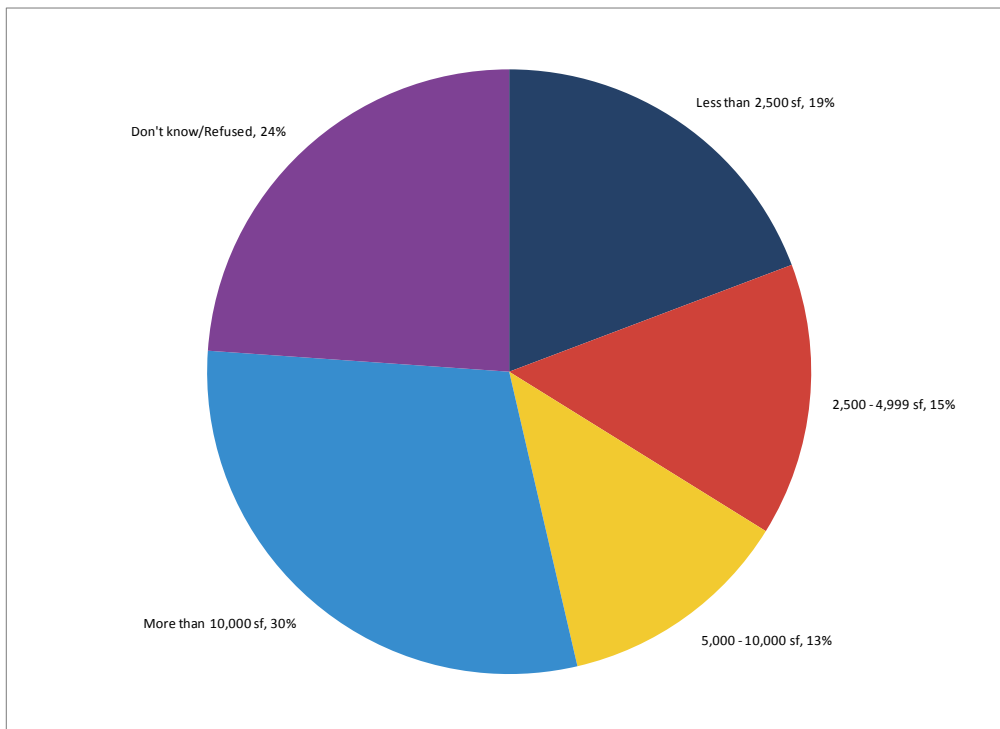
If respondents stated that the location was partially or wholly leased, they were then asked if any of the energy costs included in the normal lease payment. As shown in Figure 4-29, 31 percent of all respondents leased at least a portion of their facility. That portion is comprised of those whose lease included energy costs (3%), those whose lease did not (23%) and those who did not know (5%). Combining those who own their facility (62%) and those who lease but pay their own energy costs (23%), at least 85 percent of participants were responsible for their own energy costs.

4.2.4.6 Facility size

Respondents were asked about the size, in square feet, of space they occupy at the contacted location. Average (mean) square feet occupied were over 134,000, with a median of 6,500. These distributions are similar to those of program participants. The square footage distribution

is highly skewed, with a few extremely large sites and most respondents clustering nearer to the low end of the scale. Responses were grouped by those under 2,500 ft², 2,500 to 4,999 ft², 5,000 to 10,000 ft², and greater than 10,000 ft² (Figure 4-30).

**Figure 4-30:
Facility Size**



4.2.5 Sources of Information

Respondents were asked if they had heard of the Efficiency United or Energy Optimization programs. Approximately one-third (35%) of respondents had heard of the programs, 65% had not. In addition, at least 41 percent of respondents were aware of at least one of the rebates



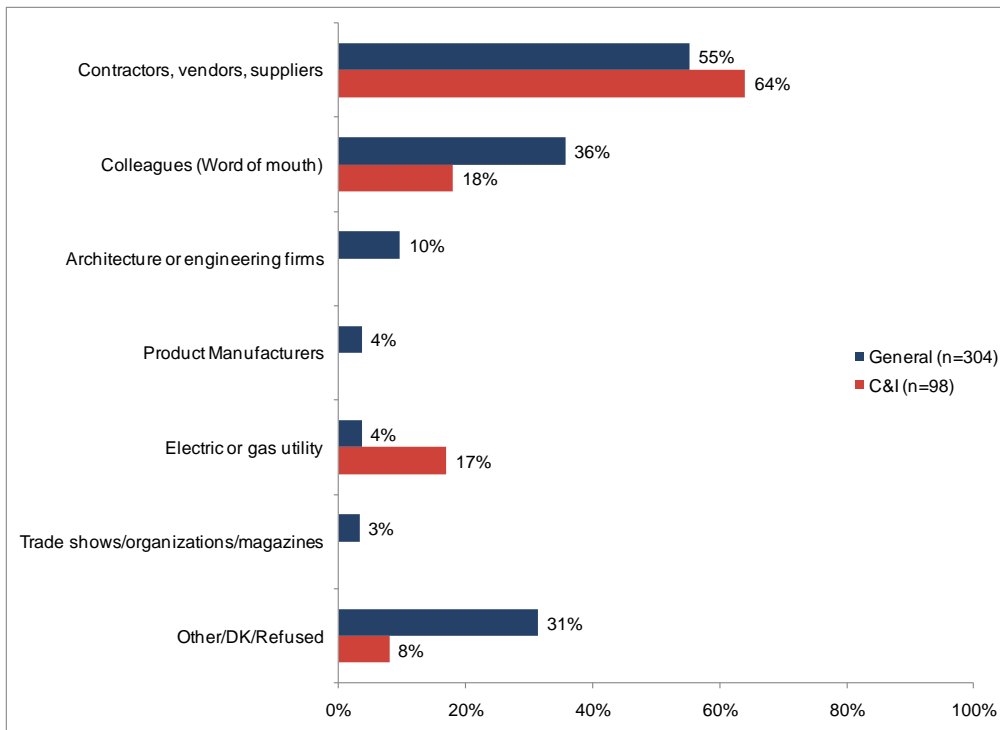
offered. There were a number of statistically significant²⁵ differences between those who had and those who had not heard of the EU/EO programs including:

- *Company size:* Companies with 11 or more employees (62%) were more likely than those who had 1 to 4 employees (17%) to have heard of the programs. Companies with 5 to 10 employees did not show statistically significant differences from the other groups.
- *Energy manager:* Companies who had an individual whose job responsibilities included energy efficiency (62%) were more likely than companies that did not (24%) to have heard of the programs.
- *Formal energy efficiency purchasing requirements:* Companies with formal energy efficiency purchasing requirements were more likely (77%) than those without formal requirements (28%) to have heard of the programs.
- *Life cycle costs:* Companies that consider life cycle costs when purchasing new equipment always or most of the time (48%) were more likely than those which do not often consider life cycle costs (27%) to have heard of the programs.

Respondents were asked where they get information when making equipment purchase or maintenance decisions. The majority (55%) of respondents stated that they get information from contractors, vendors or suppliers, and over one-third (36%) responded that they get information from colleagues (word of mouth; [Figure 4-31](#), ~~Figure 4-34~~).

²⁵ Reported differences are statistically significant at a 90% confidence level.

Figure 4-31: Sources of information: Overall General Population



There were a number of statistically different reasons respondents had different sources of information, including:

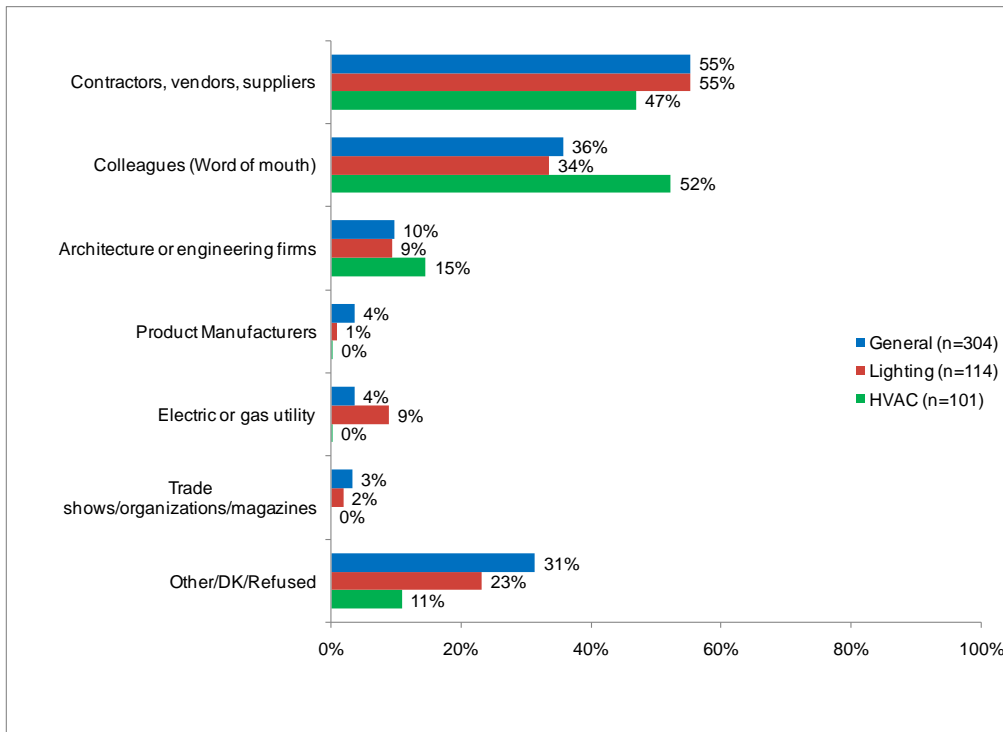
- *Effect of Economy:* Respondents who reported being affected by the slow economy were more likely than those who did not report being affected by the economy to report getting information from contractors, vendors or suppliers (74% vs. 48%), and less likely than those who did not report being affected by the economy to report their organization using internal sources of information (a form of word of mouth; 3% vs. 36%).
- *Company size:* Respondents from companies with eleven or more employees (18%) were more likely than those with 1-4 employees (2%) to report getting information from an architecture or engineering firm.



-
- *Formal energy efficiency purchasing requirements:* Companies with formal energy efficiency purchasing requirements were more likely (25%) than those without formal requirements (7%) to get information from an architectural or engineering firm.
 - *Ownership:* Companies that owned their facilities (13%) were more likely than those that leased (2%) to get information from an architectural or engineering firm.

Respondents were also asked about sources of information not only in general, but also when making lighting purchases and HVAC purchases. As shown in Figure 4-32, the pattern of responses for lighting or HVAC purchases remains largely the same as that of responses for information in general, with a couple of notable exceptions. The same majority of respondents (55%) received information from contractors, vendors and suppliers for lighting purchases, more than any other method. However, the most frequent method of getting information about HVAC equipment was through word of mouth (52%), while in general and for lighting word of mouth accounted for only about a third (36% and 34%, respectively) of responses. The other notable difference was in uncharacterized “other” responses or if they did not know. When talking about generalities, respondents provided vague answers or did not know. However, when talking about HVAC equipment, only eleven percent of respondents gave “other” answers or did not know.

**Figure 4-32 Sources of information:
Overall , Lighting and HVAC**



There were a number of statistically different reasons respondents had different sources of lighting information, including:

- Location:** Respondents in the Lower Peninsula were more likely (33%) than those in the Upper Peninsula (2%) to get lighting information from someone in the organization. This may be due to the differences in size of businesses between the two areas; the average respondent size in the UP was 80 while the average in the LP was 159. Respondents from the Upper Peninsula were more likely (18%) than those from the Lower Peninsula (<1%) to get information from product manufacturers. Respondents from the Upper Peninsula were more likely (17%) than those from the Lower Peninsula (2%) to not know where they got information.



-
- *Formal energy efficiency purchasing requirements:* Companies with formal energy efficiency purchasing requirements were more likely (28%) than those without formal requirements (<1%) to get information from an architecture or engineering firm.
 - *Ownership:* Companies that owned their facilities were more likely (80%) than those that leased (45%) to get information from contractors, vendors or suppliers.

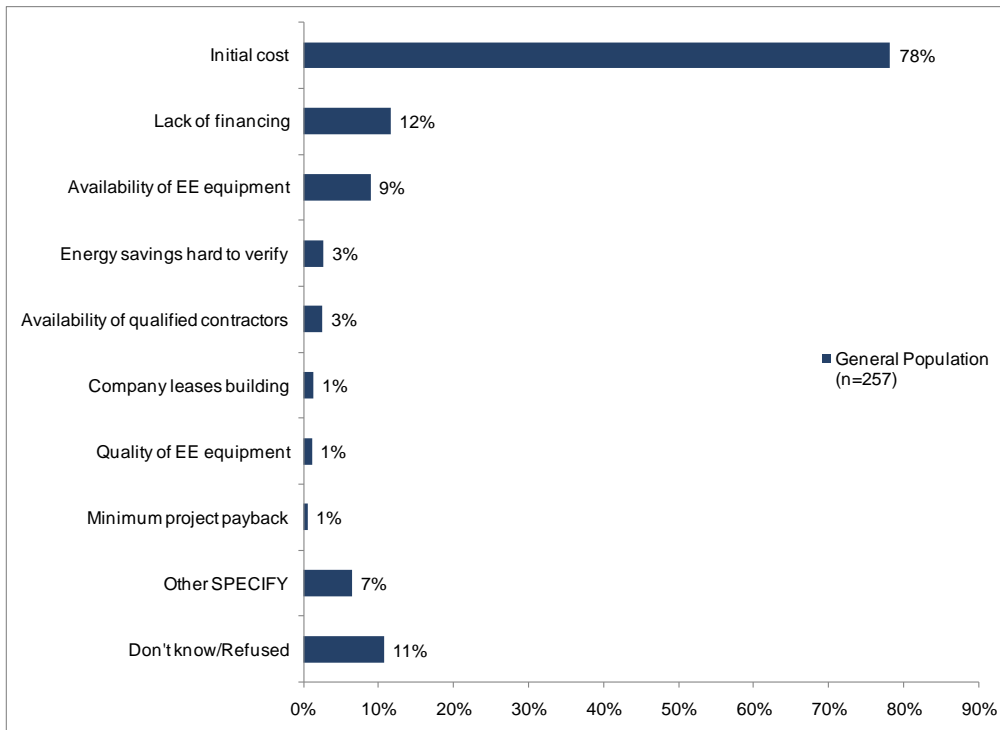
There were a number of statistically different reasons respondents had different sources of HVAC information, including:

- *Location:* Respondents from the Upper Peninsula were more likely (81%) than those from the Lower Peninsula (45%) to get HVAC information from contractors, vendors or suppliers.
- *Company size:* Companies with five to ten employees were more likely (98%) than those companies with one to four employees (37%) to get HVAC information from contractors, vendors or suppliers.
- *Ownership:* Companies that lease their space are more likely (38%) than those who own (9%) to get HVAC information from colleagues outside their organization (word of mouth).
- *Life cycle costs:* Companies that often consider life cycle costs when purchasing new equipment were less likely (11%) than those which do not often consider life cycle costs (27%) to get HVAC information from outside colleagues (word of mouth). Companies that often consider life cycle costs when purchasing new equipment (<1%) were also less likely than those which do not often consider life cycle costs (27%) to not know where they get HVAC equipment information.

4.2.6 Reasons for Nonparticipation

Participants were also asked about barriers to purchasing energy efficiency improvements. A large majority (78%) of respondents identified initial cost as a barrier. The next most frequent responses were a lack of financing (12%) and equipment availability (9%). No other specific responses were mentioned by more than three percent of respondents, as shown in Figure 4-33.

**Figure 4-33:
Barriers to participation**



A number of factors influenced what respondents perceived as being barriers to participation.

- *Location:* Respondents from the Lower Peninsula (81%) were more likely than those from the Upper Peninsula (45%) to cite initial cost as a barrier to purchasing energy efficient equipment. Respondents from the Upper Peninsula (7%) were more likely than those from the Lower Peninsula (1%) to cite a leased building as a barrier to purchasing energy efficient equipment.
- *Energy manager:* Companies who had an individual whose job responsibilities included energy efficiency were more likely (28%) than companies that did not (5%) to cite a lack of financing as a barrier to purchasing energy efficient equipment.
- *Effect of economy:* Respondents reporting being affected by the slow economy were more likely (27%) than those who did not report being affected by the economy (5%) to cite a lack



of financing as a barrier to purchasing energy efficient equipment. Respondents reporting being affected by the slow economy were more likely (96%) than those who did not report being affected by the economy (71%) to cite initial cost as a barrier to purchasing energy efficient equipment.

- *Company size:* Companies with five to ten employees were more likely (34%) than those companies with one to four employees (1%) to cite a lack of financing as a barrier to purchasing energy efficient equipment.
- *Life cycle costs:* Companies that often consider life cycle costs when purchasing new equipment were more likely (5%) than those which do not often consider life cycle costs (<1%) to get HVAC information from outside colleagues (word of mouth).

Respondents were also specifically asked if the economic downturn had affected their organizations equipment purchase or maintenance decisions. The majority (72%) said that it had not and a few (1%) did not know. Over one quarter of respondents (27%) stated that the economic downturn had affected decisions.

4.2.7 Baseline purchase behaviors

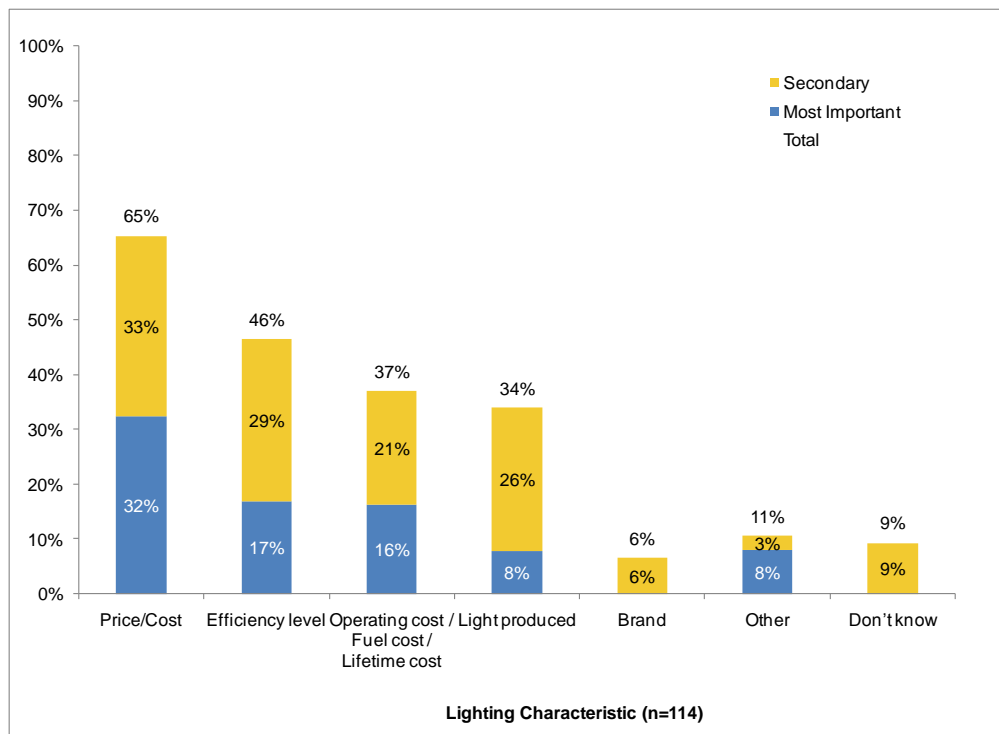
Respondents were asked about characteristics that were important to them for both lighting and HVAC equipment. When asked if they had made equipment purchases since January 2008, 65 percent of respondents stated that they had not purchased any new HVAC equipment and 51 percent stated that they had not purchased new lighting equipment.

- *Lighting:* Less than half (43%) of respondents stated that they had purchased new lighting since January 2008. A number of characteristics were significant, including:
 - *Size:* Companies with one to four employees were less likely (22%) than those with five to ten employees (72%) or those with eleven or more employees (59%) to have purchased new lighting since January 2008.
 - *Energy manager:* Companies who had an individual whose job responsibilities included energy efficiency were more likely (61%) than companies that did not (35%) to have purchased new lighting since January 2008.

- *Formal energy efficiency purchasing requirements:* Companies with formal energy efficiency purchasing requirements were more likely (91%) than those without formal requirements (34%) to have purchased new lighting since January 2008.

Respondents who said that they had purchased lighting were then asked what characteristics were important to them, shown in Figure 4-34. Price (65%) was the most important characteristic, followed by efficiency level (46%), operating/lifetime costs (37%) and the amount of light produced (34%).

**Figure 4-34:
Important Characteristics
for C&I Lighting Purchasers**



A number of elements were significant influenced what respondents perceived as important lighting characteristics, including:



-
- *Location:* Respondents from the Lower Peninsula were more likely (38%) than those from the Upper Peninsula (5%) to cite lifetime costs as an important characteristic.
 - *Company size:* Companies with one to four employees were more likely (14%) than those with five to ten employees (59%) or those with more than ten employees (65%) to cite efficiency level as an important characteristic. Companies with five to ten employees were more likely (74%) than those with more than ten employees (12%) to cite cost as the most important characteristic. Companies with more than ten employees were more likely (33%) than those with one to four employees (<1%) to cite lifetime costs as the most important characteristic.
 - *Formal energy efficiency purchasing requirements:* Companies with formal energy efficiency purchasing requirements were less likely (<1%) than those without formal requirements (43%) to cite lifetime costs as the most important characteristic.
 - *Ownership:* Companies that lease were more likely (53%) than those who own (2%) to cite the amount of light produced as the most important characteristic.

Of the companies that purchased lighting equipment, about one quarter (24%) had rebates available at the time of purchase, forty-four percent did not. Nearly a third (32%) of companies that purchased equipment did not know if rebates were available. All companies (100%) that were aware of rebates purchased rebate-eligible equipment. Three-quarters (75%) of companies that purchased lighting equipment chose energy efficient equipment over standard equipment (25%).

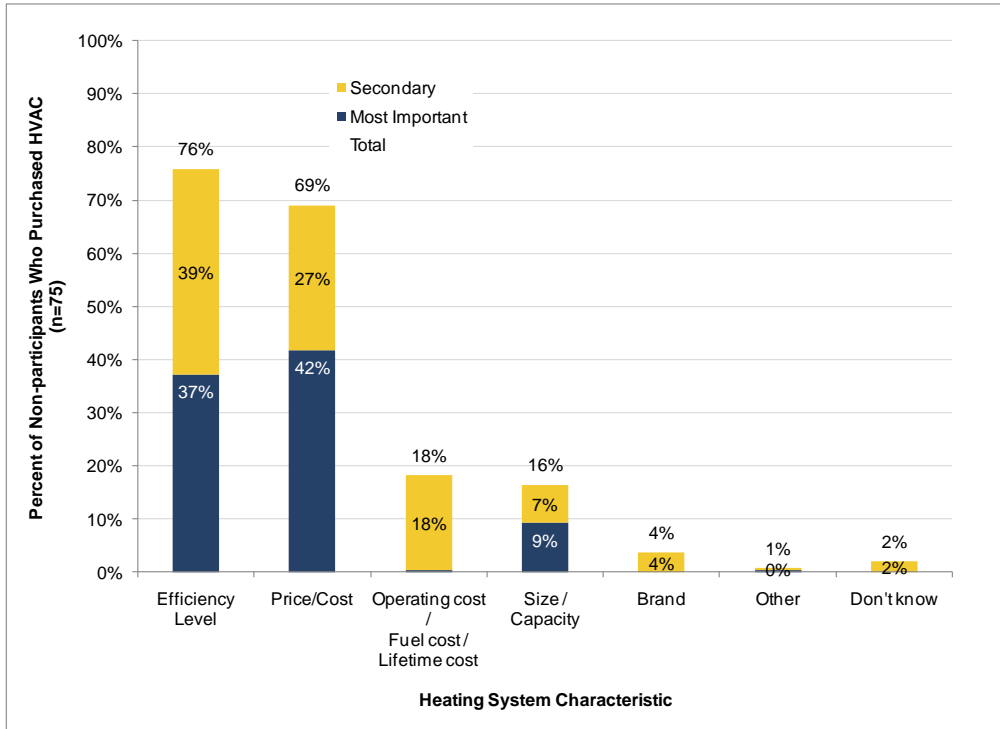
- *HVAC:* Two thirds (66%) of respondents stated that they had not purchased new lighting since January 2008. The remaining companies responded that they had installed air conditioning (17%), installed a boiler (7%), boiler tune up (4%), or other HVAC (2%). A number of characteristics were significant, including:
 - *Energy manager:* Companies who had an individual whose job responsibilities included energy efficiency were more likely (36%) than companies that did not (9%) to have purchased new air conditioning equipment since January 2008.
 - *Effect of economy:* Respondents reporting being affected by the slow economy (18%) were less likely than those who did not report being affected by the economy (3%) to have purchased a new boiler since January 2008.



-
- *Company size:* Companies with more than ten employees were more likely (37%) than companies with five to ten employees (2%) and those with one to four employees (5%) to have purchased new air conditioning equipment since January 2008.
 - *Formal energy efficiency purchasing requirements:* Companies with formal energy efficiency purchasing requirements were more likely (63%) than those without formal requirements (8%) to have purchased new air conditioning equipment since January 2008. Companies without formal energy efficiency purchasing requirements (74%) were more likely than companies with formal requirements (22%) to have not purchased any HVAC equipment since January 2008.
 - *Life cycle:* Companies that often consider life cycle costs when purchasing new equipment were less likely (47%) than those which do not often consider life cycle costs (82%) to have not purchased any HVAC equipment since January 2008.

Respondents who said that they had purchased HVAC equipment were then asked what characteristics were important to them, shown in Figure 4-35Figure 4-34. Efficiency level (76%) and price/cost (69%) were the most important characteristics.

**Figure 4-35:
Important Characteristics
for C&I HVAC Equipment Purchasers**



A number of elements were significant in influencing what respondents perceived as important HVAC characteristics, including:

- Company size:** Companies with five to ten employees were more likely (92%) than those with one to four employees (3%) or companies with ten or more employees (14%) to cite operating/lifetime costs as an important characteristic. Companies with more than ten employees were more likely (85%) than companies with five to ten employees (5%) to cite the efficiency level as an important characteristic.
- Formal energy efficiency purchasing requirements:** Companies with formal energy efficiency purchasing requirements were less likely (<1%) than those without formal requirements (32%) to cite operating/lifetime costs as an important characteristic.



Of the companies that purchased HVAC equipment, less than one-in-ten (9%) had rebates available at the time of purchase, and nearly three-quarters (72%) did not. One fifth (20%) of companies that purchased equipment did not know if rebates were available. All companies (100%) that were aware of rebates purchased rebate-eligible equipment. Eighty percent of companies that purchased HVAC equipment chose energy efficient equipment, ten percent chose standard efficiency.

A. Findings from the MECA Utility In-depth Interviews

This section contains our findings from in-depth interviews we conducted with the Michigan Electric Cooperative Association (MECA) utilities.

A.1 Background

In October and November 2011 we completed twelve in-depth interviews with 13 representatives of 12 MECA utilities that are either self-implementing programs (e.g., HVAC) or assisting in the implementation of Energy Optimization (EO) programs. These included Alger Delta Electric, City of Stephenson, Cloverland Electric, Escanaba Power, Great Lakes Energy, HomeWorks Tri-County, Marquette Board of Light and Power, Midwest Energy, Ontonagon County REA, Presque Isle Electric and Gas Coop, and Thumb Electric. These interviews were conducted at the same time as interviews we conducted with MCAAA utilities (summarized earlier in the report) with the MECA utility interview guide being slightly different than the one used for the MCAAA interviews.

A.2 MECA Utility Involvement in EO Programs

In our evaluation of the 2010 EO program we found that MECA utility involvement in EO program management ranged widely with key determinants being the size of the utility staff and whether the utility was self implementing the Residential HVAC program. Generally the larger utilities had more staff resources to commit to the programs than the smaller utilities did. The utilities that self-implemented the Residential HVAC programs were involved in some program tracking and incentive payment but the others were not and relied on the MECA implementation contractor CLEAResult to handle these responsibilities.

Our interviews with the MECA utilities concerning the 2011 EO program found that to a large degree their roles have remained the same. The one exception, as discussed in the marketing section, is that some utilities have reduced their EO marketing activity. Going forward, of course, the responsibilities of the MECA utilities will change as some of the co-ops relinquish their management of the Residential HVAC program to the Wisconsin Energy Conservation Coalition (WECC) – the new EO implementation contractor.

A.3 MECA Utility Communications with EO

Good communications between program actors are essential for the effective delivery of energy efficiency programs. This subsection describes how the MECA utilities handled communications concerning the EO programs.

A.3.1 How they communicate with EO program actors

The evaluation of the 2010 EO program found that the MECA utilities were generally very unhappy with the communications they were receiving from CLEAResult concerning program activities or responding to customer questions or complaints. Yet our interviews of the MECA utility representatives for the 2011 evaluation found that they generally thought that CLEAResult had improved their communications. "There was a change in how CLEAResult worked for this utility ... they improved greatly over last year," said one MECA utility representative. "In relation to what we had happen in 2010, there was a marked improvement on every level, their communication issues with our customers, timeliness of rebate checks. Just across the board, they improved significantly." As discussed in the next subsection, a number of representatives also gave CLEAResult credit for improving their reporting of program status and results.

The two areas of communications where a number of MECA utility representatives found CLEAResult lacking were:

- *Not providing a long-term marketing plan:* A number of the representatives said that they regretted the absence of a long-term marketing plan that would help them understand CLEAResult's marketing strategies and give them advanced notice of promotional efforts in their service territories. This issue is discussed in the marketing section of this report.
- *Not providing more face-to-face meetings:* A couple of the representatives wished that they would have more opportunities to meet with CLEAResult in person in their own service territories. "We talked about having like quarterly face-to-face meetings," said one representative, "and, I've actually talked to somebody face to face once in 2011." The marketing section of this report also discusses how a couple of the MECA utility representatives were disappointed that CLEAResult did not provide more staff to attend their community events and festivals.

One concrete step that was taken to improve these communications in 2011 involved the Director of Energy Efficiency Programs for MECA requesting that CLEAResult assign a staff

person who would serve as a dedicated liaison to the MECA utilities. Some of the MECA utilities said that this was a nice resource to have. For example, one of them commented.

The only really positive thing, as far as marketing or organization, is that they did hire that [EO-dedicated] program manager, and that has helped. It seems that things have been smoother. We've had fewer questions this year. ... [and] it just seems like there's more response when there's a question or there's something that needs to be done. We actually see some movement on ... because of ... gentleman that's working with us. Whereas before, it was like pulling teeth to try and get answers on stuff.

"One of the improvements that they did make was having someone, hiring someone and having them dedicated just to the cooperatives, to the EO group," said another MECA utility representative. "I think that was a big improvement. He's very responsive to anything that I've ever needed."

Yet one of the MECA utilities was somewhat disappointed with the attention she received from this new liaison:

One change in I do think that they could've done a better job with, they were supposed to assign a contact person who was supposed to follow up, once a month give us a call: 'What can we do?' Well ... we didn't get that as much as I thought. Now the one gentleman did stop one time after I met him, and I think he was nice. And he seemed enthused and ... I think he had good intentions, and I think he wanted to succeed. I just think that maybe he ... had too much on his plate.

A number of MECA utility representatives said that they had fewer EO-related phone calls from their members. One representative theorized that this was due to their members becoming more knowledgeable about the EO program. "[Our EO-related communications] has actually lessened," she said. "I think that might be attributed to more people being aware and knowing that [EO] is not something that the utility themselves is directly responsible for doing, but it's, in fact, the contractor that we've hired. And I usually tell them to call that number and I think people know that now. ... The first year or two not a whole lot of people even understood what was really going on with the program. But now that I think the word has spread, it's a little bit easier."

A.3.2 Program Tracking Reports

The evaluation of the 2010 program focused a lot of attention on utility complaints about the tardiness of program tracking reports. There was a general consensus from both the MECA and MCAAA utility representatives who we interviewed in 2011 that CLEAResult had improved its performance in this area. The following are some of their comments.

- “The reporting that we have been getting from CLEAResult has improved this year versus last year. ... Before we weren't getting monthly reporting, now we are. They streamlined the reporting. They did a very nice job with that.”
- “I think MCAAA, CLEAResult have refined their reporting, provided more detail on the reporting, expanded the data that they share with the different utilities, and that's going well, better than the previous year.”
- “[The reporting] has gotten better. It's improved.”
- “They are good at reporting the results.”
- “They were better than last year as far as getting the reporting to us. It wasn't timely like they promised, not exactly, but it was better than last year.”

A.3.3 Communication between Utilities

One of the MECA utility representatives mentioned being involved in an informal meeting of the utilities involved in the EO program called the “co-op collaborative.” The representative explained the nature of this collaborative:

The biggest thing that's going well is the co-ops collaborative we've got together. I mean, that seems to really help everybody out. It's just all the other coops -- the other coops that are in the Energy Optimization program -together as well as some munis, just talking back and forth. You know: 'What's working?', 'Are you selling stuff out of your office?' Just things that help out working. They kind of made some connections with people that I usually want to talk with. And then it kind of branches beyond the Energy Optimization program as well. There's not really a set schedule. I mean, if we see something that there might be an issue with or that we want to try, we'll talk about it.

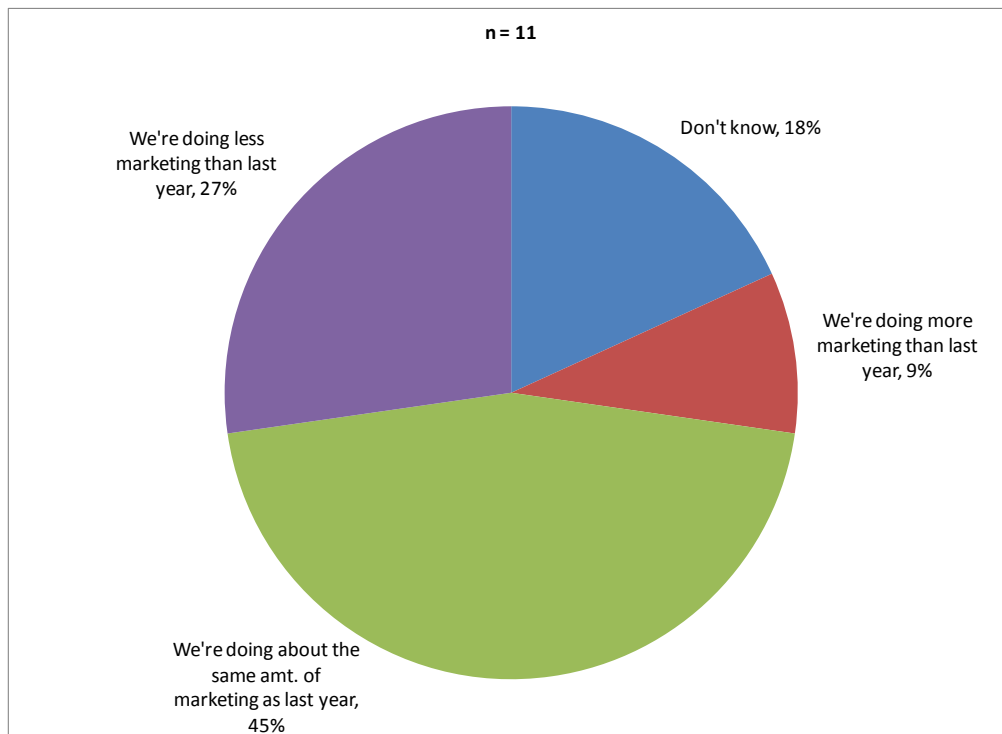
A.4 MECA Utility Involvement in EO Marketing

A.4.1 Level of EO Marketing Activity

We asked the MECA utility representatives in 2010 how actively they promote the EO program, all of them said they did some marketing of these programs, but the level of effort appeared to vary significantly. Some utilities reported being very proactive in a wide variety of marketing approaches, while others acknowledged that they had made a minimal effort to promote the programs.

In the 2011 interviews we asked them how their involvement with the marketing and outreach of the EO programs had changed, if at all, in the past year. Figure A-1 shows that the most common response – including nearly half (45%) of the respondents – was that their involvement in marketing had remained about the same. Those who said that they decreased their involvement in EO marketing were three times as numerous as those who said that their involvement had increased.

**Figure A-1:
Whether MECA Utility Involvement
In Marketing and Outreach Activities
Has Changed Since Previous Year**



Those who said that they had decreased their involvement in EO marketing generally provided two explanations for their lesser involvement. The first one was that in 2010 they had been concerned about not meeting their energy saving goals and therefore made a greater effort. One MECA utility representative explained:

In 2010, we tried to put things out, because, of course, ... we really needed to hit those targets. We put more things in our billing insert. ... The CFL rebates, we really pushed in that, and we also pushed the online audit. We also pushed the appliance recycling in that newsletter on our own. We didn't necessarily wait for the lead from CLEAResult on that ... We, basically, pulled things from how program descriptions were listed in Country Lines [magazine] and just threw our own little impromptu ads on together. And I think we really were a lot more aggressive in our billing inserts last year.

The other explanation for decreased marketing activity by the MECA utilities was that CLEAResult was becoming more active in the marketing department and therefore they did not believe they needed to do as much. "CLEAResult seems to be doing more marketing type planning and implementation, so that's good," said one MECA utility representative.

One MECA utility representative did say that they were increasing their marketing activity in 2011. "We're probably promoting a little bit more this year," he said. "What we did last year, we had the free CFLs for a time, and then now this year we're doing the smart strips and the CFLs. ... And what works really well for us, we're finding, is if we have the items here for our customers that they can come directly here [to the utility offices]."

In addition, some of the MECA utility representatives said that while their basic level of marketing involvement had remained the same, they were either trying new things or getting better at what they did. "We are starting to get into the social media a little bit, so we're promoting [EO] on Facebook," said one representative. "Well, [we're running] pretty much the same ads, but with a higher level of sophistication," said another. "We're being a little more efficient in terms of how we work. We're getting to be a little smarter about how we do these programs."

A.4.2 MECA Utility Perspectives on Barriers to EO Participation

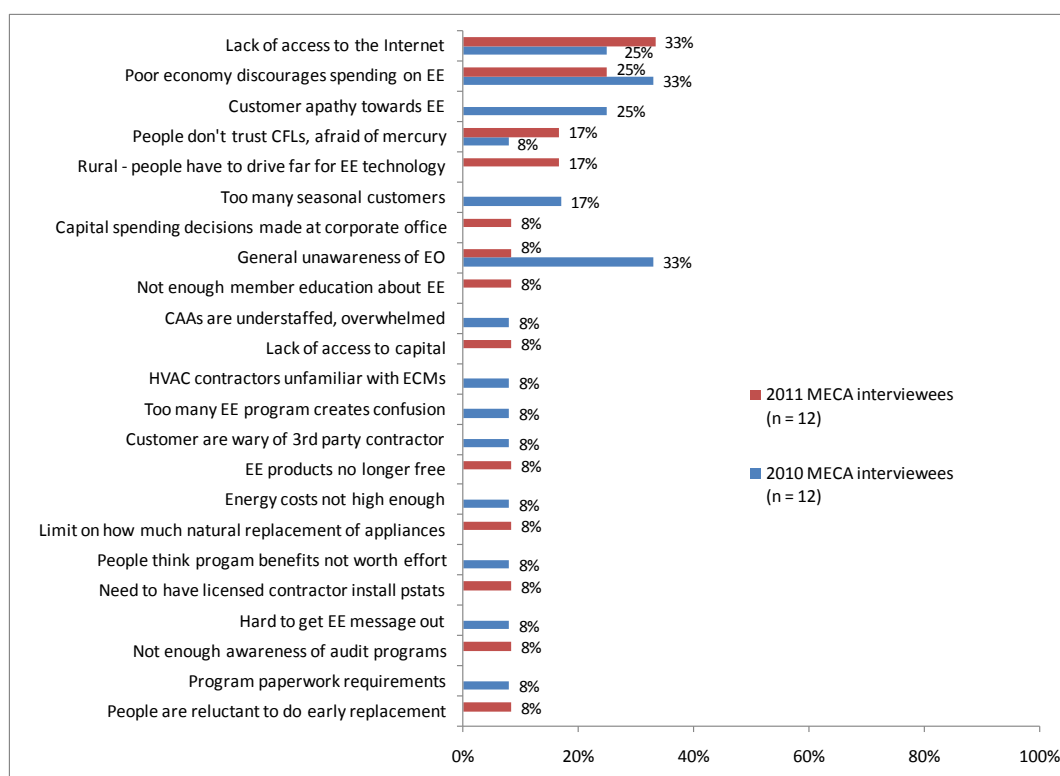
We asked the MECA utility representatives what factors or barriers prevented their customers from participating in the EO program. We had asked the same question in our 2010 interviews with these representatives. Table A-1 compares the responses of the 2011 interviewees with those of the 2010 interviewees.

It shows that the 2011 interviewees cited many different barriers to participation with the most common including lack of access to the Internet (33% of respondents) and the poor economy discouraging spending on bigger-ticket energy efficient equipment (25% of respondents). Multiple 2011 respondents also cited as barriers the fact that members in rural service territories often have to drive further to find retailers who stock energy-efficient equipment and some consumer distrust and fear CFL (e.g. worries about mercury contamination).

One interesting finding is that even though the 2011 interviewees were, with a couple of exceptions, the same people we interviewed in 2010, there were only four barriers that were cited in both years. These included the poor economy, the lack of customer/member access to the Internet, the distrust of CFLs, and general unawareness of the EO program.

Another interesting finding is that two major awareness/attitude barriers that were cited by the 2010 interviewees – unawareness of the EO program and customer apathy towards energy efficiency – both declined significantly in frequency among the 2011 interviewees. This indicates that the EO program marketing and customer education efforts may be having some success.

**Table A-1:
MECA Utility Perspectives
on Barriers to EO Participation
2011 vs. 2010**



Some elaborations from the MECA utility representatives on the other barriers cited in the 2011 interviews include:

- *Capital spending decisions made at corporate office:* “[A MECA utility representative] was able to demonstrate at times where there was a quick payback on the company’s investment -- say new lighting -- but they were reluctant to jump on that. They agreed it

made a lot of sense, but getting capital from their mother ship or the headquarter operation was sometimes difficult. So we have [C&I facilities] in rural areas with corporate headquarters a lot of times being elsewhere.”

- *Lack of access to capital:* “We have got one [project] pending right now that’s about the lowest-hanging fruit you could possibly pick, payback of less than a year, and they’re still dragging their feet, met that with the comptroller of the company, and he’s looking to borrow the capital to do the project.”
- *Limits on how much natural replacement of appliances:* “They can only buy and change so many light bulbs. They can only replace so many appliances. You know, even if you build a new house, you buy all your appliances. You aren’t going to change them out the next year.”
- *People are reluctant to do early replacement:* “I would just say it’s the way [the members] were brought up. They’re not going to throw away something that’s working, even though it could save them money. If it’s working, they’re not going to throw it away and buy a new one.”

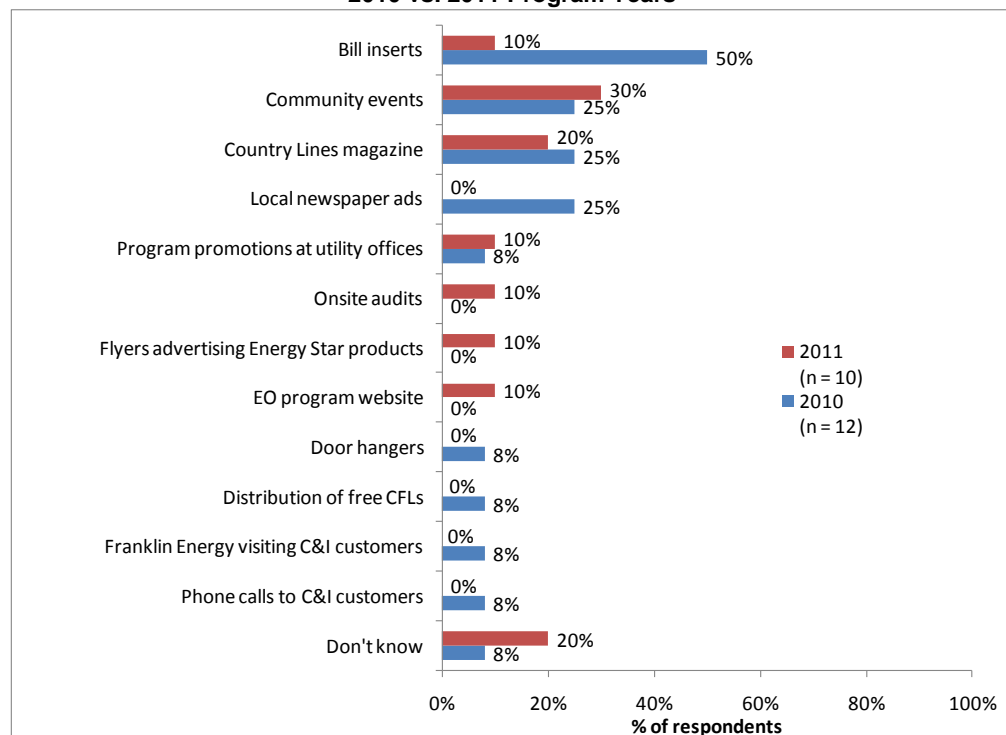
A.4.3 The MECA Utility Assessment of EO Marketing Efforts

A.4.3.1 Which marketing activities have been effective

We asked the MECA utility representatives which 2011 EO marketing activities had been the most effective. We then compared these responses to what they said about the 2010 EO marketing activities. Table A-2 shows that there were some significant changes in how frequently the MECA utility representatives cited different marketing activities as effective. Bill inserts, which were cited as an effective marketing activity by half the respondents in 2010, was named as effective by only one of the 2011 respondents. As discussed in the next section, the 2011 MECA utility interviewees had a number of concerns about the bill inserts. While a quarter of the 2010 respondents had named local newspaper ads as an effective marketing activity, none of the 2011 respondents named it.

However, some of marketing activities which the respondents had cited as effective in 2010 continued to be popular in 2011. These included community events and *Country Lines* magazine.

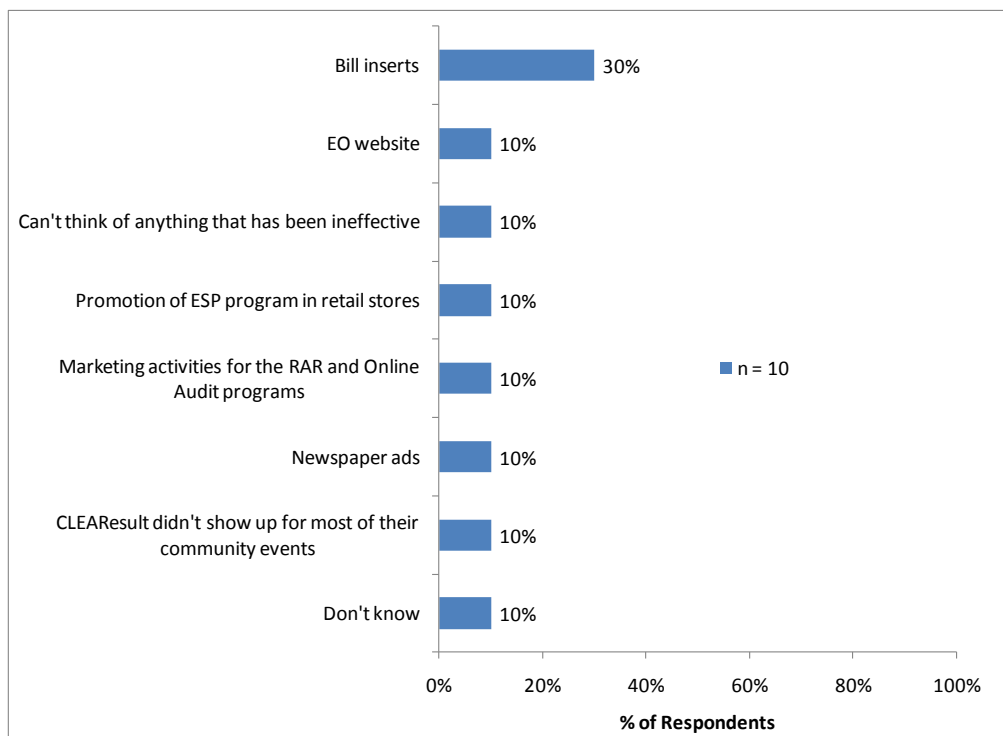
**Table A-2:
Which Marketing and Outreach Efforts
the MECA Utilities Considered
to Be Most Effective
2010 vs. 2011 Program Years**



A.4.3.2 Which marketing activities have been less effective

We also asked the MECA utility representatives which marketing activities had been less effective. Table A-3 shows that they named a lot of different activities as being ineffective with bill inserts being the most cited.

**Table A-3:
Which Marketing and Outreach Efforts
the MECA Utilities Considered
to Be Least Effective**



The 2011 MECA utility representatives explained why these different activities were ineffective:

- *Bill inserts:*
 - “Probably bill inserts [have been the least effective], because ... there’s no consistency. There’s no plan on their part, as far as what kind of marketing they’re going to do for the year. It’s just random. They’ll just e-mail us and say: ‘Can we do a bill insert next month?’ So if they have more of a consistent message, I think, that they were trying to spread amongst our members ... and promote certain programs, maybe we would be able to see some effectiveness there, but there isn’t anything.”

-
- “Any kind of billing-type inserts, I think people tend to overlook. ...Maybe some of the ENERGY STAR programs that are point-of-sale, where: ‘Hey, you can save this amount on a new dishwasher, a new clothes dryer,’ that sort of thing. I have to believe that there’s a lot of people in our membership that are buying washers and dryers, and dishwashers, that have no idea that those programs even exist.”
 - “The least effective I would say have been the bill inserts. ... Because I think they’re very general.”
 - *Newspaper ads:* “Some of the markets that we’re looking at, [newspapers] just seems like kind of a diluted way to get the word out. [These markets are] very rural areas that are spread out, not populated.”
 - *Marketing activities for the RAR and Online Audit programs:* “I think maybe the appliance recycling because we don’t get too many customers interested in that. Or perhaps the ... online audit. Because I don’t know how many people are actually aware that they can go online and fill out this audit and get a free energy kit. And I don’t know how many people are actually aware that they can return an old refrigerator ... for a cash rebate. Those are the ones that are kind of the poorest, I suppose. ...I mean, they haven’t tried a whole lot [to market these programs]. I mean, I’ve seen some little information cards and stuff that I put out and display when they sent them to me. But that’s about it. I haven’t really heard or seen much else on those programs.”
 - *Promotion of ESP program in retail stores:* “RESPONDENT 1: The retail front has fallen flat on its face. INTERVIEWER: You mean implementing the ENERGY STAR products program through retailers RESPONDENT 1: Correct. Yeah, it never went anywhere. INTERVIEWER: And why do you think that is? What do you think are the barriers there for many of them from using retailers more? RESPONDENT 1: Concentration of stores in our territories. You know we are rural. So people, they actually drive out of our territories on a very routine basis to go to Home Depot, Lowe’s, Menards, Meijer to purchase their products.”
 - *CLEAResult didn’t show up for most of their community events:* “We gave them a list of different festivals. Not once did we hear from them: ‘Yeah, we’d like to cover that festival and promote [the EO program].’ And we started to feel this year that we were paying them to do these things for us.”

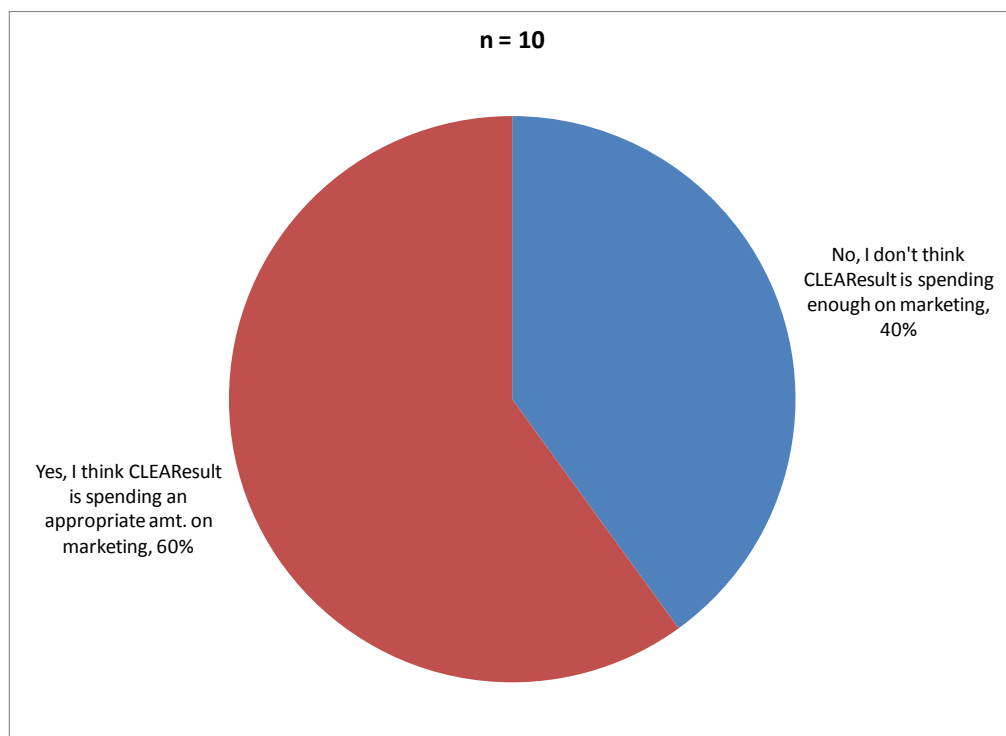
- *EO website*: “The online website probably with our membership, because of the lack of the Internet in a lot of people’s homes, obviously, that’s not going to probably be as effective as it could be.”

In the evaluation of the 2010 program many utilities had also cited this Internet access barrier.

A.4.3.3 Whether EO is spending enough on marketing and outreach

We asked ten MECA utility representatives who had been willing to provide opinions on the effectiveness of EO market activities whether they thought the EO program was spending an appropriate amount on marketing and outreach. Table A-4 shows that 60 percent of these representatives thought that CLEAResult was spending an appropriate amount.

**Table A-4:
Whether MECA Utility Representatives
Thought CLEAResult Was Spending
an Appropriate Amount on EO Marketing**



Yet while a slight majority thought that CLEAResult was spending an appropriate amount on marketing and outreach, many of them qualified their responses by indicating that it was an appropriate amount considering the difficulty of marketing in their service territory, or if one uses energy savings goal achievement as the criterion for sufficient, or compared to what they had done the previous year. The following are some of these comments:

- “This year they've done a lot better. I think they've tried to make an effort to put a little bit more ...being here in person, like I said, and spending more on radio, and they try to do a little bit of mailing type stuff for us. So, yeah, I'm glad that they've put some more effort and possibly money into that.”
- “Yeah, I think so. I think we, for a lot of reasons that I mentioned earlier, we kind of have a difficult challenge. We're mostly rural in nature, and we're also intermingled with Detroit Edison, so it makes it kind of a challenge in our area.”
- “Well, I guess ... the answer is if they're reaching the goals with the dollars that they've contracted for, then, yes. We're a little concerned, right now, on the C&I side, we're a little under targets, year-to-date. But we'll see how it works out by the end of the year.”
- “I think they have been done well for our area.”

The MECA utility representatives who thought that CLEAResult was not spending enough on marketing or outreach, had the following comments:

- “CLEAResult's philosophy is to focus more money on the incentive side to try to move the market with dollars versus communication, marketing, education ... the advertising, the marketing is all about the amount of the rebate, and there is some education in terms of saving watts by screwing in a CFL versus an incandescent, but it's mostly done through higher incentives, although because of our woefully low budget, even those are not the greatest ... because of the size of the budgets.”
- “As far as what's currently being allocated or the resources, I know our organization as a whole does not feel comfortable with what has been done or is being done.”
- “No, I'd like to see it be a little bit more.”

- “Did we get a benefit of any of that [EO marketing effort]? I’m not so sure I could say yes on that.”

A.4.3.4 Whether marketing responsibilities are appropriately allocated

We also asked the MECA utility representatives who had been willing to provide opinions on the effectiveness of EO market activities whether they thought marketing and outreach responsibilities were allocated appropriately between CLEAResult and the utilities. Seven of the nine respondents (78%) thought that the current allocation of marketing responsibilities was appropriate.

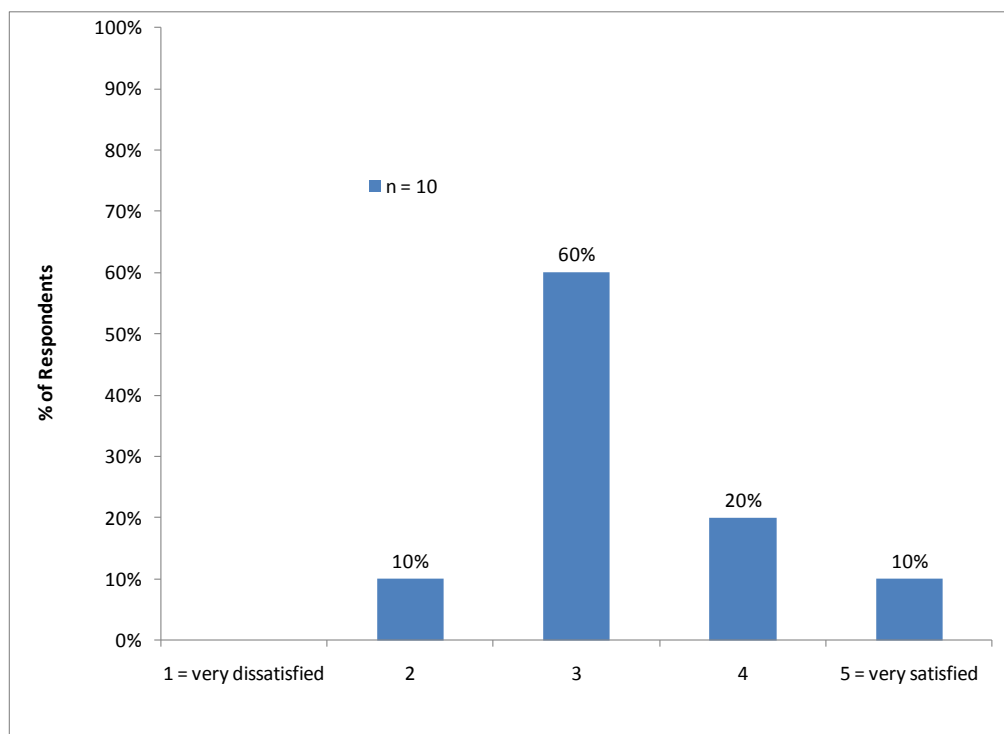
The two who did not think the allocation of responsibilities was correct both thought that they should be made more aware of marketing activities and be more involved in marketing decisions:

- “I think the way the program has been designed, CLEAResult would like to take the primary role of direct communications,” said one utility representative. “I think because of our desire to represent our members, I think we’d like to have a more active role in that process. That’s been somewhat lacking. So ... I’d answer your question by saying, I’d like to see the cooperatives more involved in the planning and communications.”
- “I would simply say that we would like to have a greater amount of coordination between the two. ... [Our organization] feels a lack of input into the process.”

A.4.3.5 MECA utility satisfaction with EO marketing efforts

We asked the MECA utility representatives to rate their satisfaction with the EO marketing activities. We asked them to use a five-point satisfaction scale where five indicated “very satisfied” and one indicated “very dissatisfied.” We consider satisfaction ratings of four or five on this five-point scale to indicate that the respondent was satisfied with the program activity. Figure 2-3 shows that only thirty percent of the respondents were satisfied with the EO program marketing efforts. The average satisfaction rating was 3.3 and the modal response was 3.0.

**Table A-5:
MECA Utility Satisfaction with EO Marketing Efforts**



We asked the ten respondents to explain their satisfaction ratings. They gave the following reasons:

- Satisfaction rating of 2:* "[CLEAResult's marketing effort] did leave a lot to be desired overall. I just think that, it is ... because we're out in the middle of nowhere up here ... a small coop ... they had a lot bigger territories, different offices, like with Great Lakes and HomeWorks and Midwest, they're much more urban and ... I think maybe they had more, because there was not a lot going on up here. ... Some of those festivals though would've been ideal, and we did give them a list, but, frankly, I didn't babysit them a lot this year ... I kind of sympathize with some of the ... realities of the program, it's complex. CLEAResult is way down in Lansing."
- Satisfaction ratings of 3:*

-
- “It hasn’t been super, but it hasn’t been totally non-existent ... it’s adequate, but they’re not overly aggressive, by any means. And sometimes ... we kind of poked them”
 - “Just lack of communications ... the big thing is ... we don’t know ... I haven’t seen anything. ... Maybe the woman handling the Country Lines [magazine] just makes sure things aren’t doubled up and lets them do their own thing... We haven’t really discussed [the marketing] much because things have been on cruise control pretty heavy. ...Other than that it, [the marketing] hasn’t been terrible, but it’s just the unknown that worries me sometimes.”
 - “Well, we do have a person with our statewide organization ... I’m not sure how much they utilize [his] talents in terms of keeping [the marketing] coordinated.... There are times when certain ads would come out, and we really didn’t have much of an opportunity to weigh in on it and put our two cents worth in. And a couple of them were ads really we did not feel were appropriate, kind of promising significant cash gains . . . and you really don’t want to play on people’s expectations.”
 - “It’s going back to not having more [CLEAResult staff] support at the [community] events. ...[The bill inserts] could be more specific too ...”
 - *Satisfaction ratings of 4:* “I mean, could you do better? Sure. Could you do worse? Sure ... but obviously, I think we’re going to hit our goal, so we must be doing something right.”
 - *Satisfaction ratings of 5:* “Actually, it would probably be closer to a five because I think they really have strived to do all they can.”

In other parts of the interviews, the MECA utility representatives pointed to other areas of dissatisfaction with CLEAResult’s marketing efforts:

- *The need for more consistency and quality control in marketing materials:* “One comment that I would have on their marketing materials would be that it gets quite frustrating when you have to constantly go back and, with corrections for something that has already been corrected previously on other items,” said one MECA utility representative, “So we refer to our members as ‘members,’ not as ‘customers’. So you would think anytime you’re doing a piece for a cooperative you would, once you’ve already learned that they’re called ‘members,’ not customers, that you shouldn’t have to scrutinize every piece to make sure that it’s correct. That should be a given ...And that’s just one example, but it seems like we

have to really carefully go through each piece for everything from style to grammatical corrections and things like that.”

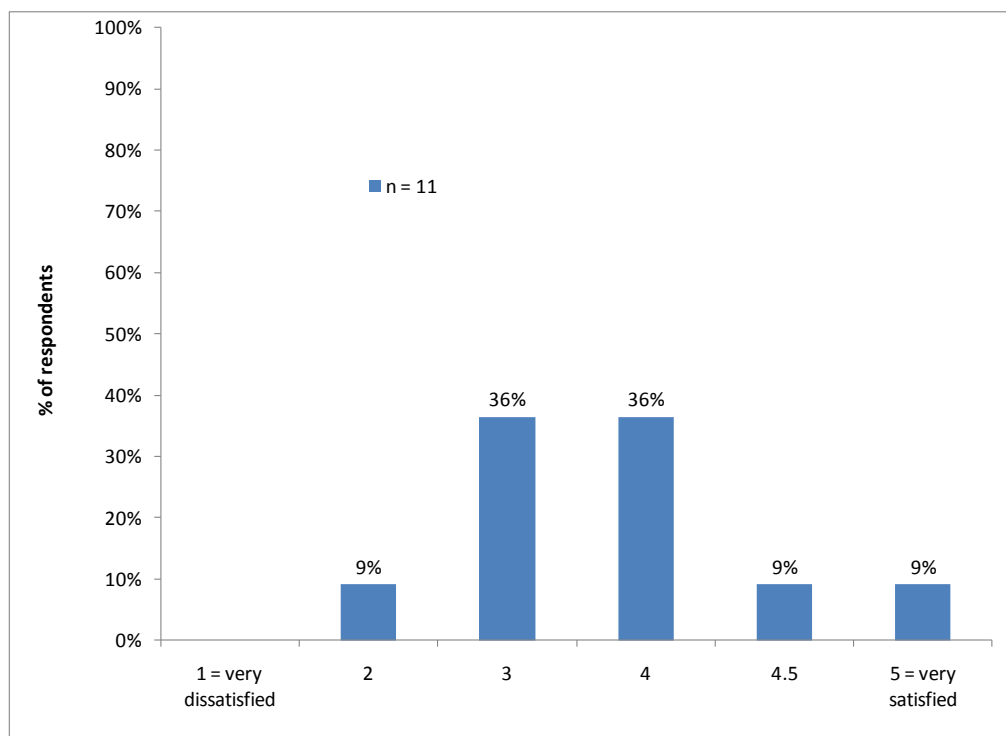
- *The need for more awareness of deadlines for utility newsletters/mailings:* “Late in the year, and I think it was in October ... they offered to put in like a billing stuffer and coupons but they were very slow to get back with us on how they would do that, because we told them, but apparently they didn’t understand, the fact that in October we had already sent out to our publisher the November newsletter. So when they were asking us in October, that was for a December newsletter. And I’m not sure that they were quite following that. They didn’t understand the lead time was much greater than, I think, they anticipated.”

A.5 Utility Satisfaction with the EO Programs

A.5.1 Satisfaction with CLEAResult

We asked the MECA utility perspectives how satisfied they have been with the performance of CLEAResult. We asked them to use a five-point satisfaction scale where five indicated “very satisfied” and one indicated “very dissatisfied.” Table A-6 shows that the large majority of the respondents gave CLEAResult satisfaction ratings of three or four. The average satisfaction rating was 3.6. We consider satisfaction levels below 80 percent (e.g., the % of participants giving satisfaction ratings of 4 or 5 on a 5-point scale) to indicate that a program or a contractor has room for improvement. The percentage of MECA utility representatives who were satisfied with CLEAResult was 54 percent.

**Table A-6:
MECA Utility Satisfaction with CLEAResult**



We asked the respondents to explain their ratings. The following are some of their responses:

- Satisfaction rating = 2: “I would give them a 2. They were all geared up to launch these programs, but I didn’t see them interact with villages and coops.”
- Satisfaction rating = 3:
 - “I think they do continue to get better. There are some areas that are important to us, and they’re still lacking on the communication side.”
 - “Just lack of, I guess, communication ... I mean we talked about having like quarterly face-to-face meetings. And ...I’ve actually talked to somebody face to face once in 2011. So ... we’re going to end up meeting our goals which is great news, but it’s you almost feel out of the loop with what’s going on.”

- “I mean, I’m trying to, be fair with, I think CLEAResult had good intentions, and I think they got the programs a little better under control this year with the validation and all that. Things were in place finally. But, like any big, huge, complicated project like this, I mean, they were supposed to be in this business. ... But I think the communication, you may have heard this in different parts of your life ... but if you know you’re going to have trouble meeting a deadline ... just ... be frank with the person, and let them know ... we’re working on that. Even that’s better than not hearing from them.”
- Satisfaction rating = 4:
 - “Good. They’ve been very responsive to questions. They’ve been good in communicating. I’m happy.”
 - “Because they’ve been improving as far as like the program implementation is. So they’ve definitely listened to some of the things we’ve said, and improved on that. That’s a good thing.”
 - “Well, just that, there were growing pains, yes, but they’ve done everything we’ve asked them to do. They’ve corrected it. And for the most part we’re happy with them.”

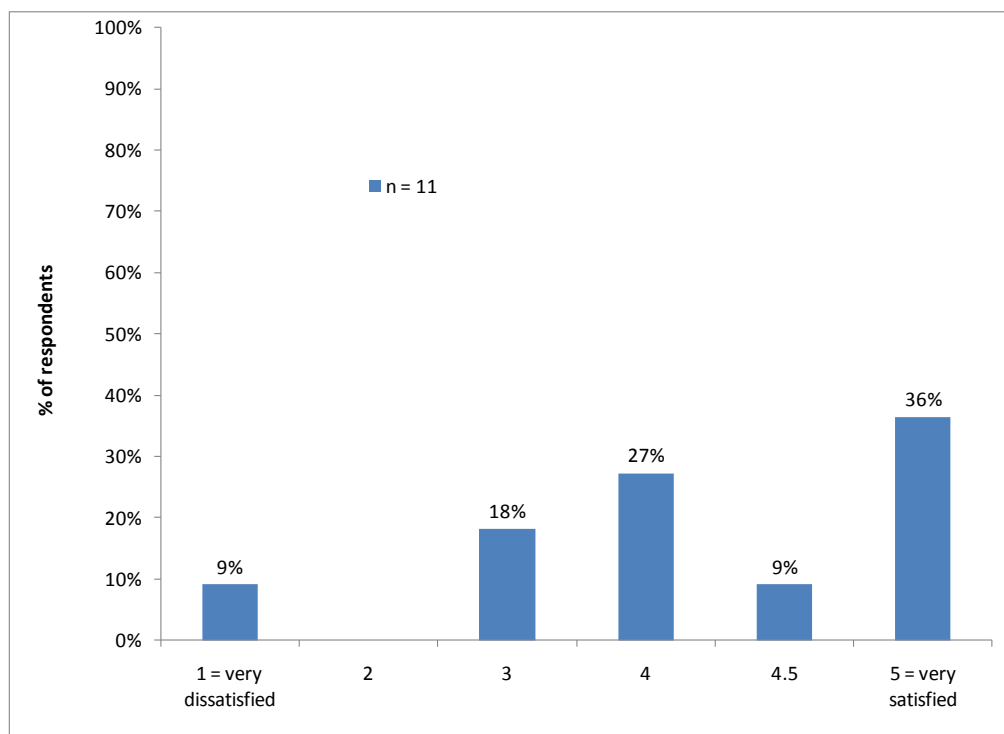
A.5.2 Satisfaction with CLEAResult’s Subcontractors

The following subsections summarize the satisfaction ratings that the MECA utility representatives gave to CLEAResult subcontractors Franklin Energy, which implemented the C&I program; JACO Environmental, which implemented the Residential Appliance Recycling program; and the local Community Action Agencies which implemented the Low Income program.

A.5.3 Satisfaction with Franklin Energy

We asked the MECA utility representatives to rate their interaction with Franklin Energy. Table A-7 shows that the large majority (72%) of respondents was satisfied (satisfaction ratings of 4 or 5). The average satisfaction rating was 4.0.

**Table A-7:
MECA Utility Satisfaction with Franklin Energy**



We asked the respondents to explain their ratings. The only very negative rating came from a MECA utility representative who said that Franklin Energy did nothing in their service territory. Some of the respondents who gave Franklin satisfaction ratings of 3 or 4 faulted the contractor for sometimes not informing them of contacts that were made with their C & I customers. The following are some of their responses:

- Satisfaction rating = 1: "I can say that I'm disappointed Franklin never took the ball ... there again why wasn't CLEAResult asking them to take some trips up here and start to maybe do some rainmaking a little bit? I know that it's a tough economy. I really do. But instead of trying to sell things ... they could've had a little afternoon meeting at one of the schools where ...we could've tried to provide them with names of business contacts just, not selling them something or getting them to buy something, but energy efficiency tips for commercial accounts. Why couldn't they have like a little educational thing? I don't know why they didn't."

Maybe they're really busy too, but I can't imagine in this environment that they were, setting records either. So I guess I'm disappointed. ... We half expected maybe a little more effort on their part, but I didn't even hear from Franklin this year, which is sad. I would say one [satisfaction rating], because, they were nonexistent to us. And I think they're a great outfit, and that's what's disappointing is I think they do what they do well, but whether there were some factors that I'm not aware of that prevented them from reaching out to us, I don't know, but they didn't do anything."

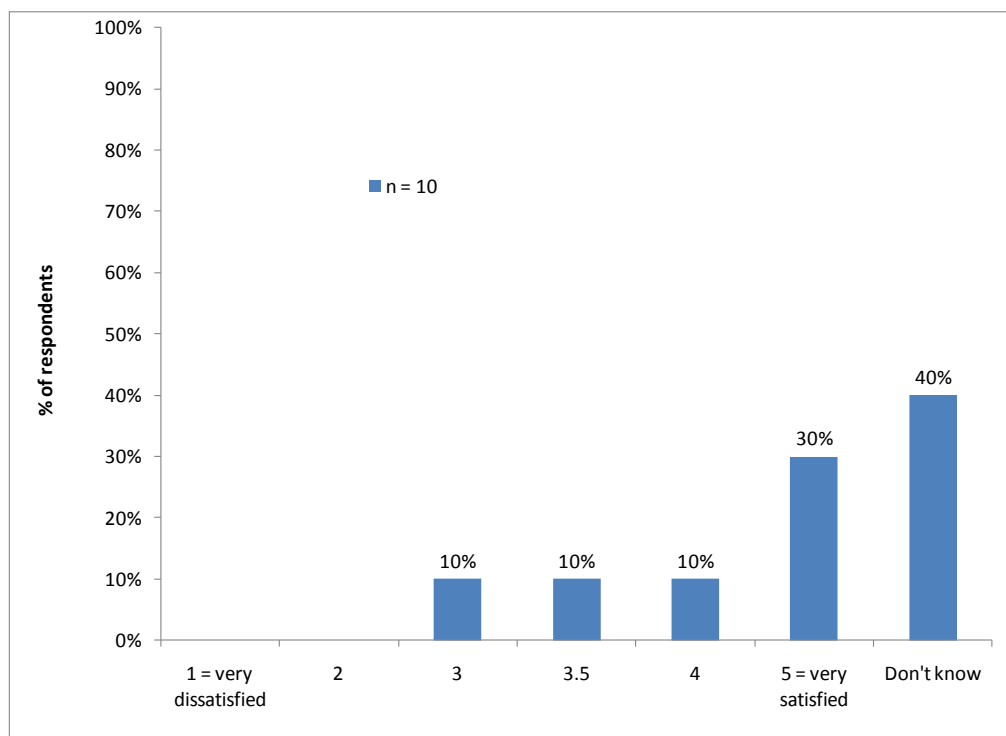
- Satisfaction rating = 3
 - "They're getting goal, so that means they're doing the job, but I haven't had enough contact with them."
 - "The initial meeting with them was very good. This year was better than last year."
- Satisfaction rating = 4
 - "Well, they've done a very good job in working with me. One of the detractors that I went from a five down to a four [in satisfaction rating] is that ... I had wanted them to communicate with me any and all involvement they had with our customers, and that wasn't happening to a point. But we have that resolved."
 - "That [C&I] has been a successful program. [One of the utility staffers] formed a real solid team with the folks from Franklin Energy, so I think from our experience with them has been very good. And I think that's because of the team they formed to get into, people's shops and then be able to develop a financial model on the spot, show them what their payback will be. So I don't know if it's so much Franklin as it is Franklin and [one of the utility staffers], but it's worked well for us."
 - "They've been very responsive to any leads and referrals that I have made to them. So when our commercial accounts phone and they are interested in learning more or having someone do a walk-through and talk to them about what measures they have installed now and what they could change out perhaps and take advantage of what incentives are out there, they've been very good about calling them back and following up with them and doing site visits quite regularly. So my overall satisfaction has been pretty good with them."

- Satisfaction rating = 4.5: “From what I understand from our account rep, the interaction with them is always very good, the communication is always very good. They work well with the members. I think our members just give them direct feedback that’s very positive.” But the respondent also noted that the C&I program had not reached goals at the time of the interview (late October 2011).
- Satisfaction rating = 5:
 - “I’ve heard nothing but good things from customers who happen to mention that they’ve spoke to them. So I think they picked the right subcontractor with Franklin Energy.”
 - “Well, I’ve talked to some of our C&I members and they were happy with them, so if they’re happy we’re happy.”
 - “Put five plus, plus ... The employee they have working for them ... I cannot sing that man’s praises enough, top of the line ...Excellent.”

A.5.4 Satisfaction with JACO Environmental

We also asked the MECA utility representatives to rate their satisfaction with JACO Environmental, which implemented the Residential Appliance Recycling (RAR) program. Only six of the ten representatives who had some familiarity with the RAR program believed that they had enough interaction with JACO to be able to fairly rate their satisfaction with them. Table A-8 shows that half of those who were willing to provide a satisfaction rating for JACO said that they were “very satisfied.” The average satisfaction rating was 3.7.

**Table A-8:
MECA Utility Satisfaction with JACO**



We asked the respondents to explain their ratings.

- Satisfaction rating = 3: "I would do three [satisfaction rating] again, just because I have no interaction with them."
- Satisfaction rating = 3.5: "UTILITY RESPONDENT 1: I'd give them a four [satisfaction rating]. There tends to be the occasional problem here and there of, you pointed out one in your write-up here. But that's been onesie-twosie kind of problems that I've heard of.
UTILITY RESPONDENT 2: I'd go a little less on that one and just say three just because I don't see much from them,. I don't know if they've had really much momentum in our area. So I guess I'd go a little less, because I don't see a lot from appliance recycling. See a little bit from them but not a lot."
- Satisfaction rating = 4: "They were very responsive."

- Satisfaction rating = 5
 - “I think when they started up, they had some issues, end of last year, and we may have commented about that. And I think they’ve corrected those.”
 - “Minimal to no phone calls [from members] so they, we’ll give them a five as well.”

A couple of the MECA utility representatives who declined to provide a satisfaction rating for JACO also had comments about their performance:

- “I had interactions with [JACO] last year [2010], and there were some unfortunate incidents. But they did do good remediation with the problems presented. And just as strongly as I tell someone something negative when it’s deserved, I feel strongly about saying something positive. And it’s just too bad that I didn’t have the opportunity to have interaction with JACO this year [2011], simply because the recycling was at goal as of January 1st [2011]. So I really had no opportunity to interact with them to see had they really stepped up.”
- “I don’t think, I could say much about JACO. We didn’t have the issue like we did, at least I’m not aware of complaints like we had last year, where they weren’t showing up for appointments, and that kind of thing. We had a couple people who I think were a little overreacting, because they didn’t get their old refrigerator picked up. But, I mean, in the cosmic scheme of things the world didn’t fall apart. We could’ve rescheduled. But what happened is it got late in the year, and last year, I think they left a few people without getting their appointments taken care of before the end of the year. So all they did, and I think it was a good solution, is we suggested they bump the people up to the first of the following April. And I’m assuming everybody got taken care of, because I didn’t hear any more after we contacted the people who were left out and told them that they were the first on the list on the following year.”

A.5.5 Satisfaction with the Community Action Agencies

Finally we asked the MECA utility representatives to provide satisfaction ratings for the Community Action Agencies (CAAs) who implement the Low Income program. Only three of the representatives were willing to provide ratings. Those who declined to provide ratings generally said that they had not enough interaction with the CAAs to fairly rating them.

The three utility representatives who were willing to rate their satisfaction with the CAAs gave ratings of two, three, and five respectively for an average rating of 3.3. The two respondents

who gave the lower satisfaction ratings both pointed to lack of interaction from the CAAs. “We just don’t have their attention,” she said. “For whatever reason, we don’t have their attention.”

One of the respondents who declined to provide a satisfaction rating explained why they have not had interaction with the CAAs:

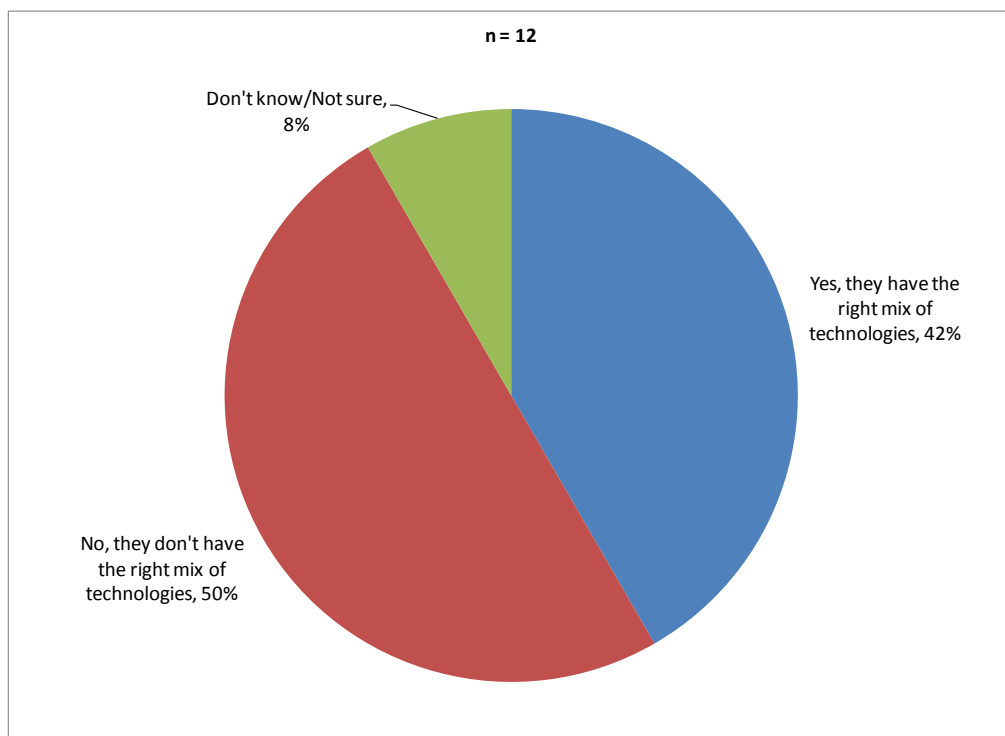
Never heard from any of them [the CAAs], although we didn’t hear from any of them in the first years of it either. ... We have the commonality of shared client, they’re helping the low-income person save energy, which is a good thing, but they don’t ever seek out [member] verification or anything like that. And I don’t think they really market that [Low Income program], because they, basically run out of money before the end of the year anyway, because they have such a long waiting list. I can’t really rate them.

A.6 Satisfaction with Program Design

A.6.1 Whether the Program is Offering the Right Mix of EE Technologies

We asked the MECA utility representatives whether they thought that the EO program was currently offering the right mix of energy-efficient technologies. Figure A-2 shows that half of the respondents did not think the program was offering the right mix.

**Figure A-2:
Whether MECA Utilities Thought
The EO Program was Offering the Right Mix of EE Technologies**



The utility representative who thought the program was not offering the right mix of energy efficient technologies either thought the EO program was missing key measures in its offerings or that the program incentives were too low to encourage enough diversity in participating measures. The following are some of their comments:

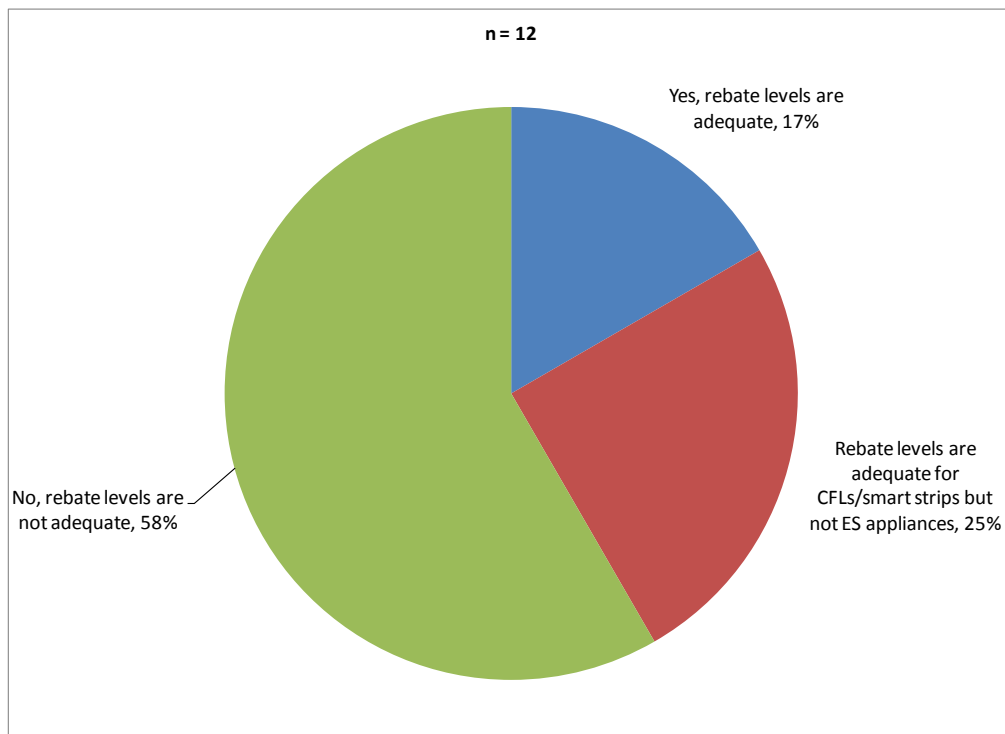
- “Definitely [the mix is right] for the smaller products ... like the light bulbs and the power strips, that's why they sold so well at first, or they are now. But for some of the larger things like a clothes washer or rebate on a fridge, I don't think customers see that as like a huge benefit when they get \$50 off, when they're buying a brand new clothes washer or dryer or whatever it might be. So I think, it could be a little better on some of the larger items the customers get rebates for.”

- “It’s because of the way the laws established the EO program through the [Michigan] Public Service Commission. They’re not allowing [fuel switching].”
- “No. I think they could expand. ... There’s other opportunities for energy efficiencies, in regard to heat pumps. We were sometimes limited, with our offerings. I would have liked to see incentives for more efficient water heaters, rebates for those in particular. I would have liked to see something to address our farming and forest products industry in the commercial and industrial segment of the program.”
- “But, absolutely, we’ve got to find a way to offer good enough rebates to some people to move to heat pump technology. It is tried and true and extremely efficient. “
- “No, I do not [think the energy-efficient mix is right]. Take apart the structure. Allow for more creative approaches for utilities to reach their goals.”
- “I would like to see something be heavily done on the LED lighting.”

A.6.2 Whether Rebate Levels are Adequate

We asked the MECA utility representatives whether they thought the EO program’s current rebate levels were adequate to encourage adoption of the energy-efficient technologies. Figure A-3 shows that only a small minority thought that the EO program rebates were adequate. A quarter of the respondents thought the rebates were adequate for the CFLs and the smart strips, but not for the Energy Star appliances. The remainder believed that the rebate levels in general were inadequate to encourage adoption of the energy-efficient technologies.

**Figure A-3:
Whether the MECA Utilities
Thought the EO Rebate Levels were Adequate**



The following are some of the explanations they gave for their responses:

- *Rebate levels are not adequate:*
 - “The amount [of the water heater rebate], I don’t think is enough to encourage people to actually make a switch. I think we’re getting people who are switching because of their water heater died. ... Fifty dollars isn’t going to incent them to change out their water heater. I think it’s the same for like a dishwasher or, you know, other large appliances like that in your home. You’re going to do it because you have to change out the appliance. You’re not going to change out your dishwasher for a \$20 rebate.”
 - “I don’t know if any of [the rebates] are enough to move the market, if that’s what you’re asking me. ...I mean, do people like them, and will they accept it? Sure. Sure. But I think

if, even on the heat pump side, if we came up with \$200 a ton for a geothermal heat pump when someone is going to spend \$20,000 to put it in, it's not moving them. It's, maybe takes the edge off of the pain, but they're probably going to do it anyway. That's the honest answer."

- *Rebate levels are adequate for CFLs/smart strips but not Energy Star appliances:*
 - "Definitely for the smaller products. I think like the light bulbs and the power strips, that's why they sold so well at first, or they are now. But for some of the larger things like a clothes washer or rebate on a frig, I don't think customers see that as like a huge benefit when they get \$50 off when they're buying a brand new clothes washer or dryer or whatever it might be. So I think, yeah, it could be a little better on some of the larger items the customers get rebates for."
 - "In some cases, yes, in some cases, no. I mean, let's look at the ENERGY STAR things. I mean, I think \$1 for each bulb, is what we give away on CFLs up to 12. That's pretty much giving away the bulb, so they're doing it. But is \$50 enough to entice somebody to buy a clothes washer? No. Is \$25 for a clothes dryer or a dishwasher enough? No. Now if that number was \$100 or \$150 or \$100, now you're looking at because you're paying for 100% of the cost of a CFL, but you're only probably paying maybe one-fifth of the cost of a clothes washer or less? So it's not enough to incentivize."

A.7 MECA Utility Satisfaction with Program Processes

A.7.1 Satisfaction with Checking Participant Eligibility for EO

When we interviewed the MECA utility representatives in late 2010 we asked them how they determined whether their customers are eligible for the EO programs. Most of them had sent CLEAResult a database of their eligible customers. When customers sought rebates or free CFLs from the programs, CLEAResult would check the information provided by the customer (e.g., name, address, account number) against these databases. In the cases where utilities implemented their own Residential HVAC programs, they would do this customer eligibility verification themselves. Some utilities also distributed free CFLs on their own and therefore needed to check to make sure customers were not exceeding their quota of free bulbs. For the Residential Appliance Recycling Program JACO's IT system could access CLEAResult's customer database to verify customers.



Appendices

When we interviewed the MECA utility representatives again in late 2011 we found that most of them were giving CLEAResult direct access to their tracking databases via a web portal, but a few were sending customer databases to CLEAResult on a periodic basis. Nearly all of them said that they or their customer service representatives still periodically had to verify customer names which do not appear to be in the system. These requests from CLEAResult usually came via email.

One MECA utility representative explained that the cooperative utilities were initially reluctant to give CLEAResult access to their database via the portals:

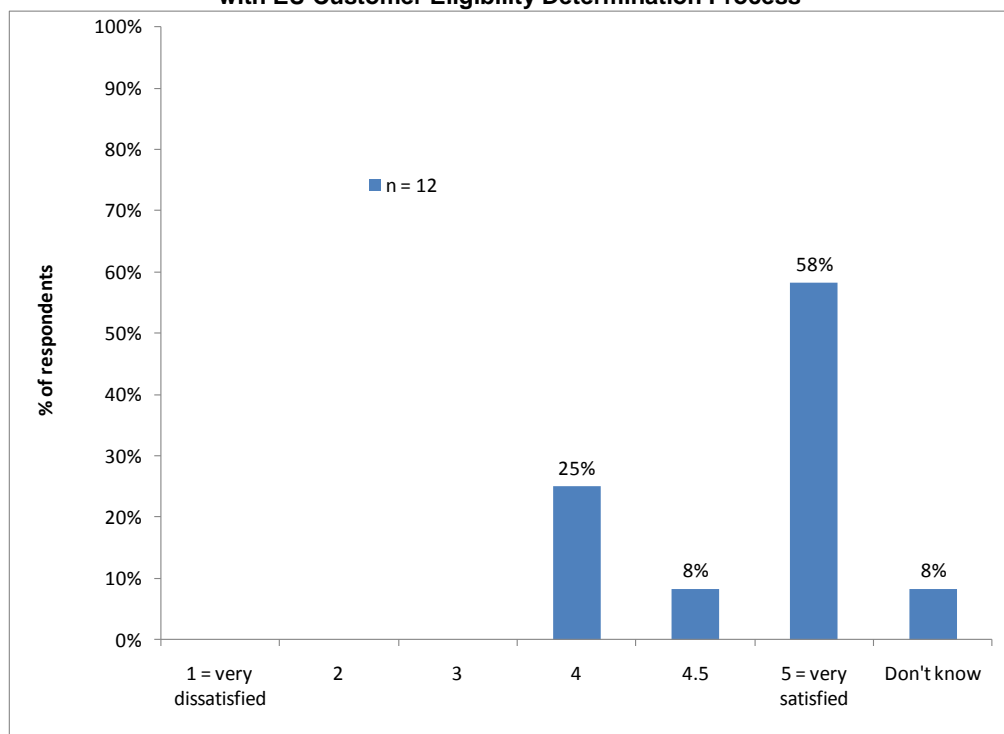
I think we were actually the leader in the [Coop utility] collaborative in working with CLEAResult and giving them the portal that they needed. There was a lot of pushback when that first started, and I'm: 'Well, give them access. They just want access for verification, it is the only reason they want it.' So we closely communicated with a CLEAResult's contractor on that front and gave them the ability to access our records for verification, so it's gone very smoothly, I think.

We asked the MECA utility representatives how satisfied they had been with the EO process for checking customer eligibility. We asked them to use a five-point satisfaction scale where five indicated "very satisfied" and one indicated "very dissatisfied." Table A-9:

MECA Utility Satisfaction

with EU Customer Eligibility Determination Process shows the distribution of responses. The average satisfaction rating was 4.3 and the modal response was 5. Using the criteria that a four or five rating equates to their being satisfied, all twelve of the MECA utilities were satisfied with the EO process for checking customer eligibility.

**Table A-9:
MECA Utility Satisfaction
with EU Customer Eligibility Determination Process**



We asked the respondents to explain their ratings. The following are some of their responses:

- Satisfaction rating = 4
 - “It seems like it's been going pretty smooth. ... the questions that we get from CLEAResult, there's not a lot so it seems like it must be going fairly well. probably the dissatisfaction that I've had was maybe more last year in the setup of [the customer verification portal]”
 - “Since our last evaluation. I think things have improved.”
 - “I think that [process] is fine.”
- Satisfaction rating = 5

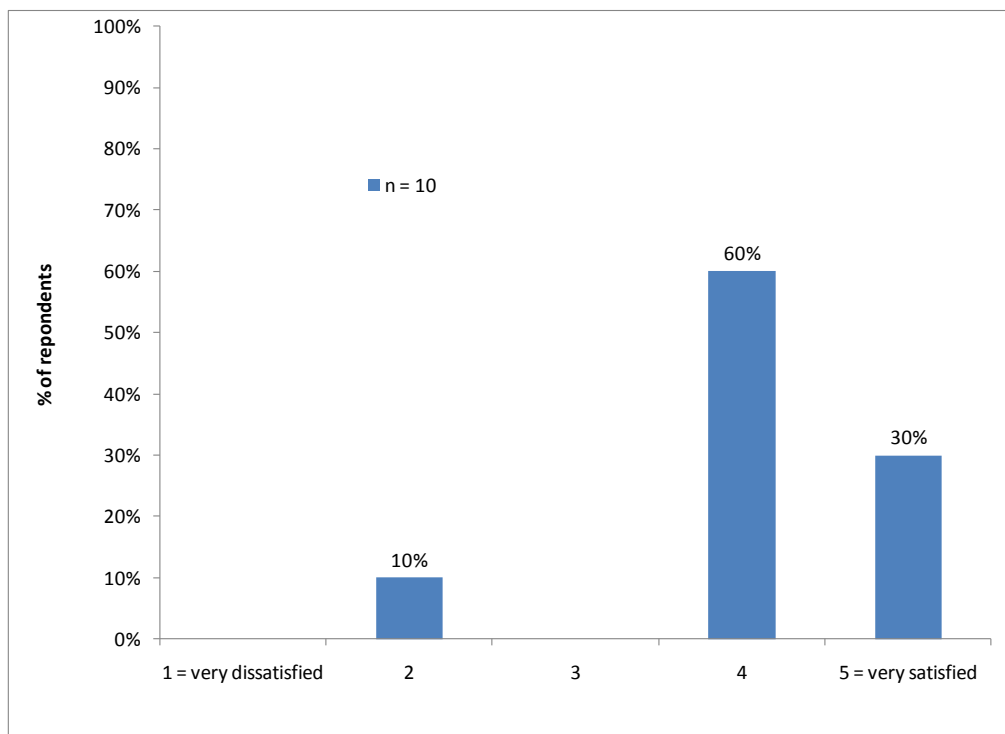
- “The first year this [EO program] was rolled out I was getting list upon list of customer verifications ... and I haven't got any of those. And I haven't got any bad phone calls either.”
- “They seem to be thorough. ... Our service territory is actually the largest geographical footprint of any municipal in the State of Michigan. We've stretched into seven outlying townships, so we have a very large footprint. Needless to say, our customer database has a lot of different addresses and zip codes. So the first year especially, I was getting a lot of e-mail contacts from CLEAResult saying: ‘please verify that this is your customer.’ And it would be not my customer, but it's difficult, I recognize now, for CLEAResult, especially when you're dealing with multiple utilities, etc. But they seem to have somehow kind of gotten the hang of it and figured it out. So now when I'm asked for customer verification, the majority of the time, it is in fact our customer. They're just asking me for verification. So they seem to have, somehow, I don't know how ... done a better a job of it. Maybe they had a UP 101 webinar or something ... either way, they've done a great job.”
- “I get an e-mail list of all verifications. It's quick, easy, bam, here they are, and I don't get too many considering the numbers that are processed probably.”
- “[They put] ‘that program in place where they could go online ... and they'd enter [the member's] account number and stuff. ... it was a program that was implemented last year. It took a long time to get on board, but I think it was working this year, because ... I didn't get as many requests for verification this year at all. ... was that because people weren't taking advantage of the programs? I hope not, because we met the Appliance and Energy Star [program] goals. I'm assuming they were able to verify much quicker and much easier.”
- “I have noticed with the residential [customers] I felt that they really checked those. When they're reading the C&I [customer requests], they made sure they had a bill with an account number and stuff, so I believe they did a thorough job as far as I'm concerned.”

A.7.2 Satisfaction with the Processing of Rebate Applications

We asked the MECA utility representatives how satisfied they have been with the EO program's processing of rebate applications for their customers. Table A-10 shows that 90 percent of the respondents were satisfied with this processing of rebate applications. In general they based

these ratings on the lack of member/customer complaints. The one dissatisfied utility representative was unhappy with the lack of rebate applications (e.g., low program participation) rather than with the processing of these applications per se.

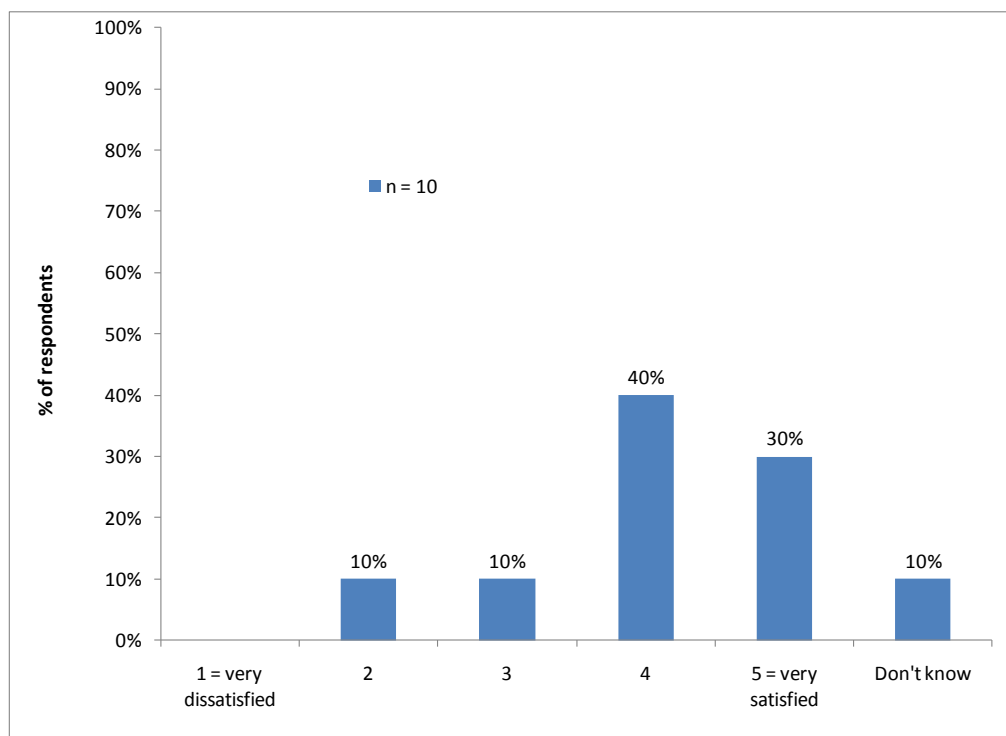
**Table A-10:
MECA Utility Satisfaction
with Rebate Application Processing**



A.7.3 Satisfaction with the rebate payment process

We asked the MECA utility representatives how satisfied they had been with the EO program's payment of financial incentives. Table A-11 shows that the large majority of the utility representatives were satisfied with the payment process. Most of these respondents were satisfied simply because they did not receive many complaints from their customers/members about late payment.

**Table A-11:
MECA Utility Satisfaction with Rebate Payments**



The MECA utility respondents gave the following explanations for their ratings:

- Satisfaction rating = 2: "I'd give this a 2. I am not aware of any issues this year, but there were a lot of issues last year. ... Oh, we'd hear from customers that they got a rebate check, and they didn't know what it was for. They hadn't done anything with the program. Them getting checks was a mistake."
- Satisfaction rating = 3 "UTILITY RESPONDENT 1: I would give that a three, and it's kind of program specific. C&I has been slow. I understand that our Franklin office who services our applications is slower than other Franklin offices. And I don't know if that's because of the staffing itself or if there's organizational problems within that office. In terms of Franklin's field help and assistance to us, it's been terrific. But once it's out of my field guys' hands, trying to get the approval through on the application has been painful. And then along the

same lines, getting the rebate check to the customer has been slow. UTILITY RESPONDENT 2: And that has gotten better of late, but I think earlier in the year there were some issues . . . and some of the other programs where some rebates were kind of lost in that process . . . and it took a lengthy amount of time to get that check into the members' hands. UTILITY RESPONDENT 1: Yeah, some of the ENERGY STAR rebates, the ones that we weren't handling at point of sale, have been slow as well. That's the three."

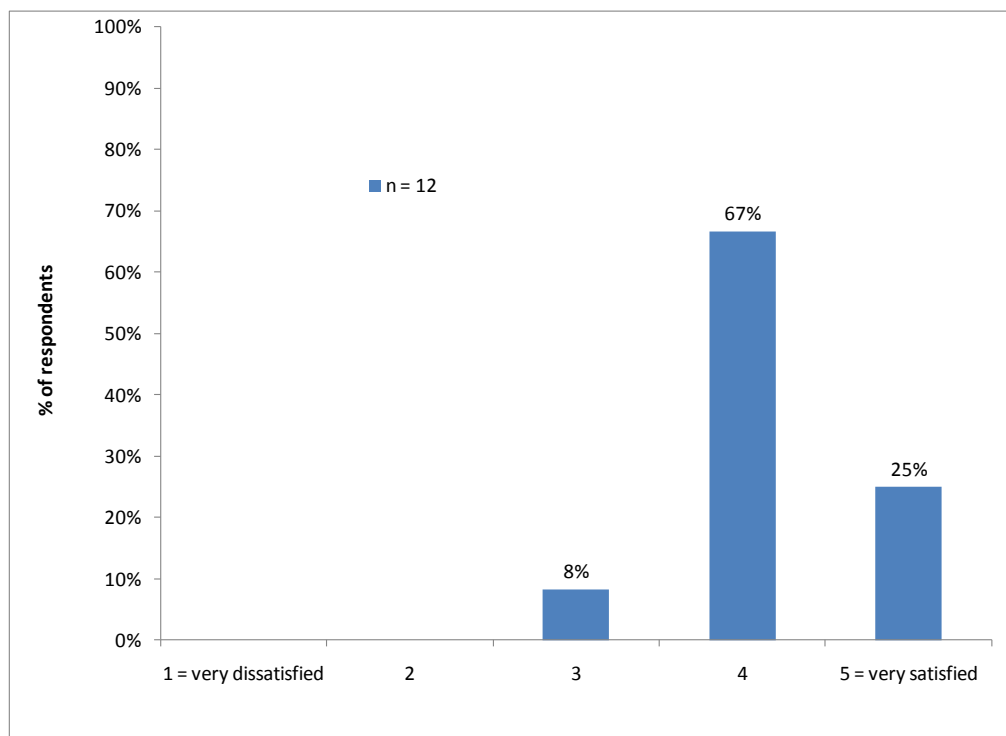
- Satisfaction rating = 4:
 - "I'm going to say four, just because our residential outweighs our industrial so much [they had complained earlier in the interview about late payment for one of their C&I customers]."
 - "I'm going to give that a four, because, again, if we would have any kind of incentive payment issues and that, we would hear about them, and we haven't."
- Satisfaction rating = 5:
 - "Again a five and the reason I'm giving them that is I did not receive any negative commentary or inquiries from our customers as to: 'Where is my payment?'"
 - "Well, I haven't had complaints from anybody, so I have to believe that that is going pretty smooth."
 - "Well, I must say I don't know entirely how well that was working out, but it must've been good, because I didn't hear complaints. And if I don't hear complaints, then I've got to assume that they did a good job. That's my reasoning on that."

A.8 Satisfaction with Individual Programs

A.8.1 The Energy Star Products program

We asked the MECA utility representatives about their satisfaction with the EO Energy Star Products program. Table A-12 shows that the overwhelming majority (92%) of the utility representatives was satisfied (4 or 5 satisfaction scale) with the program. The average satisfaction rating was 4.2.

**Table A-12:
MECA Utility Satisfaction with
the Energy Star Products Program**



When asked to explain their satisfaction ratings, the utility respondents made the following comments:

- Satisfaction rating = 3: “I would give it a three. Mostly because of the cost. Most of these programs – we don’t get to participate. We weren’t getting the participation that we wanted for the program from our customers. We were six months in and people weren’t using the web site. People did not know about the program. So I said to them [CLEAResult] Send me the bulbs. “I” got them out to customers.”
- Satisfaction rating = 4:
 - “Because they’ve done pretty well, but it feels like they could focus a little bit more on a couple different parts of the ENERGY STAR products. ... some are doing well, and then

there's a couple that don't do so good. ... Like, I mean the CFLs, we sold quite a bit of them at first, and now they're not doing as good, because I don't think as many people want CFLs anymore, now that they have them. The power strips that they're selling seem to be doing much better now. And some of the other products, I know they have LED nightlights, but I don't know how many people are going to want those. They have these electric hot water heater kits, which I don't think they've been selling too many of those either."

- "I just think sometimes they expect more out of us ... as far as our responsibility with that program. So it's been a little frustrating ... For example, and we're doing this because we feel that it's good for our members, we're selling products out of a couple of our offices. But, we're also paying them to run this program for us, and, in turn, we're doing part of the work. And it's a little hard to swallow."
- UTILITY RESPONDENT 1: "Well, I don't know if I'm disappointed [with the delivery of the program via retailers]. I just don't know it's a very effective means in which to deliver the program. UTILITY RESPONDENT 2: Well, I think we've got a lot of expectations and hopes, and [retail delivery] just never gained traction it never went anywhere, that sort of program as with that particular aspect of it [retail delivery]. It kind of fizzled. UTILITY RESPONDENT 1: And, again, [the program] works so well in the co-op culture, because we do like those touches with our members, you know, that one-on-one, that face-to-face with press the flesh at the lobby, I mean, well, that just fits us perfect. And obviously [the ESP program] helped us hit goal this year in residential, so I think it's a good program."
- "Because those are the products, I think, when you look at that category that are ... going to save some money. It makes sense. The clothes washers, if you have an electric water heater, obviously, the less water you use, the more it's going to save you. Same with a dishwasher, clothes dryer. If you can have the moisture sensor in it, you could shut that down once it knows the clothes are dry, it shuts it down. And obviously, that's going to save you money. So I think it makes sense in a lot of those areas that they're, and then, obviously, the CFLs are huge. I mean, there's a big, big savings on those. So they're all appropriate and seem to be working."
- "I would say the best product, the things that we were most excited about, were the smart power strips, and so were our members, and the EO value kits where we could bundle a number of items for a great price. And I think the members saw the value in

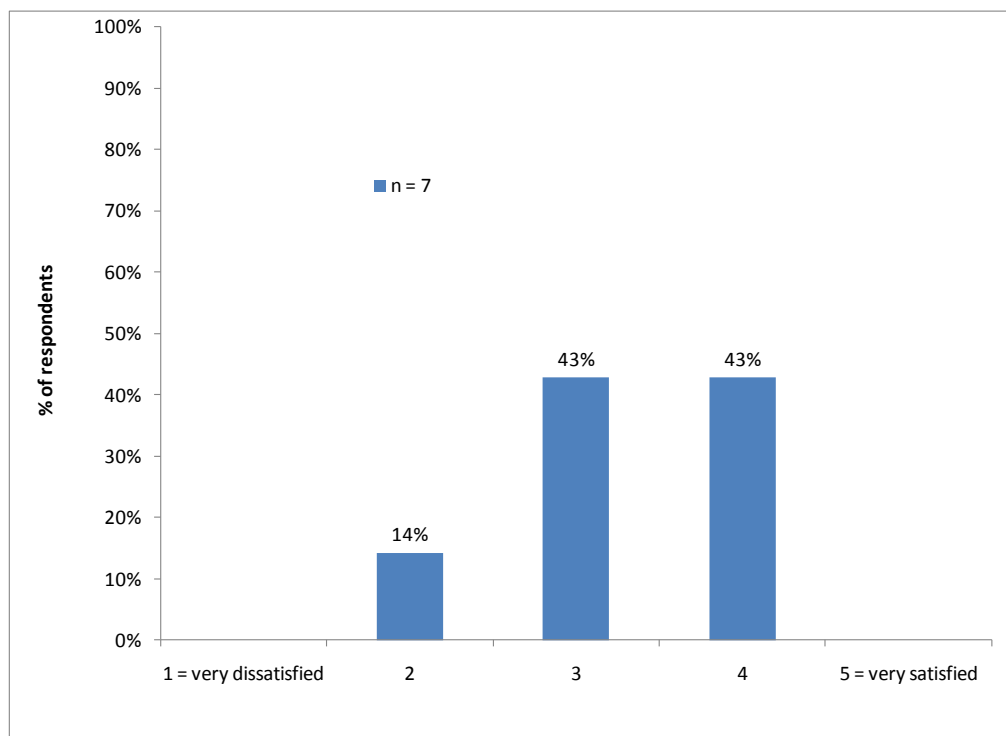
that and it was an easy purchase for them. And it was items that they could use immediately. So I think on some of the other items, like the appliance rebates and things like that, they're on the low end. So I'm not quite sure how many members actually took advantage of that."

- "Well, I haven't heard complaints, so I have to... believe it's running smooth.
- "I would say a four. And the only reason I say that, is that it took them awhile to come up with this whole thing, half the year was over with by the time, I mean, they had their CFL rebates out there, and it took them until June or whatever or so to come up with the storefront idea. And I realize things take time, but we lost half a year. We made goal, but it would've been nice to have had those items sooner."
- "Same reason, just lack of negative feedback."
- Satisfaction rating = 5: "I'm very satisfied with it. The only thing that I'm finding at this point is I don't know how much more demand there's going to be for it in the future, because after a while you start inundating the market, because we are such a small market. That's probably my only concern down the road."

A.8.2 The Residential HVAC Program

We asked the MECA utility representatives about their satisfaction with the EO Residential HVAC program. Only seven of the representatives were willing to provide satisfaction ratings for this program. Table A-13 shows that over half (57%) of the respondents gave a satisfaction rating of less than four. The average satisfaction rating was 3.3.

**Table A-13:
MECA Utility Satisfaction with
the Residential HVAC Program**



We asked them to comment on their satisfaction ratings. Some of their comments included:

- Satisfaction rating = 2: “People have not participated. They do not know about the program.”
- Satisfaction rating = 3:
 - “It’s been a little more difficult for both the applicants and the contractors to fully understand it.”
 - “I’m going to say three. I’m not sure how much they did for us on that outside of what we did initially with the trade ally meeting.”

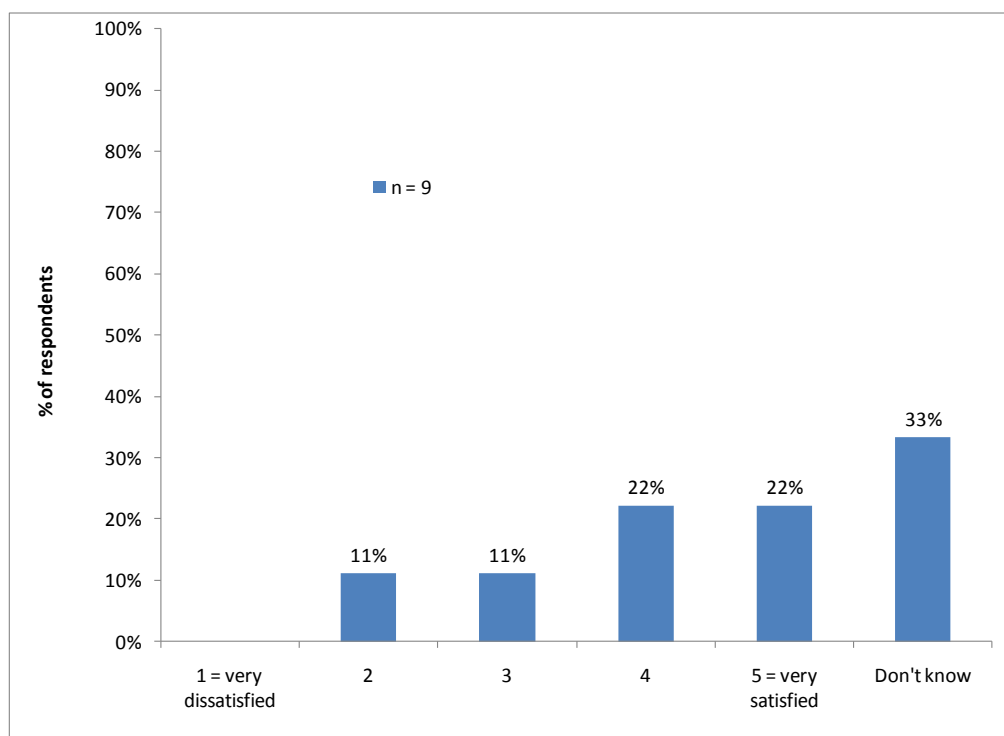
- “Because I think there’s a lot more we can be doing on that. We have a lot of members that put in geothermal heating. And now, there’s talk of, next year, that the commission is going to allow this, but it’s a thing of fuel switching. We have very little access to natural gas in our members’ areas. So propane and fuel oil, those are the big two fuels that people use. And with the cost of those two commodities right now it’s a killer. Somebody that’s spending \$4,000 a year on propane to heat their home could go \$500 on a geothermal.”
- So we think, with all this energy savings and stuff, that we should be able to fuel switch. So, in other words, if somebody turns in their old fuel oil burner and puts in a geothermal heater, that should be able to count to the HVAC program as a savings. Now they’re talking that this coming year that that’s going to be, we’re going to be able to do that. Now if they do, I think I’ll be a lot more satisfied with that program.
- Satisfaction rating = 4:
 - “I don’t think what we’re offering is a real hot ticket item for people. They’re not super excited about a \$50 water heater rebate. I think we’re getting rebates for those or applications because we sell water heaters and give out the rebate. But I think the way the program is designed, the rebates aren’t super aggressive.”
 - “I think it’s gone pretty well. I would have to give it a four. ... This is more of a MPSC ruling issue, but as far as the no fuel switching goes, like we can’t offer like geothermal upgrades, stuff like that. If they go for propane the geothermal obviously is more efficient but we can’t offer any rebates.”
 - “I’d give it a four, not a five, just simply because I wish we could get even closer ... with the trade allies. I think that’ll come eventually.”

A.8.3 The Audits and Weatherization Program

We asked the MECA utility representatives about their satisfaction with the EO Audit and Weatherization program. Table A-14 shows that the utility representatives gave a wide variety of satisfaction ratings for this program. The average satisfaction rating was 3.8. It should be noted that most of these MECA utility interviews were completed in late October 2011 and the first week of November. CLEAResult introduced a new streamlined version of the Online Audit tool at the end of the first week of November 2011. So most of these utility representatives are

reporting on the older version of the tool, although at least one interviewee commented on the new version of the tool.

Table A-14:
MECA Utility Satisfaction
with Audit & Weatherization Program



When asked to explain their satisfaction ratings, the respondents provided the following comments:

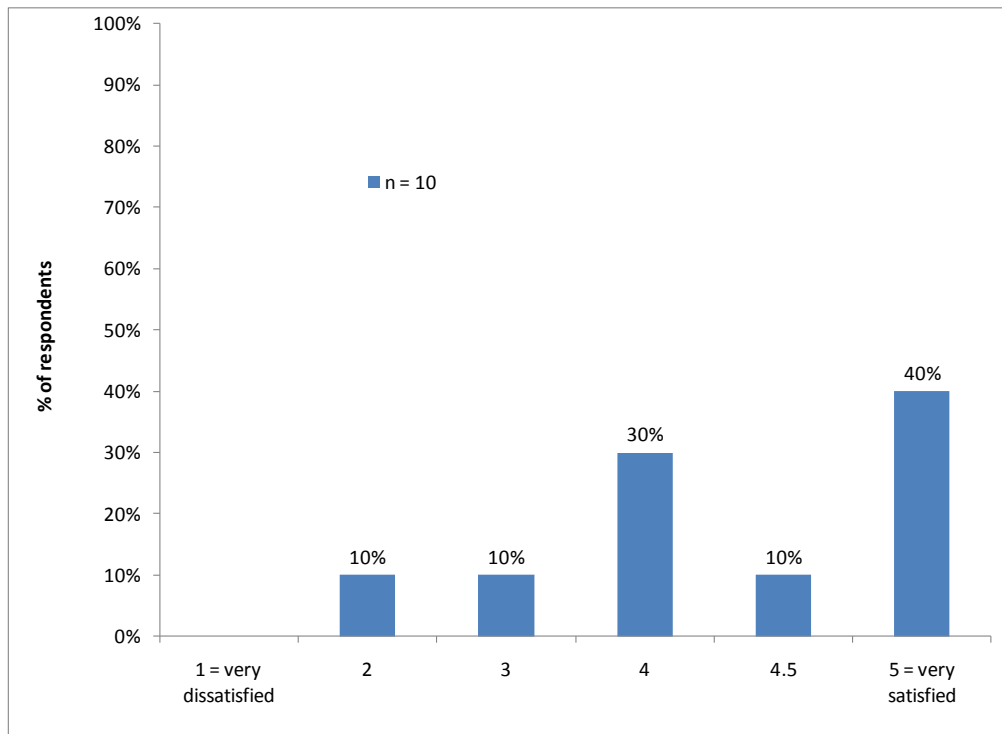
- Satisfaction rating =2: “[It was] time consuming for members . . . it was a turn off. . . as far as the online audit, there wasn’t a lot of push on that either. I think the four co-ops who did the marketing pushed the online audit earlier in the year, and then I don’t think there was much else. . . I think that the Low Income program and the online audit are . . . utilized by so few of our members. I think there’s a place for the online audit, but I think like, most people, they want a much more, like a hands on type thing, and those cost money.”

- Satisfaction rating = 3: "I don't think we've ever been like truly happy with the audit. We feel it's way too lengthy and detailed for most members. I think they get enough people responding to it because of the freebies offered, but, well, I feel, for what we're paying, we could have more people utilizing it, maybe for a smaller box of freebies that they get and just get more usefulness out of it. It's too long for the average person to go through. But it seems to be working okay."
- Satisfaction rating =4:
 - "Because it's been effective. Going forward, I have maybe my concerns about how effective it's going to be able to be maintained. Hopefully, it does, but I just wonder. Because the people that have taken advantage of it now are the people that probably tend to or want to. They're very aggressive. They're really into saving money and such. I think, going forward, it's going to be harder and harder to find those people in that particular program. So we'll see. But, for now, I'm satisfied with it. "
 - "I have heard a couple people have done the online audit, so it does seem like people are responding to some of those things."
- Satisfaction = 5
 - "The online audit has been [going] really well, I would give that a five. ... Out of the amount of members we have participating, I think we've only had one or two kits not get delivered."
 - UTILITY RESPONDENT 1: "Well, that's been a five. ... That's been nearly flawless. Occasionally, I will get a call from someone who has not received an energy savings kit. Those have been very few and far between considering we've processed, going off memory, I think we've done 260 to 300 and some audits this year, so very, very low number of dissatisfaction there. UTILITY RESPONDENT 2: I know [utility staffer] has spent a lot of time with members and educated them in terms on how to access [the online tool] and use it. I do process a lot of invoices in that area, and I do see a lot of stuff come through to the online audit, which means many people are utilizing the program. UTILITY RESPONDENT 1: Frankly, I have a concern about that. That's one program concern I have with the transition to a new contractor. ... The existing product is just so easy to work with, and I fear that with something that good, if it ain't broke, don't fix it."

A.8.4 The Residential Appliance Recycling Program

The interviewers asked the MECA utility representatives about their level of satisfaction with the Residential Appliance Recycling (RAR) program. Table A-15 shows that 80 percent of the respondents were satisfied (ratings of 4 to 5) with the program. The average satisfaction rating was 4.2.

Table A-15:
MECA Utility Satisfaction with
the Residential Appliance Recycling Program



The following are the representatives' explanations of their ratings:

- Satisfaction rating = 2: "I'd say a two probably. ... I suppose it might not be their fault, but it seems like many customers aren't totally aware that [the program] is available to them. We've had very low participation numbers, when I've seen other co-ops and other utilities have much, much higher participation rates. For us it's just really low for some reason."

-
- Satisfaction rating = 3: “I am going to give that a three for now, just because, originally, I think it was . . . miseducated. I don't know what the right word I'm looking for is. But I think it's been getting better, so, hopefully, going forward, that will be a little more understood.”
 - Satisfaction rating = 4:
 - “I think they're doing fine. The only trouble is we're in an area that those people aren't, I don't know that they're not willing, but we're far enough away. They aren't coming here all the time like they might be to Detroit or Traverse City or something like that. But there's probably not a lot of calls, so. So I have to believe that they're doing what they can, so I'll say four.”
 - “Go with a four on that one . . . just a lack of negative feedback.”
 - Satisfaction rating = 5:
 - “I don't think we've had any complaints. It's a pretty simple one for people to utilize.”
 - “I'd give that a five as well, minimal calls. I think we've had two calls over the past two years about not the scheduling but as far as some of the JACO's employees. But it's, I mean, like I say it's so minimal to where it could just be that person was very sensitive.”
 - “Those that have participated seem to have no complaints.”

A.9 Aspects of the EO Program That Are Going Well

We asked the MECA utility representatives what aspects of the EO program were going well. Things they mentioned included:

- *Improved marketing:*
 - “The marketing is getting better.”
 - “They seem to do a good deal of marketing.”
 - “Country Lines [magazine] seemed to be going well.”
 - “I think there is kind of heightened awareness of Energy Optimization through this effort, so, and the importance of energy efficiency. We've got a long way to go, but I do see

forward momentum. I don't see us slipping back. And I think brand recognition is getting better, definitely."

- *The EO program in general:*
 - "I guess all of them [are going well]. I don't really have a lot of negatives."
 - "Well, as far as I know, they all are. I haven't had complaints."
 - "I think it's, for the most part, going well everywhere. I mean, people seem to like it."
- *The residential programs, especially the Energy Star Products program:*
 - "Just like I said, back to the ENERGY STAR and residential programs, those, they've been a lot better [than the C&I program], and I think those are going a lot better."
 - Delivery as far as they have been very good about getting the products to us for our storefront. "
- *Good reporting:* "They are good at reporting the results."
- *The C&I program:* "I think [the EO program] is sparking some activity, in that, I think there's a lot of work being done that probably wouldn't be being done if it weren't for these incentives, particularly in the commercial, industrial [sectors]... where they're changing bulbs, and ballasts, and that. I think, in the last three years, that [program] has kept a lot of people busy that probably would be looking for work right now."
- *The instant rebates:* "They can order some of those items online, and get a rebate and stuff too. So those seem to be going good."

A.10 Areas for Program Improvement

We asked the MECA utility representatives about areas of EU program administration and delivery where there was room for improvement. They cited a number of areas including:

- *Improved communications:*
 - "I think if they had more regular, if they made an effort, to ... get in touch with us every month ... or every other week, to say, what's going on? What do you need? What

questions do you have? ... But they're not initiating anything there... when you have those conversations and you talk about stuff, ideas, thoughts come out of those."

- I do still think they do need to work on their communication."
- "Just overall communication and planning."
- *More customer education and awareness building:*
 - "Certain parts that need improvement would be perhaps more education or letting customers know."
 - "CLEAResult's philosophy is to focus more money on the incentive side to try to move the market with dollars versus communication, marketing, education ... The advertising, the marketing is all about, the amount of the rebate, and there is some education in terms of saving watts by screwing in a CFL versus an incandescent, but it's mostly done through higher incentives."
- *Allowing fuel switching:* (2 respondents)
- *More vendor training and outreach:* (2 respondents)
- *C&I program not meeting its goals:* "As far as year to date, the C&I [program] reaching the goals. ... [It's been] a struggle for them to find projects."
- *Reducing administrative costs:* "I guess the one thing that sticks in my mind is it's hard to chew on the fact that the dollars that go into administration versus the dollars that go back to the customers is, I'd like to see that ratio come down."
- *Give utilities real-time access to the program tracking information:* "I would like to be able to check on ... rebate tracking. If somebody calls in and says: 'Hey, I bought this washer, my rebate application was put in on this date.' I'd like to be able to check it out and see where... their application is."
- *Making customer/member eligibility information clearer in marketing materials:* "When marketing is done, especially the print marketing, for instance, for refrigerator recycling, it's confusing for the customers to know which utility that covers. ... For instance, there's one running right now and it's for refrigerator recycling ... and there's in very fine print on the bottom as to which utilities are involved. But invariably, we get calls from our customers

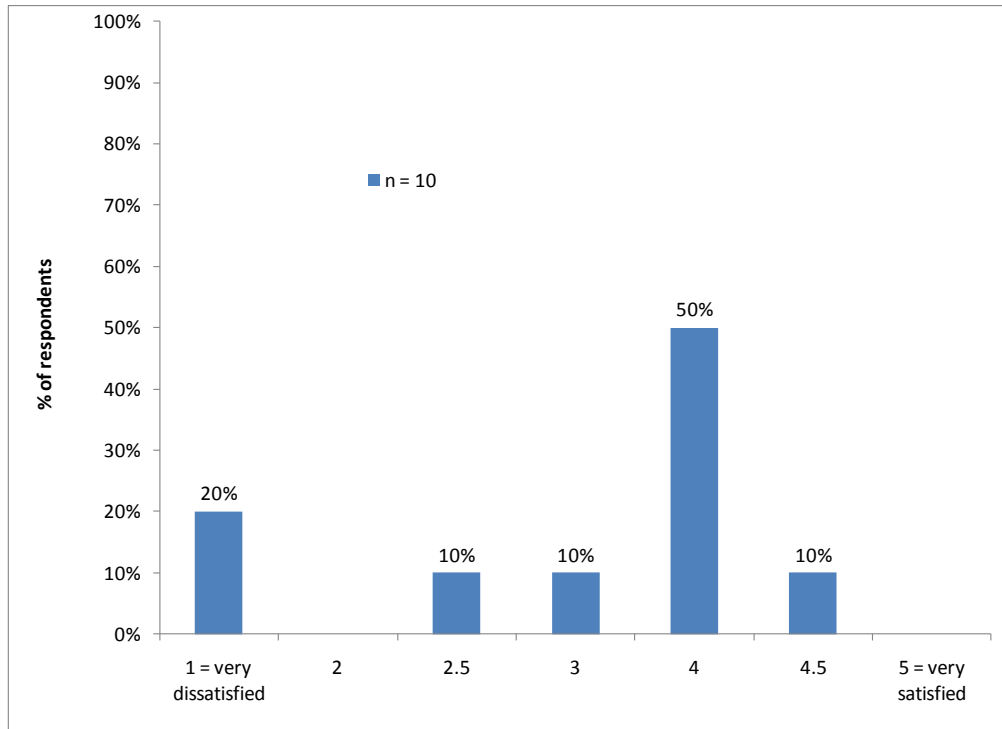
because they say: 'Hey, I want my refrigerator picked up.' So maybe having some of their marketing professionals come up with something where it's in bolder print ... identifying exactly which customer are qualified to partake in that offering."

- *More timely rebate payments:* "The rebates can sometimes not be as timely as you'd like to see them."
- *Invoices should be mailed instead of emailed:* "I hate that the billings for the program are emailed. I get them mixed in with all my other emails. I want them mailed. In the actual mail."

A.11 Overall EO Program Satisfaction

We asked the MECA utility representatives how satisfied they have been with the EO programs as a whole. Table A-16 shows that there was a wide range of satisfaction ratings. The average rating was 3.2.

**Table A-16:
MECA Utility Satisfaction with
the EO Program as a Whole**



We asked the respondents to explain their satisfaction ratings. The following are their comments:

- Satisfaction rating = 1:
 - “I give it a 1. I hate the programs. I hate the fact that we have to do it at all. It is an added burden to my customers. It’s an added burden to me and my staff.”
 - “Well, I think I indicated how I felt about it. You know, this is a state mandate, and it’s on the bill. We have to tell our members that they’re paying, you know, that this energy optimization charge will save them \$2.92 a month. You know, so they’re paying \$10 to save \$2.92. And a person can only change so many light bulbs, get so

many smart strips. It's just, as far as I'm concerned, a social service program. And why don't they just, why make us jump through all the hoops? Just charge us. But, I guess Jennifer Granholm, when she was in it was all about creating jobs, which she has done with CLEAResult, but at the expense of everybody else in the state. And people in this state don't have the money."

- Satisfaction rating = 2.5: "I'd say, you know, two and a half, right in the middle. I mean it's a lot of work ... for the two programs that were most popular. ... They had programs we didn't even use like that multifamily program and the educational program."
- Satisfaction rating = 3: "And I think that's just because our members are paying into a program where I'm just not sure that they're getting enough bang for their buck out of it in the long run. I'm not sure enough of our members are really taking advantage of the rebate. Yes, we're making our kilowatt savings goals, but I'm just not that confident that all of these items are getting installed as they should be. They're buying the deals, but are they installing them immediately and using them the way that they were intended in order to benefit in the long run by reducing energy usage? I'm just not sure about that."
- Satisfaction rating = 4:
 - "Pretty much just because we're going to hit ... our kilowatt-hour savings target and just a few minor blips we talked about. But overall I think it's slightly above average. Things have been going fairly well. Like I say, we haven't been doing a whole lot of communicating, so everything's kind of been on cruise control. We're just waiting to hit our target."
 - "They've just improved a little bit this year, and they've looked at some of the stuff that we've brought up and tried to fix some of the past problems they have of getting programs rolling. I think it will get better from here on out, but like I said, there's always a little bit of room for improvement."
 - "I'm going to put it at a four because I think it's done some good. It's created some jobs, which is what it was designed to do ... I just think there's some areas that need to be more heavily incentivized and some areas where I think it just could be market driven."
- Satisfaction rating = 4.5: "I don't want to beat them up because they've made real inroads and really worked hard, but they still need to work on it a little."



Appendices

B. ESTAR Appliances CATI Survey

EO-EU

Energy Star Products Program
Residential Combined CATI Survey
Revised – 03/22/2012

Survey house instructions

1. Text in bold should be read.
2. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should NOT be read.
3. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
4. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
5. Text in gray boxes is major programming instruction.
6. Unless specifically noted, do NOT read answer choices. [Don't know] and [Refused] should NEVER be read.

Programming Notes

1. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet. Make separate 0/1 variables for the [Don't know] and [Refused] options as well.

Database variables

Variable	Definition
cont1, cont2, ... contx	Contact name(s).
Utility	Name of the contact's utility. One per customer.
program	name of the program, "Energy Star"
client	Name of the program the contact is likely to recognize. One per customer. Efficiency United or Energy Optimization
Address	Address where measures are installed
installation_date	Date the equipment was purchased – probably not exact: best guess
cfl_kit_qty	# of cfls received in kits
cfl_nokit_qty	# of cfls purchased not in kits
cfl_qty	total # of cfls purchased by respondent (includes any from a kit or separate from a kit)
sps_kit_qty	# of smart power strips purchased as part of a kit
sps_nokit_qty	# of smart power strips bought separately from kits



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sps_qty	# of smart power strips purchased by respondent (includes any from a kit or separate from a kit)
sh_kit_qty	# of showerheads purchased as part of kit
sh_nokit_qty	# of showerheads purchased separately from kits
sh_qty	# of low flow showerheads purchased by respondent (includes any from a kit or separate from a kit)
pw_kit_qty	# of pipe wraps purchased as part of kit
pw_nokit_qty	# of pipe wraps purchased separately from kits
pw_qty	# of pipe wraps purchased by respondent (includes any from a kit or separate from a kit)
fa_kit_qty	number of faucet aerators purchased as part of kits
fa_nokit_qty	# of faucet aerators purchased separately from kits
fa_qty	# of faucet aerators purchased by respondent (includes any from a kit or separate from a kit)
nl_kit_qty	# of nightlights purchased as part of kits
nl_nokit_qty	# of nightlights purchased separately from kits
nl_qty	# of LED night lights purchased by respondent (includes any from a kit or separate from a kit)
dw_qty	# of dishwashers purchased by respondent (includes any from a kit or separate from a kit)
wm_qty	# of washing machines purchased by respondent (includes any from a kit or separate from a kit)
cd_qty	# of dryers purchased by respondent (includes any from a kit or separate from a kit)
fan_qty	# of ceiling fans purchased by respondent (includes any from a kit or separate from a kit)
equipment_string	list of measures the respondent received rebates or price reductions for
Kit	1 if respondent purchased a kit 0 if respondent did not purchase a kit
non_kit	1 if respondent purchased an item not in a kit 0 if respondent did not purchase an item not in a kit
Event	1 if respondent purchased items at an event 0 if respondent did not purchase items at an event
kit_contents	list of measures contained in the kit



Appendices

INTRODUCTION

Intro1. Hello, my name is _____, and I'm calling on behalf of the Energy Star Products program offered through <utility> and <client>. I'm calling to discuss some energy efficient equipment or appliances you recently received discounts or rebates for. I'm not selling anything; I'd just like to ask your opinions. Your responses will be kept confidential and your individual responses will not be revealed to anyone.

[IF THEY WANT TO VERIFY SURVEY, THEY CAN CONTACT <confirm_contact> AT <confirm_contact_phone>]

1	[AGREES TO PARTICIPATE]	Intro2
2	[DOES NOT AGREE TO PARTICIPATE]	TERMINATE

Intro2. Our records show that your household recently purchased <equipment_string> that were discounted by the program. Are you familiar with your household's decision to purchase this equipment?

1	[Yes]	Intro6
2	[No]	Intro3
97	[Don't know]	Intro3
98	[Refused]	Intro3

Intro3. Who could I speak to that would be familiar with that decision?

	[RECORD FIRST and LAST NAME]	Intro4
98	[Refused]	Intro4
97	[Don't know]	Intro4

Intro4. Could I speak with <<Intro3>> now?

1	[Yes]	Intro1
2	[No]	Intro5
97	[Don't know]	Intro5
98	[Refused]	Intro5

Intro5. When is a good time I could call back to reach <<Intro3>>?

	[RECORD DAY and TIME]	Call back later
97	[Don't know]	Call back later
98	[Refused]	Call back later

Intro6. What is your name?

	[RECORD FIRST and LAST NAME]	A0
97	[Don't know]	A0
98	[Refused]	A0

Program Awareness

A0. I'd like to start with a few general questions about the program.



Appendices

- A1. The <utility> Energy Star Products program provided you with rebates or price discounts on <equipment_string>. Before today, had you ever heard of the <utility> Energy Star Products program?**

1	[Yes]	A2
2	[No]	A4
97	[Don't know]	A4
98	[Refused]	A4

- A2. Where did you first hear about the program?**

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Salesperson where equip purchased]	A3
2	[Utility bill stuffers]	A3
3	[Utility website]	A3
4	[the Internet other than utility's website]	A3
5	[Local newspaper]	A3
6	[A state or national newspaper]	A3
7	[TV, radio]	A3
8	[Friends, Relatives, or Neighbors]	A3
9	[Community Events or Local Schools]	A3
10	County Line Magazine	A3
11	Workplace	A3
12	Other Printed Advertisement	A3
13	Community Event/ Fair	A3
77	[Other, specify _____]	A3
97	[Don't know]	A3
98	[Refused]	A3

- A3. Did you hear about the program, before or after <installation date>?**

1	[Before]	A4
2	[After]	A4
3	[About the same time]	A4
97	[Don't know]	A4
98	[Refused]	A4

- A4. Why did you decide to participate in the Energy Star Products program?**

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Wanted to get rebate while it was available]	P1
2	[Was going to buy the equipment anyway]	P1
3	[Reduce my energy consumption / bills]	P1
4	[Help the environment / Global warming]	P1
5	Family, friends, neighbors, coworkers	P1
6	Trade Show/ Fair	P1
7	Free Program	P1
8	Curious	P1
77	[Other, specify _____]	P1
97	[Don't know]	P1
98	[Refused]	P1

KITS

[IF KIT = 0, GOTO DISHWASHER SECTION]

P1. Our records show that you bought a kit that contained <kit contents>. Why did you purchase the kit?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[get the CFLs]	P3
2	[get the smart power strip]	P3
3	[get the faucet aerator]	P3
4	[get the low flow showerheads]	P3
5	[get the pipe wrap]	P3
6	[get the LED night light]	P3
7	[it was a convenient way to get everything at once]	P3
8	Money	P3
9	Energy Efficiency	P3
10	Needed the Kit	P3
77	[Other, specify _____]	P3
97	[Don't know]	P3
98	[Refused]	P3

[P2 INTENTIONALLY MISSING]

[IF <cfl_kit_qty> = 0 GOTO P4]

P3. If they had not been part of kit, would you have bought CFLs? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	P4
2	Probably yes	P4
3	Probably not	P4
4	No	P4
97	[Don't know]	P4
98	[Refused]	P4



Appendices

[IF <sps_kit_qty> = 0 GOTO P5]

P4. If they had not been part of kit, would you have bought smart power strips? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	P5
2	Probably yes	P5
3	Probably not	P5
4	No	P5
97	[Don't know]	P5
98	[Refused]	P5

[IF <nl_kit_qty> = 0 GOTO P6]

P5. If they had not been part of kit, would you have bought any night lights? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	P6
2	Probably yes	P6
3	Probably not	P6
4	No	P6
97	[Don't know]	P6
98	[Refused]	P6

[IF <fa_kit_qty> = 0 GOTO P7]

P6. If they had not been part of kit, would you have bought faucet aerators? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	P7
2	Probably yes	P7
3	Probably not	P7
4	No	P7
97	[Don't know]	P7
98	[Refused]	P7

[IF <pw_kit_qty> = 0 GOTO P8]

P7. If it had not been part of kit, would you have bought pipe wrap? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	P8
2	Probably yes	P8
3	Probably not	P8
4	No	P8
97	[Don't know]	P8
98	[Refused]	P8



Appendices

[IF <sh_kit_qty> = 0 GOTO P9]

P8. If it had not been part of kit, would you have bought a new showerhead? Would you say...

1	Yes	P9
2	Probably yes	P9
3	Probably not	P9
4	No	P9
97	[Don't know]	P9
98	[Refused]	P9

P9. Next, I have some questions about each of the energy saving measures you purchased. They may have been part of the kits or sold separately from the kits. Please answer these questions as they relate to the majority of the measures you purchased at a discount through the Energy Star Products Program, whether or not they were in a kit.



Appendices

DISHWASHERS

[IF <DW_QTY> = 0, GOTO WASHING MACHINES SECTION]

DW1. Our records show you purchased <dw_qty> high efficiency dishwasher(s). Does that sound like the correct number?

1	[Yes]	DW2
2	[No]	DW1b
97	[Don't know]	DW2
98	[Refused]	GOTO WASHING MACHINES section

DW1b. How many dishwashers did you purchase?

	[RECORD #]	<DW_qty> = answer GOTO DW2
97	[Don't know]	DW2
98	[Refused]	GOTO WASHING MACHINES section

DW2. Where did you buy the dishwasher(s)?

[ALLOW ONE ANSWER. DO NOT READ LIST.]

1	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	DW3
2	[Department Store (Sears, Wal-Mart, Target, K-Mart]	DW3
3	[Big Box store (Best Buy)]	DW3
4	[Local Appliance Store]	DW3
5	[Warehouse store (Costco, Sam's Club)]	DW3
6	[Home energy show]	DW3
7	[Mail-order catalog]	DW11
8	[Internet]	DW11
9	Manufacturer	DW11
77	[Other (specify)]	DW11
97	[Don't know]	DW11
98	[Refused]	DW11

DW3. When you purchased the dishwasher(s), do you recall seeing any signs, displays, brochures, or other marketing materials providing information about them?

1	[Yes]	DW4
2	[No]	DW5
97	[Don't know]	DW5
98	[Refused]	DW5

DW4. What kind of information or marketing materials do you recall seeing?
[ACCEPT MULTIPLE RESPONSES.]

1	[Brochure]	DW5
2	[Sign]	DW5
3	[Display]	DW5
77	[Other (specify)]	DW5
97	[Don't know]	DW5
98	[Refused]	DW5

DW5. When you were considering the purchase of the dishwasher(s) did you talk to any salespeople?

1	[Yes]	DW6
2	[No]	DW7
97	[Don't know]	DW7
98	[Refused]	DW7

DW6. What, if any, characteristics of the dishwasher(s) did you and the salespeople talk about?
[FOLLOW UP WITH:] Anything else?
[DO NOT READ. ACCEPT MULTIPLE RESPONSES.]

0	[None]	DW7
1	[Price/Cost]	DW7
2	[Size / capacity]	DW7
3	[Brand]	DW7
4	[Operating cost]	DW7
5	[Efficiency level]	DW7
6	[Energy Star]	DW7
7	[Rebates]	DW7
8	[Warranty]	DW7
9	[Color]	DW7
10	[Ease of Installation]	DW7
11	Quality Upgrade	DW7
77	[Other] (RECORD) _____	DW7
97	[Don't know/Not sure/Can't remember]	DW7
98	[Refused]	DW7

DW7. Were there special rebates or price discounts on dishwashers at the store when you purchased it?

1	[Yes]	DW8
2	[No]	DW11
97	[Don't know]	DW11
98	[Refused]	DW11

DW8. Who offered the rebates or price discount?
[DO NOT READ. ACCEPT MULTIPLE ANSWERS]



Appendices

1	[Efficiency United / Energy Optimization]	DW11
2	[Utility]	DW11
3	[Store]	DW11
4	[Manufacturer]	DW11
77	[Other, Specify ____]	DW11
97	[Don't know]	DW11
98	[Refused]	DW11

DW11. Of the <dw_qty> dishwashers you purchased, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <dw_qty> GOTO DW11b IF < <dw_qty> GOTO DW11a;
97	[Don't know]	GOTO WASHING MACHINE SECTION
98	[Refused]	GOTO WASHING MACHINE SECTION

DW11a. Why aren't all of them installed?

	[RECORD VERBATIM]	
97	[Don't know]	IF DW11 = 0 GOTO WASHING MACHINE SECTION
98	[Refused]	ELSE GOTO DW11b

DW11b. How many are installed at <address>?

	[RECORD #]	IF answer = <<DW11>> GOTO DW_V1 IF answer less than <<DW11>> GOTO DW11c
97	[Don't know]	DW11c
98	[Refused]	DW11c



Appendices

DWI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	DWI1d
2	[Alpena Power]	DWI1d
3	[Bayfield Electric Cooperative]	DWI1d
4	[Cloverland Electric Coop]	DWI1d
5	[Daggett Electric Department]	DWI1d
6	[Edison Sault Electric Company]	DWI1d
7	[Great Lakes Energy coop]	DWI1d
8	[HomeWorks Tri-County electric Coop]	DWI1d
9	[Indiana Michigan Power Company]	DWI1d
10	[Midwest Energy Coop]	DWI1d
11	[Ontonagon County Rural Electrification]	DWI1d
12	[Presque Isle Electric and Gas]	DWI1d
13	[Thumb Electric]	DWI1d
14	[Upper Penninsula Power Company]	DWI1d
15	[WE Energies]	DWI1d
16	[Wisconsin Public Service or "WPS"]	DWI1d
17	[Xcel Energy]	DWI1d
18	[City of Escanaba]	DWI1d
19	[City of Stephenson]	DWI1d
20	[Marquette Board of Light & Power]	DWI1d
21	[Newberry Water & Light]	DWI1d
22	[Detroit Edison or "DTE"]	DWI1d
23	[Consumers Energy]	DWI1d
77	[Other (specify) _____]	DWI1d
97	[Don't know]	DWI1d
98	[Refused]	DWI1d

DW1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	DW11e
2	[SEMCO Energy]	DW11e
3	[Wisconsin Public Service or "WPS"]	DW11e
4	[Xcel Energy]	DW11e
5	[Detroit Edison or "DTE"]	DW11e
6	[Consumers Energy]	DW11e
7	[Home does not have gas service]	DW11e
77	[Other, Specify ____]	DW11e
97	[Don't know]	DW11e
98	[Refused]	DW11e

DW1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	DW_V1
97	[Don't know]	DW_V1
98	[Refused]	DW_V1

DW_V1. About how many loads of dishes are done in the new dishwasher(s) per week?

	[RECORD QUANTITY]	DW_V2
97	[Don't know]	DW_V2
98	[Refused]	DW_V2

DW_V2. Did the new dishwasher replace an old one?

1	[Yes]	DW_V2
2	[No]	DW_D0
97	[Don't know]	DW_D0
98	[Refused]	DW_D0

DW_V3. Was the old dishwasher still working, or had it broken?

1	[still working]	DW_D0
2	[broken]	DW_D0
97	[Don't know]	DW_D0
98	[Refused]	DW_D0

DW NET TO GROSS

DW_D0. Next, I have some questions about the effect the discount from the <utility> Energy Star Products program had on your decision to purchase a dishwasher(s). I'm referring to your decision to purchase any dishwasher, not just an energy efficient model.

Without the program, would you say the likelihood of purchasing the dishwasher(s) was...

[READ UNBRACKETED OPTIONS]

1	Very likely	DW_D1a
2	Somewhat likely	DW_D1a
3	Not very likely	DW_D1a
4	Or very unlikely	DW_D1a
97	[Don't know]	DW_D1a
98	[Refused]	DW_D1a

DW TIMING

DW_D1a. I'd like to know about the effect, if any, that program incentives had on your decision to purchase the dishwasher(s) when you did. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	DW_D1ac1
2	[Earlier]	DW_D1ac1
3	[Later]	DW_D1ac1
4	[Never]	DW_D1ac1
97	[Don't know]	DW_D1ac1
98	[Refused]	DW_D1ac1

IF DW_D0 = 4 very unlikely AND DW_D1a = 1 same time, THEN ASK DW_D1ac1 ELSE GOTO DW_D1ac2

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat DW_D0 for whatever measure they are currently on so that they can change their answer.

DW_D1ac1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase a dishwasher at all and that you would have done it at the same time? Is that correct?

1	[Yes]	DW_D1aO
2	[No]	DW_D0



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97	[Don't know]	DW_D0
98	[Refused]	DW_D0

IF DW_D0 = 1 very likely AND DW_D1a = 4 never, THEN ASK DW_D1ac2 ELSE GOTO DW_D1aO

DW_D1ac2. I'd just like to confirm, you said that without the program, you were very likely to purchase a dishwasher and that you would never have done it? Is that correct?

1	[Yes]	DW_D1aO
2	[No]	DW_D0
97	[Don't know]	DW_D0
98	[Refused]	DW_D0

DW_D1aO. Why do you say that you would have purchased a dishwasher <<dw_D1a>>?

	[RECORD RESPONSE VERBATIM]	DW_D1b
1	Need	DW_D1b
2	Energy Efficiency	DW_D1b
3	Discount	DW_D1b
97	[Don't know]	DW_D1b
98	[Refused]	DW_D1b

IF DW_D1a ≠ 3 LATER, SKIP TO DW_D2a

DW_D1b. Approximately how many months later?

	[RECORD # months]	DW_D2a
97	[Don't know]	DW_D2a
98	[Refused]	DW_D2a

DW EFFICIENCY

DW_D2a. Next, I'd like to know about the effect, if any, that program incentives had on your decision to purchase a *high efficiency* dishwasher.

Without the program would you have purchased dishwasher of the same efficiency, lesser efficiency, or greater efficiency?

1	[Same efficiency]	DW_D2aO
2	[Lesser efficiency]	DW_D2aO
3	[Greater efficiency]	DW_D2aO
97	[Don't know]	DW_D2aO
98	[Refused]	DW_D2aO

DW_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	DW_D2b
--	----------------------------	--------

1	Need	DW_D2b
2	Energy Efficiency	DW_D2b
3	Preference	DW_D2b
97	[Don't know]	DW_D2b
98	[Refused]	DW_D2b

IF DW_D2a ≠ 2 LESSER EFFICIENCY, SKIP TO DW_D3

DW_D2b. Without the program, would you have purchased a dishwasher that was
 “standard efficiency on the market at that time,”
 “slightly higher than standard efficiency”,
 “between standard efficiency and the efficiency that you purchased,”
 or “slightly lower than the high efficiency that was purchased?”

1	[Standard efficiency on the market at time]	DW_D3
2	[Slightly higher than standard efficiency]	DW_D3
3	[Between standard efficiency and what purchased]	DW_D3
4	[Slightly lower than the high efficiency purchased]	DW_D3
97	[Don't know]	DW_D3
98	[Refused]	DW_D3

DW QUANTITY

[IF <dw_qty> = 1 AND <<DWI1>> = 1, GOTO DW_D4]

DW_D3. Finally, I'd like to know about the effect, if any, that program incentives and services had on the number of dishwashers that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number]	DW_D3c1
2	[Fewer]	DW_D3c1
3	[More]	DW_D3c1
4	[None at all]	DW_D3c1
97	[Don't know]	DW_D3c1
98	[Refused]	DW_D3c1

IF DW_D0 = 4 very unlikely AND DW_D3 = 1 same number/size THEN ASK DW_D3c1 ELSE GOTO DW_D3c2

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat DW_D3_ for whatever measure they are currently on so that they can change their answer.

DW_D3c1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase a dishwasher at all and that you would have bought the same number? Is that correct?

1	[Yes]	DW_D3O
2	[No]	DW_D3
97	[Don't know]	DW_D3
98	[Refused]	DW_D3

IF DW_D0 = 1 very likely AND DW_D3 = 4 none at all, THEN ASK DW_D3c2 ELSE GOTO DW_D3O

DW_D3c2. I'd just like to confirm, you said that without the program, you were very likely to purchase a dishwasher and that you would not have bought anything at all? Is that correct?

1	[Yes]	DW_D3O
2	[No]	DW_D3
97	[Don't know]	DW_D3
98	[Refused]	DW_D3

DW_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	DW_D3a
97	[Don't know]	DW_D3a
98	[Refused]	DW_D3a

IF DW_D3 = 1 same number/size or 4 none at all, SKIP TO DW_D4

DW_D3a. How many dishwashers would you have purchased without a discount from the program?

	[RECORD Number]	DW_D4
97	[Don't know]	DW_D4
98	[Refused]	DW_D4

DW_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of dishwashers. I'd like you to summarize the programs' influence on the timing, efficiency and number of dishwashers that you purchased.

	[RECORD RESPONSE VERBATIM]	DW_D5
1	Rebate	DW_D5
2	Energy Efficiency	DW_D5
3	Need	DW_D5
97	[Don't know]	DW_D5
98	[Refused]	DW_D5

DW_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	GOTO WASHING MACHINES
--	----------------------------	-----------------------



Appendices

		section
1	No	
97	[Don't know]	GOTO WASHING MACHINES section
98	[Refused]	GOTO WASHING MACHINES section



Appendices

WASHING MACHINES

[IF <WM_QTY> = 0, GOTO CLOTHES DRYER SECTION]

WM1. Our records show you purchased <wm_qty> high efficiency washing machine(s). Does that sound like the correct number?

1	[Yes]	WM2
2	[No]	WM1b
97	[Don't know]	WM2
98	[Refused]	GOTO CLOTHES DRYER section

WM1b. How many washing machines did you purchase?

	[RECORD #]	<WM_qty> = answer GOTO WM2
97	[Don't know]	WM2
98	[Refused]	GOTO CLOTHES DRYER section

WM2. Where did you buy the washing machine(s)?

[ALLOW ONE ANSWER. DO NOT READ LIST.]

1	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	WM3
2	[Department Store (Sears, Wal-Mart, Target, K-Mart]	WM3
3	[Big Box store (Best Buy)]	WM3
4	[Local Appliance Store]	WM3
5	[Warehouse store (Costco, Sam's Club)]	WM3
6	[Home energy show]	WM3
7	[Mail-order catalog]	WMI1
8	[Internet]	WMI1
77	[Other (specify)]	WMI1
97	[Don't know]	WMI1
98	[Refused]	WMI1

WM3. When you purchased the washing machine(s), do you recall seeing any signs, displays, brochures, or other marketing materials providing information about them?

1	[Yes]	WM4
2	[No]	WM5
97	[Don't know]	WM5
98	[Refused]	WM5

WM4. What kind of information or marketing materials do you recall seeing?
[ACCEPT MULTIPLE RESPONSES.]

1	[Brochure]	WM5
2	[Sign]	WM5
3	[Display]	WM5
4	Label/ sticker	WM5
77	[Other (specify)]	WM5
97	[Don't know]	WM5
98	[Refused]	WM5

WM5. When you were considering the purchase of the washing machine(s) did you talk to any salespeople?

1	[Yes]	WM6
2	[No]	WM7
97	[Don't know]	WM7
98	[Refused]	WM7

WM6. What, if any, characteristics of the washing machine(s) did you and the salespeople talk about?

[FOLLOW UP WITH:] **Anything else?**

[DO NOT READ. ACCEPT MULTIPLE RESPONSES.]

0	[None]	WM7
1	[Price/Cost]	WM7
2	[Size (capacity)]	WM7
3	[Brand]	WM7
4	[Operating cost]	WM7
5	[Efficiency level]	WM7
6	[Energy Star]	WM7
7	[Rebates]	WM7
8	[Warranty]	WM7
9	[Color]	WM7
10	[Ease of Installation]	WM7
11	Durability/ Reliability	WM7
77	[Other] (RECORD) _____	WM7
97	[Don't know/Not sure/Can't remember]	WM7
98	[Refused]	WM7

WM7. Were there special rebates or price discounts on washing machines at the store when you purchased it?

1	[Yes]	WM8
2	[No]	WM11
97	[Don't know]	WM11
98	[Refused]	WM11



Appendices

WM8. Who offered the rebates or price discount?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Efficiency United / Energy Optimization]	WMI1
2	[Utility]	WMI1
3	[Store]	WMI1
4	[Manufacturer]	WMI1
77	[Other, Specify ____]	WMI1
97	[Don't know]	WMI1
98	[Refused]	WMI1

WMI1. Of the <wm_qty> washing machines you purchased, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <wm_qty> GOTO WMI1b IF < <wm_qty> GOTO WMI1a;
97	[Don't know]	GOTO CLOTHES DRYER SECTION
98	[Refused]	GOTO CLOTHES DRYER SECTION

WMI1a. Why aren't all of them installed?

	[RECORD VERBATIM]	IF WMI1 = 0 GOTO CLOTHES DRYER SECTION ELSE GOTO WMI1b
97	[Don't know]	
98	[Refused]	

WMI1b. How many are installed at <address>?

	[RECORD #]	IF answer = <<WMI1>> GOTO WM_D0 IF answer less than <<WMI1>> GOTO WMI1c
97	[Don't know]	WMI1c
98	[Refused]	WMI1c



Appendices

WMI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	WMI1d
2	[Alpena Power]	WMI1d
3	[Bayfield Electric Cooperative]	WMI1d
4	[Cloverland Electric Coop]	WMI1d
5	[Daggett Electric Department]	WMI1d
6	[Edison Sault Electric Company]	WMI1d
7	[Great Lakes Energy coop]	WMI1d
8	[HomeWorks Tri-County electric Coop]	WMI1d
9	[Indiana Michigan Power Company]	WMI1d
10	[Midwest Energy Coop]	WMI1d
11	[Ontonagon County Rural Electrification]	WMI1d
12	[Presque Isle Electric and Gas]	WMI1d
13	[Thumb Electric]	WMI1d
14	[Upper Penninsula Power Company]	WMI1d
15	[WE Energies]	WMI1d
16	[Wisconsin Public Service or "WPS"]	WMI1d
17	[Xcel Energy]	WMI1d
18	[City of Escanaba]	WMI1d
19	[City of Stephenson]	WMI1d
20	[Marquette Board of Light & Power]	WMI1d
21	[Newberry Water & Light]	WMI1d
22	[Detroit Edison or "DTE"]	WMI1d
23	[Consumers Energy]	WMI1d
77	[Other (specify) _____]	WMI1d
97	[Don't know]	WMI1d
98	[Refused]	WMI1d

WMI1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	WMI1e
2	[SEMCO Energy]	WMI1e
3	[Wisconsin Public Service or "WPS"]	WMI1e
4	[Xcel Energy]	WMI1e
5	[Detroit Edison or "DTE"]	WMI1e
6	[Consumers Energy]	WMI1e
7	[Home does not have gas service]	WMI1e
77	[Other, Specify ____]	WMI1e
97	[Don't know]	WMI1e
98	[Refused]	WMI1e

WMI1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	WM_D0
97	[Don't know]	WM_D0
98	[Refused]	WM_D0

WM NET TO GROSS

WM_D0. Next, I have some questions about the effect the discount from the <utility> Energy Star Products program had on your decision to purchase the washing machine(s).

Without the program, would you say the likelihood of purchasing the washing machine(s) was...

[READ UNBRACKETED OPTIONS]

1	Very likely	WM_D1a
2	Somewhat likely	WM_D1a
3	Not very likely	WM_D1a
4	Or very unlikely	WM_D1a
97	[Don't know]	WM_D1a
98	[Refused]	WM_D1a

WM TIMING

WM_D1a. I'd like to know about the effect, if any, that program incentives had on your decision to purchase a washing machine when you did. I'm referring to your decision to buy any washing machine, not just an energy efficient one. Without the program, would you have purchased it at the same time, earlier, later, or never?

1	[at the Same time]	WM_D1ac1
2	[Earlier]	WM_D1ac1
3	[Later]	WM_D1ac1
4	[Never]	WM_D1ac1
97	[Don't know]	WM_D1ac1
98	[Refused]	WM_D1ac1

IF WM_D0 = 4 very unlikely AND WM_D1a = 1 same time, THEN ASK WM_D1ac1 ELSE GOTO WM_D1ac2

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat WM_D0 for whatever measure they are currently on so that they can change their answer.

WM_D1ac1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase a washing machine at all and that you would have done it at the same time? Is that correct?

1	[Yes]	WM_D1aO
2	[No]	WM_D0
97	[Don't know]	WM_D0
98	[Refused]	WM_D0

IF WM_D0 = 1 very likely AND WM_D1a = 4 never, THEN ASK WM_D1ac2 ELSE GOTO WM_D1aO

WM_D1ac2. I'd just like to confirm, you said that without the program, you were very likely to purchase a washing machine and that you would never have done it? Is that correct?

1	[Yes]	WM_D1aO
2	[No]	WM_D0
97	[Don't know]	WM_D0
98	[Refused]	WM_D0

WM_D1aO. Why do you say that you would have purchased a washing machine <<wm_D1a>>?

	[RECORD RESPONSE VERBATIM]	WM_D1b
97	[Don't know]	WM_D1b
98	[Refused]	WM_D1b



Appendices

IF WM_D1a ≠ 3 LATER, SKIP TO WM_D2a

WM_D1b. Approximately how many months later?

	[RECORD # months]	WM_D2a
97	[Don't know]	WM_D2a
98	[Refused]	WM_D2a

WM EFFICIENCY

WM_D2a. Next, I'd like to know about the effect, if any, that program incentives had on your decision to purchase a *high efficiency* washing machine.

Without the program would you have purchased washing machine of the same efficiency, lesser efficiency, or greater efficiency?

1	[Same efficiency]	WM_D2aO
2	[Lesser efficiency]	WM_D2aO
3	[Greater efficiency]	WM_D2aO
97	[Don't know]	WM_D2aO
98	[Refused]	WM_D2aO

WM_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	WM_D2b
97	[Don't know]	WM_D2b
98	[Refused]	WM_D2b

IF WM_D2a ≠ 2 LESSER EFFICIENCY, SKIP TO WM_D3

WM_D2b. Without the program, would you have purchased a washing machine that was
“standard efficiency on the market at that time,”
“slightly higher than standard efficiency”,
“between standard efficiency and the efficiency that you purchased,”
or “slightly lower than the high efficiency that was purchased?”

1	[Standard efficiency on the market at time]	WM_D3
2	[Slightly higher than standard efficiency]	WM_D3
3	[Between standard efficiency and what purchased]	WM_D3
4	[Slightly lower than the high efficiency purchased]	WM_D3
97	[Don't know]	WM_D3
98	[Refused]	WM_D3

WM QUANTITY

[IF <wm_qty> = 1 AND <<WMI1>> = 1, GOTO WM_D4]

WM_D3. Finally, I'd like to know about the effect, if any, that program incentives and services had on the number of washing machines that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number]	WM_D3c1
2	[Fewer]	WM_D3c1
3	[More]	WM_D3c1
4	[None at all]	WM_D3c1
97	[Don't know]	WM_D3c1
98	[Refused]	WM_D3c1

IF WM_D0 = 4 very unlikely AND WM_D3 = 1 same number/size THEN ASK WM_D3c1 ELSE GOTO WM_D3c2

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat WM_D3 for whatever measure they are currently on so that they can change their answer.

WM_D3c1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase a washing machine at all and that you would have bought the same number? Is that correct?

1	[Yes]	WM_D3O
2	[No]	WM_D3
97	[Don't know]	WM_D3
98	[Refused]	WM_D3

IF WM_D0 = 1 very likely AND WM_D3 = 4 none at all, THEN ASK WM_D3c2 ELSE GOTO WM_D3O

WM_D3c2. I'd just like to confirm, you said that without the program, you were very likely to purchase a washing machine and that you would not have bought anything at all? Is that correct?

1	[Yes]	WM_D3O
2	[No]	WM_D3
97	[Don't know]	WM_D3
98	[Refused]	WM_D3

WM_D3O. Why do you say that?

	[RECORD RESPONSE VERBATIM]	WM_D3a
97	[Don't know]	WM_D3a
98	[Refused]	WM_D3a



Appendices

IF WM_D3 = 1 same number/size or 4 none at all, SKIP TO WM_D4

WM_D3a. How many washing machines would you have purchased without a discount from the program?

	[RECORD Number]	WM_D4
97	[Don't know]	WM_D4
98	[Refused]	WM_D4

WM_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of washing machines. I'd like you to summarize the programs' influence on the timing, efficiency and number of washing machines that you purchased.

	[RECORD RESPONSE VERBATIM]	WM_D5
1	Needed a new machine	WM_D5
2	Program awareness	WM_D5
3	No influence	WM_D5
4	Convenient Timing	WM_D5
5	Incentive	WM_D5
97	[Don't know]	WM_D5
98	[Refused]	WM_D5

WM_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	GOTO CLOTHES DRYER section
1	Great Deal	GOTO CLOTHES DRYER section
2	Satisfied	GOTO CLOTHES DRYER section
3	Dissatisfied	GOTO CLOTHES DRYER section
4	No	GOTO CLOTHES DRYER section
97	[Don't know]	GOTO CLOTHES DRYER section
98	[Refused]	GOTO CLOTHES DRYER section



Appendices

CLOTHES DRYERS

[IF <CD_QTY> = 0, GOTO CEILING FAN SECTION]

CD1. Our records show you purchased <cd_qty> high efficiency clothes dryer(s). Does that sound like the right number?

1	[Yes]	CD2
2	[No]	CD1b
97	[Don't know]	CD2
98	[Refused]	GOTO CEILING FAN SECTION

CD1b. How many clothes dryers did you purchase?

	[RECORD #]	<CD_qty> = answer GOTO CD2
97	[Don't know]	CD2
98	[Refused]	GOTO CEILING FAN SECTION

CD2. Where did you buy the clothes dryer(s)?

[ALLOW ONE ANSWER. DO NOT READ LIST.]

1	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	CD3
2	[Department Store (Sears, Wal-Mart, Target, K-Mart]	CD3
3	[Big Box store (Best Buy)]	CD3
4	[Local Appliance Store]	CD3
5	[Warehouse store (Costco, Sam's Club)]	CD3
6	[Home energy show]	CD3
7	[Mail-order catalog]	CDI1
8	[Internet]	CDI1
77	[Other (specify)]	CDI1
97	[Don't know]	CDI1
98	[Refused]	CDI1

CD3. When you purchased the clothes dryer(s), do you recall seeing any signs, displays, brochures, or other marketing materials providing information about them?

1	[Yes]	CD4
2	[No]	CD5
97	[Don't know]	CD5
98	[Refused]	CD5

CD4. What kind of information or marketing materials do you recall seeing?
[ACCEPT MULTIPLE RESPONSES.]

1	[Brochure]	CD5
2	[Sign]	CD5
3	[Display]	CD5
4	Stickers	CD5
77	[Other (specify)]	CD5
97	[Don't know]	CD5
98	[Refused]	CD5

CD5. When you were considering the purchase of the clothes dryer(s) did you talk to any salespeople?

1	[Yes]	CD6
2	[No]	CD7
97	[Don't know]	CD7
98	[Refused]	CD7

CD6. What, if any, characteristics of the clothes dryer(s) did you and the salespeople talk about?

[FOLLOW UP WITH:] **Anything else?**

[DO NOT READ. ACCEPT MULTIPLE RESPONSES.]

0	[None]	CD7
1	[Price/Cost]	CD7
2	[Size /capacity]	CD7
3	[Brand]	CD7
4	[Operating cost]	CD7
5	[Efficiency level]	CD7
6	[Energy Star]	CD7
7	[Rebates]	CD7
8	[Warranty]	CD7
9	[Color]	CD7
10	[Ease of Installation]	CD7
11	Availability	CD7
77	[Other] (RECORD) _____	CD7
97	[Don't know/Not sure/Can't remember]	CD7
98	[Refused]	CD7

CD7. Were there special rebates or price discounts on clothes dryers at the store when you purchased it?

1	[Yes]	CD8a
2	[No]	CDI1
97	[Don't know]	CDI1
98	[Refused]	CDI1



Appendices

CD8. Who offered the rebates or price discount?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Efficiency United / Energy Optimization]	CDI1
2	[Utility]	CDI1
3	[Store]	CDI1
4	[Manufacturer]	CDI1
77	[Other, Specify ____]	CDI1
97	[Don't know]	CDI1
98	[Refused]	CDI1

CDI1. Of the <cd_qty> clothes dryers you purchased, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <CD_qty> GOTO CDI1b IF < <CD_qty> GOTO CDI1a;
97	[Don't know]	GOTO CEILING FAN SECTION
98	[Refused]	GOTO CEILING FAN SECTION

CDI1a. Why aren't all of them installed?

	[RECORD VERBATIM]	IF CDI1 = 0 GOTO CEILING FAN SECTION ELSE GOTO CDI1b
97	[Don't know]	
98	[Refused]	

CDI1b. How many are installed at <address>?

	[RECORD #]	IF answer = <<CDI1>> GOTO CD_V1 IF answer less than <<CDI1>> GOTO CDI1c
97	[Don't know]	CDI1c
98	[Refused]	CDI1c

CDI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	CDI1d
2	[Alpena Power]	CDI1d
3	[Bayfield Electric Cooperative]	CDI1d
4	[Cloverland Electric Coop]	CDI1d
5	[Daggett Electric Department]	CDI1d
6	[Edison Sault Electric Company]	CDI1d
7	[Great Lakes Energy coop]	CDI1d
8	[HomeWorks Tri-County electric Coop]	CDI1d
9	[Indiana Michigan Power Company]	CDI1d
10	[Midwest Energy Coop]	CDI1d
11	[Ontonagon County Rural Electrification]	CDI1d
12	[Presque Isle Electric and Gas]	CDI1d
13	[Thumb Electric]	CDI1d
14	[Upper Penninsula Power Company]	CDI1d
15	[WE Energies]	CDI1d
16	[Wisconsin Public Service or "WPS"]	CDI1d
17	[Xcel Energy]	CDI1d
18	[City of Escanaba]	CDI1d
19	[City of Stephenson]	CDI1d
20	[Marquette Board of Light & Power]	CDI1d
21	[Newberry Water & Light]	CDI1d
22	[Detroit Edison or "DTE"]	CDI1d
23	[Consumers Energy]	CDI1d
77	[Other (specify) _____]	CDI1d
97	[Don't know]	CDI1d
98	[Refused]	CDI1d

CDI1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	CDI1e
2	[SEMC Energy]	CDI1e
3	[Wisconsin Public Service or "WPS"]	CDI1e
4	[Xcel Energy]	CDI1e
5	[Detroit Edison or "DTE"]	CDI1e
6	[Consumers Energy]	CDI1e
7	[Home does not have gas service]	CDI1e
77	[Other, Specify ____]	CDI1e
97	[Don't know]	CDI1e
98	[Refused]	CDI1e

CDI1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	CD_V1
97	[Don't know]	CD_V1
98	[Refused]	CD_V1

CD_V1. What type of fuel does the new clothes dryer use?

1	[Gas]	CD_V2
2	[Electricity]	CD_V2
77	[Other, Specify ____]	CD_V2
97	[Don't know]	CD_V2
98	[Refused]	CD_V2

CD_V2. Did the new clothes dryer replace an old one?

1	[Yes]	CD_V3
2	[No]	CD_V4
97	[Don't know]	CD_V3
98	[Refused]	CD_V3

CD_V3. What type of fuel did the old clothes dryer use?

1	[Gas]	CD_V4
2	[Electricity]	CD_V4
77	[Other, Specify ____]	CD_V4
97	[Don't know]	CD_V4
98	[Refused]	CD_V4



Appendices

CD_V4. About how many loads are dried in the new dryer per week?

	[RECORD QUANTITY]	CD_V5
97	[Don't know]	CD_V5
98	[Refused]	CD_V5

CD_V5. Do you have a high efficiency or ENERGY STAR washing machine at the address where the new dryer is installed?

1	[Yes]	CD_V6
2	[No]	CD_V6
97	[Don't know]	CD_V6
98	[Refused]	CD_V6

CD_V6. Prior to purchasing the new clothes dryer, did you have a high efficiency or ENERGY STAR washing machine at that address?

1	[Yes]	CD_D0
2	[No]	CD_D0
97	[Don't know]	CD_D0
98	[Refused]	CD_D0

CD NET TO GROSS

CD_D0. Next, I have some questions about the effect the discount from the <utility> Energy Star Products program had on your decision to purchase the clothes dryer(s).

Without the program, would you say the likelihood of purchasing the clothes dryer(s) was...

[READ UNBRACKETED OPTIONS]

1	Very likely	CD_D1a
2	Somewhat likely	CD_D1a
3	Not very likely	CD_D1a
4	Or very unlikely	CD_D1a
97	[Don't know]	CD_D1a
98	[Refused]	CD_D1a

CD TIMING

CD_D1a. I'd like to know about the effect, if any, that program incentives had on your decision to purchase a clothes dryer when you did. I'm referring to your decision to purchase any clothes dryer, not just a high efficiency one. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	CD_D1ac1
2	[Earlier]	CD_D1ac1
3	[Later]	CD_D1ac1
4	[Never]	CD_D1ac1
97	[Don't know]	CD_D1ac1
98	[Refused]	CD_D1ac1

IF CD_D0 = 4 very unlikely AND CD_D1a = 1 same time, THEN ASK CD_D1ac1 ELSE GOTO CD_D1ac2

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat CD_D0 for whatever measure they are currently on so that they can change their answer.

CD_D1ac1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase a clothes dryer at all and that you would have done it at the same time? Is that correct?

1	[Yes]	CD_D1aO
2	[No]	CD_D0
97	[Don't know]	CD_D0
98	[Refused]	CD_D0

IF CD_D0 = 1 very likely AND CD_D1a = 4 never, THEN ASK CD_D1ac2 ELSE GOTO CD_D1aO

CD_D1ac2. I'd just like to confirm, you said that without the program, you were very likely to purchase a clothes dryer and that you would never have done it? Is that correct?

1	[Yes]	CD_D1aO
2	[No]	CD_D0
97	[Don't know]	CD_D0
98	[Refused]	CD_D0

CD_D1aO. Why do you say that you would have purchased a clothes dryer <<cd_D1a>>?

	[RECORD RESPONSE VERBATIM]	CD_D1b
1	Need	CD_D1b
2	Preference	CD_D1b
3	Cost	CD_D1b



Appendices

97	[Don't know]	CD_D1b
98	[Refused]	CD_D1b

IF CD_D1a ≠ 3 LATER, SKIP TO CD_D2a

CD_D1b. Approximately how many months later?

	[RECORD # months]	CD_D2a
97	[Don't know]	CD_D2a
98	[Refused]	CD_D2a

CD EFFICIENCY

CD_D2a. Next, I'd like to know about the effect, if any, that program incentives had on your decision to purchase a *high efficiency* clothes dryer.

Without the program would you have purchased clothes dryer of the same efficiency, lesser efficiency, or greater efficiency?

1	[Same efficiency]	CD_D2aO
2	[Lesser efficiency]	CD_D2aO
3	[Greater efficiency]	CD_D2aO
97	[Don't know]	CD_D2aO
98	[Refused]	CD_D2aO

CD_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	CD_D2b
1	Energy Efficiency	CD_D2b
2	Need	CD_D2b
3	Preference	CD_D2b
4	Cost	CD_D2b
97	[Don't know]	CD_D2b
98	[Refused]	CD_D2b

IF CD_D2a ≠ 2 LESSER EFFICIENCY, SKIP TO CD_D3

CD_D2b. Without the program, would you have purchased a clothes dryer that was
 “standard efficiency on the market at that time,”
 “slightly higher than standard efficiency”,
 “between standard efficiency and the efficiency that you purchased,”
 or “slightly lower than the high efficiency that was purchased?”

1	[Standard efficiency on the market at time]	CD_D3
2	[Slightly higher than standard efficiency]	CD_D3
3	[Between standard efficiency and what purchased]	CD_D3
4	[Slightly lower than the high efficiency purchased]	CD_D3
97	[Don't know]	CD_D3
98	[Refused]	CD_D3

CD QUANTITY

[IF <cd_qty> = 1 AND <<CDI1>> = 1, GOTO CD_D4]

CD_D3. Finally, I'd like to know about the effect, if any, that program incentives and services had on the number of clothes dryers that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number/size]	CD_D3c1
2	[Fewer/smaller]	CD_D3c1
3	[More/larger]	CD_D3c1
4	[None at all]	CD_D3c1
97	[Don't know]	CD_D3c1
98	[Refused]	CD_D3c1

IF CD_D0 = 4 very unlikely AND CD_D3 = 1 same number/size THEN ASK CD_D3c1 ELSE GOTO CD_D3c2

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat CD_D3_ for whatever measure they are currently on so that they can change their answer.

CD_D3c1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase a clothes dryer at all and that you would have bought the same number? Is that correct?

1	[Yes]	CD_D30
2	[No]	CD_D3
97	[Don't know]	CD_D3
98	[Refused]	CD_D3

IF CD_D0 = 1 very likely AND CD_D3 = 4 none at all, THEN ASK CD_D3c2 ELSE GOT CD_D3O

CD_D3c2. I'd just like to confirm, you said that without the program, you were very likely to purchase a clothes dryer and that you would not have bought anything at all? Is that correct?

1	[Yes]	CD_D3O
2	[No]	CD_D3
97	[Don't know]	CD_D3
98	[Refused]	CD_D3

CD_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	CD_D3a
97	[Don't know]	CD_D3a
98	[Refused]	CD_D3a

IF CD_D3 = 1 same number/size or 4 none at all, SKIP TO CD_D4

CD_D3a. How many clothes dryers would you have bought without a discount from the program?

	[RECORD Number]	CD_D4
97	[Don't know]	CD_D4
98	[Refused]	CD_D4

CD_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of clothes dryers. I'd like you to summarize the programs' influence on the timing, efficiency and number of clothes dryers that you purchased.

	[RECORD RESPONSE VERBATIM]	CD_D5
1	No Influence	CD_D5
2	Timing	CD_D5
3	Rebate	CD_D5
4	Sale	CD_D5
5	Program	CD_D5
97	[Don't know]	CD_D5
98	[Refused]	CD_D5

CD_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	GOTO CEILING FAN SECTION
1	No	GOTO CEILING FAN SECTION
2	Satisfied with Purchase	GOTO CEILING FAN SECTION
97	[Don't know]	GOTO CEILING FAN SECTION
98	[Refused]	GOTO CEILING FAN SECTION



Appendices

CEILING FANS

[IF <FAN> = 0, GOTO CFL SECTION]

FAN1. Our records show you purchased <fan_qty> ceiling fans. Does that number sound correct?

1	[Yes]	FAN2
2	[No]	FAN1b
97	[Don't know]	FAN2
98	[Refused]	GOTO CFL SECTION

FAN1b. How many ceiling fans did you purchase?

	[RECORD #]	<FAN_qty> = answer GOTO FAN2
97	[Don't know]	FAN2
98	[Refused]	GOTO CFL SECTION

FAN2. Where did you buy the ceiling fan(s)?

[ALLOW ONE ANSWER. DO NOT READ LIST.]

1	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	FAN3
2	[Department Store (Sears, Wal-Mart, Target, K-Mart]	FAN3
3	[Big Box store (Best Buy)]	FAN3
4	[Local Appliance Store]	FAN3
5	[Warehouse store (Costco, Sam's Club)]	FAN3
6	[Home energy show]	FAN3
7	[Mail-order catalog]	FAN11
8	[Internet]	FAN11
77	[Other (specify)]	FAN11
97	[Don't know]	FAN11
98	[Refused]	FAN11

FAN3. When you purchased the ceiling fan(s), do you recall seeing any signs, displays, brochures, or other marketing materials providing information about them?

1	[Yes]	FAN4
2	[No]	FAN5
97	[Don't know]	FAN5
98	[Refused]	FAN5

FAN4. What kind of information or marketing materials do you recall seeing?

[ACCEPT MULTIPLE RESPONSES.]

1	[Brochure]	FAN5
2	[Sign]	FAN5
3	[Display]	FAN5
77	[Other (specify)]	FAN5
97	[Don't know]	FAN5



Appendices

98	[Refused]	FAN5
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FAN7. Were there special rebates or price discounts on ceiling fans at the store when you purchased it?

1	[Yes]	FAN8
2	[No]	FAN11
97	[Don't know]	FAN11
98	[Refused]	FAN11

FAN8. Who offered the rebates or price discount?

1	[Efficiency United / Energy Optimization]	FAN11
2	[Utility]	FAN11
3	[Store]	FAN11
4	[Manufacturer]	FAN11
77	[Other, Specify____]	FAN11
97	[Don't know]	FAN11
98	[Refused]	FAN11

FAN11. Of the <fan_qty> ceiling fans you purchased, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <fan_qty> GOTO FAN11b IF < fan_qty> GOTO FAN11a;
97	[Don't know]	GOTO CFL SECTION
98	[Refused]	GOTO CFL SECTION

FAN11a. Why aren't all of them installed?

	[RECORD VERBATIM]	
97	[Don't know]	IF FAN11 = 0 GOTO CFL SECTION
98	[Refused]	ELSE GOTO FAN11b

FAN11b. How many are installed at <address>?

	[RECORD #]	IF answer = <<FAN11>> GOTO FAN_D0 IF answer less than <<FAN11>> GOTO FAN11c
97	[Don't know]	FAN11c
98	[Refused]	FAN11c



Appendices

FANI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	FANI1d
2	[Alpena Power]	FANI1d
3	[Bayfield Electric Cooperative]	FANI1d
4	[Cloverland Electric Coop]	FANI1d
5	[Daggett Electric Department]	FANI1d
6	[Edison Sault Electric Company]	FANI1d
7	[Great Lakes Energy coop]	FANI1d
8	[HomeWorks Tri-County electric Coop]	FANI1d
9	[Indiana Michigan Power Company]	FANI1d
10	[Midwest Energy Coop]	FANI1d
11	[Ontonagon County Rural Electrification]	FANI1d
12	[Presque Isle Electric and Gas]	FANI1d
13	[Thumb Electric]	FANI1d
14	[Upper Penninsula Power Company]	FANI1d
15	[WE Energies]	FANI1d
16	[Wisconsin Public Service or "WPS"]	FANI1d
17	[Xcel Energy]	FANI1d
18	[City of Escanaba]	FANI1d
19	[City of Stephenson]	FANI1d
20	[Marquette Board of Light & Power]	FANI1d
21	[Newberry Water & Light]	FANI1d
22	[Detroit Edison or "DTE"]	FANI1d
23	[Consumers Energy]	FANI1d
77	[Other (specify) _____]	FANI1d
97	[Don't know]	FANI1d
98	[Refused]	FANI1d

[IF FANI1c INCLUDES 22, 23, or 77, ASK FANI1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>

ELSE GOT FANI1e]

FANI1d. How many fans are installed in locations that get electricity from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	FANI1e
97	[Don't know]	FANI1e
98	[Refused]	FANI1e

FAN1e. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	FAN_D0
97	[Don't know]	FAN_D0
98	[Refused]	FAN_D0

FAN NET TO GROSS

FAN_D0. Next, I have some questions about the effect the discount from the <utility> Energy Star Products program had on your decision to purchase the ceiling fans.

Without the program, would you say the likelihood of purchasing the ceiling fan(s) was...

[READ UNBRACKETED OPTIONS]

1	Very likely	FAN_D1a
2	Somewhat likely	FAN_D1a
3	Not very likely	FAN_D1a
4	Or very unlikely	FAN_D1a
97	[Don't know]	FAN_D1a
98	[Refused]	FAN_D1a

FAN TIMING

FAN_D1a. I'd like to know about the effect, if any, that program incentives had on your decision to purchase the ceiling fan(s) when you did. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	FAN_D1ac1
2	[Earlier]	FAN_D1ac1
3	[Later]	FAN_D1ac1
4	[Never]	FAN_D1ac1
97	[Don't know]	FAN_D1ac1
98	[Refused]	FAN_D1ac1

IF FAN_D0 = 4 very unlikely AND FAN_D1a = 1 same time, THEN ASK FAN_D1ac1 ELSE GOTO FAN_D1ac2

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat FAN_D0 for whatever measure they are currently on so that they can change their answer.

FAN_D1ac1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase a ceiling fan at all and that you would have done it at the same time? Is that correct?

1	[Yes]	FAN_D1aO
2	[No]	FAN_D0
97	[Don't know]	FAN_D0
98	[Refused]	FAN_D0

IF FAN_D0 = 1 very likely AND FAN_D1a = 4 never, THEN ASK FAN_D1ac2 ELSE GOTO FAN_D1aO

FAN_D1ac2. I'd just like to confirm, you said that without the program, you were very likely to purchase a ceiling fan and that you would never have done it? Is that correct?

1	[Yes]	FAN_D1aO
2	[No]	FAN_D0
97	[Don't know]	FAN_D0
98	[Refused]	FAN_D0

FAN_D1aO. Why do you say that you would have purchased a ceiling fan <<FAN_D1a>>?

	[RECORD RESPONSE VERBATIM]	FAN_D1b
1	Need	FAN_D1b
2	Cost	FAN_D1b
97	[Don't know]	FAN_D1b
98	[Refused]	FAN_D1b

IF FAN_D1a ≠ 3 LATER, SKIP TO FAN_D2a

FAN_D1b. Approximately how many months later?

	[RECORD # months]	FAN_D2a
97	[Don't know]	FAN_D2a
98	[Refused]	FAN_D2a

FAN EFFICIENCY

FAN_D2a. Next, I'd like to know about the effect, if any, that program incentives had on your decision to purchase high efficiency fans.

Without the program would you have purchased a standard efficiency fans or high efficiency fans?

1	[high efficiency]	FAN_D2aO
2	[standard]	FAN_D2aO
97	[Don't know]	FAN_D2aO
98	[Refused]	FAN_D2aO

FAN_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	FAN_D3
1	Quality	FAN_D3
2	Cost	FAN_D3
3	Knowledge	FAN_D3
97	[Don't know]	FAN_D3
98	[Refused]	FAN_D3

FAN QUANTITY

[IF <fan_qty> = 1 AND <<FANI1>> = 1, GOTO FAN_D4]

FAN_D3. Finally, I'd like to know about the effect, if any, that program incentives and services had on the number of ceiling fans that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number/size]	FAN_D3c1
2	[Fewer/smaller]	FAN_D3c1
3	[More/larger]	FAN_D3c1
4	[None at all]	FAN_D3c1
97	[Don't know]	FAN_D3c1
98	[Refused]	FAN_D3c1

IF FAN_D0 = 4 very unlikely AND FAN_D3 = 1 same number/size THEN ASK FAN_D3c1 ELSE GOTO FAN_D3c2

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat FAN_D3_ for whatever measure they are currently on so that they can change their answer.

FAN_D3c1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase a ceiling fan at all and that you would have bought the same number? Is that correct?

1	[Yes]	FAN_D3O
2	[No]	FAN_D3
97	[Don't know]	FAN_D3
98	[Refused]	FAN_D3

IF FAN_D0 = 1 very likely AND FAN_D3 = 4 none at all, THEN ASK FAN_D3c2 ELSE GOTO FAN_D3O

FAN_D3c2. I'd just like to confirm, you said that without the program, you were very likely to purchase a ceiling fan and that you would not have bought anything at all? Is that correct?

1	[Yes]	FAN_D3O
2	[No]	FAN_D3
97	[Don't know]	FAN_D3
98	[Refused]	FAN_D3

FAN_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	FAN_D3a
1	Need	FAN_D3a
97	[Don't know]	FAN_D3a
98	[Refused]	FAN_D3a

IF FAN_D3 = 1 same number/size or 4 none at all, SKIP TO FAN_D4

FAN_D3a. How many ceiling fans would you have bought without a discount from the program?

	[RECORD Number]	FAN_D4
97	[Don't know]	FAN_D4
98	[Refused]	FAN_D4

FAN_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of ceiling fans. I'd like you to summarize the programs' influence on the timing, efficiency and number of ceiling fans that you purchased.

	[RECORD RESPONSE VERBATIM]	FAN_D5
1	Quality Value	FAN_D5
97	[Don't know]	FAN_D5
98	[Refused]	FAN_D5

FAN_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	GOTO CFL SECTION
1	Satisfied	GOTO CFL SECTION
97	[Don't know]	GOTO CFL SECTION
98	[Refused]	GOTO CFL SECTION



Appendices

CFL SECTION

[IF <CFL_QTY> = 0, GOTO SMART POWER STRIP SECTION]

Next, I want to talk about some compact fluorescent bulbs that you purchased at a discounted rate through the <program> program. These are the spiral light bulbs and are also called CFLs. I'm going to ask you about your purchase experience, then I'll have some questions about what you did with the bulbs after you took them home.

CFL0. According to our records, you purchased <cfl_qty> CFLs at a discounted price around <installation_date>. Does <cfl_qty> CFLs sound correct?

[IF NECESSARY <cfl_kit_qty> of these CFLs came in a kit with some other energy saving items.]

1	[Yes]	CFL2;
2	[No]	CFL1
97	[Don't know]	CFL2;
98	[Refused]	CFL2

CFL1. Approximately how many bulbs did you buy?

[IF <cfl_kit_qty> >0 ADD] Including the ones in the kit.

[IF <cfl_nokit_qty> >0 ADD] If a package contained more than one bulb, please count each bulb separately.

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	CFL4; <cfl_qty> = this answer
0	[None]	GOTO SMART POWER STRIP SECTION
97	[Don't know]	CFL4
98	[Refused]	CFL4

[CFL2 AND CFL3 INTENTIONALLY MISSING]



Appendices

CFL4. Where did you buy the CFLs?

[DO NOT READ LIST. ALLOW MULTIPLE RESPONSES]

1	[Home improvement or hardware store (such as Ace, Home Depot, Menards or True Value)]	CFL5
2	[Department store (Wal-Mart, Target, K-Mart, Sears)]	CFL5
3	[Big box retailer (Best Buy)]	CFL5
4	[Warehouse store (Costco, Sam's Club)]	CFL5
5	[Supermarket, food store (Meijer, Kroger, Farmer Jack, Busch's)]	CFL5
6	[Drug store (Atlas, CVS, Walgreen's, Medicine Shoppe)]	CFL5
7	[Mail-order catalog]	CFL5
8	[Over the Internet]	CFL5
9	[Home energy show]	CFL5
10	[Utility sponsored event/meeting]	CFL5
11	[Utility office]	CFL5
12	Community Event/ Fair	CFL5
13	Kit	CFL5
77	[Other (specify)]	CFL5
97	[Don't know]	CFL5
98	[Refused]	CFL5

CFL5. Was this the first time you purchased CFL bulbs?

1	[Yes]	CFL6
2	[No]	CFL6
97	[Don't know]	CFL6
98	[Refused]	CFL6

[IF <cfl_nokit_qty> = 0 AND P3 = 4, GOTO CFL9]

CFL6. How likely would you have been to purchase CFL bulbs if you didn't get the discount?

Would you say very likely, somewhat likely, not very likely, or not at all likely?

[INCLUDING THE REBATES THAT THEY RECEIVED.]

1	[Very likely]	CFL9
2	[Somewhat likely]	CFL9
3	[Not very likely]	CFL9
4	[Not at all likely]	CFL9
97	[Don't know]	CFL9
98	[Refused]	CFL9

[CFL7 and CFL8 INTENTIONALLY MISSING]

CFL9. How much did you pay PER BULB for the <cfl_qty> CFLs that received a discount or rebate, after the discount or rebate?

[THE PRICE AFTER THE REBATE THEY RECEIVED]



Appendices

	[RECORD QUANTITY]	CFL10
97	[Don't know]	CFL10
98	[Refused]	CFL10

CFL10. How many CFLs would you have purchased if they cost \$1.00 more per bulb?

	[RECORD QUANTITY]	CFL11
97	[Don't know]	CFL11
98	[Refused]	CFL11

CFL11. What if they cost \$2.00 more per bulb?

[IF NECESSARY: **How many would you have purchased?**]

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	CFL12
97	[Don't know]	CFL12
98	[Refused]	CFL12

CFL12. [CFL14 \geq \$1.00] What if they cost \$1.00 less per bulb?

[IF NECESSARY: **How many would you have purchased?**]

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	CFL13
97	[Don't know]	CFL13
98	[Refused]	CFL13



Appendices

CFL13. How did you decide which CFLs to purchase?

[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

1	[Bought what was on sale]	CFL14
2	[utility logo/sticker/signs]	CFL14
3	[Looked at wattage]	CFL14
4	[Looked at lumens]	CFL14
5	[Already familiar with/use this model]	CFL14
6	[Brand name/ Already know /use this manufacturer's products]	CFL14
7	[Recommendation from friend or family member]	CFL14
8	[Recommendation from store staff]	CFL14
9	[Bought only bulbs they had available	CFL14
10	[Just got whatever was in kit]	CFL14
11	Need	CFL14
12	Try new options	CFL14
77	[Other (specify)]	CFL14
97	[Don't know]	CFL14
98	[Refused]	CFL14

[IF <<CFL4>> INCLUDES 1, 2, 3, 4, 5, 6 READ CFL14; ELSE GOTO CFL11]

CFL14. For the CFLs that you purchased at a store, were they packaged in single packs, multi-packs, or both?

1	[Single packs]	CFL15
2	[Multi-packs]	CFL15
3	[Both]	CFL15
97	[Don't know]	CFL15
98	[Refused]	CFL15

CFL15. When you purchased the CFLs at a store, do you recall seeing any signs, displays, brochures, or other marketing materials providing information about them?

1	[Yes]	CFL16
2	[No]	CFL17
97	[Don't know]	CFL17
98	[Refused]	CFL17

CFL16. What kind of information or marketing materials do you recall seeing?

[ACCEPT MULTIPLE RESPONSES.]

1	[Brochure]	CFL17
2	[Sign]	CFL17
3	[Display]	CFL17
4	Coupon	CFL17
77	[Other (specify)]	CFL17
97	[Don't know]	CFL17



Appendices

98	[Refused]	CFL17
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CFL17. Were there special promotions or price discounts on CFLs at the store when you purchased the CFL(s)? [INCLUDING THE REBATES THAT THEY RECEIVED]

1	[Yes]	CFL18
2	[No]	CFL19
97	[Don't know]	CFL19
98	[Refused]	CFL19

CFL18. Who offered the promotion or price discount?

1	[Efficiency United / Energy Optimization]	CFL19
2	[Utility]	CFL19
3	[Store]	CFL19
4	[Manufacturer]	CFL19
77	[Other, Specify ____]	CFL19
97	[Don't know]	CFL19
98	[Refused]	CFL19

CFL19. If the store where you purchased the CFLs had not been carrying them, which of the following best describes what you would have done?

[READ CHOICES]

1	bought regular incandescent bulbs at the same store	CFLI1
2	bought CFLs from a different store	CFLI1
3	not purchased any bulbs	CFLI1
4	Price Determinant	CFLI1
77	Other (specify)	CFLI1
97	[Don't know]	CFLI1
98	[Refused]	CFLI1

CFL INSTALLATION

Now I'm going to ask some questions about what you did with the bulbs after you took them home.

CFLI1. Of the <cfl_qty> CFL bulbs you purchased, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	If >0, CFLI1a; If 0, skip to CFLT1
97	[Don't know]	CFLT1
98	[Refused]	CFLT1



Appendices

CFLI1a. Are all of them installed at <address>?

1	[Yes]	CFLI2
2	[No]	CFLI1b
97	[Don't know]	CFLI2
98	[Refused]	CFLI2

CFLI1b. How many are installed at <address>?

	[RECORD #]	CFLI1c
97	[Don't know]	CFLI1c
98	[Refused]	CFLI1c

CFLI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	CFL1e
2	[Alpena Power]	CFL1e
3	[Bayfield Electric Cooperative]	CFL1e
4	[Cloverland Electric Coop]	CFL1e
5	[Daggett Electric Department]	CFL1e
6	[Edison Sault Electric Company]	CFL1e
7	[Great Lakes Energy coop]	CFL1e
8	[HomeWorks Tri-County electric Coop]	CFL1e
9	[Indiana Michigan Power Company]	CFL1e
10	[Midwest Energy Coop]	CFL1e
11	[Ontonagon County Rural Electrification]	CFL1e
12	[Presque Isle Electric and Gas]	CFL1e
13	[Thumb Electric]	CFL1e
14	[Upper Penninsula Power Company]	CFL1e
15	[WE Energies]	CFL1e
16	[Wisconsin Public Service or "WPS"]	CFL1e
17	[Xcel Energy]	CFL1e
18	[City of Escanaba]	CFL1e
19	[City of Stephenson]	CFL1e
20	[Marquette Board of Light & Power]	CFL1e
21	[Newberry Water & Light]	CFL1e
22	[Detroit Edison or "DTE"]	CFL1d
23	[Consumers Energy]	CFL1d
77	[Other (specify)_____]	CFL1d
97	[Don't know]	CFL1e



Appendices

98	[Refused]	CFL1e
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[IF CFL1c INCLUDES 22, 23, or 77, ASK CFL1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>
ELSE GOTO CFL1e]

CFL1d. How many bulbs are installed in locations that get electricity from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	CFL1e
97	[Don't know]	CFL1e
98	[Refused]	CFL1e

CFL1e. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	CFLI2
1	Installed at another address	CFLI2
2	Gave away	CFLI2
97	[Don't know]	CFLI2
98	[Refused]	CFLI2

CFLI2. Of the <<CFLI1>> bulbs you installed, how many replaced a bulb that was still working?
[IF NECESSARY: I'm referring to any kind of replaced bulb, not necessarily another CFL.]

	[RECORD NUMBER]	IF ANSWER > 0 GOTO CFLI3 ELSE GOTO CFLI4
97	[Don't know]	CFLI4
98	[Refused]	CFLI4

CFLI3. Would you have replaced these working bulbs if the Energy Star Products program had not discounted the CFLs you purchased? I'm referring to replacing them with any kind of bulb, not necessary a CFL.

1	[Yes]	CFLI4
2	[No]	CFLI4
3	[I did not replace any working bulbs]	CFLI4
97	[Don't know]	CFLI4
98	[Refused]	CFLI4

CFLI4. You said earlier that you installed <<CFLI1>> CFLs. If the program had not discounted the CFLs, how many of each of the following types of bulbs would you have installed in the same fixtures?

- a. Incandescent
- b. CFLs



Appendices

- c. LEDs
d. Or Something else?

	[RECORD NUMBER]	
97	[Don't know]	MAKE SURE CFLI5a + CFLI5b + CFLI5c + CFLI5d = CFLI1 THEN GOTO CFLT1
98	[Refused]	

CFL STORAGE

[IF <<CFLI1>> EQUALS <CFL_QTY>, GOTO CFLS1]

CFLT1. You said you purchased <cfl_qty> CFL bulbs and installed <<CFLI1>> of them. Are the rest in storage?

1	[Yes]	CFLS1
2	[No]	CFLT2
97	[Don't know]	CFLS1
98	[Refused]	CFLS1

CFLT2. What did you do with the other bulbs?

	[RECORD VERBATIM]	CFLS1
1	Recycle	CFLS1
2	Threw Away	CFLS1
3	Spare	CFLS1
97	[Don't know]	CFLS1
98	[Refused]	CFLS1

CFL SATISFACTION

[IF CFLI1 = 0 (none installed) GOTO SMART POWER STRIP SECTION]

-Now I have some questions about how satisfied you are with the CFLs the program discounted.

S1. Using a scale of 1 to 5, where 1 means you are "not at all satisfied" and 5 means you are "very satisfied," how satisfied are you with CFLs in general?

1	Not at all satisfied	00
2		00
3		00
4		00
5	Very satisfied	00
97	[Don't know]	00
98	[Refused]	00

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Using the same scale, how would you rate CFLs in terms of ...

[ROTATE ORDER].

- S2. The color of the light they provide?
 S3. The brightness of the light they provide?
 S4. The amount of time they take to light up?
 S5. The way they fit into light fixtures?
 S6. The way they look in light fixtures?
 S7. How long they last before burning out?

1	Not at all satisfied	CFLS8
2		CFLS8
3		CFLS8
4		CFLS8
5	Very satisfied	CFLS8
97	[Don't know]	CFLS8
98	[Refused]	CFLS8

- S8. [IF CFLS3 < 3] You said you were less than satisfied with the brightness. Are the CFLs too bright, or not bright enough?

1	Too bright	CFLS9
2	Not bright enough	CFLS9
97	[Don't know]	CFLS9
98	[Refused]	CFLS9

- S9. In general, what are the best features of CFLs?
 [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

1	Last longer before burning out	CFLS10
2	Save money/reduce electric bill	CFLS10
3	Save/conserves energy/electricity	CFLS10
4	Resource conservation benefits/better for environment/"green"/global warming	CFLS10
5	CFLs work better/higher quality than incandescent bulbs	CFLS10
6	None	CFLS10
7	Style	CFLS10
8	Low Heat Output	CFLS10
9	Easy Installation	CFLS10
77	Other (specify)	CFLS10
97	[Don't know]	CFLS10
98	[Refused]	CFLS10

- CFLS10. Based on your experience with these CFLs how likely are you to purchase CFLs in the future? Would you say you say very likely, somewhat likely, not very likely, or not at all likely?



Appendices

1	[Very likely]	CFLS11
2	[Somewhat likely]	CFLS11
3	[Not very likely]	CFLS11
4	[Not at all likely]	GOTO SMART POWER STRIP SECTION
97	[Don't know]	CFLS11
98	[Refused]	CFLS11

CFLS11. How likely are you to purchase bulbs in the future at full price of 3 to 4 dollars each? Would you say you say very likely, somewhat likely, not very likely, or not at all likely?

1	[Very likely]	GOTO SMART POWER STRIP SECTION
2	[Somewhat likely]	GOTO SMART POWER STRIP SECTION
3	[Not very likely]	GOTO SMART POWER STRIP SECTION
4	[Not at all likely]	GOTO SMART POWER STRIP SECTION
97	[Don't know]	GOTO SMART POWER STRIP SECTION
98	[Refused]	GOTO SMART POWER STRIP SECTION

SMART POWER STRIPS

[IF <SPS_qty> = 0, GOTO NIGHT LIGHT SECTION]

SPS1. Our records show you purchased <sps_qty> smart power strips.

Does <sps_qty> smart power strips sound correct?

[IF NECESSARY: <sps_kit_qty> were part of a kit with other energy saving items.]

1	[Yes]	SPS2
2	[No]	SPS1b
97	[Don't know]	SPS2
98	[Refused]	GOTO NIGHT LIGHT section

SPS1b. About how many smart power strips did you purchase?

[IF <SPS_kit_qty> >0 ADD] Including the ones in the kit.

	[RECORD #]	<SPS_qty> = answer GOTO SPS2
97	[Don't know]	SPS2
98	[Refused]	GOTO NIGHT LIGHT section

SPS2. Where did you buy the smart power strip(s)?

[ALLOW MULTIPLE ANSWERS. DO NOT READ LIST.]

1	[Home improvement or hardware store (such as Ace, Home Depot, Menards or True Value)]	SPS3
2	[Department store (Wal-Mart, Target, K-Mart, Sears)]	SPS3
3	[Big box retailer (Best Buy)]	SPS3
4	[Warehouse store (Costco, Sam's Club)]	SPS3
5	[Supermarket, food store (Meijer, Kroger, Farmer Jack, Busch's)]	SPS3
6	[Drug store (Atlas, CVS, Walgreen's, Medicine Shoppe)]	SPS3
7	[Mail-order catalog]	SPS11
8	[Over the Internet]	SPS11
9	[Home energy show]	SPS11
10	[Utility sponsored event/meeting]	SPS11
11	[Utility office]	SPS11
12	Community Event/ Fair	SPS11
77	[Other (specify)]	SPS11
97	[Don't know]	SPS11
98	[Refused]	SPS11

[IF <<SPS2>> INCLUDES 1, 2, 3, 4, 5, or 6, READ SPS3; ELSE GOTO SPS11]

SPS3. When you purchased the smart power strip(s) at a store, do you recall seeing any signs, displays, brochures, or other marketing materials providing information about them?

1	[Yes]	SPS4
2	[No]	SPS7
97	[Don't know]	SPS7
98	[Refused]	SPS7



Appendices

SPS4. What kind of information or marketing materials do you recall seeing?
[ACCEPT MULTIPLE RESPONSES.]

1	[Brochure]	SPS7
2	[Sign]	SPS7
3	[Display]	SPS7
77	[Other (specify)]	SPS7
97	[Don't know]	SPS7
98	[Refused]	SPS7

[SPS5, SPS6 INTENTIONALLY MISSING]

SPS7. Were there special rebates or price discounts on smart power strips at the store when you purchased them?

1	[Yes]	SPS8
2	[No]	SPS11
97	[Don't know]	SPS11
98	[Refused]	SPS11

SPS8. Who offered the rebates or price discount?

1	[Efficiency United / Energy Optimization]	SPS11
2	[Utility]	SPS11
3	[Store]	SPS11
4	[Manufacturer]	SPS11
77	[Other, Specify ____]	SPS11
97	[Don't know]	SPS11
98	[Refused]	SPS11

SPS11. Of the <sps_qty> smart power strips you purchased, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <SPS_qty> GOTO SPS11b IF < <SPS_qty> GOTO SPS11a;
97	[Don't know]	GOTO NIGHT LIGHT SECTION
98	[Refused]	GOTO NIGHT LIGHT SECTION



Appendices

SPSI1a. Why aren't all of them installed?

	[RECORD VERBATIM]	IF SPSI1 = 0 GOTO NIGHT LIGHT SECTION ELSE GOTO SPSI1b
1	No use/ need	
2	No time	
3	Already installed	
4	Need help using/ installing	
5	Broken	
6	Preference	
97	[Don't know]	
98	[Refused]	

SPSI1b. How many are installed at <address>?

	[RECORD #]	IF answer = <<SPSI1>> GOTO SPS_V1 IF answer less than <<SPSI1>> GOTO SPSI1c
97	[Don't know]	SPSI1c
98	[Refused]	SPSI1c



Appendices

SPSI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	SPSI1e
2	[Alpena Power]	SPSI1e
3	[Bayfield Electric Cooperative]	SPSI1e
4	[Cloverland Electric Coop]	SPSI1e
5	[Daggett Electric Department]	SPSI1e
6	[Edison Sault Electric Company]	SPSI1e
7	[Great Lakes Energy coop]	SPSI1e
8	[HomeWorks Tri-County electric Coop]	SPSI1e
9	[Indiana Michigan Power Company]	SPSI1e
10	[Midwest Energy Coop]	SPSI1e
11	[Ontonagon County Rural Electrification]	SPSI1e
12	[Presque Isle Electric and Gas]	SPSI1e
13	[Thumb Electric]	SPSI1e
14	[Upper Penninsula Power Company]	SPSI1e
15	[WE Energies]	SPSI1e
16	[Wisconsin Public Service or "WPS"]	SPSI1e
17	[Xcel Energy]	SPSI1e
18	[City of Escanaba]	SPSI1e
19	[City of Stephenson]	SPSI1e
20	[Marquette Board of Light & Power]	SPSI1e
21	[Newberry Water & Light]	SPSI1e
22	[Detroit Edison or "DTE"]	SPSI1d
23	[Consumers Energy]	SPSI1d
77	[Other (specify) _____]	SPSI1d
97	[Don't know]	SPSI1e
98	[Refused]	SPSI1e

[IF SPSI1c INCLUDES 22, 23, or 77, ASK SPSI1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>

ELSE GOT SPSI1e]

SPSI1d. How many smart power strips are installed in locations that get electricity from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	SPSI1e
97	[Don't know]	SPSI1e
98	[Refused]	SPSI1e



Appendices

SPSI1e. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	SPS_V1
1	Gave away	SPS_V1
2	Do not live there	SPS_V1
3	Not needed	SPS_V1
97	[Don't know]	SPS_V1
98	[Refused]	SPS_V1

SPS_V1. What is plugged into the Smart power strip(s)?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[TV]	SPS_D1a
2	[DVD player]	SPS_D1a
3	[Video Game console]	SPS_D1a
4	[Computer]	SPS_D1a
5	[Kitchen Gadgets (toaster, bread machine, etc)]	SPS_D1a
6	[Refrigerator]	SPS_D1a
7	[Washing Machine / Dryer]	SPS_D1a
8	[Stereo system]	SPS_D1a
9	[Lamps/Lights]	SPS_D1a
10	[Computer peripherals – printer, scanner, copier]	SPS_D1a
11	[Computer monitor]	SPS_D1a
12	Clock	SPS_D1a
13	Heater	SPS_D1a
14	Telephone	SPS_D1a
15	Recreational	SPS_D1a
77	[Other, specify _____]	SPS_D1a
97	[Don't know]	SPS_D1a
98	[Refused]	SPS_D1a

SPS NET TO GROSS

[IF <sps_nokit_qty> = 0 AND P4 = 4, GOTO NIGHT LIGHT SECTION]



Appendices

SPS TIMING

SPS_D1a. I'd like to know about the effect, if any, that program discounts had on your decision to purchase the power strip(s) when you did. I'm referring to your decision to buy any power strips, not just energy efficient smart power strips. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	SPS_D1aO
2	[Earlier]	SPS_D1aO
3	[Later]	SPS_D1aO
4	[Never]	SPS_D1aO
97	[Don't know]	SPS_D2a
98	[Refused]	SPS_D2a

SPS_D1aO. Why do you say that you would have purchased a power strip <<SPS_D1a>>?

	[RECORD RESPONSE VERBATIM]	SPS_D1b
1	Cost	SPS_D1b
2	Energy Efficiency	SPS_D1b
3	Need	SPS_D1b
4	Awareness/ Convenience	SPS_D1b
5	Would Not Purchase	SPS_D1b
97	[Don't know]	SPS_D1b
98	[Refused]	SPS_D1b

IF SPS_D1a ≠ 3 LATER, SKIP TO SPS_D3

SPS_D1b. Approximately how many months later?

	[RECORD # months]	SPS_D2a
97	[Don't know]	SPS_D2a
98	[Refused]	SPS_D2a

SPS EFFICIENCY

SPS_D2a. Next, I'd like to know about the effect, if any, that program discounts had on your decision to purchase energy saving power strips.

Without the program would you have purchased a standard power strip or an energy efficient smart power strip?

1	[energy efficient smart]	SPS_D2aO
2	[standard]	SPS_D2aO
97	[Don't know]	SPS_D2aO
98	[Refused]	SPS_D3

SPS_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	SPS_D3
97	[Don't know]	SPS_D3
98	[Refused]	SPS_D3

SPS QUANTITY

[IF <sps_qty> = 1 AND <<SPS1>> = 1, GOTO SPS_D4]

SPS_D3. Finally, I'd like to know about the effect, if any, that program discounts had on the number of smart power strips that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number/size]	SPS_D3O
2	[Fewer/smaller]	SPS_D3O
3	[More/larger]	SPS_D3O
4	[None at all]	SPS_D3O
97	[Don't know]	SPS_D3O
98	[Refused]	SPS_D4

SPS_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	SPS_D3a
1	Need	SPS_D3a
2	Cost too much	SPS_D3a
3	Energy Bill Savings	SPS_D3a
4	Would not purchase	SPS_D3a
97	[Don't know]	SPS_D3a
98	[Refused]	SPS_D3a



Appendices

IF SPS_D3 = 1 same number/size or 4 none at all, SKIP TO SPS_D4

SPS_D3a. How many smart power strips would you have purchased without discounts from the program?

	[RECORD Number]	SPS_D4
97	[Don't know]	SPS_D4
98	[Refused]	SPS_D4

SPS_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of smart power strips. I'd like you to summarize the programs' influence on the timing, efficiency and number of smart power strips that you purchased.

	[RECORD RESPONSE VERBATIM]	SPS_D5
1	Program Timing	SPS_D5
2	Needed	SPS_D5
3	Discount Price	SPS_D5
4	Lower Electric Bill	SPS_D5
5	Energy Efficiency	SPS_D5
6	Quality Product	SPS_D5
7	No Influence	SPS_D5
97	[Don't know]	SPS_D5
98	[Refused]	SPS_D5

SPS_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	GOTO NIGHT LIGHT SECTION
1	No	GOTO NIGHT LIGHT SECTION
2	Satisfied	GOTO NIGHT LIGHT SECTION
3	Great Price	GOTO NIGHT LIGHT SECTION
4	Dissatisfied	GOTO NIGHT LIGHT SECTION
97	[Don't know]	GOTO NIGHT LIGHT SECTION
98	[Refused]	GOTO NIGHT LIGHT SECTION

LED NIGHT LIGHTS

[IF <NL_qty> = 0, GOTO FAUCET AERATOR SECTION]

**NL1. Our records show you got <nl_qty> LED night lights at a discount or for free.
Does <nl_qty> LED night lights sound correct?**

[IF NECESSARY: <nl_kit_qty> were in a kit with other energy saving items.]

1	[Yes]	NL2
2	[No]	NL1b
97	[Don't know]	NL2
98	[Refused]	GOTO FAUCET AERATOR SECTION

NL1b. About how many LED nightlights did you purchase?

[IF <NL_kit_qty> >0 ADD] Including the ones in the kit.

	[RECORD #]	<NL_qty> = answer GOTO NL2
97	[Don't know]	NL2
98	[Refused]	GOTO FAUCET AERATOR SECTION

NL2. Where did you buy the LED night light(s)?

[ALLOW MULTIPLE ANSWERS. DO NOT READ LIST.]

1	[Home improvement or hardware store (such as Ace, Home Depot, Menards or True Value)]	NL11
2	[Department store (Wal-Mart, Target, K-Mart, Sears)]	NL11
3	[Big box retailer (Best Buy)]	NL11
4	[Warehouse store (Costco, Sam's Club)]	NL11
5	[Supermarket, food store (Meijer, Kroger, Farmer Jack, Busch's)]	NL11
6	[Drug store (Atlas, CVS, Walgreen's, Medicine Shoppe)]	NL11
7	[Mail-order catalog]	NL11
8	[Over the Internet]	NL11
9	[Home energy show]	NL11
10	[Utility sponsored event/meeting]	NL11
11	[Utility office]	NL11
12	Fair	NL11
77	[Other (specify)]	NL11
97	[Don't know]	NL11
98	[Refused]	NL11

NL11. Of the <nl_qty> LED nightlights you purchased, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <NL_qty> GOTO NL11b IF < <NL_qty> GOTO NL11a;
97	[Don't know]	GOTO FAUCET AERATOR SECTION
98	[Refused]	GOTO FAUCET AERATOR SECTION



Appendices

NLI1a. Why aren't all of them installed?

	[RECORD VERBATIM]	IF NLI1 = 0 GOTO FAUCET AERATOR SECTION ELSE GOTO NLI1b
1	Does not fit	
2	No need	
3	Did not receive/ buy	
4	No time	
5	Preference	
6	Broken	
97	[Don't know]	
98	[Refused]	

NLI1b. How many are installed at <address>?

	[RECORD #]	IF answer = <<NLI1>> GOTO NL_D1a IF answer less than <<NLI1>> GOTO NLI1c
97	[Don't know]	NLI1c
98	[Refused]	NLI1c

NLI1b. How many are installed at <address>?

	[RECORD #]	NLI1c
97	[Don't know]	NLI1c
98	[Refused]	NLI1c



Appendices

NLI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	NLI1e
2	[Alpena Power]	NLI1e
3	[Bayfield Electric Cooperative]	NLI1e
4	[Cloverland Electric Coop]	NLI1e
5	[Daggett Electric Department]	NLI1e
6	[Edison Sault Electric Company]	NLI1e
7	[Great Lakes Energy coop]	NLI1e
8	[HomeWorks Tri-County electric Coop]	NLI1e
9	[Indiana Michigan Power Company]	NLI1e
10	[Midwest Energy Coop]	NLI1e
11	[Ontonagon County Rural Electrification]	NLI1e
12	[Presque Isle Electric and Gas]	NLI1e
13	[Thumb Electric]	NLI1e
14	[Upper Penninsula Power Company]	NLI1e
15	[WE Energies]	NLI1e
16	[Wisconsin Public Service or "WPS"]	NLI1e
17	[Xcel Energy]	NLI1e
18	[City of Escanaba]	NLI1e
19	[City of Stephenson]	NLI1e
20	[Marquette Board of Light & Power]	NLI1e
21	[Newberry Water & Light]	NLI1e
22	[Detroit Edison or "DTE"]	NLI1d
23	[Consumers Energy]	NLI1d
77	[Other (specify) _____]	NLI1d
97	[Don't know]	NLI1e
98	[Refused]	NLI1e

[IF NLI1c INCLUDES 22, 23, or 77, ASK NLI1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>
ELSE GOTO NLI1e]

NLI1d. How many LED nightlights are installed in locations that get electricity from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	NLI1e
97	[Don't know]	NLI1e
98	[Refused]	NLI1e



Appendices

NLI1e. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	NL_D1a
97	[Don't know]	NL_D1a
98	[Refused]	NL_D1a

NL NET TO GROSS

[IF <nl_nokit_qty> = 0 AND P5 = 4, GOTO NEXT MEASURE SECTION]

NL TIMING

NL_D1a. I'd like to know about the effect, if any, that program discounts had on your decision to purchase the night light(s) when you did. I'm referring to your decision to purchase any night lights, not just energy efficient LED night lights. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	NL_D1aO
2	[Earlier]	NL_D1aO
3	[Later]	NL_D1aO
4	[Never]	NL_D1aO
97	[Don't know]	NL_D2a
98	[Refused]	NL_D2a

NL_D1aO. Why do you say that you would have purchased a night light <<NL_D1a>>?

	[RECORD RESPONSE VERBATIM]	NL_D1b
1	Need	NL_D1b
2	Rebate	NL_D1b
3	Energy Efficiency Awareness	NL_D1b
4	Price	NL_D1b
5	Already Have	NL_D1b
6	No Use	NL_D1b
97	[Don't know]	NL_D1b
98	[Refused]	NL_D1b

IF NL_D1a ≠ 3 LATER, SKIP TO NL_D2a

NL_D1b. Approximately how many months later?

	[RECORD # months]	NL_D2a
97	[Don't know]	NL_D2a
98	[Refused]	NL_D2a

NL EFFICIENCY

NL_D2a. Next, I'd like to know about the effect, if any, that program discounts had on your decision to purchase energy efficient LED night lights.

Without the program would you have purchased a standard night lights or energy efficient LED night lights?

1	[energy efficient LED]	NL_D2aO
2	[standard]	NL_D2aO
97	[Don't know]	NL_D2aO
98	[Refused]	NL_D3

NL_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	NL_D3
1	New Program Awareness	NL_D3
2	Cost	NL_D3
3	Energy Efficiency	NL_D3
4	Would Not Have Purchased	NL_D3
97	[Don't know]	NL_D3
98	[Refused]	NL_D3

NL QUANTITY

[IF <nl_qty> = 1, GOTO NL_D4]

NL_D3. Finally, I'd like to know about the effect, if any, that program discounts had on the number of LED night lights that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number/size]	NL_D3O
2	[Fewer/smaller]	NL_D3O
3	[More/larger]	NL_D3O
4	[None at all]	NL_D3O
97	[Don't know]	NL_D3O
98	[Refused]	NL_D4

NL_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	NL_D3a
1	Need	NL_D3a
2	Cost	NL_D3a
3	Energy Efficiency Awareness	NL_D3a
97	[Don't know]	NL_D3a
98	[Refused]	NL_D3a



Appendices

IF NL_D3 = 1 same number/size or 4 none at all, SKIP TO NL_D4

NL_D3a. How many LED night lights would you have purchased without discounts from the program?

	[RECORD Number]	NL_D4
97	[Don't know]	NL_D4
98	[Refused]	NL_D4

NL_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of LED night lights. I'd like you to summarize the programs' influence on the timing, efficiency and number of LED night lights that you purchased.

	[RECORD RESPONSE VERBATIM]	NL_D5
1	Cost	NL_D5
2	Energy Efficiency Kit	NL_D5
3	Program Timing/ Awareness	NL_D5
4	Rebate	NL_D5
5	No Influence	NL_D5
97	[Don't know]	NL_D5
98	[Refused]	NL_D5

NL_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	GOTO FAUCET AERATOR SECTION
1	Satisfied	GOTO FAUCET AERATOR SECTION
2	Included in Kit	GOTO FAUCET AERATOR SECTION
3	No	GOTO FAUCET AERATOR SECTION
4	Will Not Buy More	GOTO FAUCET AERATOR SECTION
97	[Don't know]	GOTO FAUCET AERATOR SECTION
98	[Refused]	GOTO FAUCET AERATOR SECTION

FAUCET AERATORS

[IF <FA_QTY> = 0, GOTO PIPE WRAP SECTION]

- FA1. Our records show you purchased <fa_qty> faucet aerators.**
Does <fa_qty> faucet aerators sound correct?
 [IF NECESSARY: <fa_kit_qty> were part of a kit with other energy saving items.]

1	[Yes]	FA2
2	[No]	FA1b
97	[Don't know]	FA2
98	[Refused]	GOTO PIPE WRAP SECTION

- FA1b. About how many faucet aerators did you purchase?**
 [IF <fa_kit_qty> >0 ADD] Including the ones in the kit.

	[RECORD #]	<fa_qty> = answer GOTO FA2
97	[Don't know]	FA2
98	[Refused]	GOTO PIPE WRAP SECTION

- FA2. Where did you buy the faucet aerator(s)?**
 [ALLOW MULTIPLE ANSWERS. DO NOT READ LIST.]

1	[Home improvement or hardware store (such as Ace, Home Depot, Menards or True Value)]	FA3
2	[Department store (Wal-Mart, Target, K-Mart, Sears)]	FA3
3	[Big box retailer (Best Buy)]	FA3
4	[Warehouse store (Costco, Sam's Club)]	FA3
5	[Supermarket, food store (Meijer, Kroger, Farmer Jack, Busch's)]	FA3
6	[Drug store (Atlas, CVS, Walgreen's, Medicine Shoppe)]	FA3
7	[Mail-order catalog]	FAI1
8	[Over the Internet]	FAI1
9	[Home energy show]	FAI1
10	[Utility sponsored event/meeting]	FAI1
11	[Utility office]	FAI1
12	Trade Fair	FAI1
77	[Other (specify)]	FAI1
97	[Don't know]	FAI1
98	[Refused]	FAI1

[IF <<FA2>> INCLUDES 1, 2, 3, 4, 5, or 6, READ FA3; ELSE GOTO FAI1]

- FA3. When you purchased the faucet aerator(s) at a store, do you recall seeing any signs, displays, brochures, or other marketing materials providing information about them?**

1	[Yes]	FA4
2	[No]	FA7
97	[Don't know]	FA7
98	[Refused]	FA7



Appendices

FA4. What kind of information or marketing materials do you recall seeing?
[ACCEPT MULTIPLE RESPONSES.]

1	[Brochure]	FA7
2	[Sign]	FA7
3	[Display]	FA7
77	[Other (specify)]	FA7
97	[Don't know]	FA7
98	[Refused]	FA7

[FA5, FA6 INTENTIONALLY MISSING]

FA7. Were there special rebates or price discounts on faucet aerators at the store when you purchased it?

1	[Yes]	FA8
2	[No]	FAI1
97	[Don't know]	FAI1
98	[Refused]	FAI1

FA8. Who offered the rebates or price discount?

1	[Efficiency United / Energy Optimization]	FAI1
2	[Utility]	FAI1
3	[Store]	FAI1
4	[Manufacturer]	FAI1
77	[Other, Specify ____]	FAI1
97	[Don't know]	FAI1
98	[Refused]	FAI1

FAI1. Of the <fa_qty> faucet aerators you purchased, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <FA_qty> GOTO FAI1b IF < <FA_qty> GOTO FAI1a;
97	[Don't know]	GOTO PIPE WRAP SECTION
98	[Refused]	GOTO PIPE WRAP SECTION



Appendices

FAI1a. Why aren't all of them installed?

	[RECORD VERBATIM]	
1	Fit	
2	Need	
3	Time/ Need help	
4	Gave Away	
5	Already Had Them	
6	No Use/ Didn't Like	
97	[Don't know]	
98	[Refused]	IF FAI1 = 0 GOTO PIPE WRAP SECTION ELSE GOTO FAI1b

FAI1b. How many are installed at <address>?

	[RECORD #]	IF answer = <<FAI1>> GOTO FA_D1a IF answer less than <<FAI1>> GOTO FAI1c
97	[Don't know]	FAI1c
98	[Refused]	FAI1c

FAI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	FAI1d
2	[Alpena Power]	FAI1d
3	[Bayfield Electric Cooperative]	FAI1d
4	[Cloverland Electric Coop]	FAI1d
5	[Daggett Electric Department]	FAI1d
6	[Edison Sault Electric Company]	FAI1d
7	[Great Lakes Energy coop]	FAI1d
8	[HomeWorks Tri-County electric Coop]	FAI1d
9	[Indiana Michigan Power Company]	FAI1d
10	[Midwest Energy Coop]	FAI1d
11	[Ontonagon County Rural Electrification]	FAI1d
12	[Presque Isle Electric and Gas]	FAI1d
13	[Thumb Electric]	FAI1d
14	[Upper Penninsula Power Company]	FAI1d
15	[WE Energies]	FAI1d
16	[Wisconsin Public Service or "WPS"]	FAI1d
17	[Xcel Energy]	FAI1d
18	[City of Escanaba]	FAI1d
19	[City of Stephenson]	FAI1d
20	[Marquette Board of Light & Power]	FAI1d
21	[Newberry Water & Light]	FAI1d
22	[Detroit Edison or "DTE"]	FAI1d
23	[Consumers Energy]	FAI1d
77	[Other (specify) _____]	FAI1d
97	[Don't know]	FAI1d
98	[Refused]	FAI1d



Appendices

FAI1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	FAI1e
2	[SEMCO Energy]	FAI1e
3	[Wisconsin Public Service or "WPS"]	FAI1e
4	[Xcel Energy]	FAI1e
5	[Detroit Edison or "DTE"]	FAI1e
6	[Consumers Energy]	FAI1e
7	[Home does not have gas service]	FAI1e
77	[Other, Specify ____]	FAI1e
97	[Don't know]	FAI1e
98	[Refused]	FAI1e

[IF FAI1c INCLUDES 22, 23, or 77, OR FAI1d INCLUDES 5, 6, or 77 ASK NLI1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>
ELSE GOTO FAI1f]

FAI1e. How many faucet aerators are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	FAI1f
97	[Don't know]	FAI1f
98	[Refused]	FAI1f

FAI1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	FA_D1a
97	[Don't know]	FA_D1a
98	[Refused]	FA_D1a

FA NET TO GROSS

[IF <fa_nokit_qty> = 0 AND P6 = 4, GOTO NEXT MEASURE SECTION]

FA TIMING

FA_D1a. I'd like to know about the effect, if any, that program discounts had on your decision to purchase the faucet aerator(s) when you did. I'm referring to your decision to purchase any faucet aerator, not just an energy efficient one. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	FA_D1aO
2	[Earlier]	FA_D1aO
3	[Later]	FA_D1aO
4	[Never]	FA_D1aO
97	[Don't know]	FA_D2a
98	[Refused]	FA_D2a

FA_D1aO. Why do you say that you would have purchased a faucet aerator <<FA_D1a>>?

	[RECORD RESPONSE VERBATIM]	FA_D1b
1	Need	FA_D1b
2	Preference	FA_D1b
3	Cost	FA_D1b
4	Awareness	FA_D1b
97	[Don't know]	FA_D1b
98	[Refused]	FA_D1b

IF FA_D1a ≠ 3 LATER, SKIP TO FA_D3

FA_D1b. Approximately how many months later would you have purchased the aerator?

	[RECORD # months]	FA_D2a
97	[Don't know]	FA_D2a
98	[Refused]	FA_D2a

FA EFFICIENCY

FA_D2a. Next, I'd like to know about the effect, if any, that program discounts had on your decision to purchase an energy efficient faucet aerator.

Without the program would you have purchased a standard aerator or an energy efficient aerator?

1	[energy efficient]	FA_D2aO
2	[standard]	FA_D2aO
97	[Don't know]	FA_D2aO
98	[Refused]	FA_D3

FA_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	FA_D3
1	Knowledge	FA_D3
2	Energy Efficiency	FA_D3
3	Cost	FA_D3
4	Need	FA_D3
5	Preference	FA_D3
97	[Don't know]	FA_D3
98	[Refused]	FA_D3

FA QUANTITY

[IF <fa_qty> = 1, GOTO FA_D4]

FA_D3. Finally, I'd like to know about the effect, if any, that program discounts had on the number of faucet aerators that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number/size]	FA_D3O
2	[Fewer/smaller]	FA_D3O
3	[More/larger]	FA_D3O
4	[None at all]	FA_D3O
97	[Don't know]	FA_D3O
98	[Refused]	FA_D4

FA_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	FA_D3a
1	Knowledge	FA_D3a
2	Need	FA_D3a
3	Already Efficient	FA_D3a
4	Availability	FA_D3a
5	Cost	FA_D3a
97	[Don't know]	FA_D3a
98	[Refused]	FA_D3a

IF FA_D3 = 1 same number/size or 4 none at all, SKIP TO FA_D4

FA_D3a. How many faucet aerators would you have purchased without discounts from the program?

	[RECORD Number]	FA_D4
97	[Don't know]	FA_D4
98	[Refused]	FA_D4

FA_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of faucet aerators. I'd like you to summarize the programs' influence on the timing and number of faucet aerators that you purchased.

	[RECORD RESPONSE VERBATIM]	FA_D5
1	Program timing/ Convenience	FA_D5
2	Need	FA_D5
3	No Influence	FA_D5
4	Incentive	FA_D5
5	Price	FA_D5
97	[Don't know]	FA_D5
98	[Refused]	FA_D5

FA_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	GOTO PIPE WRAP SECTION
1	Satisfied	GOTO PIPE WRAP SECTION
2	No	GOTO PIPE WRAP SECTION
3	Slow Flow	GOTO PIPE WRAP SECTION
97	[Don't know]	GOTO PIPE WRAP SECTION
98	[Refused]	GOTO PIPE WRAP SECTION



Appendices

PIPE WRAP

[IF <PW_QTY> = 0, GOTO SHOWERHEAD SECTION]

PW1. Our records show you purchased <pw_qty> feet of pipe wrap.

Does <pw_qty> feet of pipe wrap sound correct?

[IF NECESSARY: <pw_kit_qty> feet were included in a kit with other energy saving items.]

1	[Yes]	PW2
2	[No]	PW1b
97	[Don't know]	PW2
98	[Refused]	GOTO SHOWERHEAD SECTION

PW1b. About how many feet of pipe wrap did you purchase?

[IF <pw_kit_qty> >0 ADD] Including the ones in the kit.

	[RECORD #]	<pw_qty> = answer GOTO PW2
97	[Don't know]	PW2
98	[Refused]	GOTO SHOWERHEAD SECTION

PW2. Where did you buy the pipe wrap?

[ALLOW MULTIPLE ANSWERS. DO NOT READ LIST.]

1	[Home improvement or hardware store (such as Ace, Home Depot, Menards or True Value)]	PW3
2	[Department store (Wal-Mart, Target, K-Mart, Sears)]	PW3
3	[Big box retailer (Best Buy)]	PW3
4	[Warehouse store (Costco, Sam's Club)]	PW3
5	[Supermarket, food store (Meijer, Kroger, Farmer Jack, Busch's)]	PW3
6	[Drug store (Atlas, CVS, Walgreen's, Medicine Shoppe)]	PW3
7	[Mail-order catalog]	PW11
8	[Over the Internet]	PW11
9	[Home energy show]	PW11
10	[Utility sponsored event/meeting]	PW11
11	[Utility office]	PW11
77	[Other (specify)]	PW11
97	[Don't know]	PW11
98	[Refused]	PW11

[IF <<PW2>> INCLUDES 1, 2, 3, 4, 5, or 6, READ PW3; ELSE GOTO PW11]

PW3. When you purchased the pipe wrap at a store, do you recall seeing any signs, displays, brochures, or other marketing materials providing information about them?

1	[Yes]	PW4
2	[No]	PW7
97	[Don't know]	PW7
98	[Refused]	PW7



Appendices

PW4. What kind of information or marketing materials do you recall seeing?
[ACCEPT MULTIPLE RESPONSES.]

1	[Brochure]	PW7
2	[Sign]	PW7
3	[Display]	PW7
77	[Other (specify)]	PW7
97	[Don't know]	PW7
98	[Refused]	PW7

[PW5, PW6 INTENTIONALLY MISSING]

PW7. Were there special rebates or price discounts on pipe wrap at the store when you purchased it?

1	[Yes]	PW8
2	[No]	PW11
97	[Don't know]	PW11
98	[Refused]	PW11

PW8. Who offered the rebates or price discount?

1	[Efficiency United / Energy Optimization]	PW11
2	[Utility]	PW11
3	[Store]	PW11
4	[Manufacturer]	PW11
77	[Other, Specify ____]	PW11
97	[Don't know]	PW11
98	[Refused]	PW11

PW11. Of the <pw_qty> feet of pipe wrap you purchased, how much is currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <PW_qty> GOTO PW11b IF < <PW_qty> GOTO PW11a;
97	[Don't know]	GOTO SHOWERHEAD SECTION
98	[Refused]	GOTO SHOWERHEAD SECTION



Appendices

PWI1a. Why aren't all of them installed?

	[RECORD VERBATIM]	IF PW11 = 0 GOTO SHOWERHEAD SECTION ELSE GOTO PW11b
1	Already wrapped	
2	Did not receive/ purchase	
3	No need	
4	No Time	
5	Need help installing	
97	[Don't know]	
98	[Refused]	

PWI1b. How much is installed at <address>?

	[RECORD #]	IF answer = <<PW11>> GOTO PW_D1a IF answer less than <<PW11>> GOTO PW11c
97	[Don't know]	PW11c
98	[Refused]	PW11c



Appendices

PWI1c. What electric utilities serve the locations where the rest is installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	PWI1d
2	[Alpena Power]	PWI1d
3	[Bayfield Electric Cooperative]	PWI1d
4	[Cloverland Electric Coop]	PWI1d
5	[Daggett Electric Department]	PWI1d
6	[Edison Sault Electric Company]	PWI1d
7	[Great Lakes Energy coop]	PWI1d
8	[HomeWorks Tri-County electric Coop]	PWI1d
9	[Indiana Michigan Power Company]	PWI1d
10	[Midwest Energy Coop]	PWI1d
11	[Ontonagon County Rural Electrification]	PWI1d
12	[Presque Isle Electric and Gas]	PWI1d
13	[Thumb Electric]	PWI1d
14	[Upper Penninsula Power Company]	PWI1d
15	[WE Energies]	PWI1d
16	[Wisconsin Public Service or "WPS"]	PWI1d
17	[Xcel Energy]	PWI1d
18	[City of Escanaba]	PWI1d
19	[City of Stephenson]	PWI1d
20	[Marquette Board of Light & Power]	PWI1d
21	[Newberry Water & Light]	PWI1d
22	[Detroit Edison or "DTE"]	PWI1d
23	[Consumers Energy]	PWI1d
77	[Other (specify) _____]	PWI1d
97	[Don't know]	PWI1d
98	[Refused]	PWI1d

PW11d. What gas utility serves the locations where the rest is installed?

1	[Michigan Gas Utilities]	PW11e
2	[SEMC Energy]	PW11e
3	[Wisconsin Public Service or "WPS"]	PW11e
4	[Xcel Energy]	PW11e
5	[Detroit Edison or "DTE"]	PW11e
6	[Consumers Energy]	PW11e
7	[Home does not have gas service]	PW11e
77	[Other, Specify ____]	PW11e
97	[Don't know]	PW11e
98	[Refused]	PW11e

[IF PW11c = 22, 23, or 77 OR PW11d = 5,6, or 77 ASK PW11e AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE OTHER ANSWER INTO <<OTHER UTILITY>>, ELSE GOTO PW11f]

PW11e. How many feet of pipe wrap are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	PW11f
97	[Don't know]	PW11f
98	[Refused]	PW11f

PW11f. Why aren't isn't all of it installed at <address>?

	[RECORD VERBATIM]	PW_D1a
97	[Don't know]	PW_D1a
98	[Refused]	PW_D1a

PW NET TO GROSS

[IF <pw_nokit_qty> = 0 AND P7 = 4, GOTO SHOWERHEAD SECTION]

PW TIMING

PW_D1a. I'd like to know about the effect, if any, that program discounts had on your decision to purchase the pipe wrap when you did. Without the program, would you have purchased it at the same time, earlier, later, or never?

1	[at the Same time]	PW_D1aO
2	[Earlier]	PW_D1aO
3	[Later]	PW_D1aO
4	[Never]	PW_D1aO
97	[Don't know]	PW_D3
98	[Refused]	PW_D3

PW_D1aO. Why do you say that you would have purchased pipe wrap <<PW_D1a>>?

	[RECORD RESPONSE VERBATIM]	PW_D1b
1	Need	PW_D1b
2	Program Awareness	PW_D1b
3	Cost	PW_D1b
4	Energy Efficiency	PW_D1b
5	Would Not Purchase	PW_D1b
97	[Don't know]	PW_D1b
98	[Refused]	PW_D1b

IF PW_D1a ≠ 3 LATER, SKIP TO PW_D2a

PW_D1b. Approximately how many months later?

	[RECORD # months]	PW_D3
97	[Don't know]	PW_D3
98	[Refused]	PW_D3

PW EFFICIENCY

[EFFICIENCY NA FOR PIPE WRAP]

PW QUANTITY

PW_D3. Finally, I'd like to know about the effect, if any, that program discounts had on the amount of pipe wrap that you purchased. Without the program would you have purchased the same amount, more, less, or none at all?

1	[Same amount]	PW_D3O
2	[Less]	PW_D3O
3	[More]	PW_D3O
4	[None at all]	PW_D3O
97	[Don't know]	PW_D3O
98	[Refused]	PW_D4

PW_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	PW_D3a
97	[Don't know]	PW_D3a
98	[Refused]	PW_D3a

IF PW_D3 = 1 same number/size or 4 none at all, SKIP TO PW_D4

PW_D3a. How many feet of pipe wrap would you have purchased without discounts from the program?

	[RECORD Number]	PW_D4
--	-----------------	-------

97	[Don't know]	PW_D4
98	[Refused]	PW_D4

PW_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of pipe wraps. I'd like you to summarize the programs' influence on the timing and amount of pipe wrap that you purchased.

	[RECORD RESPONSE VERBATIM]	PW_D5
1	Need	PW_D5
2	Price	PW_D5
3	Energy Efficiency	PW_D5
4	Program Efficiency	PW_D5
5	No Influence	PW_D5
97	[Don't know]	PW_D5
98	[Refused]	PW_D5

PW_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	GOTO SHOWERHEAD SECTION
1	Satisfied	GOTO SHOWERHEAD SECTION
2	No	GOTO SHOWERHEAD SECTION
3	More Rebates	GOTO SHOWERHEAD SECTION
97	[Don't know]	GOTO SHOWERHEAD SECTION
98	[Refused]	GOTO SHOWERHEAD SECTION



Appendices

LOW FLOW SHOWERHEADS

[IF <SH_QTY> = 0, GOTO SATISFACTION SECTION]

- SH1. Our records show you purchased <sh_qty> low flow showerheads. Does <sh_kit_qty> showerheads sound correct?**
[IF NECESSARY <sh_kit_qty> were part of a kit with other energy saving items.]

1	[Yes]	SH2
2	[No]	SH1b
97	[Don't know]	SH2
98	[Refused]	satisfaction section

- SH1b. About how many low flow showerheads did you purchase?**
[IF <sh_kit_qty> >0 ADD] Including the ones in the kit.

	[RECORD #]	<sh_qty> = answer GOTO SH2
97	[Don't know]	SH2
98	[Refused]	satisfaction section

- SH2. Where did you buy the low flow showerhead(s)?**
[ALLOW MULTIPLE ANSWERS. DO NOT READ LIST.]

1	[Home improvement or hardware store (such as Ace, Home Depot, Menards or True Value)]	SH11
2	[Department store (Wal-Mart, Target, K-Mart, Sears)]	SH11
3	[Big box retailer (Best Buy)]	SH11
4	[Warehouse store (Costco, Sam's Club)]	SH11
5	[Supermarket, food store (Meijer, Kroger, Farmer Jack, Busch's)]	SH11
6	[Drug store (Atlas, CVS, Walgreen's, Medicine Shoppe)]	SH11
7	[Mail-order catalog]	SH11
8	[Over the Internet]	SH11
9	[Home energy show]	SH11
10	[Utility sponsored event/meeting]	SH11
11	[Utility office]	SH11
77	[Other (specify)]	SH11
97	[Don't know]	SH11
98	[Refused]	SH11

- SH11. Of the <sh_qty> low flow showerheads you purchased, how many are currently installed?**
[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <SH_qty> GOTO SH11b IF < <SH_qty> GOTO SH11a;
97	[Don't know]	GOTO SATISFACTION SECTION
98	[Refused]	GOTO SATISFACTION SECTION



Appendices

SHI1a. Why aren't all of them installed?

	[RECORD VERBATIM]	IF SHI1 = 0 GOTO SATISFACTION SECTION ELSE GOTO SHI1b
1	Already installed	
2	No Need	
3	No Time	
4	Did not work	
5	Preference	
6	Need help installing	
97	[Don't know]	
98	[Refused]	

SHI1b. How many are installed at <address>?

	[RECORD #]	IF answer = <<SHI1>> GOTO SH_D1a IF answer less than <<SHI1>> GOTO SHI1c
97	[Don't know]	SHI1c
98	[Refused]	SHI1c

SHI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	SHI1d
2	[Alpena Power]	SHI1d
3	[Bayfield Electric Cooperative]	SHI1d
4	[Cloverland Electric Coop]	SHI1d
5	[Daggett Electric Department]	SHI1d
6	[Edison Sault Electric Company]	SHI1d
7	[Great Lakes Energy coop]	SHI1d
8	[HomeWorks Tri-County electric Coop]	SHI1d
9	[Indiana Michigan Power Company]	SHI1d
10	[Midwest Energy Coop]	SHI1d
11	[Ontonagon County Rural Electrification]	SHI1d
12	[Presque Isle Electric and Gas]	SHI1d
13	[Thumb Electric]	SHI1d
14	[Upper Penninsula Power Company]	SHI1d
15	[WE Energies]	SHI1d
16	[Wisconsin Public Service or "WPS"]	SHI1d
17	[Xcel Energy]	SHI1d
18	[City of Escanaba]	SHI1d
19	[City of Stephenson]	SHI1d
20	[Marquette Board of Light & Power]	SHI1d
21	[Newberry Water & Light]	SHI1d
22	[Detroit Edison or "DTE"]	SHI1d
23	[Consumers Energy]	SHI1d
77	[Other (specify) _____]	SHI1d
97	[Don't know]	SHI1d
98	[Refused]	SHI1d

SHI1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	SHI1e
2	[SEMCO Energy]	SHI1e
3	[Wisconsin Public Service or "WPS"]	SHI1e
4	[Xcel Energy]	SHI1e
5	[Detroit Edison or "DTE"]	SHI1e
6	[Consumers Energy]	SHI1e
7	[Home does not have gas service]	SHI1e
77	[Other, Specify ____]	SHI1e
97	[Don't know]	SHI1e
98	[Refused]	SHI1e

[IF SHI1c = 22, 23, or 77 OR SHI1d = 5,6, or 77 ASK SHI1e AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE OTHER ANSWER INTO <<OTHER UTILITY>>, ELSE GOTO SHI1f]

SHI1e. How many low flow showerheads are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY 2>>, or <<OTHER UTILITY 3>>?

	[RECORD #]	SHI1f
97	[Don't know]	SHI1f
98	[Refused]	SHI1f

SHI1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	SH_D1a
97	[Don't know]	SH_D1a
98	[Refused]	SH_D1a



Appendices

SH NET TO GROSS

[IF <sh_nokit_qty> = 0 AND P8 = 4, GOTO SATISFACTION SECTION]

SH TIMING

SH_D1a. I'd like to know about the effect, if any, that program discounts had on your decision to purchase the low flow showerhead(s) when you did. I am referring to your decision to purchase any showerhead, not just a high efficiency one. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	SH_D1aO
2	[Earlier]	SH_D1aO
3	[Later]	SH_D1aO
4	[Never]	SH_D1aO
97	[Don't know]	SH_D2a
98	[Refused]	SH_D2a

SH_D1aO. Why do you say that you would have purchased a showerhead <<SH_D1a>>?

	[RECORD RESPONSE VERBATIM]	SH_D1b
1	Need	SH_D1b
2	Energy Efficiency	SH_D1b
3	Convenience	SH_D1b
4	Awareness	SH_D1b
5	Cost	SH_D1b
97	[Don't know]	SH_D1b
98	[Refused]	SH_D1b

IF SH_D1a ≠ 3 LATER, SKIP TO SH_D3

SH_D1b. Approximately how many months later would you have purchased a showerhead?

	[RECORD # months]	SH_D2a
97	[Don't know]	SH_D2a
98	[Refused]	SH_D2a

SH EFFICIENCY

SH_D2a. Next, I'd like to know about the effect, if any, that program discounts had on your decision to purchase a high efficiency low flow showerhead.

Without the program would you have purchased a standard showerhead or a high efficiency low flow showerhead?

1	[high efficiency]	SH_D2aO
2	[standard]	SH_D2aO
97	[Don't know]	SH_D2aO
98	[Refused]	SH_D3

SH_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	SH_D3
1	Need HE	SH_D3
2	Energy Efficiency	SH_D3
3	HE Money Savings	SH_D3
4	HE too expensive	SH_D3
5	Prefer Standard	SH_D3
6	Need more information	SH_D3
97	[Don't know]	SH_D3
98	[Refused]	SH_D3

SH QUANTITY

[IF <sh_qty> = 1, GOTO SH_D4]

SH_D3. Finally, I'd like to know about the effect, if any, that program discounts had on the number of low flow showerheads that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number/size]	SH_D3c1
2	[Fewer/smaller]	SH_D3c1
3	[More/larger]	SH_D3c1
4	[None at all]	SH_D3c1
97	[Don't know]	SH_D3c1
98	[Refused]	SH_D4

SH_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	SH_D3a
1	Didn't need them all	SH_D3a
97	[Don't know]	SH_D3a
98	[Refused]	SH_D3a

IF SH_D3 = 1 same number/size or 4 none at all, SKIP TO SH_D4

SH_D3a. How many low flow showerheads would you have purchased without discounts from the program?

	[RECORD Number]	SH_D4
97	[Don't know]	SH_D4
98	[Refused]	SH_D4

SH_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of low flow showerheads. I'd like you to summarize the programs' influence on the timing, efficiency and number of low flow showerheads that you purchased.

	[RECORD RESPONSE VERBATIM]	SH_D5
1	Convenient Timing	SH_D5
2	Cost	SH_D5
3	Quality	SH_D5
4	Need	SH_D5
5	Energy Efficiency	SH_D5
6	Already purchased	SH_D5
97	[Don't know]	SH_D5
98	[Refused]	SH_D5

SH_D5. Do you have any additional comments about this purchase?

	[RECORD RESPONSE VERBATIM]	satisfaction section
1	Satisfied	satisfaction section
2	No	satisfaction section
97	[Don't know]	satisfaction section
98	[Refused]	satisfaction section



Appendices

SATISFACTION

S0. Next I have a series of questions about how satisfied you are with different aspects of the <utility> Energy Star Rebate program. For all of these questions, use a 5 point scale where 5 means very satisfied and 1 means very *dissatisfied*.

S1. How satisfied or dissatisfied are you with the rebated equipment?

1	Not at all satisfied	S1b
2		S1b
3		S1b
4		S2
5	Very satisfied	S2
97	[Don't know]	S2
98	[Refused]	S2

S1b. Why do you say that?

	[RECORD VERBATIM]	S2
1	Did not receive rebate	S2
2	Satisfied	S2
3	Not Satisfied	S2
4	Less Energy Savings	S2
5	Difficult to use/ Broken	S2
97	[Don't know]	S2
98	[Refused]	S2

S2. How about the dollar amount of the rebate?

[REPEAT SCALE IF NECESSARY]

1	Not at all satisfied	S2b
2		S2b
3		S2b
4		S3
5	Very satisfied	S3
97	[Don't know]	S3
98	[Refused]	S3

S2b. Why do you say that?

	[RECORD VERBATIM]	S3
1	Did not receive rebate	S3
2	Higher rebate	S3
3	More information necessary	S3
4	Reasonable discount	S3
97	[Don't know]	S3
98	[Refused]	S3

S3. How satisfied or dissatisfied were you with the timeliness of the rebate payment?

1	Not at all satisfied	S3b
2		S3b
3		S3b
4		S4
5	Very satisfied	S4
97	[Don't know]	S4
98	[Refused]	S4

S3b. Why do you say that?

	[RECORD VERBATIM]	S4
1	Did not receive rebate	S4
2	Took too long	S4
3	Reasonable time	S4
4	Program Flaw	S4
97	[Don't know]	S4
98	[Refused]	S4

S4. How about the rebate application forms and other paperwork?

0	[Did not fill out rebate paperwork]	S5
1	Not at all satisfied	S4b
2		S4b
3		S4b
4		S5
5	Very satisfied	S5
97	[Don't know]	S5
98	[Refused]	S5

S4b. Why do you say that?

	[RECORD VERBATIM]	S5
1	Too much paperwork	S5
2	Too much time	S5
3	Too complicated/ confusing	S5
4	Difficult to read	S5
5	Trouble getting rebates	S5
6	Satisfied	S5
97	[Don't know]	S5
98	[Refused]	S5

S5. How satisfied are you with the program as a whole?

1	Not at all satisfied	S5b
2		S5b
3		S5b
4		S6
5	Very satisfied	S6
97	[Don't know]	S6
98	[Refused]	S6

S5b. Why do you say that?

	[RECORD VERBATIM]	S6
1	Poor program management	S6
2	Did not receive rebate	S6
3	Equipment did not work	S6
4	Not enough awareness	S6
5	Not enough energy savings	S6
6	Not enough money savings	S6
7	Too complicated	S6
8	Satisfied	S6
97	[Don't know]	S6
98	[Refused]	S6

S6. What, if anything, could <utility> do to get more people to participate in the rebate program?

	[RECORD VERBATIM]	S7
1	Increase awareness	S7
2	Increase rebate amount/ money savings	S7
3	Offer free energy efficient tools	S7
0	[No suggestions]	S7
97	[Don't know]	S7
98	[Refused]	S7

S7. What, if any, energy efficiency technologies would you like <utility> to offer rebates for?

	[RECORD VERBATIM]	R0
1	Lighting	R0
2	Refrigerators and Freezers	R0
3	Heating and Cooling Appliances	R0
4	Gas	R0
5	All Energy Star Appliances	R0
6	Home Energy Audit	R0
7	Windows and Doors	R0
8	Renewable Sources	R0
9	Consumer Electronics	R0
0	[No suggestions]	R0
97	[Don't know]	R0
98	[Refused]	R0

APPLIANCE RECYCLING

R0. Next I'm going to ask you a few questions that will help us evaluate a different program.

R1. In the past 5 years, have you acquired a new or used refrigerator or stand-alone freezer?

1	[Yes]	R2
2	[No]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

R2. Did you get a refrigerator, stand-alone freezer, or both?

1	[Refrigerator]	R3
2	[Freezer]	R3
3	[Both]	R3
97	[Don't know]	R3
98	[Refused]	R3

[If R2 ≠ 1 or 3, SKIP TO R14]

R3. Was the refrigerator used or brand new?

1	[Used]	R4
2	[New]	R4
97	[Don't know]	R4
98	[Refused]	R4

R4. Are you using it as your main refrigerator or as a spare?

1	[Main]	R5
2	[Spare]	R5
97	[Don't know]	R5
98	[Refused]	R5

[IF R3 ≠ 1, used; Skip to R7]

R5. Where did you get this used refrigerator?

1	[Purchased from used appliance store]	R6
2	[Received as gift / hand-me-down]	
3	Purchased from individual	
77	[Other (Specify _____)]	
97	[Don't know]	
98	[Refused]	

R6. At the time you got this used refrigerator, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R7
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
77	Or something else [SPECIFY]	
97	[Don't know]	
98	[Refused]	

R7. Did this refrigerator replace an existing one?

1	[Yes]	R8
2	[No]	R9
97	[Don't know]	R9
98	[Refused]	R9

R8. What did you do with the refrigerator that you replaced?

1	[Threw away / Took to Landfill]	R9
2	[Took to recycling center]	R9
3	[Donated to charity]	R9

4	[Taken by installer of new one]	R9
5	[Sold to used appliance dealer]	R9
6	[Gave to friend/relative]	R9
7	[Kept it - plugged in]	R9
8	[Kept it - not plugged in]	R9
9	Sold to individual	R9
77	[Other (specify)]	R9
97	[Don't know]	R9
98	[Refused]	R9

[If R2 ≠ 2 or 3, SKIP TO EA1]

R9. Was the freezer used or brand new?

1	[Used]	R10
2	[New]	R12
97	[Don't know]	R12
98	[Refused]	R12

R10. Where did you get this used freezer?

1	[Purchased from used appliance store]	R11
2	[Received as gift / hand-me-down]	
3	Purchased from individual	
77	[Other (Specify _____)]	
97	[Don't know]	
98	[Refused]	

R11. At the time you got this used freezer, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R12
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
77	Or something else [SPECIFY]	
97	[Don't know]	
98	[Refused]	

R12. Did this freezer replace an existing one?

1	[Yes]	R13
2	[No]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

R13. What did you do with the freezer that you replaced?

1	[Threw away / Took to Landfill]	EA1
2	[Took to recycling center]	EA1
3	[Donated to charity]	EA1
4	[Taken by installer of new one]	EA1
5	[Sold to used appliance dealer]	EA1
6	[Gave to friend/relative]	EA1
7	[Kept it - plugged in]	EA1
8	[Kept it - not plugged in]	EA1
77	[Other (specify)]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

ENERGY ATTITUDES

EA1. Before today, had you heard of ENERGY STAR?

1	[Yes]	EA2
2	[No]	EA2
97	[Don't know]	EA2
98	[Refused]	EA2

EA2. How concerned are you with reducing your home's energy use? Would you say... [READ UNBRACKETED OPTIONS.]

1	Not at all concerned	EA4
2	Somewhat concerned	EA3
3	or Very concerned?	EA3
97	[Don't know]	D0
98	[Refused]	D0

EA3. Why are you concerned with reducing your home's energy use? [DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Cost of energy / Reduce energy bill]	D0
2	[Environment / Global warming]	D0
3	[Power availability / reliability]	D0
4	[Dependence on foreign oil]	D0
5	[Other, Specify _____]	D0
97	[Don't know]	D0
98	[Refused]	D0

EA4. Why aren't you concerned with reducing your home's energy use?

	[RECORD VERBATIM]	D0
1	Time	D0
2	Cost	D0
3	Already Energy Efficient	D0
97	[Don't know]	D0
98	[Refused]	D0

DEMOGRAPHICS

D0. We're almost done. I just have a few more questions about the address where the rebated equipment is installed. Is <address> a home or a business?

1	[home]	D1
2	[business]	F1
97	[Don't know]	D1
98	[Refused]	D1

D1. Do you own or rent <address>?

1	[Own]	D2
2	[Rent]	D2
97	[Don't know]	D2
98	[Refused]	D2

D2. What type of building is <address>?

[READ LIST]

1	Mobile home	WH1
2	One-family home detached from any other house	WH1
3	One-family home attached to one or more houses	WH1
4	A building with 2 apartments	WH1
5	A building with 3 or 4 apartments	WH1
6	A building with 5 or more apartments	WH1
77	[Other (specify)]	WH1
97	[Don't know]	WH1
98	[Refused]	WH1

WH1. What type of fuel does your current water heater use?

1	[Gas]	D3
2	[Electricity]	D3
3	Propane	D3
4	Wood	D3
5	Geothermal	D3
6	Liquid Petroleum	D3
7	No Water Heater	D3
77	[Other, Specify_____]	D3
97	[Don't know]	D3
98	[Refused]	D3

D3. Is <address> a seasonal home?

1	[Yes]	D4
2	[No]	D4
97	[Don't know]	D4
98	[Refused]	D4

D4. How many months per year is <address> occupied?

	[RECORD #]	D5; if <6, skip to D5e
97	[Don't know]	D5
98	[Refused]	D5

D5. Including yourself, and children how many people live in <address> at least 6 months per year?

	[RECORD #]	D5a
97	[Don't know]	D5e
98	[Refused]	D5e

D5a. How many people are 65 or older?

	[RECORD #]	D5b
97	[Don't know]	D5b
98	[Refused]	D5b

D5b. How many people are 19 to 64?

	[RECORD #]	D5c
97	[Don't know]	D5c
98	[Refused]	D5c

D5c. How many people are 5 to 18?

	[RECORD #]	D5d
97	[Don't know]	D5d
98	[Refused]	D5d

D5d. How many people are less than 5?

	[RECORD #]	D5e
97	[Don't know]	D5e
98	[Refused]	D5e

[CHECK THAT SUM OF D5A TO D5D = D5. IF NOT, REPEAT D5 TO D5D.]

D5e. What is *your* age?

	[RECORD #]	D6
97	[Don't know]	D6
98	[Refused]	D6

D6. What is the highest level of education you have completed?

1	No schooling	D7
2	Less than high school	D7
3	Some high school	D7
4	High school graduate or equivalent (e.g., GED)	D7
5	Trade or technical school	D7
6	Some college	D7
7	College degree	D7
8	Some graduate school	D7
9	Graduate degree	D7
77	Other (Specify _____)	D7
97	[Don't know]	D7
98	[Refused]	D7

D7. Which of the following best represents your annual household income from all sources in 2010, before taxes? Was it . . . ?

1	Less than \$20,000 per year,	D8
2	\$20,000-49,999,	D8
3	\$50,000-74,999,	D8
4	\$75,000-97,999,	D8
5	\$100,000-149,999,	D8
6	\$150,000-199,999, or	D8
7	\$200,000 or more?	D8
97	[Don't know]	D8
98	[Refused]	D8

D8. RECORD GENDER [DO NOT ASK.]

1	Male	END_1
2	Female	END_1
97	[Don't know]	END_1

FIRMOGRAPHICS

F1. What is the principal activity of your organization at <address>?

1	Office	F2
2	Retail (non-food)	F2
3	College/university	F2
4	School	F2
5	Grocery Store	F2
6	Convenience store	F2
7	Restaurant	F2
8	Health care/hospital	F2
9	Hotel or motel	F2
10	Warehouse	F2
11	Community Service/Church/Temple/Municipality	F2
12	Industrial Process/Manufacturing/Assembly	F2
13	Agriculture/Farm	F2
77	[Other (Record)]	F2
97	Don't know	F2
98	Refused	F2

F2. At this location, does your organization

[READ UNBRACKETED LIST]

1	Own all of the space it occupies?	F4
---	-----------------------------------	----



Appendices

2	Lease all of the space it occupies?	F3
3	Or own some and lease some of the space it occupies?	F3
97	[Don't know]	F3
98	[Refused]	F3

F3. Are any of your energy costs included in your normal lease payment?

1	[Yes]	WH2
2	[No]	WH2
97	[Don't know]	WH2
98	[Refused]	WH2

WH2. What type of fuel does your current water heater use?

1	[Gas]	F4
2	[Electricity]	F4
77	[Other, Specify_____]	F4
97	[Don't know]	F4
98	[Refused]	F4

F4. What is the total enclosed square footage of the space your organization occupies at this location? Your best estimate is fine.

	[RECORD # SQ FT]	F5
99999997	[Don't know] [Get Best Guess]	F5
99999998	[Refused]	F5

F5. How many full-time employees work for your organization at this location?

	[Record number of employees]	END_1
99999997	[Don't know] [Get Best Guess]	END_1
99999998	[Refused]	END_1

THANK & TERMINATE

END_1. Those are all of the questions I have for you today. Thank you for your time.

C. Appliance Recycling CATI Survey

EO-EU

Appliance Recycling Rebate Program

Residential CATI Survey

Revised – 03/22/12

Survey house instructions

7. Text in bold should be read.
8. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should NOT be read.
9. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
10. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
11. Text in gray boxes is major programming instruction.
12. Unless specifically noted, do NOT read answer choices. [Don't know] and [Refused] should NEVER be read.

Programming Notes

2. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet. Make separate 0/1 variables for the [Don't know] and [Refused] options as well.

Database variables

Variable	Definition
	(Unless otherwise noted, the database can contain more than one of each variable per respondent)
cont1, cont2, ... contx	Contact name(s).
utility	Name of the contact's utility. One per customer.
program	Name of the program the contact is likely to recognize. One per customer.
Address	Address where equipment was picked up / recycled
ref_qty	# of refrigerators recycled
frz_qty	# of freezers recycled



Appendices

INTRODUCTION

Intro1. May I speak with <cont1>? Hello, my name is _____, and I'm calling on behalf of the <program> program offered through <utility>. I'm calling to talk to you about some appliances you recently recycled. I'm not selling anything; I'd just like to ask your opinions. Your responses will be kept confidential and your individual responses will not be revealed to anyone.

1	[AGREES TO PARTICIPATE]	Intro2
2	[DOES NOT AGREE TO PARTICIPATE]	TERMINATE

Intro2. Our records show that you received rebates for a refrigerator or freezer you recently recycled. Are you familiar with having an appliance picked up earlier this year?

1	[Yes]	Intro6
2	[No]	Intro3
-97	[Don't know]	Intro3
-98	[Refused]	Intro3

Intro3. Who could I speak to that would be familiar with that process?

	[RECORD FIRST and LAST NAME]	Intro4
-98	[Refused]	Intro4
-97	[Don't know]	Intro4

Intro4. Could I speak with <Intro3> now?

1	[Yes]	Intro1
2	[No]	Intro5
-97	[Don't know]	Intro5
-98	[Refused]	Intro5

Intro5. When is a good time I could call back to reach <Intro3>?

	[RECORD DAY and TIME]	Call back later
-98	[Refused]	Call back later
-97	[Don't know]	Call back later

Intro6. What is your name?

	[RECORD FIRST and LAST NAME]	A0
-98	[Refused]	A0
-97	[Don't know]	A0

Program Awareness

A0. I'd like to start by asking you about your awareness of the <program> program.

A1. Before today, had you ever heard of the <program> program?



Appendices

1	[Yes]	A2
2	[No]	VG0
-97	[Don't know]	VG0
-98	[Refused]	VG0

A2. Where did you first hear about the program?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Contractor / Salesperson where equip purchased]	VG0
2	[Utility bill insert/information with utility bill]	VG0
3	[Utility website]	VG0
4	[the Internet other than utility's website]	VG0
5	[Local newspaper]	VG0
6	[A state or national newspaper]	VG0
7	[TV, radio]	VG0
8	[Friends, Relatives, or Neighbors]	VG0
9	[Community Events or Local Schools]	VG0
10	[Other, specify _____]	VG0
11	[Country Lines / Co-op Newsletter]	VG0
12	[unspecified magazine]	VG0
13	[Utility]	VG0
-97	[Don't know]	VG0
-98	[Refused]	VG0

VERIFY GROSS INSTALLATION

VG0. Next, I have some questions about the equipment you recycled.

[IF <ref_qty> = 0, GOTO VG3]

VG1. Our records show you had <ref_qty> refrigerators picked up at <address> for recycling. Is that correct?

1	[Yes]	<<NUM_REF>> = <ref_qty> GOTO VG2c
2	[No]	VG2a
-97	[Don't know]	<<NUM_REF>> = -1
-98	[Refused]	GOTO VG2c

VG2a. How many refrigerators were picked up?

	[RECORD VERBATIM]	<<NUM_REF>> = answer GOTO VG2b
-97	[Don't know]	<<NUM_REF>> = -1
-98	[Refused]	GOTO VG2b

[IF <<NUM_REF>> = <ref_qty>, GOTO VG2c]

VG2b. Why were a different number of refrigerators picked up?

	[RECORD VERBATIM]	VG2c
-97	[Don't know]	
-98	[Refused]	

VG2c. What address were they picked up from?

	[RECORD VERBATIM]	IF ANSWER DIFFERENT THAN <ADDRESS> GOTO VG2d ELSE VG3
-97	[Don't know]	VG3
-98	[Refused]	VG3

VG2d. Why were they picked up from a different address?

	[RECORD VERBATIM]	VG3
-97	[Don't know]	
-98	[Refused]	

[IF <frz_qty> = 0, GOTO R1]

VG3. Our records show you had <frz_qty> freezers picked up at <address> for recycling. Is that correct?

1	[Yes]	<<NUM_FRZ>> = <frz_qty> GOTO VG4c
2	[No]	VG4a
-97	[Don't know]	<<NUM_FRZ>> = -1
-98	[Refused]	GOTO VG4c

VG4a. How many freezers were picked up?

	[RECORD VERBATIM]	<<NUM_FRZ>> = answer VG4b
-97	[Don't know]	<<NUM_FRZ>> = -1
-98	[Refused]	VG4b

[IF <<NUM_FRZ>> = <frz_qty>, GOTO VG4c]

VG4b. Why were a different number of freezers picked up?

	[RECORD VERBATIM]	VG4c
-97	[Don't know]	
-98	[Refused]	

VG4c. What address were they picked up from?

	[RECORD VERBATIM]	IF ANSWER DIFFERENT THAN <ADDRESS> GOTO VG4d ELSE R1
-97	[Don't know]	R1
-98	[Refused]	R1

VG4d. Why were they picked up from a different address?

	[RECORD VERBATIM]	R1
-97	[Don't know]	
-98	[Refused]	

REFRIGERATORS

[IF <<NUM_REF>> <= 0, GOTO F0]

R1. Of the refrigerators that were picked up, how many were being used as a main refrigerator?

	[RECORD QUANTITY]	R2
-97	[Don't know]	
-98	[Refused]	

R2. How many were being used as a spare refrigerator?

[IF NEEDED, READ: "Units in storage would be considered spare refrigerators."]

	[RECORD QUANTITY]	RLOOP
-97	[Don't know]	
-98	[Refused]	

[R1 + R2 SHOULD EQUAL <<NUM_REF>>]

[IF <<NUM_REF>>=1, GOTO RSPR]

RLOOP. Now I'm going to ask you some questions about each of the refrigerators you recycled.

[IF R2 = 0, SKIP TO R3a]

RSPR. For the [first/second/third/etc] refrigerator, were you using it as a spare?

1	[Yes]	R2a
2	[No]	R3a
-97	[Don't know]	R3a
-98	[Refused]	

[REPEAT QUESTIONS R2a THROUGH R8 FOR EACH REFRIGERATOR]

R2a. How long had you used it as a spare?

	[Record Years]	R2b
	[Record Months]	
1	Less than 1 year	
2	1-5 years	
3	5-10 years	
4	10-15 years	
5	15-20 years	
6	20-30 years	
7	More than 30 years	
-97	[Don't know]	
-98	[Refused]	

R2b. How many months in the past year was it plugged in and running?

	[Record Months] [IF RESPONSE > 12 REPEAT QUESTION NOTING THAT RESPONSE IS ASKING ABOUT PAST YEAR]	R3a
-97	[Don't know]	
-98	[Refused]	

R3a How old was the [first/second/third/etc] refrigerator you recycled?

	[Record Years]	R4a
-97	[Don't know]	R3b
-98	[Refused]	

R3b. If you don't know exactly, was it...?

[READ OPTIONS BELOW BUT STOP WHEN/IF RESPONDENT CONFIRMS ONE OF THE AGE RANGES]

1	1-5 years old	R4a
2	5-10 years old	
3	10-15 years old	
4	15-20 years old	
5	20-30 years old	
6	More than 30 years old	
-97	[Don't know]	R3c
-98	[Refused]	R4a

R3c. What color was it?

	[Record Color]	R4a
1	White	
2	Tan	
3	Blue	
-97	[Don't know]	R4a
-98	[Refused]	

R4a. Did you replace this recycled refrigerator with another refrigerator?

1	[Yes]	R4b
2	[No]	R5a
-97	[Don't know]	
-98	[Refused]	

R4b. Is the replacement refrigerator brand new or used?

1	[Brand new refrigerator]	R5a
2	[Used refrigerator]	R4c
-97	[Don't know]	R5a
-98	[Refused]	R5a

R4c. How old is the replacement refrigerator?

	[Record Years]	R4e
-97	[Don't know]	R4d
-98	[Refused]	

R4d. If you don't know exactly, is it...?

[READ OPTIONS BELOW BUT STOP WHEN/IF RESPONDENT CONFIRMS ONE OF THE AGE RANGES]

1	1-5 years old	R4e
2	5-10 years old	
3	10-15 years old	
4	15-20 years old	
5	20-30 years old	
6	More than 30 years old	
-97	[Don't know]	
-98	[Refused]	

R4e. Where did you get your used replacement refrigerator?

[PROBE IF NEEDED: "Did you purchase your replacement refrigerator or was it given to you?"]

1	[Purchased from used appliance store]	R4f
2	[Received as gift / hand-me-down]	
3	Purchased from individual	
-77	[Other (Specify _____)]	
-97	[Don't know]	
-98	[Refused]	

R4f. At the time you got this used refrigerator, if this specific refrigerator had not been available, which of the following would you most likely have done...

[READ UNBRACKETED OPTIONS – ONLY ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R5a
2	Purchased a lower quality or less expensive used refrigerator	
3	Purchased a higher quality or more expensive used refrigerator	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working refrigerator	
6	Not replaced my refrigerator at that time	
7	Other (SPECIFY)	
-97	[Don't know]	
-98	[Refused]	

R5a. Thinking about your recycled refrigerator, did you decide to get rid of it...

[READ UNBRACKETED RESPONSES]

1	Before you heard about this recycling program	R5b
2	About the same time as you heard about the program	
3	After you heard about the program	
-97	[Don't know]	
-98	[Refused]	

R5b. If the recycling program had not picked up the refrigerator when it did, would you have still gotten rid of it, or would you have kept it?

1	[Gotten rid of it]	R6
2	[Kept it]	R8
-97	[Don't know]	R7
-98	[Refused]	

R6. How would you have gotten rid of it?

[PROMPT FOR RESPONSE – READ OPTIONS IF NEEDED]

1	[Threw away / Took to Landfill]	R6a
2	[Took to recycling center]	
3	[Donated to charity]	
4	[Taken by installer of new one]	
5	[Sold to used appliance dealer]	R6b
6	[Sold to private individual]	
7	[Given it to friend/relative/private individual]	R7
8	[Kept it - plugged in]	R8
9	[Kept it - not plugged in]	
77	[Other (specify)]	R7
-97	[Don't know]	
-98	[Refused]	

R6a. If you were to hire someone to take the appliance away, what do you think you would have paid for this service?

	[RECORD DOLLAR AMOUNT]	R7
1	\$0	
2	\$0-\$25	
3	\$25-\$50	
4	\$50-\$100	
5	More than \$100	
-97	[Don't know]	
-98	[Refused]	

R6b. If you had sold this appliance to someone, how much do you think you could have received for it?

	[RECORD DOLLAR AMOUNT]	R7
1	\$0-\$25	
2	\$25-\$50	
3	\$50-\$100	
-97	[Don't know]	
-98	[Refused]	

R7. How many months later do you think you would have gotten rid of the refrigerator if the program had not picked it up when it did?

	[Record Months]	End Ref. section
-77	[Actually might have kept it instead]	R8
-97	[Don't know]	End Ref. section
-98	[Refused]	

R8. Would it have been stored unplugged, or used as a spare
[DO NOT READ]

1	[Stored unplugged]	Next R2a or Next Section
2	[Used as a spare]	
3	[Both – store it and use it some]	
4	[No – Would not have kept it]	
-97	[Don't know]	
-98	[Refused]	

[GO BACK TO R2a IF ANY REFRIGERATORS REMAIN, ELSE NEXT SECTION]

End REFRIGERATORS

FREEZERS

[IF <<NUM_FRZ>> <= 0 GOTO C1]

[IF <<NUM_FRZ>> = 1 GOTO F1]

F0. Next, I have some questions to ask you about each of the freezers you recycled.

[REPEAT F1 THROUGH F10 FOR EACH FREEZER]

F1. For the [first/second/third/etc] freezer that was removed. During the time just before deciding to have it removed, was the freezer plugged in and running?

1	[Yes]	F2
2	[No]	
-97	[Don't know]	
-98	[Refused]	

F2. How many months in the past year was it plugged in and running?

	[Record Months] [IF RESPONSE > 12 REPEAT QUESTION NOTING THAT RESPONSE IS ASKING ABOUT PAST YEAR]	F3a
-97	[Don't know]	
-98	[Refused]	

F3a. How long had you had the freezer?

[PROBE FOR NUMERIC AGE/TIME RESPONSE. USE MONTHS FOR PARTIAL YEARS]

	[Record Years]	F3b
	[Record Months]	
1	Less than 1 year	
2	1-5 years	
3	5-10 years	
4	10-15 years	
5	15-20 years	
6	20-30 years	
7	More than 30 years	
-97	[Don't know]	
-98	[Refused]	

F3b How old was the freezer you recycled?

	[Record Years]	F4
-97	[Don't know]	F3c
-98	[Refused]	

F3c. If you don't know exactly, was it...?

[READ OPTIONS BELOW BUT STOP WHEN/IF RESPONDENT CONFIRMS ONE OF THE AGE RANGES]

1	1-5 years old	F4
2	5-10 years old	
3	10-15 years old	
4	15-20 years old	
5	20-30 years old	
6	More than 30 years old	
-97	[Don't know]	F3d
-98	[Refused]	F4

F3d. What color was it?

	[Record Color]	F4
1	White	F4
-97	[Don't know]	
-98	[Refused]	

F4. Did you replace this recycled freezer with another freezer?

1	[Yes]	F4a
2	[No]	F5
-97	[Don't know]	
-98	[Refused]	

F4a. Was the replacement freezer brand new or used?

1	[Brand new freezer]	F5
2	[Used freezer]	F4d
-97	[Don't know]	F5
-98	[Refused]	F5

F4d. How old is the replacement freezer?

	[Record Years]	F4f
-97	[Don't know]	F4e
-98	[Refused]	

F4e. If you don't know exactly, is it...?

[READ OPTIONS BELOW BUT STOP WHEN/IF RESPONDENT CONFIRMS ONE OF THE AGE RANGES]

1	1-7 years old	F4h
2	8-12 years old	
3	13-17 years old	
4	18-25 years old	
5	26-30 years old	
6	More than 30 years old	
-97	[Don't know]	
-98	[Refused]	

F4h. Where did you get your used replacement freezer?

[PROBE IF NEEDED]: Did you purchase it or was it given to you?

1	[Purchased from used appliance store]	F4i
2	[Received as gift / hand-me-down]	
3	Purchased from an individual	
-77	[Other (Specify_____)]	
-97	[Don't know]	
-98	[Refused]	

F4i. At the time you got this used freezer, if this specific unit had not been available, which of the following would you most likely have done...

[READ UNBRACKETED OPTIONS– ONLY ONE ANSWER ALLOWED]

1	Bought a similar used freezer somewhere else	F5
2	Purchased a lower quality or less expensive used freezer	
3	Purchased a higher quality or more expensive used freezer	
4	Purchased a brand new freezer	
5	Repaired an old non-working freezer	
6	Not replaced my freezer at that time	
7	[Other] (SPECIFY)	
-97	[Don't know]	
-98	[Refused]	

F5. Thinking about your recycled freezer, did you decide to get rid of it...

1	Before you heard about this recycling program	F6
2	About the same time as you heard about the program	
3	After you heard about the program	
-97	[Don't know]	
-98	[Refused]	

F6. If the recycling program had not picked up the freezer when it did, would you have still gotten rid of it, or would you have kept it?

[DO NOT READ OPTIONS]

1	[Gotten rid of it]	F7
2	[Kept it]	F10
-97	[Don't know]	F9
-98	[Refused]	

F7. How would you have gotten rid of it?

[PROMPT FOR RESPONSE – READ OPTIONS IF NEEDED]

1	[Threw away / Took to Landfill]	F8a
2	[Took to recycling center]	
3	[Donated to charity]	
4	[Taken by installer of new one]	
5	[Sold to used appliance dealer]	F8b
6	[Sold to a private individual]	
7	[Given it to friend/relative]	F9
8	[Kept it - plugged in]	F10
9	[Kept it - not plugged in]	
77	[Other (specify)]	F9
97	[Don't know]	
98	[Refused]	

F8a. If you were to hire someone to take the appliance away, what do you think you would have paid for this service?

	[RECORD DOLLAR AMOUNT]	F9
1	\$0	
2	\$0-\$25	
3	\$25-\$50	
4	\$50-\$100	
5	More than \$100	
-97	[Don't know]	
-98	[Refused]	

F8b. If you had sold this appliance to someone, how much do you think you could have received for it?

	[RECORD DOLLAR AMOUNT]	F9
-97	[Don't know]	
-98	[Refused]	

F9. How many months later do you think you would have gotten rid of the freezer if the program had not picked it up when it did?

	[RECORD MONTHS]	End freezer section
-77	[Actually might have kept it instead]	F10
-97	[Don't know]	End freezer section
-98	[Refused]	

F10. Would it have been stored unplugged, plugged in and running or both?

[DO NOT READ OPTIONS]

1	[Stored unplugged]	Next F1 or Next Section
2	[Plugged in and running]	
3	[Both – store it and use it some]	
4	[No – Would not have kept it]	
-97	[Don't know]	
-98	[Refused]	

[GO BACK TO F1 IF ANY ADDITIONAL FREEZERS, ELSE NEXT SECTION]

End FREEZERS

ADDITIONAL NET TO GROSS

C1. What is the main reason you chose this service to dispose of your appliance?

[ALLOW ONLY ONE RESPONSE]

1	Getting the program rebate	C2
2	Other reasons [RECORD VERBATIM]	
3	Free old unit pickup	
4	Environmental Concerns	
5	Lower Electric Bill	
6	Needed Space	
7	Convenience	
8	Old appliance	
-97	[Don't know]	
-98	[Refused]	

C2. Are there any other reasons? If yes: what were they?
[ALLOW MULTIPLE RESPONSES]

1	Getting the program rebate	C3
2	Other reasons [RECORD VERBATIM]	
3	Free old unit pickup	
4	Environmental Concerns	
5	Lower Electric Bill	
6	Needed Space	
7	Convenience	
8	Old/broken appliance	
9	Get rid of old one	
-97	[Don't know]	
-98	[Refused]	

C3. Have you disposed of a refrigerator or freezer in the past, before using the recycling program? How did you get rid of that unit?

[PROMPT FOR RESPONSE – READ OPTIONS IF NEEDED]

1	[No this is the first unit I've disposed of]	I1
2	[Threw away / Took to Landfill]	
3	[Took to recycling center]	
4	[Donated to charity]	
5	[Taken by installer of new one]	
6	[Sold to used appliance dealer]	
7	[Sold to private individual]	
8	[Gave to friend/relative/private individual]	
9	[Set it out on the curb for someone to take]	
77	[Other (specify)]	
-97	[Don't know]	
-98	[Refused]	

I1. Did you receive any rebate or incentive from the program after they picked up your appliance?

[IF YES] **What did you receive?**

1	Yes, \$30 rebate for one unit	I2
2	Yes, \$60 rebate for two units	
3	Yes, \$90 rebate for three units	
4	Yes, \$120 rebate for four units	
5	No, did not receive incentive	I4
6	Other (SPECIFY)	I2
-97	[Don't know]	
-98	[Refused]	

I2. Approximately how long did it take to receive your incentive?

[DO NOT READ BRACKETED OPTIONS]

1	[1 week or less]	I3
2	[2-3 weeks]	
3	[4-5 weeks]	
4	[6-8 weeks]	
5	[More than 8 weeks]	
6	[Got it at time of pickup]	
-97	[Don't know]	
-98	[Refused]	

I3. Did you know about the incentive prior to scheduling the pick-up?

1	[Yes]	I4
2	[No]	
-97	[Don't know]	
-98	[Refused]	

I4. If the incentive had not been offered would you have still used this service?

1	[Yes]	Next Section
2	[No]	
-97	[Don't know]	
-98	[Refused]	

SATISFACTION

S0. Next I have a series of questions about how satisfied you are with different aspects of the <program>. For all of these questions, use a 5 point scale where 5 means very satisfied and 1 means very *dissatisfied*

S1. How satisfied are you with the process to sign up for and schedule the appliance pick-up?

1	Very dissatisfied	S1b
2		S1b
3		S1b
4		S1c
5	Very satisfied	S1c
-97	[Don't know]	S1c
-98	[Refused]	S1c

S1b. Why do you say that?

[ALLOW MULTIPLE RESPONSES]

1	[The rebate application form was too long / the paperwork was too much]	S1c
2	[They could not tell me a definite time when they would pick it up]	
3	[They could not schedule a convenient time for pickup]	
4	[Other] [RECORD] _____	
5	Program Difficulty	
-97	[Don't know]	
-98	[Refused]	

S1c. How much time elapsed between when you scheduled the appointment and the date they came to pick up the appliance?

1	Less than a week	S1d
2	One week	
3	Two weeks	
4	Three weeks	
4	Four weeks	
4	Five weeks	
4	Six weeks	
4	More than six weeks	
-97	[Don't know]	
-98	[Refused]	

S1d. Using a 5 point scale where 5 means "Very satisfied" and 1 means "Very dissatisfied" how satisfied were you with the length of time you had to wait for your scheduled appointment?

1	Very dissatisfied	S2
2		
3		
4		
5	Very satisfied	
-97	[Don't know]	
-98	[Refused]	

S2. Now let's talk about what happened when the truck came. Using a 5 point scale where 5 means "Very satisfied" and 1 means "Very dissatisfied" how satisfied were you with the pick-up of your appliance(s)?

1	Very dissatisfied	S2b
2		S2b
3		S2b
4		S3
5	Very satisfied	S3
-97	[Don't know]	S3
-98	[Refused]	S3

S2b. Why do you say that?

[DO NOT PROMPT. ACCEPT MULTIPLE RESPONSES. WHEN RESPONDENT SEEMS FINISHED, PROMPT W/ "ANY OTHER REASON?" BEFORE PROCEEDING]

1	[Damaged my home while removing appliance]	S3
2	[Didn't check that the unit was working]	
3	[Did not come on the scheduled date]	
4	[Did not come on time]	
5	[Not courteous / un-professional staff]	
6	[Didn't leave check where instructed]	
7	[Too much paperwork]	
8	[Other] (RECORD)	
-97	[Don't know]	
-98	[Refused]	

S3. How satisfied were you with the dollar amount of the rebate? [REPEAT SCALE IF NECESSARY- Using a 5 point scale where 5 means "Very satisfied" and 1 means "Very dissatisfied"]

1	Very dissatisfied	S3b
2		S3b
3		S3b
4		S4
5	Very satisfied	S4
-97	[Don't know]	S4
-98	[Refused]	S4

S3b. Why do you say that?

1	[The rebate amount should have been larger]	S4
2	Other [RECORD VERBATIM]	
-97	[Don't know]	
-98	[Refused]	

S4. How satisfied were you with the timeliness of the rebate payment?

[REPEAT SCALE IF NECESSARY]

1	Very dissatisfied	S4b
2		S4b
3		S4b
4		S5
5	Very satisfied	S5
-97	[Don't know]	S5
-98	[Refused]	S5

S4b. Why do you say that?

1	[Rebate payment took too long to arrive]	S5
2	[Still haven't received rebate]	S5
3	[Other] [RECORD VERBATIM]	S5
-97	[Don't know]	S5
-98	[Refused]	S5

S5. How satisfied were you with the appliance recycling program as a whole?

[REPEAT SCALE IF NECESSARY]

1	Very dissatisfied	S5b
2		
3		
4		
5	Very satisfied	EA1
-97	[Don't know]	
-98	[Refused]	

S5b. Why do you say that?

1	[The rebate amount was not large enough]	EA1
2	[I haven't received the rebate check yet]	
3	[The rebate check took too long to arrive]	
4	[Damaged my home while removing appliance]	
5	[Didn't check that the unit was working]	
6	[Did not come on the scheduled date]	
7	[Did not come on time]	
8	Other [RECORD VERBATIM]	
9	Program Organizational flaws	
-97	[Don't know]	
-98	[Refused]	

ENERGY ATTITUDES

EA1. Before today, had you heard of ENERGY STAR?

1	[Yes]	EA2
2	[No]	EA2
97	[Don't know]	EA2
98	[Refused]	EA2

EA2. How concerned are you with reducing your home's energy use? Would you say...

[READ UNBRACKETED OPTIONS.]

1	Not at all concerned	EA4
2	Somewhat concerned	EA3

3	or Very concerned?	EA3
97	[Don't know]	D0
98	[Refused]	D0

EA3. Why are you concerned with reducing your home's energy use?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Cost of energy / Reduce energy bill]	D0
2	[Environment / Global warming]	D0
3	[Power availability / reliability]	D0
4	[Dependence on foreign oil]	D0
5	[Other, Specify _____]	D0
97	[Don't know]	D0
98	[Refused]	D0

EA4. Why aren't you concerned with reducing your home's energy use?

	[RECORD VERBATIM]	D0
1	Already made upgrades	
2	Fine with the way it is	
3	Believe already conserving	
97	[Don't know]	D0
98	[Refused]	D0

DEMOGRAPHICS

D0. We're almost done. I just have a few more questions about the address where the appliances were picked up. Is <address> a home or a business?

1	[home]	D1
2	[business]	
-97	[Don't know]	
-98	[Refused]	

D9. Do you own or rent <address>?

1	[Own]	D2
2	[Rent]	
-77	Other (specify)	
-97	[Don't know]	
-98	[Refused]	

D10. In what type of building is <address>?

[READ LIST IF NEEDED.]

1	Mobile home	D3
2	One-family home detached from any other house	
3	One-family home attached to one or more houses	
4	A building with 2 apartments	
5	A building with 3 or 4 apartments	
6	A building with 5 or more apartments	
-77	[Other (specify)]	
-97	[Don't know]	
-98	[Refused]	

D11. About when was this building first built?

[READ LIST IF NEEDED.]

1	Before the 1970s	D4
2	1970s	
3	1980s	
4	1990-1994	
5	1995-1999	
6	2000s	
-97	[Don't know]	
-98	[Refused]	

D12. How many square feet of living space are there in <address>, including bathrooms, foyers and hallways? [EXCLUDE GARAGES, BASEMENTS AND UNHEATED PORCHES.]

1	Less than 500	D5
2	500 – 1,000	
3	1,001 – 1,500	
4	1,501 – 2,000	
5	2,001 – 2,500	
6	2,501 – 3,000	
7	Greater than 3,000	
-97	[Don't know]	
-98	[Refused]	

D13. Is <address> a seasonal home?

1	[Yes]	D6
2	[No]	
-97	[Don't know]	
-98	[Refused]	

D14. How many months per year is <address> occupied?

	[RECORD #]	D7
-97	[Don't know]	
-98	[Refused]	

D15. Including yourself, how many people live in <address> in the following age groups?

1	Less than 18 years old	D7a. RECORD NUMBER	D8
2	18 to 24	D7b. RECORD NUMBER	
3	25 to 34	D7c. RECORD NUMBER	
4	35 to 44	D7d. RECORD NUMBER	
5	45 to 54	D7e. RECORD NUMBER	
6	55 to 64	D7f. RECORD NUMBER	
7	65 or older	D7g. RECORD NUMBER	
-97	[Don't know]		
-98	[Refused]		

D16. What is the highest level of education you have completed?

1	No schooling	D9
2	Less than high school	
3	Some high school	
4	High school graduate or equivalent (e.g., GED)	
5	Trade or technical school	
6	Some college	
7	College degree	
8	Some graduate school	
9	Graduate degree	
-97	[Don't know]	
-98	[Refused]	

D17. Which of the following best represents your annual household income from all sources in 2010, before taxes? Was it . . . ?

1	Less than \$20,000 per year,	D10
2	\$20,000-49,999,	
3	\$50,000-74,999,	
4	\$75,000-97,999,	
5	\$100,000-149,999,	
6	\$150,000-199,999, or	
7	\$200,000 or more?	
-97	[Don't know]	
-98	[Refused]	



Appendices

D18. RECORD GENDER [DO NOT ASK.]

1	Male	END_1
2	Female	END_1
-97	[Don't know]	END_1

THANK & TERMINATE

END_2. Those are all of the questions I have for you today. Thank you for your time.



Appendices

D. HVAC CATI Survey

EO-EU
HVAC Rebate Program
Residential CATI Survey
Revised – 03/22/12

Survey house instructions

13. Text in bold should be read.
14. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should NOT be read.
15. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
16. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
17. Text in gray boxes is major programming instruction.
18. Unless specifically noted, do NOT read answer choices. [Don't know] and [Refused] should NEVER be read.

Programming Notes

3. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet. Make separate 0/1 variables for the [Don't know] and [Refused] options as well.

Database variables

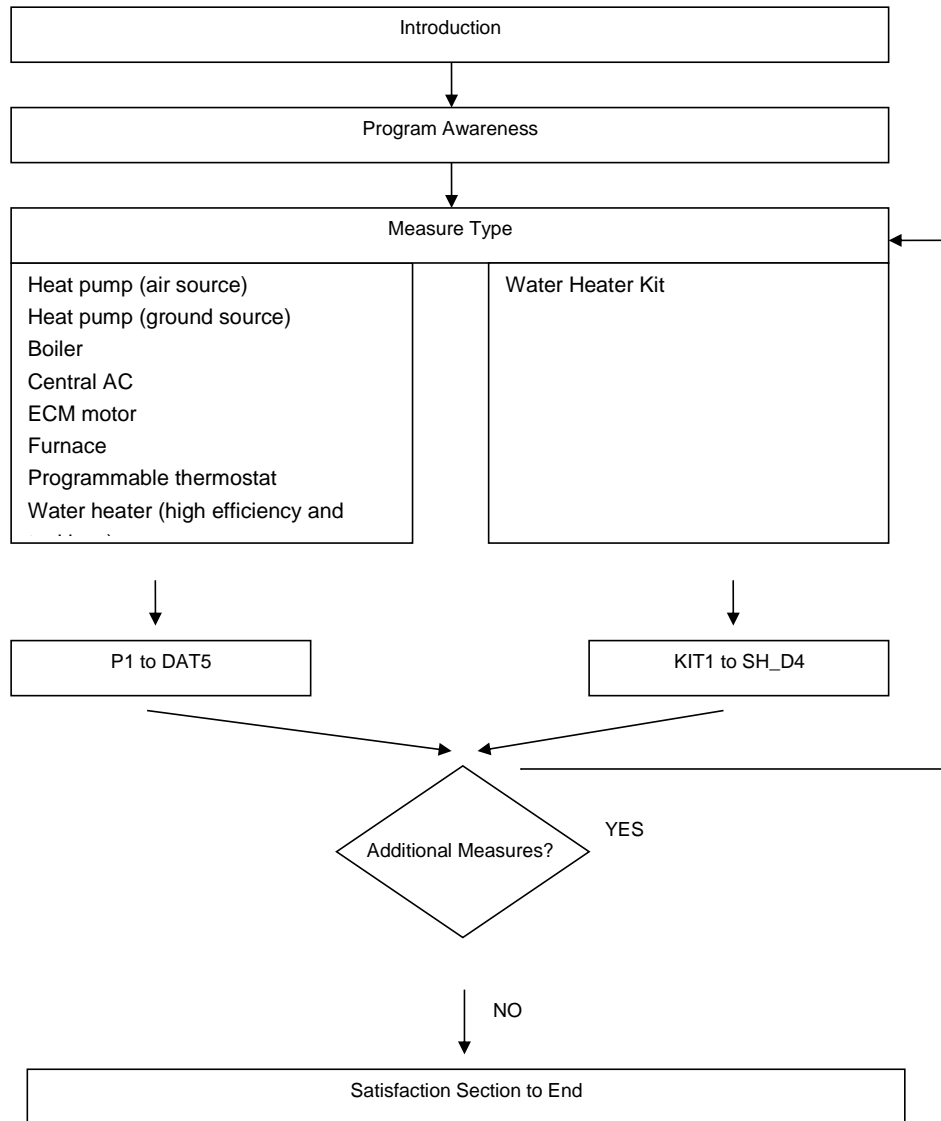
Variable	Definition
	(Unless otherwise noted, the database can contain more than one of each variable per respondent)
cont1, cont2, ... contx	Contact name(s).
utility	Name of the contact's utility. One per customer.
program	Energy Optimization or Efficiency United
Address	Address where measures are installed
M1, m2, ... mn	Measure that was installed
M1_wording, m2_wording, ..., mn_wording	Wording for measure that was installed
M1_qty, m2_qty, ..., mn_qty	Amount of measure that was installed
M1_code, m2_code, ..., mn_code	Numeric code for installed measure
mn_dat1_any_sentence	Sentence for "any measure, not just a high efficiency one"
Dat3_word1	"quantity" or "size" depending on measure



Appendices

Dat3_word2	"less" or "smaller" depending on measure
Dat3_word3	"more" or "larger" depending on measure
Total_rebate	Total amount of rebates this customer received
confirm_contact	name of person they can contact to verify the study
confirm_contact_phone	phone number of person they can contact to verify study

Program Flow





Appendices

INTRODUCTION

Intro1. Hello, my name is _____, and I'm calling on behalf of the Residential Heating Ventilation and Air Conditioning rebate program offered through <utility> and <program>. According to program records you received <total rebate> in rebates from the program. I'm calling to talk to you about the purchase decision and how you use the rebated appliances. Your responses will be kept confidential and your individual responses will not be revealed to anyone.

[IF NECESSARY: You can call <confirm_contact> at <confirm_contact_phone> to verify the study.]

1	[AGREES TO PARTICIPATE]	Intro2
2	[DOES NOT AGREE TO PARTICIPATE]	TERMINATE

Intro2. Our records show that you received rebates for a <m1_wording> ... <mn_wording> you recently purchased. Are you familiar with the decision to purchase this equipment?

1	[Yes]	Intro6
2	[No]	Intro3
-97	[Don't know]	Intro3
-98	[Refused]	Intro3

Intro3. Who could I speak to that would be familiar with that decision?

	[RECORD FIRST and LAST NAME]	Intro4
-98	[Refused]	TERMINATE
-97	[Don't know]	CALL BACK LATER

Intro4. Could I speak with <Intro3> now?

1	[Yes]	Intro1
2	[No]	Intro5
-97	[Don't know]	Intro5
-98	[Refused]	Intro5

Intro5. When is a good time I could call back to reach <Intro3>?

	[RECORD DAY and TIME]	Call back later
-98	[Refused]	Call back later
-97	[Don't know]	Call back later

Intro6. What is your name?

	[RECORD FIRST and LAST NAME]	A0
-98	[Refused]	A0
-97	[Don't know]	A0



Appendices

Program Awareness

A0. I'd like to start by asking you about your awareness of the <utility> Residential Heating Ventilation and Air Conditioning rebate program.

A1. Before today, had you ever heard of the program?

1	[Yes]	A2
2	[No]	A4
-97	[Don't know]	A4
-98	[Refused]	A4

A2. Where did you first hear about the program?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Contractor / Salesperson where equip purchased]	A3
2	[Utility bill stuffers]	A3
3	[Utility website]	A3
4	[the Internet other than utility's website]	A3
5	[Local newspaper]	A3
6	[A state or national newspaper]	A3
7	[TV, radio]	A3
8	[Friends, Relatives, or Neighbors]	A3
9	[Community Events or Local Schools]	A3
10	[Direct mail not included in bill]	A3
11	Government	A3
12	Heating Company	A3
13	Business Course/ Certification	A3
77	[Other, specify _____]	A3
-97	[Don't know]	A3
-98	[Refused]	A3

A3. Did you hear about the program, before or after you purchased the <m1_wording>?

1	[Before]	A4
2	[After]	A4
3	[About the same time]	A4
-97	[Don't know]	A4
-98	[Refused]	A4

A4. Why did you decide to participate in the <utility> rebate program?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]



Appendices

1	[Contractor / Installer recommendation]	VG0
2	[Wanted to get rebate while it was available]	VG0
3	[Was going to buy the equipment anyway]	VG0
4	[Reduce my energy consumption / bills]	VG0
5	[Help the environment / Global warming]	VG0
6	Convenience	VG0
7	Upgrade	VG0
8	Tax Advantage	VG0
77	[Other, specify _____]	VG0
-97	[Don't know]	VG0
-98	[Refused]	VG0



Appendices

VERIFY GROSS INSTALLATION

VG0. Next, I have some questions about the equipment that received the rebate.

[IF <mn_mtype_cd> = 17 (water heater kit) GOTO KIT1

ELSE GOTO P1]

P1. Was the <mn_wording> installed at <mn_address>?

1	[Yes]	VG1; <<ADDRESS>> = <mn_address>
2	[No]	P2
-97	[Don't know]	VG1
-98	[Refused]	Skip to next measure

P2. What address was the <mn_wording> installed in?

	P10a. [RECORD STREET ADDRESS]	P3; <<ADDRESS>> = <<P10a>>
	P10b. [RECORD CITY]	P3
	P10c. [RECORD ZIP CODE]	P3
-97	[Don't know]	P3
-98	[Refused]	P3

P3. What electric utility serves <<ADDRESS>>?

1	[Alger Delta Coop]	P4
2	[Alpena Power]	P4
3	[Bayfield Electric Cooperative]	P4
4	[Cloverland Electric Coop]	P4
5	[Daggett Electric Department]	P4
6	[Edison Sault Electric Company]	P4
7	[Great Lakes Energy coop]	P4
8	[HomeWorks Tri-County electric Coop]	P4
9	[Indiana Michigan Power Company]	P4
10	[Midwest Energy Coop]	P4
11	[Ontonagon County Rural Electrification]	P4
12	[Presque Isle Electric and Gas]	P4
13	[Thumb Electric]	P4
14	[Upper Peninsula Power Company]	P4
15	[WE Energies]	P4
16	[Wisconsin Public Service or "WPS"]	P4
17	[Xcel Energy]	P4
18	[City of Escanaba]	P4
19	[City of Stephenson]	P4
20	[Marquette Board of Light & Power]	P4
21	[Newberry Water & Light]	P4
22	[Detroit Edison or "DTE"]	P4
23	[Consumers Energy]	P4
77	[Other (specify)_____]	P4
97	[Don't know]	P4
98	[Refused]	P4

P4. What gas utility serves <<ADDRESS>>?

1	[Michigan Gas Utilities]	VG1
2	[SEMCO Energy]	VG1
3	[Wisconsin Public Service or "WPS"]	VG1
4	[Xcel Energy]	VG1
5	[Detroit Edison or "DTE"]	VG1
6	[Consumers Energy]	VG1
7	[Home does not have gas service]	VG1
77	[Other, Specify ____]	VG1
97	[Don't know]	VG1
98	[Refused]	VG1

VG1. Our records show <mn_qty> <mn_wording> were installed at << address>>. Is that quantity correct?

[IF PIPE WRAP, UNIT = FEET]

1	[Yes]	VG4a
2	[No]	VG2
-97	[Don't know]	VG2
-98	[Refused]	VG2

VG2. What quantity of <mn_wording> were installed at <<address>>?

[IF PIPE WRAP UNIT = FEET]

	[RECORD QUANTITY]	VG3
-97	[Don't know]	VG3
-98	[Refused]	VG3

VG3. Why was the quantity different?

	[RECORD VERBATIM]	IF VG2 = 0, GOTO VG1 FOR NEXT MEASURE ELSE GOTO VG4a
-97	[Don't know]	
-98	[Refused]	

THERMOSTAT BATTERY

[ASK VG4A - VG4H IF <mn_mtype_cd> = 24 (THERMOSTATS)]

VG4a. Did your new thermostat replace an older one?

1	[Yes]	VG4b
2	[No]	DAT0
-97	[Don't know]	DAT0
-98	[Refused]	DAT0

VG4b. Was your old thermostat programmable?

1	[Yes]	VG4e
2	[No]	VG4e
-97	[Don't know]	VG4e
-98	[Refused]	VG4e

VG4e. Since getting a new thermostat, have you used different temperature settings during the wintertime than you did before?

1	[Yes]	VG4f
2	[No]	DAT0
3	[We didn't get the new thermostat until after winter was over]	DAT0
-97	[Don't know]	DAT0
-98	[Refused]	DAT0

VG4f. Overnight, would you say you set the temperature warmer, cooler, or about the same as you did before?

1	[Warmer temperature].	VG4g
2	[Cooler temperature]	VG4g
3	[About the same]	VG4g
-97	[Don't know/ Not sure/Can't remember	VG4g
-98	[Refused].	VG4g

VG4g. During the daytime when the home is occupied, would you say you set the temperature warmer, cooler, or about the same as you did before?

1	[Warmer temperature].	VG4h
2	[Cooler temperature]	VG4h
3	[About the same]	VG4h
-97	[Don't know/ Not sure/Can't remember	VG4h
-98	[Refused].	VG4h

VG4h. During the daytime when the home is unoccupied, would you say you set the temperature warmer, cooler, or about the same as you did before?

1	[Warmer temperature].	DAT0
2	[Cooler temperature]	DAT0
3	[About the same]	DAT0
-97	[Don't know/ Not sure/Can't remember	DAT0
-98	[Refused].	DAT0

FURNACE FAN BATTERY

[ASK VG5A THROUGH VG5C IF <mn_mtype_cd> = 9 (FURNACE FAN)]

VG5a. Your thermostat might have a switch that has “auto”, “on”, and “off” on it. Before getting the new furnace fan, which setting do you have this switch set to when the furnace or AC were on?

0	[thermostat doesn't have this switch]	VG5c
1	[auto]	VG5b
2	[on]	VG5b
3	[both]	VG5b
-97	[Don't know]	VG5b
-98	[Refused]	VG5b

VG5b. Since getting the new furnace fan, which setting do you have this switch set to when the furnace or AC are on?

1	[auto]	VG5c
2	[on]	VG5c
3	[both]	VG5c
-97	[Don't know]	VG5c
-98	[Refused]	VG5c

VG5c. Do you have a central air conditioner?

1	[Yes]	DAT0
2	[No]	DAT0
-97	[Don't know]	DAT0
-98	[Refused]	DAT0

HEATING SYSTEM BATTERY

[ASK VG6A THROUGH VG6B IF <mn_mtype_cd> = 4, 12, 13 (BOILER, FURNACE, HEAT PUMP)]

VG6a. What was your old heating system at <mn_address>?

1	[furnace]	VG6b
2	[heat pump]	VG6b
3	[boiler]	VG6b
77	[other (specify)]	VG6b
-97	[Don't know]	VG6b
-98	[Refused]	VG6b

VG6b. How old was your previous system?

[IF GREATER THAN 100, ENTER 100]

	[RECORD RESPONSE] # years	Vg6c
-97	[Don't know]	Vg6c
-98	[Refused]	Vg6c

[ASK VG6c ONLY IF <mn_mtype_cd> = 4, 12 (FURNACE OR BOILER) ELSE SKIP TO DAT0]

VG6c. Which of the following best describes the condition of your boiler or furnace before it was replaced? [READ UNBRACKETED RESPONSES ONLY]

1	Not functioning at all?	VG6d
2	Still functioning but with significant performance or maintenance problems?	VG6d
3	Still functioning well?	VG6d
4	[Other] [RECORD RESPONDENT's ALTERNATIVE VERBATIM DESCRIPTION]	VG6d
-97	[Don't know]	VG6d
-98	[Refused]	VG6d

VG6d. You had a [furnace/boiler] installed that was much more energy-efficient than standard models. What were some reasons why you choose to go with this high efficiency [furnace/boiler]? [DON'T READ OPTIONS BUT ALLOW MULTIPLE RESPONSES]

1	[Our HVAC contractor/plumber recommended it]	DAT0
2	[We wanted to reduce our utility/energy bills]	DAT0
3	[We wanted a rebate]	DAT0
4	[We wanted to help the environment/ Reduce global warming]	DAT0
5	New system would be better for longer	DAT0
6	Good price on the unit	DAT0
7	Needed a new unit	DAT0
8	Someone else bought it for me	DAT0
9	Personal Preference	DAT0
10	Less noisy	DAT0
11	Rebate/ discount	DAT0
5	[Other] [RECORD RESPONSE]	DAT0
-97	[Don't know]	DAT0
-98	[Refused]	DAT0

CAC BATTERY

[ASK VG7A THROUGH VG7B IF <mn_mtype_cd> = 6 (CENTRAL AIR CONDITIONER)]

VG7a. What was your old cooling system at <mn_address>?

1	[central AC]	VG7b
2	[heat pump]	VG7b
3	[one or more room ACs]	VG7b
4	[fans]	VG7b
5	[No previous cooling systems]	DAT0
77	[other (specify)]	VG7b
-97	[Don't know]	VG7b
-98	[Refused]	VG7b

VG7b. About how old was your previous system? [if greater than 100, enter 100]

	[RECORD RESPONSE] # years	DAT0
-97	[Don't know]	DAT0
-98	[Refused]	DAT0

WATER HEATER BATTERY

[ASK VG20 THROUGH VG29 IF <mn_mtype_cd> = 31 (WATER HEATER OR TANKLESS WATER HEATER),]

VG20. About how many years old was the water heater that you replaced?

	[RECORD QUANTITY]	VG21
96	[did not replace an old water heater / this was an addon]	VG23
-97	[Don't know]	VG21
-98	[Refused]	VG21

VG21. What type of fuel did your old water heater use?

1	[Gas]	VG22
2	[Electricity]	VG22
3	[Other, Specify _____]	VG22
-97	[Don't know]	VG22
-98	[Refused]	VG22

VG22. Was your old water heater a standard tank water heater?

1	[Yes]	VG23
2	[No]	VG22b
-97	[Don't know]	VG23
-98	[Refused]	VG23

VG22b. What kind of water heater was it?

1	[Tankless]	VG23
2	[Solar]	VG23
3	[Other] Specify _____	VG23
-97	[Don't know]	VG23
-98	[Refused]	VG23

VG23. What type of fuel does the new water heater use?

1	[Gas]	VG14
2	[Electricity]	VG14
3	[Other, Specify _____]	VG14
-97	[Don't know]	VG14
-98	[Refused]	VG14

VG24. About how many loads of laundry are done at <mn_address> each week?

	[RECORD QUANTITY]	VG25
-97	[Don't know]	VG25
-98	[Refused]	VG25

VG25. About what percentage of those loads are done with cold water?

	[RECORD PERCENT]	VG26
-97	[Don't know]	VG26
-98	[Refused]	VG26

VG26. About what percentage of those loads are done in warm water?

	[RECORD PERCENT]	VG27
-97	[Don't know]	VG27
-98	[Refused]	VG27

VG27. About what percentage are done in hot water?

	[RECORD PERCENT]	VG28
-97	[Don't know]	VG28
-98	[Refused]	VG28

[IF VG25 + VG26 + VG27 ≠ 200, REPEAT VG25 to VG27]

VG28. About how many showers are taken at <mn_address> per week?

	[RECORD QUANTITY]	VG29
-97	[Don't know]	VG29
-98	[Refused]	VG29

VG29. About how many baths are taken at <mn_address> per week?

	[RECORD QUANTITY]	DAT0
-97	[Don't know]	DAT0
-98	[Refused]	DAT0

PIPE WRAP BATTERY

[STAND-ALONE PIPE WRAP DOES NOT REQUIRE ADDITIONAL QUESTIONS]

NET TO GROSS

DAT0. Next, I have some questions about the effect the rebates from the <utility> and <program> Residential Heating Ventilation and Air Conditioning rebate program had on your decision to purchase the <mn_wording>.

Without the program, would you say the likelihood of purchasing the <mn_wording> was... [READ UNBRACKETED OPTIONS]

1	Very likely	DAT1a
2	Somewhat likely	DAT1a
3	Not very likely	DAT1a
4	Or very unlikely	DAT1a
-97	[Don't know]	DAT1a
-98	[Refused]	Skip to next measure or S section

TIMING

DAT1a. I'd like to know about the effect, if any, that program incentives had on your decision to purchase the <mn_wording> when you did. <mn_dat1_any_sentence> Would you have purchased the <mn_wording> at the same time, earlier, later, or never?

1	[at the Same time]	DAT1a_conf_1
2	[Earlier]	DAT1a_conf_1
3	[Later]	DAT1a_conf_1
4	[Never]	DAT1a_conf_1
97	[Don't know]	DAT2a
98	[Refused]	DAT2a

IF DAT0 = 4 very unlikely AND DAT1a = 1 same time, THEN ASK DAT1a_conf1

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat DAT1a_ for whatever measure they are currently on so that they can change their answer.

DAT1a_conf1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase an <mn_wording> at all and that you would have done it at the same time? Is that correct?

1	[Yes]	DAT1a_O
2	[No]	DAT0
97	[Don't know]	DAT0
98	[Refused]	DAT0

IF DAT0 = 1 very likely AND DAT1a = 4 never, THEN ASK DAT1a_conf2

DAT1a_conf2. I'd just like to confirm, you said that without the program, you were very likely to purchase an <mn_wording> and that you would never have done it? Is that correct?

1	[Yes]	DAT1a_O
2	[No]	DAT0
97	[Don't know]	DAT0
98	[Refused]	DAT0

DAT1a_O. Why do you say that you would have purchased an <mn_wording> <<DAT1a>>?

	[RECORD RESPONSE VERBATIM]	DAT1b
1	Need	DAT1b
2	Old one broke	DAT1b
3	Cost too much	DAT1b
4	Personal preference	DAT1b

5	Not enough information	DAT1b
6	Efficiency	DAT1b
7	Good rebate/ discount	DAT1b
-97	[Don't know]	DAT1b
-98	[Refused]	DAT1b

IF DAT1a ≠ 3 LATER, SKIP TO DAT2a

DAT1b. Approximately how many months later?

	[RECORD # months]	DAT2a
-97	[Don't know]	DAT2a
-98	[Refused]	DAT2a

EFFICIENCY

[SKIP to DAT3 if <mn_mtype_cd> = 23, 24, OR 40 (pipe wrap or thermostat)]

DAT2a. Next, I'd like to know about the effect, if any, that program incentives had on your decision to purchase a *high efficiency* <mn_wording>.

Without the program would you have purchased <mn_wording> of the same efficiency, lesser efficiency, or greater efficiency?

1	[Same efficiency]	DAT2a_O
2	[Lesser efficiency]	DAT2a_O
3	[Greater efficiency]	DAT2a_O
-97	[Don't know]	DAT3
-98	[Refused]	DAT3

DAT2a_O. Why do you say that?

	[RECORD RESPONSE VERBATIM]	DAT2b
-97	[Don't know]	DAT2b
-98	[Refused]	DAT2b

IF DAT2a ≠ 2 LESSER EFFICIENCY, SKIP TO DAT3

DAT2b. Without the program, would you have purchased a <mn_wording> that was
 “standard efficiency on the market at that time,”
 “slightly higher than standard efficiency”,
 “between standard efficiency and the efficiency that you purchased,”
 or “slightly lower than the high efficiency that was purchased?”

1	[Standard efficiency on the market at time]	DAT3
2	[Slightly higher than standard efficiency]	DAT3
3	[Between standard efficiency and what purchased]	DAT3
4	[Slightly lower than the high efficiency purchased]	DAT3
-97	[Don't know]	DAT3
-98	[Refused]	DAT3

QUANTITY

DAT3. Finally, I'd like to know about the effect, if any, that program incentives and services had on the <mn_dat3_word1> of <mn_wording> that you purchased. Without the program would you have purchased the same <mn_dat3_word1>, <mn_dat3_word2>, <mn_dat3_word3> or none at all?

1	[Same number/size]	DAT3_conf1
2	[Fewer/smaller]	DAT3_conf1
3	[More/larger]	DAT3_conf1
4	[None at all]	DAT3_conf1
-97	[Don't know]	DAT4
-98	[Refused]	DAT4

IF DAT0 = 4 very unlikely AND DAT3 = 1 same number/size THEN ASK DAT3_conf1

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat DAT3_ for whatever measure they are currently on so that they can change their answer.

DAT3_conf1. I'd just like to confirm, you said that without the program, you were very unlikely to purchase an <mn_wording> at all and that you would have bought the same <mn_dat3_word1>? Is that correct?

1	[Yes]	DAT3_O
2	[No]	DAT3
97	[Don't know]	DAT3
98	[Refused]	DAT3

IF DAT0 = 1 very likely AND DAT3 = 4 none at all, THEN ASK DAT3_conf2

DAT3_conf2. I'd just like to confirm, you said that without the program, you were very likely to purchase an <mn_wording> and that you would not have bought anything at all? Is that correct?

1	[Yes]	DAT3_O
2	[No]	DAT3
97	[Don't know]	DAT3
98	[Refused]	DAT3

DAT3_O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	DAT3a
1	Purchased what was recommended	DAT3a
2	Needed that size/ quantity	DAT3a
3	Cost was too high	DAT3a
4	High Energy Efficiency	DAT3a
5	Rebate/ discount	DAT3a
6	Personal preference	DAT3a
7	Did not need one at that time	DAT3a
8	Needed more information	DAT3a
-97	[Don't know]	DAT3a
-98	[Refused]	DAT3a

IF DAT3 = 1 same number/size or 4 none at all, SKIP TO DAT4

DAT3a should take up to 900.

DAT3a. By what percentage did you change the <mn_dat3_word1> of <mn_wording> that you purchased because of the program?

	[RECORD NUMBER]	DAT4
-97	[Don't know]	DAT4
-98	[Refused]	DAT4

DAT4. We've just discussed the different effects that the program had on your decisions regarding the purchase of <mn_wording>. I'd like you to summarize the programs' influence on the timing, efficiency and <mn_dat3_word1> of <mn_wording> that you purchased.

	[RECORD RESPONSE VERBATIM]	DAT5
1	No effect on purchase	DAT5
2	No purchase without rebate	DAT5
3	Would have purchased less quantity	DAT5
4	Needed to purchase	DAT5
5	Lower bills	DAT5



Appendices

-97	[Don't know]	DAT5
-98	[Refused]	DAT5

Measure level loop stops here.

If any measures remaining, go back to P9 for next measure

Else continue to DAT5

DAT5. Do you have any additional comments about this purchase or the Energy Optimization program?

	[RECORD RESPONSE VERBATIM]	S0
-97	[Don't know]	S0
-98	[Refused]	S0



Appendices

WH KIT BATTERY

[ASK KIT1 TO SH_D5 IF <mn_mtype_cd> = 17 (water heater kit)]

KIT1. Our records show that you bought a kit that contained faucet aerators, pipe wrap, and a low flow showerhead. Why did you purchase the kit?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[get the faucet aerator]	KIT2
2	[get the low flow showerheads]	KIT2
3	[get the pipe wrap]	KIT2
4	[it was a convenient way to get everything at once]	KIT2
77	[Other, specify _____]	KIT2
97	[Don't know]	KIT2
98	[Refused]	KIT2

KIT2. If they had not been part of kit, would you have bought the faucet aerators? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	KIT3
2	Probably yes	KIT3
3	Probably not	KIT3
4	No	KIT3
97	[Don't know]	KIT3
98	[Refused]	KIT3

KIT3. If it had not been part of kit, would you have bought the pipe wrap? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	KIT4
2	Probably yes	KIT4
3	Probably not	KIT4
4	No	KIT4
97	[Don't know]	KIT4
98	[Refused]	KIT4

KIT4. If it had not been part of kit, would you have bought a low flow showerhead? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	FAI0
2	Probably yes	FAI0
3	Probably not	FAI0
4	No	FAI0
97	[Don't know]	FAI0
98	[Refused]	FAI0

FAUCET AERATORS

FAI0. I'm going to ask you some questions about the faucet aerators, then I'm going to ask the same questions about the pipe wrap and then the shower head. [GOTO FAI1]



Appendices

FAI1. Of the two faucet aerators in the kit, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = 2 GOTO FAI1b IF < 2 GOTO FAI1a;
97	[Don't know]	GOTO PIPE WRAP SECTION
98	[Refused]	GOTO PIPE WRAP SECTION

FAI1a. Why aren't both of them installed?

	[RECORD VERBATIM]	
97	[Don't know]	IF FAI1 = 0 GOTO PIPE WRAP SECTION
98	[Refused]	ELSE GOTO FAI1b

FAI1b. How many are installed at <mn_address>?

	[RECORD #]	IF answer = <<FAI1>> GOTO FA_D1a IF answer less than <<FAI1>> GOTO FAI1c
97	[Don't know]	FAI1c
98	[Refused]	FAI1c



Appendices

FAI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	FAI1d
2	[Alpena Power]	FAI1d
3	[Bayfield Electric Cooperative]	FAI1d
4	[Cloverland Electric Coop]	FAI1d
5	[Daggett Electric Department]	FAI1d
6	[Edison Sault Electric Company]	FAI1d
7	[Great Lakes Energy coop]	FAI1d
8	[HomeWorks Tri-County electric Coop]	FAI1d
9	[Indiana Michigan Power Company]	FAI1d
10	[Midwest Energy Coop]	FAI1d
11	[Ontonagon County Rural Electrification]	FAI1d
12	[Presque Isle Electric and Gas]	FAI1d
13	[Thumb Electric]	FAI1d
14	[Upper Penninsula Power Company]	FAI1d
15	[WE Energies]	FAI1d
16	[Wisconsin Public Service or "WPS"]	FAI1d
17	[Xcel Energy]	FAI1d
18	[City of Escanaba]	FAI1d
19	[City of Stephenson]	FAI1d
20	[Marquette Board of Light & Power]	FAI1d
21	[Newberry Water & Light]	FAI1d
22	[Detroit Edison or "DTE"]	FAI1d
23	[Consumers Energy]	FAI1d
77	[Other (specify) _____]	FAI1d
97	[Don't know]	FAI1d
98	[Refused]	FAI1d



Appendices

FAI1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	FAI1e
2	[SEMCO Energy]	FAI1e
3	[Wisconsin Public Service or "WPS"]	FAI1e
4	[Xcel Energy]	FAI1e
5	[Detroit Edison or "DTE"]	FAI1e
6	[Consumers Energy]	FAI1e
7	[Home does not have gas service]	FAI1e
77	[Other, Specify ____]	FAI1e
97	[Don't know]	FAI1e
98	[Refused]	FAI1e

[IF FAI1c INCLUDES 22, 23, or 77, OR FAI1d INCLUDES 5, 6, or 77 ASK NLI1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>
ELSE GOTO FAI1f]

FAI1e. How many faucet aerators are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	FAI1f
97	[Don't know]	FAI1f
98	[Refused]	FAI1f

FAI1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	FA_D1a
97	[Don't know]	FA_D1a
98	[Refused]	FA_D1a

FA NET TO GROSS

[IF KIT2 = 4, GOTO PIPE WRAP SECTION]

FA TIMING

FA_D1a. I'd like to know about the effect, if any, that program discounts had on your decision to purchase the faucet aerator(s) when you did. I'm referring to your decision to purchase any faucet aerator, not just an energy efficient one. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	FA_D1aO
2	[Earlier]	FA_D1aO
3	[Later]	FA_D1aO
4	[Never]	FA_D1aO
97	[Don't know]	FA_D2a
98	[Refused]	FA_D2a

FA_D1aO. Why do you say that you would have purchased a faucet aerator <<FA_D1a>>?

	[RECORD RESPONSE VERBATIM]	FA_D1b
97	[Don't know]	FA_D1b
98	[Refused]	FA_D1b

IF FA_D1a ≠ 3 LATER, SKIP TO FA_D3

FA_D1b. Approximately how many months later would you have purchased the aerator?

	[RECORD # months]	FA_D2a
97	[Don't know]	FA_D2a
98	[Refused]	FA_D2a

FA EFFICIENCY

FA_D2a. Next, I'd like to know about the effect, if any, that program discounts had on your decision to purchase an energy efficient faucet aerator.

Without the program would you have purchased a standard aerator or an energy efficient aerator?

1	[energy efficient]	FA_D2aO
2	[standard]	FA_D2aO
97	[Don't know]	FA_D2aO
98	[Refused]	FA_D3

FA_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	FA_D3
97	[Don't know]	FA_D3
98	[Refused]	FA_D3

FA QUANTITY

[IF <fa_qty> = 1, GOTO FA_D4]

FA_D3. Finally, I'd like to know about the effect, if any, that program discounts had on the number of faucet aerators that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number/size]	FA_D3O
2	[Fewer/smaller]	FA_D3O
3	[More/larger]	FA_D3O
4	[None at all]	FA_D3O
97	[Don't know]	FA_D3O
98	[Refused]	FA_D4

FA_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	FA_D3a
97	[Don't know]	FA_D3a
98	[Refused]	FA_D3a

IF FA_D3 = 1 same number/size or 4 none at all, SKIP TO FA_D4

FA_D3a. How many faucet aerators would you have bought without program discounts?

	[RECORD Number]	FA_D4
97	[Don't know]	FA_D4
98	[Refused]	FA_D4

FA_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of faucet aerators. I'd like you to summarize the programs' influence on the timing and number of faucet aerators that you purchased.

	[RECORD RESPONSE VERBATIM]	FA_D5
97	[Don't know]	FA_D5
98	[Refused]	FA_D5

FA_D5. Do you have any additional comments about this purchase?

0	[No additional comments]	GOTO PIPE WRAP SECTION
	[RECORD RESPONSE VERBATIM]	GOTO PIPE WRAP SECTION
97	[Don't know]	GOTO PIPE WRAP SECTION
98	[Refused]	GOTO PIPE WRAP SECTION



Appendices

PIPE WRAP

PWI1. Of the six feet of pipe wrap you purchased, how much is currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = 6 feet GOTO PWI1b IF < 6 feet GOTO PWI1a;
97	[Don't know]	GOTO SHOWERHEAD SECTION
98	[Refused]	GOTO SHOWERHEAD SECTION

PWI1a. Why isn't all of it installed?

	[RECORD VERBATIM]	IF PWI1 = 0 GOTO SHOWERHEAD SECTION ELSE GOTO PWI1b
97	[Don't know]	
98	[Refused]	

PWI1b. How much is installed at <mn_address>?

	[RECORD #]	IF answer = <<PWI1>> GOTO PW_D1a IF answer less than <<PWI1>> GOTO PWI1c
97	[Don't know]	PWI1c
98	[Refused]	PWI1c



Appendices

PWI1c. What electric utilities serve the locations where the rest is installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	PWI1d
2	[Alpena Power]	PWI1d
3	[Bayfield Electric Cooperative]	PWI1d
4	[Cloverland Electric Coop]	PWI1d
5	[Daggett Electric Department]	PWI1d
6	[Edison Sault Electric Company]	PWI1d
7	[Great Lakes Energy coop]	PWI1d
8	[HomeWorks Tri-County electric Coop]	PWI1d
9	[Indiana Michigan Power Company]	PWI1d
10	[Midwest Energy Coop]	PWI1d
11	[Ontonagon County Rural Electrification]	PWI1d
12	[Presque Isle Electric and Gas]	PWI1d
13	[Thumb Electric]	PWI1d
14	[Upper Penninsula Power Company]	PWI1d
15	[WE Energies]	PWI1d
16	[Wisconsin Public Service or "WPS"]	PWI1d
17	[Xcel Energy]	PWI1d
18	[City of Escanaba]	PWI1d
19	[City of Stephenson]	PWI1d
20	[Marquette Board of Light & Power]	PWI1d
21	[Newberry Water & Light]	PWI1d
22	[Detroit Edison or "DTE"]	PWI1d
23	[Consumers Energy]	PWI1d
77	[Other (specify) _____]	PWI1d
97	[Don't know]	PWI1d
98	[Refused]	PWI1d

PW11d. What gas utility serves the locations where the rest is installed?

1	[Michigan Gas Utilities]	PW11e
2	[SEMC Energy]	PW11e
3	[Wisconsin Public Service or "WPS"]	PW11e
4	[Xcel Energy]	PW11e
5	[Detroit Edison or "DTE"]	PW11e
6	[Consumers Energy]	PW11e
7	[Home does not have gas service]	PW11e
77	[Other, Specify ____]	PW11e
97	[Don't know]	PW11e
98	[Refused]	PW11e

[IF PW11c = 22, 23, or 77 OR PW11d = 5,6, or 77 ASK PW11e AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE OTHER ANSWER INTO <<OTHER UTILITY>>, ELSE GOTO PW11f]

PW11e. How many feet of pipe wrap are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	PW11f
97	[Don't know]	PW11f
98	[Refused]	PW11f

PW11f. Why aren't isn't all of it installed at <address>?

	[RECORD VERBATIM]	PW_D1a
97	[Don't know]	PW_D1a
98	[Refused]	PW_D1a

PW NET TO GROSS

[IF KIT3 = 4, GOTO SHOWERHEAD SECTION]

PW TIMING

PW_D1a. I'd like to know about the effect, if any, that program discounts had on your decision to purchase the pipe wrap when you did. Without the program, would you have purchased it at the same time, earlier, later, or never?

1	[at the Same time]	PW_D1aO
2	[Earlier]	PW_D1aO
3	[Later]	PW_D1aO
4	[Never]	PW_D1aO
97	[Don't know]	PW_D3
98	[Refused]	PW_D3



Appendices

PW_D1aO. Why do you say that you would have purchased pipe wrap <<PW_D1a>>?

	[RECORD RESPONSE VERBATIM]	PW_D1b
97	[Don't know]	PW_D1b
98	[Refused]	PW_D1b

IF PW_D1a ≠ 3 LATER, SKIP TO PW_D2a

PW_D1b. Approximately how many months later?

	[RECORD # months]	PW_D3
97	[Don't know]	PW_D3
98	[Refused]	PW_D3

PW EFFICIENCY

[EFFICIENCY NA FOR PIPE WRAP]

PW QUANTITY

PW_D3. Finally, I'd like to know about the effect, if any, that program discounts had on the amount of pipe wrap that you purchased. Without the program would you have purchased the same amount, more, less, or none at all?

1	[Same amount]	PW_D3O
2	[Less]	PW_D3O
3	[More]	PW_D3O
4	[None at all]	PW_D3O
97	[Don't know]	PW_D3O
98	[Refused]	PW_D4

PW_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	PW_D3a
97	[Don't know]	PW_D3a
98	[Refused]	PW_D3a

IF PW_D3 = 1 same number/size or 4 none at all, SKIP TO PW_D4

PW_D3a. How many feet of pipe wrap would you have bought without program discounts?

	[RECORD Number]	PW_D4
97	[Don't know]	PW_D4
98	[Refused]	PW_D4

?

PW_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of pipe wrap. I'd like you to summarize the programs' influence on the timing and amount of pipe wrap that you purchased.

	[RECORD RESPONSE VERBATIM]	PW_D5
97	[Don't know]	PW_D5
98	[Refused]	PW_D5

PW_D5. Do you have any additional comments about this purchase?

0	[No additional comments]	GOTO SHOWERHEAD SECTION
	[RECORD RESPONSE VERBATIM]	GOTO SHOWERHEAD SECTION
97	[Don't know]	GOTO SHOWERHEAD SECTION
98	[Refused]	GOTO SHOWERHEAD SECTION

LOW FLOW SHOWERHEADS

SHI1. Did you install the low flow showerhead that was included in the kit?

[PROBE FOR BEST ESTIMATE.]

1	[yes]	SHI1b
2	[no]	SHI1a
97	[Don't know]	GOTO SATISFACTION SECTION
98	[Refused]	GOTO SATISFACTION SECTION

SHI1a. Why not?

	[RECORD VERBATIM]	GOTO SATISFACTION SECTION
97	[Don't know]	
98	[Refused]	

SHI1b. Is it installed at <mn_address>?

1	[yes]	SH_D1a
2	[no]	SHI1c
97	[Don't know]	SH_D1a
98	[Refused]	SH_D1a



Appendices

SH11c. What electric utilities serve the location where it is installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	SH_D1a
2	[Alpena Power]	SH_D1a
3	[Bayfield Electric Cooperative]	SH_D1a
4	[Cloverland Electric Coop]	SH_D1a
5	[Daggett Electric Department]	SH_D1a
6	[Edison Sault Electric Company]	SH_D1a
7	[Great Lakes Energy coop]	SH_D1a
8	[HomeWorks Tri-County electric Coop]	SH_D1a
9	[Indiana Michigan Power Company]	SH_D1a
10	[Midwest Energy Coop]	SH_D1a
11	[Ontonagon County Rural Electrification]	SH_D1a
12	[Presque Isle Electric and Gas]	SH_D1a
13	[Thumb Electric]	SH_D1a
14	[Upper Penninsula Power Company]	SH_D1a
15	[WE Energies]	SH_D1a
16	[Wisconsin Public Service or "WPS"]	SH_D1a
17	[Xcel Energy]	SH_D1a
18	[City of Escanaba]	SH_D1a
19	[City of Stephenson]	SH_D1a
20	[Marquette Board of Light & Power]	SH_D1a
21	[Newberry Water & Light]	SH_D1a
22	[Detroit Edison or "DTE"]	SH_D1a
23	[Consumers Energy]	SH_D1a
77	[Other (specify) _____]	SH_D1a
97	[Don't know]	SH_D1a
98	[Refused]	SH_D1a

SH1d. What gas utility serves the location where it is installed?

1	[Michigan Gas Utilities]	SH_D1a
2	[SEMCO Energy]	SH_D1a
3	[Wisconsin Public Service or "WPS"]	SH_D1a
4	[Xcel Energy]	SH_D1a
5	[Detroit Edison or "DTE"]	SH_D1a
6	[Consumers Energy]	SH_D1a
7	[Home does not have gas service]	SH_D1a
77	[Other, Specify ____]	SH_D1a
97	[Don't know]	SH_D1a
98	[Refused]	SH_D1a

SH NET TO GROSS

[IF KIT4 = 4, GOTO SATISFACTION SECTION]

SH TIMING

SH_D1a. I'd like to know about the effect, if any, that program discounts had on your decision to purchase the low flow showerhead(s) when you did. I am referring to your decision to purchase any showerhead, not just a high efficiency one. Without the program, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	SH_D1aO
2	[Earlier]	SH_D1aO
3	[Later]	SH_D1aO
4	[Never]	SH_D1aO
97	[Don't know]	SH_D2a
98	[Refused]	SH_D2a

SH_D1aO. Why do you say that you would have purchased a showerhead <<SH_D1a>>?

	[RECORD RESPONSE VERBATIM]	SH_D1b
97	[Don't know]	SH_D1b
98	[Refused]	SH_D1b

IF SH_D1a ≠ 3 LATER, SKIP TO SH_D3

SH_D1b. Approximately how many months later would you have purchased a showerhead?

	[RECORD # months]	SH_D2a
97	[Don't know]	SH_D2a
98	[Refused]	SH_D2a

SH EFFICIENCY

SH_D2a. Next, I'd like to know about the effect, if any, that program discounts had on your decision to purchase a high efficiency low flow showerhead.

Without the program would you have purchased a standard showerhead or a high efficiency low flow showerhead?

1	[high efficiency]	SH_D2aO
2	[standard]	SH_D2aO
97	[Don't know]	SH_D2aO
98	[Refused]	SH_D3

SH_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	SH_D3
97	[Don't know]	SH_D3
98	[Refused]	SH_D3

SH QUANTITY

[IF <sh_qty> = 1, GOTO SH_D4]

SH_D3. Finally, I'd like to know about the effect, if any, that program discounts had on the number of low flow showerheads that you purchased. Without the program would you have purchased the same number, more, fewer, or none at all?

1	[Same number/size]	SH_D3c1
2	[Fewer/smaller]	SH_D3c1
3	[More/larger]	SH_D3c1
4	[None at all]	SH_D3c1
97	[Don't know]	SH_D3c1
98	[Refused]	SH_D4

SH_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	SH_D3a
97	[Don't know]	SH_D3a
98	[Refused]	SH_D3a

IF SH_D3 = 1 same number/size or 4 none at all, SKIP TO SH_D4

SH_D3a. How many low flow showerheads would you have purchased without program discounts?

	[RECORD Number]	SH_D4
97	[Don't know]	SH_D4
98	[Refused]	SH_D4

SH_D4. We've just discussed the different effects that the program had on your decisions regarding the purchase of low flow showerheads. I'd like you to summarize the programs' influence on the timing, efficiency and number of low flow showerheads that you purchased.

	[RECORD RESPONSE VERBATIM]	SH_D5
97	[Don't know]	SH_D5
98	[Refused]	SH_D5

SH_D5. Do you have any additional comments about this purchase?

0	[No additional comments]	satisfaction section
	[RECORD RESPONSE VERBATIM]	satisfaction section
97	[Don't know]	satisfaction section
98	[Refused]	satisfaction section

SATISFACTION

S0. Next I have a series of questions about how satisfied you are with different aspects of the <utility> Residential Heating Ventilation and Air Conditioning program. For all of these questions, use a 5 point scale where 5 means very satisfied and 1 means very *dissatisfied*

S1. How satisfied or dissatisfied are you with the rebated equipment?

1	Not at all satisfied	S1b
2		S1b
3		S1b
4		S2
5	Very satisfied	S2
-97	[Don't know]	S2
-98	[Refused]	S2

S1b. Why do you say that?

	[RECORD VERBATIM]	S2
1	Dissatisfied with it not working correctly	S2
2	Dissatisfied with no decrease in bill	S2
3	Works fine	S2
4	Not aware of rebate	S2
-97	[Don't know]	S2
-98	[Refused]	S2

S2. How about the dollar amount of the rebate? [REPEAT SCALE IF NECESSARY]

1	Not at all satisfied	S2b
2		S2b
3		S2b
4		S3
5	Very satisfied	S3
-97	[Don't know]	S3
-98	[Refused]	S3

S2b. Why do you say that?

	[RECORD VERBATIM]	S3
1	Higher rebate	S3
2	Did not receive rebate	S3
3	Reasonable rebate amount	S3
-97	[Don't know]	S3
-98	[Refused]	S3

S3. How satisfied or dissatisfied were you with the timeliness of the rebate payment?

1	Not at all satisfied	S3b
2		S3b
3		S3b
4		S4
5	Very satisfied	S4
-97	[Don't know]	S4
-98	[Refused]	S4

S3b. Why do you say that?

	[RECORD VERBATIM]	S4
1	Slow rebate payment	S4
2	Did not receive a rebate	S4
3	Reasonable rebate amount	S4
4	Not sure how long it took	S4
-97	[Don't know]	S4
-98	[Refused]	S4

S4. How about the rebate application forms and other paperwork?

0	[Did not fill out rebate paperwork]	S5
1	Not at all satisfied	S4b
2		S4b
3		S4b
4		S5
5	Very satisfied	S5
-97	[Don't know]	S5
-98	[Refused]	S5

S4b. Why do you say that?

	[RECORD VERBATIM]	S5
1	Too much paperwork	S5
2	Complicated process	S5
3	Reasonable paperwork	S5
-97	[Don't know]	S5
-98	[Refused]	S5

S5. How satisfied are you with the program as a whole?

1	Not at all satisfied	S5b
2		S5b
3		S5b
4		S6
5	Very satisfied	S6
-97	[Don't know]	S6
-98	[Refused]	S6

S5b. Why do you say that?

	[RECORD VERBATIM]	S6
1	Took too long to receive rebate	S6
2	Did not receive rebate	S6
3	Higher rebate amount	S6
4	Needed more information	S6
5	Difficult application	S6
6	Wasteful Program	S6
-97	[Don't know]	S6
-98	[Refused]	S6

S6. What, if anything, could <utility> do to get more people to participate in the rebate program?

	[RECORD VERBATIM]	S7
0	[No suggestions]	S7
1	More advertising	S7
2	Bill Awareness	S7
3	Increase rebate amount	S7
4	Community Events	S7
5	Educate contractors and installers	S7
6	Already doing fine	S7
-97	[Don't know]	S7
-98	[Refused]	S7

S7. What, if any, energy efficiency technologies would you like <utility> to offer rebates for?

	[RECORD VERBATIM]	R0
0	[No suggestions]	R0
1	Refrigerators and Freezers	R0
2	Water heating	R0
3	Renewable Resources	R0
4	Windows and Doors	R0
5	Other major Energy Star appliances	R0
6	Bill discounts	R0
7	Gas appliances	R0
8	Consumer electronics	R0
9	Home Energy Audit	R0
-97	[Don't know]	R0
-98	[Refused]	R0

APPLIANCE RECYCLING

R0. Next I'm going to ask you a few questions that will help us evaluate a different program.

R1. In the past 5 years, have you acquired a new or used refrigerator or stand-alone freezer?

1	[Yes]	R2
2	[No]	D1
97	[Don't know]	D1
98	[Refused]	D1

R2. Did you get a refrigerator, stand-alone freezer, or both?

1	[Refrigerator]	R3
2	[Freezer]	R3
3	[Both]	R3
97	[Don't know]	R3
98	[Refused]	R3

[If R2 ≠ 1 or 3, SKIP TO R14]

R3. Was the refrigerator used or brand new?

1	[Used]	R4
2	[New]	R4
97	[Don't know]	R4
98	[Refused]	R4

R4. Are you using it as your main refrigerator or as a spare?

1	[Main]	R5
---	--------	----

2	[Spare]	R5
97	[Don't know]	R5
98	[Refused]	R5

[IF R3 ≠ 1, used; Skip to R7]

R5. Where did you get this used refrigerator?

1	[Purchased from used appliance store]	R6
2	[Received as gift / hand-me-down]	
3	Purchased from an individual	
4	Came with the house	
-77	[Other (Specify _____)]	
-97	[Don't know]	
-98	[Refused]	

R6. At the time you got this used refrigerator, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R7
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
-77	Or something else [SPECIFY]	
-97	[Don't know]	
-98	[Refused]	

R7. Did this refrigerator replace an existing one?

1	[Yes]	R8
2	[No]	R9
97	[Don't know]	R9
98	[Refused]	R9

R8. What did you do with the refrigerator that you replaced?

1	[Threw away / Took to Landfill]	R14
2	[Took to recycling center]	R14
3	[Donated to charity]	R14
4	[Taken by installer of new one]	R13a
5	[Sold to used appliance dealer]	R13a
6	[Gave to friend/relative]	R14
7	[Kept it - plugged in]	R14
8	[Kept it - not plugged in]	R14
9	Sold to individual	R14
10	Energy Rebate	R14
77	[Other (specify)]	R13a

97	[Don't know]	R14
98	[Refused]	R14

[If R2 ≠ 2 or 3, SKIP TO D1]

R9. Was the freezer used or brand new?

1	[Used]	R10
2	[New]	R12
97	[Don't know]	R12
98	[Refused]	R12

R10. Where did you get this used freezer?

1	[Purchased from used appliance store]	R11
2	[Received as gift / hand-me-down]	
-77	[Other (Specify_____)]	
-97	[Don't know]	
-98	[Refused]	

R11. At the time you got this used freezer, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R12
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
-77	Or something else [SPECIFY]	
-97	[Don't know]	
-98	[Refused]	

R12. Did this freezer replace an existing one?

1	[Yes]	R13
2	[No]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

R13. What did you do with the freezer that you replaced?

1	[Threw away / Took to Landfill]	EA1
2	[Took to recycling center]	EA1
3	[Donated to charity]	EA1
4	[Taken by installer of new one]	EA1
5	[Sold to used appliance dealer]	EA1
6	[Gave to friend/relative]	EA1
7	[Kept it - plugged in]	EA1
8	[Kept it - not plugged in]	EA1

77	[Other (specify)]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

ENERGY ATTITUDES

EA1. Before today, had you heard of ENERGY STAR?

1	[Yes]	EA2
2	[No]	EA2
97	[Don't know]	EA2
98	[Refused]	EA2

EA2. How concerned are you with reducing your home's energy use? Would you say... [READ UNBRACKETED OPTIONS.]

1	Not at all concerned	EA4
2	Somewhat concerned	EA3
3	or Very concerned?	EA3
97	[Don't know]	D1
98	[Refused]	D1

EA3. Why are you concerned with reducing your home's energy use? [DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Cost of energy / Reduce energy bill]	D1
2	[Environment / Global warming]	D1
3	[Power availability / reliability]	D1
4	[Dependence on foreign oil]	D1
5	[Other, Specify _____]	D1
97	[Don't know]	D1
98	[Refused]	D1

EA4. Why aren't you concerned with reducing your home's energy use?

	[RECORD VERBATIM]	D1
1	Already Energy Efficient	D1
2	Low bill	D1
3	Don't think about energy use	D1
97	[Don't know]	D1
98	[Refused]	D1

DEMOGRAPHICS

D19. Do you own or rent <m1_address>?

1	[Own]	D2
2	[Rent]	D2
-97	[Don't know]	D2
-98	[Refused]	D2

D20. What type of building is <m1_address>? [READ LIST]

1	Mobile home	D3
2	One-family home detached from any other house	D3
3	One-family home attached to one or more houses	D3
4	A building with 2 apartments	D3
5	A building with 3 or 4 apartments	D3
6	A building with 5 or more apartments	D3
-77	[Other (specify)]	D3
-97	[Don't know]	D3
-98	[Refused]	D3

D21. Is <m1_address> a seasonal home?

1	[Yes]	D4
2	[No]	D4
-97	[Don't know]	D4
-98	[Refused]	D4

D22. How many months per year is <m1_address> occupied?

	[RECORD #]	D5; if <6, skip to D5e
-97	[Don't know]	D5
-98	[Refused]	D5

D23. Including yourself, and children how many people live in <m1_address> at least 6 months per year?

	[RECORD #]	D5a
-97	[Don't know]	D5e
-98	[Refused]	D5e

D5a. How many people are 65 or older?

	[RECORD #]	D5b
-97	[Don't know]	D5b
-98	[Refused]	D5b

D5b. How many people are 19 to 64?

	[RECORD #]	D5c
-97	[Don't know]	D5c
-98	[Refused]	D5c

D5c. How many people are 5 to 18?

	[RECORD #]	D5d
-97	[Don't know]	D5d
-98	[Refused]	D5d

D5d. How many people are less than 5?

	[RECORD #]	D5e
-97	[Don't know]	D5e
-98	[Refused]	D5e

[Check that sum of D5a to D5d = D5. If not, repeat D5 to D5d.]

D5e. What is your age?

	[RECORD #]	D6
-97	[Don't know]	D6
-98	[Refused]	D6

D24. What is the highest level of education you have completed?

1	No schooling	D7
2	Less than high school	D7
3	Some high school	D7
4	High school graduate or equivalent (e.g., GED)	D7
5	Trade or technical school	D7
6	Some college	D7
7	College degree	D7
8	Some graduate school	D7
9	Graduate degree	D7
77	Other (specify _____)	D7
-97	[Don't know]	D7
-98	[Refused]	D7



Appendices

D25. Which of the following best represents your annual household income from all sources in 2009, before taxes? Was it . . . ?

1	Less than \$20,000 per year,	D8
2	\$20,000-49,999,	D8
3	\$50,000-74,999,	D8
4	\$75,000-97,999,	D8
5	\$100,000-149,999,	D8
6	\$150,000-199,999, or	D8
7	\$200,000 or more?	D8
-97	[Don't know]	D8
-98	[Refused]	D8

D26. RECORD GENDER [DO NOT ASK.]

1	Male	END_1
2	Female	END_1
-97	[Don't know]	END_1

THANK & TERMINATE

END_3. Those are all of the questions I have for you today. Thank you for your time.

E. Low-Income CATI Survey

EO-EU
Low Income Participant CATI
Revised – 03/22/12

Survey house instructions

19. Text in bold should be read.
20. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should NOT be read.
21. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
22. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
23. Text in gray boxes is major programming instruction.
24. Unless specifically noted, do NOT read answer choices. [Don't know] and [Refused] should NEVER be read.

Programming Notes

4. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet. Make separate 0/1 variables for the [Don't know] and [Refused] options as well.

Database variables

Variable	Definition
	(Unless otherwise noted, the database can contain more than one of each variable per respondent)
fnl_cust_name	Contact name(s).
fnl_cust_phone	phone # for contact
utility_name	Name of the contact's utility. One per customer.
program	Name of the program the contact is likely to recognize. One per customer.
confirm_contact	name of person to contact to confirm the survey
confirm_contact_phone	phone # of person to contact to confirm the survey
confirm_contact_email	email of person to contact to confirm the survey
n_meas	# of measures rebated through program
totalreb	total \$ this person received in rebates
M1_mdsc, m2_mdsc, ... mn_mdsc	Measure that was installed
M1_wording, m2_wording, ..., mn_wording	Wording for measure that was installed



Appendices

M1_qty, m2_qty, ..., mn_qty	Amount of measure that was installed
M1_mtype_cd, m2_mtype_cd, ..., mn_mtype_cd	Numeric code for installed measure
m1_verb_past, m2_verb_past, ... mn_verb_past	"Performed" or "installed"
m1_unit, m2_unit, ..., m3_unit	unit for measure if something other than number of units (e.g. insulation is usually measured in square feet). Most are blank
equipment_string	combined list of measures received by participant
sq_ft	square feet of the participant's home



Appendices

INTRODUCTION

Intro1. Hello, my name is _____, and I'm calling on behalf of the Energy Efficiency Assistance program available through <utility> and the Community Action Agency. This program recently provided you with some home improvements or energy efficient equipment. I'm not selling anything; I'd just like to ask about your experience with the program and the improvements it provided. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

1	[AGREES TO PARTICIPATE]	Intro2
2	[DOES NOT AGREE TO PARTICIPATE]	TERMINATE

Intro2. Our records show that <program> provided your household with <equipment_string> Are you familiar with your household's receipt of this equipment?

1	[Yes]	Intro6
2	[No]	Intro3
-97	[Don't know]	Intro3
-98	[Refused]	Intro3

Intro3. Who in your household is most familiar with that equipment?

	[RECORD FIRST and LAST NAME]	Intro4
-98	[Refused]	Intro4
-97	[Don't know]	Intro4

Intro4. Could I speak with <Intro3>?

1	[Yes]	Intro1
2	[No]	Intro5
-97	[Don't know]	Intro5
-98	[Refused]	Intro5

Intro5. When is a good time I could call back to reach <Intro3>?

	[RECORD DAY and TIME]	Call back later
-98	[Refused]	Call back later
-97	[Don't know]	Call back later

Intro6. What is your name?

	[RECORD FIRST and LAST NAME]	A2
-98	[Refused]	A2
-97	[Don't know]	A2



Appendices

A2. To get started, where did you first hear about the program?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Non-profit Organization]	VG0
2	[Utility bill stuffers]	VG0
3	[Utility website]	VG0
4	[the Internet other than utility's website]	VG0
5	[Local newspaper]	VG0
6	[A state or national newspaper]	VG0
7	[TV, radio]	VG0
8	[Friends, Relatives, or Neighbors]	VG0
9	[Community Events or Local Schools]	VG0
10	[Government agency]	VG0
77	[Other, specify _____]	VG0
-97	[Don't know]	VG0
-98	[Refused]	VG0

VERIFY GROSS INSTALLATION

VG0. Next, I have some questions about the improvements you received.

Repeat VG1 through VG40h for each measure. Once all measures asked about, go to S0.

Measures:

Air sealing

Insulation sq ft (ceiling, wall, mobile home belly)

Insulation ln ft (rim joist)

CFLs

Furnace

Refrigerators

Pstat

ECM motor

Furnace tune-ups

VG1. Our records show that <m1_qty> <m1_unit> <m1_wording> was/were <m1_verb_past> at <m1_address>. Does that quantity sound correct?

1	[Yes]	VG4
2	[No]	VG2
-97	[Don't know]	VG4
-98	[Refused]	VG4

VG2. How many <m1_unit> were <m1_verb_past>?

	[RECORD QUANTITY]	VG3 use this quantity instead of <m1_qty> for rest of the survey
-97	[Don't know]	VG3
-98	[Refused]	VG3

VG3. Why was the quantity different?

	[RECORD VERBATIM]	VG4
-97	[Don't know]	VG4
-98	[Refused]	VG4

[IF <m1_mtype_cd> = (furnace tune-up), GOTO P9]

VG4. How many <m1_unit> are still installed?

	[RECORD QUANTITY]	If VG4 >= <m1_qty> go to P9 Else go to VG5
-97	[Don't know]	I3
-98	[Refused]	I3

VG5. What happened to the <m1_wording> that is/are no longer installed?

	[RECORD VERBATIM]	P9
-97	[Don't know]	
-98	[Refused]	

P9. Our records show the <m1_wording> was/were <m1_verb_past> at <m1_address>. Is that address correct?

1	[Yes]	S0
2	[No]	P10
-97	[Don't know]	
-98	[Refused]	S0

P10. At what address was the <m1_wording> <m1_verb_past>?

	P10a. [RECORD STREET ADDRESS]	P11 Use this address instead of <m1_address> for rest of survey
	P10b. [RECORD CITY]	P11
	P10c. [RECORD ZIP CODE]	P11
-97	[Don't know]	P11
-98	[Refused]	P11

P11. What electric utility services <m1_address>?

1	[Alger Delta Coop]	P12
2	[Alpena Power]	P12
3	[Bayfield Electric Cooperative]	P12
4	[Cloverland Electric Coop]	P12
5	[Daggett Electric Department]	P12
6	[Edison Sault Electric Company]	P12
7	[Great Lakes Energy coop]	P12
8	[HomeWorks Tri-County electric Coop]	P12
9	[Indiana Michigan Power Company]	P12
10	[Midwest Energy Coop]	P12
11	[Ontonagon County Rural Electrification]	P12
12	[Presque Isle Electric and Gas]	P12
13	[Thumb Electric]	P12
14	[Upper Peninsula Power Company]	P12
15	[WE Energies]	P12
16	[Wisconsin Public Service or "WPS"]	P12
17	[Xcel Energy]	P12
18	[Detroit Edison or "DTE"]	P12
19	[Consumers Energy]	P12
-97	[Don't know]	P12
-98	[Refused]	P12

P12. What gas utility services <m1_address>?

1	[Michigan Gas Utilities]	S0
2	[SEMCO Energy]	
3	[Wisconsin Public Service or "WPS"]	
4	[Xcel Energy]	
5	[Detroit Edison or "DTE"]	
6	[Consumers Energy]	
7	[Home does not have gas service]	
-97	[Don't know]	
-98	[Refused]	

SATISFACTION

S0. Next I have a series of questions about how satisfied you are with different aspects of the Efficiency United program. For all of these questions, use a 5 point scale where 5 means very satisfied and 1 means not at all satisfied

[REPEAT S1, S1B FOR EACH MEASURE]

S1. How satisfied or dissatisfied are you with the <m1_wording>?

1	Not at all satisfied	S1b
2		S1b
3		S1b
4		S2
5	Very satisfied	S2
-97	[Don't know]	S2
-98	[Refused]	S2

S1b. Why do you say that?

	[RECORD VERBATIM]	S2
-97	[Don't know]	S2
-98	[Refused]	S2

S2. How satisfied or dissatisfied are you with the contractor who installed the equipment?

1	Not at all satisfied	S2b
2		S2b
3		S2b
4		S3
5	Very satisfied	S3
-97	[Don't know]	S3
-98	[Refused]	S3

S2b. Why do you say that?

	[RECORD VERBATIM]	S3
-97	[Don't know]	S3
-98	[Refused]	S3

S3. How satisfied or dissatisfied are you with the program as a whole?

1	Not at all satisfied	S3b
2		S3b
3		S3b
4		D1
5	Very satisfied	D1
-97	[Don't know]	D1
-98	[Refused]	D1

S3b. Why do you say that?

	[RECORD VERBATIM]	D1
-97	[Don't know]	D1
-98	[Refused]	D1

DEMOGRAPHICS

D1. Do you own or rent <m1_address>?

1	[Own]	D2
2	[Rent]	D1 a
-97	[Don't know]	D2
-98	[Refused]	D2

D1a. How much, if any, of your electricity and gas bills are included in your lease payment?

	[Record Percent 0 to 100]	D2
-97	[Don't know]	D2
-98	[Refused]	D2

D2. What type of building is <m1_address>?

[READ LIST]

1	Mobile home	D2a
2	One-family home detached from any other house	D2a
3	One-family home attached to one or more houses	D2a
4	A building with 2 apartments	D2a
5	A building with 3 or 4 apartments	D2a
6	A building with 5 or more apartments	D2a
-77	[Other (specify)]	D2a
-97	[Don't know]	D2a
-98	[Refused]	D2a



Appendices

[IF <sq_ft> > 0 ASK D2a ELSE ASK D2b]

D2a. Our records show <m1_address> has <sq_ft> square feet of internal conditioned space. Is that correct?

1	[Yes]	D3
2	[No]	D2b
-97	[Don't know]	D2c
-98	[Refused]	D2c

D2b. What is the approximate square footage of <m1_address>?

	[RECORD #]	D3
-97	[Don't know]	D2c
-98	[Refused]	D2c

D2c. Would you say the square footage is ... [READ OPTIONS]

1	less than 800 square feet	D4
2	800 to 999 square feet	D4
3	1000 to 1199 square feet	D4
4	1200 to 1499 square feet	D4
5	1500 to 1799 square feet	D4
6	1800 to 1999 square feet	D4
7	2000 square feet or more	D4
-97	[Don't know]	D4
-98	[Refused]	D4

D4. How many months per year is <m1_address> occupied?

	[RECORD #]	D5; if <6, skip to D5e
-97	[Don't know]	D5
-98	[Refused]	D5

D5. Including yourself, and children how many people live in <m1_address> at least 6 months per year?

	[RECORD #]	D5a
-97	[Don't know]	D5e
-98	[Refused]	D5e

D5a. How many people are 65 or older?

	[RECORD #]	D5b
-97	[Don't know]	D5b
-98	[Refused]	D5b

D5b. How many people are 19 to 64?

	[RECORD #]	D5c
-97	[Don't know]	D5c
-98	[Refused]	D5c

D5c. How many people are 5 to 18?

	[RECORD #]	D5d
-97	[Don't know]	D5d
-98	[Refused]	D5d

D5d. How many people are less than 5?

	[RECORD #]	D5e
-97	[Don't know]	D5e
-98	[Refused]	D5e

[CHECK THAT SUM OF D5A TO D5D = D5. IF NOT, REPEAT D5 TO D5D.]

D5e. What is your age?

	[RECORD #]	D6
-97	[Don't know]	D6
-98	[Refused]	D6



Appendices

D6. What is the highest level of education you have completed?

1	No schooling	D7
2	Less than high school	D7
3	Some high school	D7
4	High school graduate or equivalent (e.g., GED)	D7
5	Trade or technical school	D7
6	Some college	D7
7	College degree	D7
8	Some graduate school	D7
9	Graduate degree	D7
77	Other (specify)	D7
-97	[Don't know]	D7
-98	[Refused]	D7

D7. Which of the following best represents your annual household income from all sources in 2010, before taxes? Was it . . . ?

1	Less than \$5,000 per year,	D8
2	\$5,000 to \$9,999	D8
3	\$10,000 to \$14,999	D8
4	\$15,000 to \$19,999	D8
5	\$20,000 to \$29,999,	D8
6	\$30,000 to \$49,999	D8
7	\$50,000 or more,	D8
-97	[Don't know]	D8
-98	[Refused]	D8

D8. RECORD GENDER [DO NOT ASK.]

1	Male	END_1
2	Female	END_1
-97	[Don't know]	END_1

THANK & TERMINATE

END_4. Those are all of the questions I have for you today. Thank you for your time.

F. Audit & Weatherization Online Audit CATI Survey

EU
Audit and Weatherization Program
Online Audit CATI Survey
Revised – 3/22/2012

Survey house instructions

25. Text in bold should be read.
26. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should NOT be read.
27. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
28. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
29. Text in gray boxes is major programming instruction.
30. Unless specifically noted, do NOT read answer choices. [Don't know] and [Refused] should NEVER be read.

Programming Notes

5. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet. Make separate 0/1 variables for the [Don't know] and [Refused] options as well.

Database variables

Variable	Definition
	(Unless otherwise noted, the database can contain more than one of each variable per respondent)
<customer_name>	Contact name(s).
utility_name	Name of the contact's utility. One per customer.
client	Efficiency United or Energy Optimization.
Address	Address where measures were installed
<cfl_qty>	# of cfl bulbs in the online kit participant received
<sh_qty>	# of low flow showerheads in the kit participant rec'd
<fa_qty>	# of faucet aerators in kit
<pw_qty>	# of feet of pipe wrap in kit
<nl_qty>	# of nightlights in kit
<door_qty>	# of door weatherstripping kits in kit



Appendices

Report_month	Approximate month of audit completion. Equal to database entry date, minus 1 month.
kit string	contents of the kits



Appendices

INTRODUCTION

Intro1. Hello, my name is _____, and I'm calling on behalf of the Online Energy Audit program offered through <utility> and <client>. I'd like to discuss an online home energy audit that you recently completed and the energy-saving kit you received. I'm not selling anything; I'd just like to ask your opinions. Your responses will be kept confidential and your individual responses will not be revealed to anyone.

1	[AGREES TO PARTICIPATE]	Intro2
2	[DOES NOT AGREE TO PARTICIPATE]	TERMINATE

Intro2. Our records show that your household completed an online or on-paper audit around <report_month>. Are you familiar with the audit?

1	[Yes]	Intro6
2	[No]	Intro3
-97	[Don't know]	Intro3
-98	[Refused]	Intro3

Intro3. Who could I speak to that would be familiar with the audit?

[IF NECESSARY: Our records show <customer_name> filled out the audit.]

	[RECORD FIRST and LAST NAME]	Intro4
-98	[Refused]	Intro4
-97	[Don't know]	Intro4

Intro4. Could I speak with <Intro3> now?

1	[Yes]	Intro1
2	[No]	Intro5
-97	[Don't know]	Intro5
-98	[Refused]	Intro5

Intro5. When is a good time I could call back to reach <Intro3>?

	[RECORD DAY and TIME]	Call back later
-98	[Refused]	Call back later
-97	[Don't know]	Call back later

Intro6. What is your name?

	[RECORD FIRST and LAST NAME]	TOOL1
-98	[Refused]	TOOL1
-97	[Don't know]	TOOL1

TOOL



Appendices

TOOL1. How did you find out about the audit?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Utility bill stuffers]	TOOL1B
2	[Utility website]	TOOL1B
3	[the Internet other than utility's website]	TOOL1B
4	[Local newspaper]	TOOL1B
5	[A state or national newspaper]	TOOL1B
6	[TV, radio]	TOOL1B
7	[Friends, Relatives, or Neighbors]	TOOL1B
8	[Community Events or Local Schools]	TOOL1B
9	[Salesperson where equip purchased]	TOOL1B
10	[“County Lines” or utility magazine]	TOOL1B
11	[Utility sponsored meeting]	TOOL1B
12	Utility company company or representative	TOOL1B
13	Email or mail ad from unknown source	TOOL1B
14	Magazine or unspecified ad	TOOL1B
15	Door to Door	TOOL1B
16	Called Me	TOOL1B
77	[Other, specify _____]	TOOL1B
-97	[Don't know]	TOOL1B
-98	[Refused]	TOOL1B

TOOL1B. Why did you decide to complete the online or on-paper audit?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Wanted to get the information while it was free]	TOOL2
2	[Wanted to get the free kit with CFLs and other stuff]	TOOL2
3	[Reduce my energy consumption / bills]	TOOL2
4	[Help the environment / Global warming]	TOOL2
5	curiosity	TOOL2
6	Easy/convenient	TOOL2
7	Was asked to do it	TOOL2
77	[Other, specify _____]	TOOL2
-97	[Don't know]	TOOL2
-98	[Refused]	TOOL2

TOOL2. Next, I'd like you to think about how easy or difficult the tool or checklist was to use. Using a five point scale where 1 means very difficult and 5 means very easy, how difficult or easy was it to use ?

1	[very difficult]	TOOL2a
2		TOOL2a
3		TOOL2a
4		TOOL3
5	[very easy]	TOOL3
-97	[Don't know]	TOOL3
-98	[Refused]	TOOL3

TOOL2a. Why do you say that?

	[RECORD VERBATIM]	TOOL3
1	Internet problems	TOOL3
2	Difficulty accessing info that tool requested	TOOL3
3	Audit was confusing/complicated	TOOL3
4	Time consuming	TOOL3
-97	[Don't know]	TOOL3
-98	[Refused]	TOOL3

TOOL3.What kind of information did the audit provide you?

[SELECT ALL THAT APPLY. ALLOW MULTIPLE RESPONSES.]

1	[how much electricity appliances use]	TOOL4
2	[how much appliances cost to run]	TOOL4
3	[how much gas appliances use]	TOOL4
4	[energy efficient equipment/appliances information]	TOOL4
5	[comparison of different types of equipment/appliances]	TOOL4
6	[energy saving tips]	TOOL4
7	[rebate information]	TOOL4
8	none	TOOL4
-77	[Other, specify_____]	TOOL4
-97	[Don't know]	TOOL4
-98	[Refused]	TOOL4

TOOL4.On a 1 to 5 scale where 1 is not at all useful and 5 is very useful, how useful did you find this information?

1	[not at all useful]	TOOL4a
2		TOOL4a
3		TOOL4a
4		TOOL5
5	[very useful]	TOOL5
-97	[Don't know]	TOOL5
-98	[Refused]	TOOL5

TOOL4a. Why do you say that?

	[RECORD VERBATIM]	TOOL5
1	Didn't provide new information	TOOL5
2	Recommendations not practical to implement	TOOL5
3	Didn't provide tailored info/recommendations	TOOL5
4	Already do more than audit recommended	TOOL5
5	Didn't save money on bill	TOOL5
6	Difficult to use	TOOL5
-97	[Don't know]	TOOL5
-98	[Refused]	TOOL5

TOOL5. What questions, if any, do you have about the audit?

1	[No questions]	KIT1
2	[Questions] [Record questions]	KIT1
3	did not receive kit	KIT1
4	why did they do audit / how will they use info	KIT1
5	expect onsite audit	KIT1
6	would like more savings info	KIT1
77	other	KIT1
-97	[Don't know]	KIT1
-98	[Refused]	KIT1

KIT

KIT1. Do you remember receiving a package of energy saving equipment? It contained <kit string>.

1	[Yes]	KIT2
2	[No]	EE1
-97	[Don't know]	EE1
-98	[Refused]	EE1

KIT2. When did the package arrive? [IF NECESSARY: You filled out the audit on <report month>]

	KIT2b. [RECORD MONTH]	KIT3
	KIT2c. [RECORD YEAR]	KIT3
-97	[Don't know]	KIT3
-98	[Refused]	KIT3

[IF <cfl_qty> = 0 GOTO KIT4]

KIT3. If they had not been part of package, would you have bought compact fluorescent bulbs? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]



Appendices

1	Yes	KIT4
2	Probably yes	KIT4
3	Probably not	KIT4
4	No	KIT4
97	[Don't know]	KIT4
98	[Refused]	KIT4

[IF <nl_qty> = 0 GOTO KIT5]

KIT4. If they had not been part of the package, would you have bought LED night lights? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	KIT5
2	Probably yes	KIT5
3	Probably not	KIT5
4	No	KIT5
97	[Don't know]	KIT5
98	[Refused]	KIT5

[IF <fa_qty> = 0 GOTO KIT6]

KIT5. If they had not been part of package, would you have bought faucet aerators? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	KIT6
2	Probably yes	KIT6
3	Probably not	KIT6
4	No	KIT6
97	[Don't know]	KIT6
98	[Refused]	KIT6

[IF <pw_qty> = 0 GOTO KIT7]

KIT6. If it had not been part of package, would you have bought pipe wrap? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	KIT7
2	Probably yes	KIT7
3	Probably not	KIT7
4	No	KIT7
97	[Don't know]	KIT7
98	[Refused]	KIT7

[IF <sh_qty> = 0 GOTO KIT8]

KIT7. If it had not been part of package, would you have bought a new showerhead? Would you say...

1	Yes	KIT8
2	Probably yes	KIT8
3	Probably not	KIT8
4	No	KIT8
97	[Don't know]	KIT8
98	[Refused]	KIT8

[IF <door_qty> = 0 GOTO CFL SECTION]

KIT8. If they had not been part of package, would you have bought door sealing kits? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	CFL SECTION
2	Probably yes	CFL SECTION
3	Probably not	CFL SECTION
4	No	CFL SECTION
97	[Don't know]	CFL SECTION
98	[Refused]	CFL SECTION

CFL SECTION

[IF <CFL_QTY> = 0, GOTO LED NIGHT LIGHT SECTION]

First, I want to talk about compact fluorescent bulbs included in the kit. They are also called CFLs.

[IF NECESSARY: These are the spiral bulbs that save energy.]

CFL1. Our records show the kit contained <cfl_qty> compact fluorescent bulbs. Is that correct?

1	[Yes]	CFL11
2	[No]	CFL2
-97	[Don't know]	GOTO LED NIGHT LIGHT SECTION
-98	[Refused]	GOTO LED NIGHT LIGHT SECTION

CFL2. How many compact fluorescent light bulbs did the kit contain?

	[RECORD number]	If 0 GOTO LED NIGHT LIGHT SECTION If >0 SET <CFL_QTY> TO ANSWER, GOTO CFL11
-97	[Don't know]	GOTO LED NIGHT LIGHT SECTION
-98	[Refused]	GOTO LED NIGHT LIGHT SECTION



Appendices

CFLI1. Of the <cfl_qty> CFL bulbs you received, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	If >0, CFLI1a; If 0, skip to CFLT1
97	[Don't know]	CFLT1
98	[Refused]	CFLT1

CFLI1a. Are all of them installed at <address>?

1	[Yes]	CFLI2
2	[No]	CFLI1b
97	[Don't know]	CFLI2
98	[Refused]	CFLI2

CFLI1b. How many are installed at <address>?

	[RECORD #]	CFLI1c
97	[Don't know]	CFLI1c
98	[Refused]	CFLI1c



Appendices

CFLI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	CFL1e
2	[Alpena Power]	CFL1e
3	[Bayfield Electric Cooperative]	CFL1e
4	[Cloverland Electric Coop]	CFL1e
5	[Daggett Electric Department]	CFL1e
6	[Edison Sault Electric Company]	CFL1e
7	[Great Lakes Energy coop]	CFL1e
8	[HomeWorks Tri-County electric Coop]	CFL1e
9	[Indiana Michigan Power Company]	CFL1e
10	[Midwest Energy Coop]	CFL1e
11	[Ontonagon County Rural Electrification]	CFL1e
12	[Presque Isle Electric and Gas]	CFL1e
13	[Thumb Electric]	CFL1e
14	[Upper Penninsula Power Company]	CFL1e
15	[WE Energies]	CFL1e
16	[Wisconsin Public Service or "WPS"]	CFL1e
17	[Xcel Energy]	CFL1e
18	[City of Escanaba]	CFL1e
19	[City of Stephenson]	CFL1e
20	[Marquette Board of Light & Power]	CFL1e
21	[Newberry Water & Light]	CFL1e
22	[Detroit Edison or "DTE"]	CFL1d
23	[Consumers Energy]	CFL1d
77	[Other (specify) _____]	CFL1d
97	[Don't know]	CFL1e
98	[Refused]	CFL1e

[IF CFLI1c INCLUDES 22, 23, or 77, ASK CFLI1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>

ELSE GOTO CFLI1e]

CFLI1d. How many bulbs are installed in locations that get electricity from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	CFL1e
97	[Don't know]	CFL1e
98	[Refused]	CFL1e

CFLI1e. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	CFLI2
97	[Don't know]	CFLI2
98	[Refused]	CFLI2

CFLI2. Of the <<CFLI1>> bulbs you installed, how many replaced a bulb that was still working?
 [IF NECESSARY: I'm referring to any kind of replaced bulb, not necessarily another CFL.]

	[RECORD NUMBER]	IF ANSWER > 0 GOTO CFLI3 IF ANSWER = 0 GOTO CFLI4
97	[Don't know]	CFLI4
98	[Refused]	CFLI4

CFLI3. Would you have replaced these working bulbs if you had not received the CFLs in the kit? I'm referring to replacing them with any kind of bulb, not necessary a CFL.

1	[Yes]	CFLI4
2	[No]	CFLI4
3	[I did not replace any working bulbs]	CFLI4
97	[Don't know]	CFLI4
98	[Refused]	CFLI4

CFLI4. You said earlier that you installed <<CFLI1>> CFLs. If you had not received the CFLs in the kit, how many of each of the following types of bulbs would you have installed in the same fixtures?

- e. Incandescent
- f. CFLs
- g. LEDs
- h. Or Something else?

	[RECORD NUMBER]	
97	[Don't know]	MAKE SURE CFLI5a + CFLI5b + CFLI5c + CFLI5d = CFLI1
98	[Refused]	THEN GOTO CFLS10

CFLS10. Based on your experience with these CFLs how likely are you to purchase CFLs in the future? Would you say you say very likely, somewhat likely, not very likely, or not at all likely?

1	[Very likely]	CFLS11
2	[Somewhat likely]	CFLS11
3	[Not very likely]	CFLS11
4	[Not at all likely]	CFLT1
97	[Don't know]	CFLS11
98	[Refused]	CFLS11



Appendices

CFLS11. How likely are you to purchase bulbs in the future at full price of 3 to 4 dollars each? Would you say you say very likely, somewhat likely, not very likely, or not at all likely?

1	[Very likely]	CFLT1
2	[Somewhat likely]	CFLT1
3	[Not very likely]	CFLT1
4	[Not at all likely]	CFLT1
97	[Don't know]	CFLT1
98	[Refused]	CFLT1

CFL STORAGE

[IF <<CFLI1>> EQUALS <CFL_QTY>, GOTO LED NIGHT LIGHT SECTION]

CFLT1. You said you received <cfl_qty> CFL bulbs and installed <<CFLI1>> of them. Are the rest in storage?

1	[Yes]	CFLS1
2	[No]	CFLT2
97	[Don't know]	CFLS1
98	[Refused]	CFLS1

CFLT2. What did you do with the other bulbs?

1	They burned out/were broken	
	[RECORD VERBATIM]	CFLS1
97	[Don't know]	CFLS1
98	[Refused]	CFLS1

LED NIGHT LIGHTS

[IF <NL_qty> = 0, GOTO FAUCET AERATOR SECTION]

NL1. Our records show the kit included <nl_qty> LED night lights. Is that correct?

1	[Yes]	NL2
2	[No]	NL1b
97	[Don't know]	GOTO FAUCET AERATOR SECTION
98	[Refused]	GOTO FAUCET AERATOR SECTION

NL1b. About how many LED nightlights were in the kit?

	[RECORD #]	<NL_qty> = answer GOTO NLI1
97	[Don't know]	NLI1
98	[Refused]	GOTO FAUCET AERATOR SECTION



Appendices

NLI1. Of the <nl_qty> LED nightlights you received, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <NL_qty> GOTO NLI1b IF < <NL_qty> GOTO NLI1a;
97	[Don't know]	GOTO FAUCET AERATOR SECTION
98	[Refused]	GOTO FAUCET AERATOR SECTION

NLI1a. Why aren't all of them installed?

2	Didn't like it	?
1	Didn't need it	?
	[RECORD VERBATIM]	
97	[Don't know]	IF NLI1 = 0 GOTO FAUCET AERATOR SECTION
98	[Refused]	ELSE GOTO NLI1b

NLI1b. How many are installed at <address>?

	[RECORD #]	IF answer = <<NLI1>> GOTO NL_D1a IF answer less than <<NLI1>> GOTO NLI1c
97	[Don't know]	NLI1c
98	[Refused]	NLI1c



Appendices

NLI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	NLI1e
2	[Alpena Power]	NLI1e
3	[Bayfield Electric Cooperative]	NLI1e
4	[Cloverland Electric Coop]	NLI1e
5	[Daggett Electric Department]	NLI1e
6	[Edison Sault Electric Company]	NLI1e
7	[Great Lakes Energy coop]	NLI1e
8	[HomeWorks Tri-County electric Coop]	NLI1e
9	[Indiana Michigan Power Company]	NLI1e
10	[Midwest Energy Coop]	NLI1e
11	[Ontonagon County Rural Electrification]	NLI1e
12	[Presque Isle Electric and Gas]	NLI1e
13	[Thumb Electric]	NLI1e
14	[Upper Penninsula Power Company]	NLI1e
15	[WE Energies]	NLI1e
16	[Wisconsin Public Service or "WPS"]	NLI1e
17	[Xcel Energy]	NLI1e
18	[City of Escanaba]	NLI1e
19	[City of Stephenson]	NLI1e
20	[Marquette Board of Light & Power]	NLI1e
21	[Newberry Water & Light]	NLI1e
22	[Detroit Edison or "DTE"]	NLI1e
23	[Consumers Energy]	NLI1e
77	[Other (specify)_____]	NLI1e
97	[Don't know]	NLI1e
98	[Refused]	NLI1e

[IF NLI1c INCLUDES 22, 23, or 77, ASK NLI1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>

ELSE GOTO NLI1e]

NLI1d. How many LED nightlights are installed in locations that get electricity from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	NLI1e
97	[Don't know]	NLI1e
98	[Refused]	NLI1e



Appendices

NLI1e. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	NL_D1a
97	[Don't know]	NL_D1a
98	[Refused]	NL_D1a

NL NET TO GROSS

[IF KIT4 = 4, GOTO FAUCET AERATOR SECTION]

NL TIMING

NL_D1a. You said earlier that you might have bought night lights if they had not been included in the kit. I'm referring to your decision to purchase any night lights, not just energy efficient LED night lights. Relative to when the kit arrived, would you have purchased them at the same time, earlier, later, or never?

[IF NECESSARY: You filled out the audit in <report month>]

1	[at the Same time]	NL_D1aO
2	[Earlier]	NL_D1aO
3	[Later]	NL_D1aO
4	[Never]	NL_D1aO
97	[Don't know]	NL_D2a
98	[Refused]	NL_D2a

NL_D1aO. Why do you say that you would have purchased a night light <<NL_D1a>>?

	[RECORD RESPONSE VERBATIM]	NL_D1b
97	[Don't know]	NL_D1b
98	[Refused]	NL_D1b

IF NL_D1a ≠ 3 LATER, SKIP TO NL_D2a

NL_D1b. Approximately how many months later?

[IF NECESSARY: You filled out the audit in <report month>]

	[RECORD # months]	NL_D2a
97	[Don't know]	NL_D2a
98	[Refused]	NL_D2a

NL EFFICIENCY

NL_D2a. If you hadn't gotten an LED nightlight in the kit, would you have purchased a standard night lights or energy efficient LED night lights?

1	[energy efficient LED]	NL_D2aO
---	------------------------	---------

2	[standard]	NL_D2aO
97	[Don't know]	NL_D2aO
98	[Refused]	NL_D3

NL_D2aO. Why do you say that?

1	Like LEDs	?
2	Save energy	?
	[RECORD RESPONSE VERBATIM]	NL_D3
97	[Don't know]	NL_D3
98	[Refused]	NL_D3

NL QUANTITY

[IF <nl_qty> = 1, GOTO FAUCET AERATOR SECTION]

NL_D3. If you had not received the <nl_qty> LED night lights in the kit, would you have purchased the same number, more, fewer, or none at all?

1	[Same number]	NL_D3O
2	[Fewer]	NL_D3O
3	[More]	NL_D3O
4	[None at all]	NL_D3O
97	[Don't know]	NL_D3O
98	[Refused]	GOTO FAUCET AERATOR SECTION

NL_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	NL_D3A
97	[Don't know]	NL_D3A
98	[Refused]	NL_D3A

[IF NL_D3 = 1, 4, 97, 98 GOTO FAUCET AERATOR SECTION]

NL_D3A. How many would you have purchased?

	[RECORD RESPONSE VERBATIM]	GOTO FAUCET AERATOR SECTION
97	[Don't know]	GOTO FAUCET AERATOR SECTION
98	[Refused]	GOTO FAUCET AERATOR SECTION



Appendices

FAUCET AERATORS

[IF <FA_QTY> = 0, GOTO PIPE WRAP SECTION]

FA1. Our records show the kit included <fa_qty> faucet aerators. Is that correct?

1	[Yes]	FA11
2	[No]	FA1b
97	[Don't know]	GOTO PIPEWRAP SECTION
98	[Refused]	GOTO PIPEWRAP SECTION

FA1b. About how many faucet aerators were in the kit?

	[RECORD #]	<fa_qty> = answer GOTO FA11
97	[Don't know]	FA11
98	[Refused]	GOTO PIPEWRAP SECTION

FAI1. Of the <fa_qty> faucet aerators you received, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <FA_qty> GOTO FA11b IF < <FA_qty> GOTO FA11a;
97	[Don't know]	GOTO PIPE WRAP SECTION
98	[Refused]	GOTO PIPE WRAP SECTION

FAI1a. Why aren't all of them installed?

1	Don't have use for all	?
2	Don't fit	?
3	Don't like them	?
4	Didn't get around to it	?
	[RECORD VERBATIM]	
97	[Don't know]	IF FAI1 = 0 GOTO PIPE WRAP SECTION
98	[Refused]	ELSE GOTO FA1b

FAI1b. How many are installed at <address>?

	[RECORD #]	IF answer = <<FAI1>> GOTO FA_D1a IF answer less than <<FAI1>> GOTO FA11c
97	[Don't know]	FAI1c
98	[Refused]	FAI1c

FAI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	FAI1d
2	[Alpena Power]	FAI1d
3	[Bayfield Electric Cooperative]	FAI1d
4	[Cloverland Electric Coop]	FAI1d
5	[Daggett Electric Department]	FAI1d
6	[Edison Sault Electric Company]	FAI1d
7	[Great Lakes Energy coop]	FAI1d
8	[HomeWorks Tri-County electric Coop]	FAI1d
9	[Indiana Michigan Power Company]	FAI1d
10	[Midwest Energy Coop]	FAI1d
11	[Ontonagon County Rural Electrification]	FAI1d
12	[Presque Isle Electric and Gas]	FAI1d
13	[Thumb Electric]	FAI1d
14	[Upper Penninsula Power Company]	FAI1d
15	[WE Energies]	FAI1d
16	[Wisconsin Public Service or "WPS"]	FAI1d
17	[Xcel Energy]	FAI1d
18	[City of Escanaba]	FAI1d
19	[City of Stephenson]	FAI1d
20	[Marquette Board of Light & Power]	FAI1d
21	[Newberry Water & Light]	FAI1d
22	[Detroit Edison or "DTE"]	FAI1d
23	[Consumers Energy]	FAI1d
77	[Other (specify) _____]	FAI1d
97	[Don't know]	FAI1d
98	[Refused]	FAI1d



Appendices

FAI1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	FAI1e
2	[SEMCO Energy]	FAI1e
3	[Wisconsin Public Service or "WPS"]	FAI1e
4	[Xcel Energy]	FAI1e
5	[Detroit Edison or "DTE"]	FAI1e
6	[Consumers Energy]	FAI1e
7	[Home does not have gas service]	FAI1e
77	[Other, Specify ____]	FAI1e
97	[Don't know]	FAI1e
98	[Refused]	FAI1e

[IF FAI1c INCLUDES 22, 23, or 77, OR FAI1d INCLUDES 5, 6, or 77 ASK NLI1d AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE ANSWER TO OTHER IN <<OTHER UTILITY>>
ELSE GOTO FAI1f]

FAI1e. How many faucet aerators are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	FAI1f
97	[Don't know]	FAI1f
98	[Refused]	FAI1f

FAI1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	FA_D1a
97	[Don't know]	FA_D1a
98	[Refused]	FA_D1a

FA NET TO GROSS

[IF KIT5 = 4, GOTO PIPE WRAP SECTION]

FA TIMING

FA_D1a. You said earlier that you might have bought faucet aerators if they had not been included in the kit. I'm referring to your decision to purchase any faucet aerators, not just energy efficient ones. Relative to when the kit arrived, would you have purchased them at the same time, earlier, later, or never?

[IF NECESSARY: You filled out the audit in <report month>]

1	[at the Same time]	FA_D1aO
2	[Earlier]	FA_D1aO
3	[Later]	FA_D1aO
4	[Never]	FA_D1aO
97	[Don't know]	FA_D2a
98	[Refused]	FA_D2a

FA_D1aO. Why do you say that you would have purchased a faucet aerator <<FA_D1a>>?

1	efficient	?
2	Don't find them important/don't know about them	?
3	Need/replacement	?
	[RECORD RESPONSE VERBATIM]	FA_D1b
97	[Don't know]	FA_D1b
98	[Refused]	FA_D1b

IF FA_D1a ≠ 3 LATER, SKIP TO FA_D2a

FA_D1b. Approximately how many months later?

[IF NECESSARY: You filled out the audit in <report month>]

	[RECORD # months]	FA_D2a
97	[Don't know]	FA_D2a
98	[Refused]	FA_D2a

FA EFFICIENCY

FA_D2a. If you hadn't gotten faucet aerators in the kit, would you have purchased standard faucet aerators or energy efficient ones?

1	[energy efficient aerator]	FA_D2aO
2	[standard]	FA_D2aO
97	[Don't know]	FA_D2aO
98	[Refused]	FA_D3

FA_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	FA_D3
1	For energy efficiency reasons	?
2	Don't think about the difference/unimportant	?
3	cost	?
97	[Don't know]	FA_D3
98	[Refused]	FA_D3

FA QUANTITY

[IF <fa_qty> = 1, GOTO PIPE WRAP SECTION]

FA_D3. If you had not received the <fa_qty> faucet aerators in the kit, would you have purchased the same number, more, fewer, or none at all?

1	[Same number]	FA_D3O
2	[Fewer]	FA_D3O
3	[More]	FA_D3O
4	[None at all]	FA_D3O
97	[Don't know]	FA_D3O
98	[Refused]	GOTO PIPE WRAP SECTION

FA_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	FA_D3A
1	Amount based on need	?
2	efficiency	?
97	[Don't know]	FA_D3A
98	[Refused]	FA_D3A

[IF FA_D3 = 1, 4, 97, 98 GOTO PIPE WRAP SECTION]

FA_D3A. How many would you have purchased?

	[RECORD RESPONSE VERBATIM]	GOTO PIPE WRAP SECTION
97	[Don't know]	GOTO PIPE WRAP SECTION
98	[Refused]	GOTO PIPE WRAP SECTION





Appendices

PIPE WRAP

[IF <PW_QTY> = 0, GOTO SHOWERHEAD SECTION]

PW1. Our records show the kit included <pw_qty> feet of pipe wrap. Is that correct?

1	[Yes]	PW2
2	[No]	PW1b
97	[Don't know]	PW2
98	[Refused]	GOTO SHOWERHEAD SECTION

PW1b. About how many feet of pipe wrap were in the kit.

	[RECORD #]	<pw_qty> = answer GOTO PW11
97	[Don't know]	PW11
98	[Refused]	GOTO SHOWERHEAD SECTION

PW11. Of the <pw_qty> feet of pipe wrap you received, how much is currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <PW_qty> GOTO PW11b IF < <PW_qty> GOTO PW11a;
97	[Don't know]	GOTO SHOWERHEAD SECTION
98	[Refused]	GOTO SHOWERHEAD SECTION

PW11a. Why aren't all of them installed?

	[RECORD VERBATIM]	
1	Didn't get around to it	
97	[Don't know]	
98	[Refused]	IF PW11 = 0 GOTO SHOWERHEAD SECTION ELSE GOTO PW11b

PW11b. How much is installed at <address>?

	[RECORD #]	IF answer = <<PW11>> GOTO PW_D1a IF answer less than <<PW11>> GOTO PW11c
97	[Don't know]	PW11c
98	[Refused]	PW11c



Appendices

PWI1c. What electric utilities serve the locations where the rest is installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	PWI1d
2	[Alpena Power]	PWI1d
3	[Bayfield Electric Cooperative]	PWI1d
4	[Cloverland Electric Coop]	PWI1d
5	[Daggett Electric Department]	PWI1d
6	[Edison Sault Electric Company]	PWI1d
7	[Great Lakes Energy coop]	PWI1d
8	[HomeWorks Tri-County electric Coop]	PWI1d
9	[Indiana Michigan Power Company]	PWI1d
10	[Midwest Energy Coop]	PWI1d
11	[Ontonagon County Rural Electrification]	PWI1d
12	[Presque Isle Electric and Gas]	PWI1d
13	[Thumb Electric]	PWI1d
14	[Upper Penninsula Power Company]	PWI1d
15	[WE Energies]	PWI1d
16	[Wisconsin Public Service or "WPS"]	PWI1d
17	[Xcel Energy]	PWI1d
18	[City of Escanaba]	PWI1d
19	[City of Stephenson]	PWI1d
20	[Marquette Board of Light & Power]	PWI1d
21	[Newberry Water & Light]	PWI1d
22	[Detroit Edison or "DTE"]	PWI1d
23	[Consumers Energy]	PWI1d
77	[Other (specify) _____]	PWI1d
97	[Don't know]	PWI1d
98	[Refused]	PWI1d



Appendices

PW11d. What gas utility serves the locations where the rest is installed?

1	[Michigan Gas Utilities]	PW11e
2	[SEMCO Energy]	PW11e
3	[Wisconsin Public Service or "WPS"]	PW11e
4	[Xcel Energy]	PW11e
5	[Detroit Edison or "DTE"]	PW11e
6	[Consumers Energy]	PW11e
7	[Home does not have gas service]	PW11e
77	[Other, Specify ____]	PW11e
97	[Don't know]	PW11e
98	[Refused]	PW11e

[IF PW11c = 22, 23, or 77 OR PW11d = 5,6, or 77 ASK PW11e AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE OTHER ANSWER INTO <<OTHER UTILITY>>, ELSE GOTO PW11f]

PW11e. How many feet of pipe wrap are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY2>>, or <<OTHER UTILITY3>>?

	[RECORD #]	PW11f
97	[Don't know]	PW11f
98	[Refused]	PW11f

PW11f. Why isn't all of it installed at <address>?

	[RECORD VERBATIM]	PW_D1a
97	[Don't know]	PW_D1a
98	[Refused]	PW_D1a

PW NET TO GROSS

[IF KIT6 = 4, GOTO NEXT MEASURE SECTION]



Appendices

PW TIMING

PW_D1a. You said earlier that you might have bought pipe wrap if it had not been included in the kit. Relative to when the kit arrived, would you have purchased it at the same time, earlier, later, or never?

[IF NECESSARY: You filled out the audit in <report month>]

1	[at the Same time]	PW_D1aO
2	[Earlier]	PW_D1aO
3	[Later]	PW_D1aO
4	[Never]	PW_D1aO
97	[Don't know]	PW_D2a
98	[Refused]	PW_D2a

PW_D1aO. Why do you say that you would have purchased pipe wrap <<PW_D1a>>?

	[RECORD RESPONSE VERBATIM]	PW_D1b
1	Didn't think of it	PW_D1b
2	Based on need	PW_D1b
97	[Don't know]	PW_D1b
98	[Refused]	PW_D1b

IF PW_D1a ≠ 3 LATER, SKIP TO PW_D2a

PW_D1b. Approximately how many months later?

[IF NECESSARY: You filled out the audit in <report month>]

	[RECORD # months]	PW_D3
97	[Don't know]	PW_D3
98	[Refused]	PW_D3

PW EFFICIENCY

[EFFICIENCY NA FOR PIPE WRAP]

PW QUANTITY

PW_D3. If you had not received the <pw_qty> feet of pipe wrap in the kit, would you have purchased the same amount, more, less, or none at all?

1	[Same amount]	PW_D3O
2	[Less]	PW_D3O
3	[More]	PW_D3O
4	[None at all]	PW_D3O
97	[Don't know]	PW_D3O



Appendices

98	[Refused]	GOTO SHOWERHEAD SECTION
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PW_D30. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	PW_D3a
1	Didn't think about it	PW_D3a
2	Response based on need	PW_D3a
97	[Don't know]	PW_D3a
98	[Refused]	PW_D3a

[IF PW_D3 = 1, 4, 97, 98 GOTO SHOWERHEAD SECTION]

PW_D3A. How many feet would you have purchased?

	[RECORD RESPONSE VERBATIM]	GOTO SHOWERHEAD SECTION
97	[Don't know]	GOTO SHOWERHEAD SECTION
98	[Refused]	GOTO SHOWERHEAD SECTION

LOW FLOW SHOWERHEADS

[IF <SH_QTY> = 0, GOTO DOOR KIT SECTION]

SH1. Our records show the kit included <sh_qty> low flow showerheads. Is that correct?

1	[Yes]	SH2
2	[No]	SH1b
97	[Don't know]	SH2
98	[Refused]	GOTO DOOR KIT SECTION

SH1b. How many low flow showerheads were in the kit?

	[RECORD #]	<sh_qty> = answer GOTO SH2
97	[Don't know]	SH2
98	[Refused]	GOTO DOOR KIT SECTION

SH11. Of the <sh_qty> low flow showerheads you received, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <SH_qty> GOTO SH11b IF < <SH_qty> GOTO SH11a;
97	[Don't know]	GOTO DOOR KIT SECTION
98	[Refused]	GOTO DOOR KIT SECTION

SH11a. Why aren't all of them installed?

	[RECORD VERBATIM]	
1	Amount based on need	
2	Didn't get around to it	
3	Don't like it	
97	[Don't know]	
98	[Refused]	IF SH11 = 0 GOTO DOOR KIT SECTION ELSE GOTO SH11b

SH11b. How many are installed at <address>?

	[RECORD #]	IF answer = <<SH11>> GOTO SH_D1a IF answer less than <<SH11>> GOTO SH11c
97	[Don't know]	SH11c
98	[Refused]	SH11c

SHI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	SHI1d
2	[Alpena Power]	SHI1d
3	[Bayfield Electric Cooperative]	SHI1d
4	[Cloverland Electric Coop]	SHI1d
5	[Daggett Electric Department]	SHI1d
6	[Edison Sault Electric Company]	SHI1d
7	[Great Lakes Energy coop]	SHI1d
8	[HomeWorks Tri-County electric Coop]	SHI1d
9	[Indiana Michigan Power Company]	SHI1d
10	[Midwest Energy Coop]	SHI1d
11	[Ontonagon County Rural Electrification]	SHI1d
12	[Presque Isle Electric and Gas]	SHI1d
13	[Thumb Electric]	SHI1d
14	[Upper Penninsula Power Company]	SHI1d
15	[WE Energies]	SHI1d
16	[Wisconsin Public Service or "WPS"]	SHI1d
17	[Xcel Energy]	SHI1d
18	[City of Escanaba]	SHI1d
19	[City of Stephenson]	SHI1d
20	[Marquette Board of Light & Power]	SHI1d
21	[Newberry Water & Light]	SHI1d
22	[Detroit Edison or "DTE"]	SHI1d
23	[Consumers Energy]	SHI1d
77	[Other (specify) _____]	SHI1d
97	[Don't know]	SHI1d
98	[Refused]	SHI1d

SHI1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	SHI1e
2	[SEMC Energy]	SHI1e
3	[Wisconsin Public Service or "WPS"]	SHI1e
4	[Xcel Energy]	SHI1e
5	[Detroit Edison or "DTE"]	SHI1e
6	[Consumers Energy]	SHI1e
7	[Home does not have gas service]	SHI1e
77	[Other, Specify ____]	SHI1e
97	[Don't know]	SHI1e
98	[Refused]	SHI1e

[IF SHI1c = 22, 23, or 77 OR SHI1d = 5,6, or 77 ASK SHI1e AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE OTHER ANSWER INTO <<OTHER UTILITY>>, ELSE GOTO SHI1f]

SHI1e. How many low flow showerheads are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY 2>>, or <<OTHER UTILITY 3>>?

	[RECORD #]	SHI1f
97	[Don't know]	SHI1f
98	[Refused]	SHI1f

SHI1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	SH_D1a
97	[Don't know]	SH_D1a
98	[Refused]	SH_D1a



Appendices

SH NET TO GROSS

[IF KIT7 = 4, GOTO NEXT MEASURE SECTION]

SH TIMING

SH_D1a. You said earlier that you might have bought a shower heads if one had not been included in the kit. I'm referring to your decision to purchase any shower head, not just a high efficiency one. Relative to when the kit arrived, would you have purchased it at the same time, earlier, later, or never?

[IF NECESSARY: You filled out the audit in <report month>]

1	[at the Same time]	SH_D1aO
2	[Earlier]	SH_D1aO
3	[Later]	SH_D1aO
4	[Never]	SH_D1aO
97	[Don't know]	SH_D2a
98	[Refused]	SH_D2a

SH_D1aO. Why do you say that you would have purchased a shower head<<SH_D1a>>?

	[RECORD RESPONSE VERBATIM]	SH_D1b
1	Choice based on need	SH_D1b
2	Didn't think of it	SH_D1b
3	Didn't like it	SH_D1b
4	Energy efficiency	SH_D1b
5	Cost considerations	SH_D1b
97	[Don't know]	SH_D1b
98	[Refused]	SH_D1b

IF SH_D1a ≠ 3 LATER, SKIP TO SH_D2a

SH_D1b. Approximately how many months later?

[IF NECESSARY: You filled out the audit in <report month>]

	[RECORD # months]	SH_D2a
97	[Don't know]	SH_D2a
98	[Refused]	SH_D2a

SH EFFICIENCY

SH_D2a. If you hadn't gotten a shower head in the kit, would you have purchased a standard shower head or a high efficiency one?

1	[high efficiency / low flow shower head]	SH_D2aO
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Appendices

2	[standard]	SH_D2aO
97	[Don't know]	SH_D2aO
98	[Refused]	SH_D3

SH_D2aO.

Why do you say that?

	[RECORD RESPONSE VERBATIM]	SH_D3
1	Energy efficiency	SH_D3
2	Cost considerations	SH_D3
3	Didn't think of it/don't know about it	SH_D3
4	Don't like energy efficient showerhead	SH_D3
97	[Don't know]	SH_D3
98	[Refused]	SH_D3

SH QUANTITY

[ONLY EVER 1 SH IN KIT, SO THIS SECTION NA]



Appendices

DOOR KITS

[IF <DOOR_QTY> = 0, GOTO EE ACTION SECTION]

DR1. Our records show the kit included <dr_qty> door kits. Is that correct?

1	[Yes]	DR2
2	[No]	DR1b
97	[Don't know]	DR2
98	[Refused]	GOTO EE ACTION SECTION

DR1b. About how many door kits were included?

	[RECORD #]	<door_qty> = answer GOTO DRI1
97	[Don't know]	DRI1
98	[Refused]	GOTO EE ACTION SECTION

DR11. Of the <door_qty> door kits you received, how many are currently installed?

[PROBE FOR BEST ESTIMATE.]

	[RECORD QUANTITY]	IF = <Door_qty> GOTO DRI1b IF < <Door_qty> GOTO DRI1a;
97	[Don't know]	GOTO EE ACTION SECTION
98	[Refused]	GOTO EE ACTION SECTION

DR11a. Why aren't all of them installed?

	[RECORD VERBATIM]	IF DRI1 = 0 GOTO EE ACTION SECTION ELSE GOTO DRI1b
1	Response based on need	
2	Didn't get to it	
97	[Don't know]	
98	[Refused]	

DR11b. How many are installed at <address>?

	[RECORD #]	IF answer = <<DRI1>> GOTO SH_D1a IF answer less than <<DRI1>> GOTO DRI1c
97	[Don't know]	DRI1c
98	[Refused]	DRI1c

DRI1c. What electric utilities serve the locations where the others are installed?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Alger Delta Coop]	DRI1d
2	[Alpena Power]	DRI1d
3	[Bayfield Electric Cooperative]	DRI1d
4	[Cloverland Electric Coop]	DRI1d
5	[Daggett Electric Department]	DRI1d
6	[Edison Sault Electric Company]	DRI1d
7	[Great Lakes Energy coop]	DRI1d
8	[HomeWorks Tri-County electric Coop]	DRI1d
9	[Indiana Michigan Power Company]	DRI1d
10	[Midwest Energy Coop]	DRI1d
11	[Ontonagon County Rural Electrification]	DRI1d
12	[Presque Isle Electric and Gas]	DRI1d
13	[Thumb Electric]	DRI1d
14	[Upper Penninsula Power Company]	DRI1d
15	[WE Energies]	DRI1d
16	[Wisconsin Public Service or "WPS"]	DRI1d
17	[Xcel Energy]	DRI1d
18	[City of Escanaba]	DRI1d
19	[City of Stephenson]	DRI1d
20	[Marquette Board of Light & Power]	DRI1d
21	[Newberry Water & Light]	DRI1d
22	[Detroit Edison or "DTE"]	DRI1d
23	[Consumers Energy]	DRI1d
77	[Other (specify) _____]	DRI1d
97	[Don't know]	DRI1d
98	[Refused]	DRI1d

DRI1d. What gas utility serves the locations where the others are installed?

1	[Michigan Gas Utilities]	DRI1e
2	[SEMCO Energy]	DRI1e
3	[Wisconsin Public Service or "WPS"]	DRI1e
4	[Xcel Energy]	DRI1e
5	[Detroit Edison or "DTE"]	DRI1e
6	[Consumers Energy]	DRI1e
7	[Home does not have gas service]	DRI1e
77	[Other, Specify ____]	DRI1e
97	[Don't know]	DRI1e
98	[Refused]	DRI1e

[IF DRI1c = 22, 23, or 77 OR DRI1d = 5,6, or 77 ASK DRI1e AND FILL IN DETROIT EDISON, CONSUMERS ENERGY, OR THE OTHER ANSWER INTO <<OTHER UTILITY>>, ELSE GOTO DRI1f]

DRI1e. How many door kits are installed in locations with gas or electric service from <<OTHER UTILITY1>>, <<OTHER UTILITY 2>>, or <<OTHER UTILITY 3>>?

	[RECORD #]	DRI1f
97	[Don't know]	DRI1f
98	[Refused]	DRI1f

DRI1f. Why aren't all of them installed at <address>?

	[RECORD VERBATIM]	DR_D1a
97	[Don't know]	DR_D1a
98	[Refused]	DR_D1a

DR NET TO GROSS

[IF KIT8 = 4, GOTO NEXT MEASURE SECTION]



Appendices

DR TIMING

DR_D1a. You said earlier that you might have bought door kits if they had been included in the kit. Relative to when the kit arrived, would you have purchased door kits at the same time, earlier, later, or never?

[IF NECESSARY: You filled out the audit in <report month>]

1	[at the Same time]	DR_D1aO
2	[Earlier]	DR_D1aO
3	[Later]	DR_D1aO
4	[Never]	DR_D1aO
97	[Don't know]	DR_D2a
98	[Refused]	DR_D2a

DR_D1aO. Why do you say that you would have purchased door kits <<DR_D1a>>?

	[RECORD RESPONSE VERBATIM]	DR_D1b
97	[Don't know]	DR_D1b
98	[Refused]	DR_D1b

IF DR_D1a ≠ 3 LATER, SKIP TO DR_D2a

DR_D1b. Approximately how many months later?

[IF NECESSARY: You filled out the audit in <report month>]

	[RECORD # months]	DR_D3
97	[Don't know]	DR_D3
98	[Refused]	DR_D3

DR EFFICIENCY

[EFFICIENCY NA FOR DOOR KITS]

DR QUANTITY

DR_D3. If you had not received the <dr_qty> door kits in the kit, would you have purchased the same number, more, fewer, or none at all?

1	[Same amount]	DR_D3O
2	[Fewer]	DR_D3O
3	[More]	DR_D3O
4	[None at all]	DR_D3O
97	[Don't know]	DR_D3O
98	[Refused]	GOTO EE ACTION SECTION



Appendices

DR_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	DR_D3A
97	[Don't know]	DR_D3A
98	[Refused]	DR_D3A

[IF DR_D3 = 1, 4, 97, 98 GOTO EE SECTION]

DR_D3A. How many would you have purchased?

	[RECORD RESPONSE VERBATIM]	GOTO EE SECTION
97	[Don't know]	GOTO EE SECTION
98	[Refused]	GOTO EE SECTION



Appendices

EE Actions

EE0. Next I have a few questions about any energy saving actions you may have done since completing the audit.

EE1. In the past 12 months have you taken any actions to reduce drafts coming in through your home's doors or windows?

1	[Yes]	EE2
2	[No]	EE3
97	[Don't know]	EE3
98	[Refused]	EE3

EE2. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	EE3
1	Caulked windows or doors	EE3
2	Installed weather stripping on windows or doors	EE3
3	Installed sweeps under your doors	EE3
4	Installed a new threshold	EE3
5	Added weather stripping to attic access doors	EE3
6	Installed a crawl space vapor shield	EE3
7	Added window shades or curtains	EE3
8	New windows or doors	EE3
9	Added insulation	EE3
10	Put plastic on windows	EE3
77	or something else (specify _____)	EE3
97	[Don't know/ Not sure/ Can't remember]	EE3
98	[Refused]	EE3

EE3. In the past 12 months, have you taken any actions to reduce heat loss in your air ducts, water pipes, or chimney?

1	[Yes]	EE4
2	[No]	EE5
97	[Don't know]	EE5
98	[Refused]	EE5

EE4. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	EE5
1	Insulated attic access doors	EE5
2	Installed damper or internal seal on chimney	EE5
3	Insulated hot water pipes	EE5
4	Insulated air ducts	EE5
5	Sealed air ducts	EE5
6	Other insulation	EE5
77	or something else (specify _____)	EE5
97	[Don't know/ Not sure/ Can't remember]	EE5
98	[Refused]	EE5

EE5. In the past 12 months, have you done any maintenance on your furnace, boiler, or heat pump?

1	[Yes]	EE6
2	[No]	EE7
97	[Don't know]	EE7
98	[Refused]	EE7

EE6. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	EE7
1	replaced furnace or heat pump filter	EE7
2	had furnace or boiler tuned-up by a professional	EE7
3	Cleaning	EE7
4	Installed new furnace/geothermal heating or other heating	EE7
77	Or something else (specify _____)	EE7
97	[Don't know/ Not sure/ Can't remember]	EE7
98	[Refused]	EE7

EE7. In the past 12 months, have you done anything to reduce how much energy your major home appliances use?

1	[Yes]	EE8
2	[No]	EE9
97	[Don't know]	EE9
98	[Refused]	EE9

EE8. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	S15
1	lowered water heater temperature	S15
2	set back thermostat temperature	S15
3	increase refrigerator or freezer temperature	S15
4	used clothesline to dry clothes	S15
5	installed a water heater blanket	S15
6	added occupancy or daylight sensors to lights	S15
7	replaced or cleaned dryer vent	S15
97	[Don't know/ Not sure/ Can't remember]	S15
98	[Refused]	S15

S15. How satisfied were you with the online audit Program, overall? Would you say...

[READ OPTIONS]

1	very dissatisfied	S16
2	somewhat dissatisfied	S16
3	neither satisfied or dissatisfied	S16
4	somewhat satisfied	S17
5	very satisfied	S17
97	[don't know]	S17
98	[refused]	S17

S16. Why are you less than satisfied with the audit program?

1	[RECORD VERBATIM]	S17
2	Didn't receive kit	S17
3	Not beneficial	S17
4	Difficult to use	S17
5	Don't remember audit	S17
-97	[Don't know]	S17
-98	[Refused]	S17

S17. What, if anything, could <utility> do to get more people to use the online audit tool?

	[RECORD VERBATIM]	S18
0	[No suggestions]	S18
1	Better advertising/promotion	S18
2	More incentives	S18
3	Make it easier to complete/understand	S18
4	Provide non-computer option	S18
-97	[Don't know]	S18
-98	[Refused]	S18

S18. What, if any, energy efficiency technologies would you like <utility> to offer rebates for?

	[RECORD VERBATIM]	R0
0	[No suggestions]	R0
1	Heater/furnaces/AC	R0
2	Wind and solar power technologies	R0
3	LED and CFL	R0
4	All energy efficient appliances	R0
5	Refrigerators/Freezers	R0
6	Just more rebates/cheaper prices	R0
7	Windows	R0
8	Insulation/repair	R0
9	Senior citizen	R0
-97	[Don't know]	R0
-98	[Refused]	R0

APPLIANCE RECYCLING

R0. Next I'm going to ask you a few questions that will help us evaluate a different program.

R1. In the past 5 years, have you acquired a new or used refrigerator or stand-alone freezer?

1	[Yes]	R2
2	[No]	D1
97	[Don't know]	D1
98	[Refused]	D1

R2. Did you get a refrigerator, stand-alone freezer, or both?

1	[Refrigerator]	R3
2	[Freezer]	R3
3	[Both]	R3
97	[Don't know]	R3
98	[Refused]	R3

[If R2 ≠ 1 or 3, SKIP TO R14]

R3. Was the refrigerator used or brand new?

1	[Used]	R4
2	[New]	R4
97	[Don't know]	R4
98	[Refused]	R4

R4. Are you using it as your main refrigerator or as a spare?

1	[Main]	R5
2	[Spare]	R5
97	[Don't know]	R5
98	[Refused]	R5

[If R3 ≠ 1, used; Skip to R7]

R5. Where did you get this used refrigerator?

1	[Purchased from used appliance store]	R6
2	[Received as gift / hand-me-down]	
-77	[Other (Specify_____)]	
-97	[Don't know]	
-98	[Refused]	

R6. At the time you got this used refrigerator, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R7
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
-77	Or something else [SPECIFY]	
-97	[Don't know]	
-98	[Refused]	

R7. Did this refrigerator replace an existing one?

1	[Yes]	R8
2	[No]	R9
97	[Don't know]	R9
98	[Refused]	R9

R8. What did you do with the refrigerator that you replaced?

1	[Threw away / Took to Landfill]	R9
2	[Took to recycling center]	R9
3	[Donated to charity]	R9
4	[Taken by installer of new one]	R9
5	[Sold to used appliance dealer]	R9
6	[Gave to friend/relative]	R9
7	[Kept it - plugged in]	R9
8	[Kept it - not plugged in]	R9
77	[Other (specify)]	R9
97	[Don't know]	R9
98	[Refused]	R9

[If R2 ≠ 2 or 3, SKIP TO D1]

R9. Was the freezer used or brand new?

1	[Used]	R10
2	[New]	R12

97	[Don't know]	R12
98	[Refused]	R12

R10. Where did you get this used freezer?

1	[Purchased from used appliance store]	R11
2	[Received as gift / hand-me-down]	
-77	[Other (Specify _____)]	
-97	[Don't know]	
-98	[Refused]	

R11. At the time you got this used freezer, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R12
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
-77	Or something else [SPECIFY]	
-97	[Don't know]	
-98	[Refused]	

R12. Did this freezer replace an existing one?

1	[Yes]	R13
2	[No]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

R13. What did you do with the freezer that you replaced?

1	[Threw away / Took to Landfill]	EA1
2	[Took to recycling center]	EA1
3	[Donated to charity]	EA1
4	[Taken by installer of new one]	EA1
5	[Sold to used appliance dealer]	EA1
6	[Gave to friend/relative]	EA1
7	[Kept it - plugged in]	EA1
8	[Kept it - not plugged in]	EA1
77	[Other (specify)]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

ENERGY ATTITUDES

EA1. Before today, had you heard of ENERGY STAR?

1	[Yes]	EA2
2	[No]	EA2
97	[Don't know]	EA2
98	[Refused]	EA2

EA2. How concerned are you with reducing your home's energy use? Would you say...

[READ UNBRACKETED OPTIONS.]

1	Not at all concerned	EA4
2	Somewhat concerned	EA3
3	or Very concerned?	EA3
97	[Don't know]	D1
98	[Refused]	D1

EA3. Why are you concerned with reducing your home's energy use?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Cost of energy / Reduce energy bill]	D1
2	[Environment / Global warming]	D1
3	[Power availability / reliability]	D1
4	[Dependence on foreign oil]	D1
5	[Other, Specify _____]	D1
97	[Don't know]	D1
98	[Refused]	D1

EA4. Why aren't you concerned with reducing your home's energy use?

	[RECORD VERBATIM]	D1
1	Already do a lot	
97	[Don't know]	D1
98	[Refused]	D1

DEMOGRAPHICS

D27. Do you own or rent <address>?

1	[Own]	D2
2	[Rent]	D2
-97	[Don't know]	D2
-98	[Refused]	D2

D28. What type of building is that address [IF NECESSARY: <address>]? [READ LIST]

1	Mobile home	WH1
2	One-family home detached from any other house	WH1
3	One-family home attached to one or more houses	WH1
4	A building with 2 apartments	WH1
5	A building with 3 or 4 apartments	WH1
6	A building with 5 or more apartments	WH1
-77	[Other (specify)]	WH1
-97	[Don't know]	WH1
-98	[Refused]	WH1

WH1. What type of fuel does your current water heater use?

1	[Gas]	D3
2	[Electricity]	D3
3	Geothermal	
4	Propane	
77	[Other, Specify _____]	D3
-97	[Don't know]	D3
-98	[Refused]	D3

D29. Is that address a seasonal home? [IF NECESSARY: <address>]

1	[Yes]	D4
2	[No]	D4
-97	[Don't know]	D4
-98	[Refused]	D4

D30. How many months per year is that address occupied? [IF NECESSARY: <address>]

	[RECORD #]	D5; if <6, skip to D5e
-97	[Don't know]	D5
-98	[Refused]	D5

D31. Including yourself, and children how many people live in that address at least 6 months per year? [IF NECESSARY: <address>]

	[RECORD #]	D5a
-97	[Don't know]	D5e
-98	[Refused]	D5e

D5a. How many people are 65 or older?

	[RECORD #]	D5b
-97	[Don't know]	D5b
-98	[Refused]	D5b

D5b. How many people are 19 to 64?

	[RECORD #]	D5c
-97	[Don't know]	D5c
-98	[Refused]	D5c

D5c. How many people are 5 to 18?

	[RECORD #]	D5d
-97	[Don't know]	D5d
-98	[Refused]	D5d

D5d. How many people are less than 5?

	[RECORD #]	D5e
-97	[Don't know]	D5e
-98	[Refused]	D5e

[CHECK THAT SUM OF D5A TO D5D = D5. IF NOT, REPEAT D5 TO D5D.]

D5e. What is your age?

	[RECORD #]	D6
-97	[Don't know]	D6
-98	[Refused]	D6



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D32. What is the highest level of education you have completed?

1	No schooling	D7
2	Less than high school	D7
3	Some high school	D7
4	High school graduate or equivalent (e.g., GED)	D7
5	Trade or technical school	D7
6	Some college	D7
7	College degree	D7
8	Some graduate school	D7
9	Graduate degree	D7
77	[Other (specify _____)]	D7
-97	[Don't know]	D7
-98	[Refused]	D7

D33. Which of the following best represents your annual household income from all sources in 2010, before taxes? Was it . . . ?

1	Less than \$20,000 per year,	D8
2	\$20,000-49,999,	D8
3	\$50,000-74,999,	D8
4	\$75,000-97,999,	D8
5	\$100,000-149,999,	D8
6	\$150,000-199,999, or	D8
7	\$200,000 or more?	D8
-97	[Don't know]	D8
-98	[Refused]	D8

D34. RECORD GENDER [DO NOT ASK.]

1	Male	END_1
2	Female	END_1
-97	[Don't know]	END_1

THANK & TERMINATE

END_5. Those are all of the questions I have for you today. Thank you for your time.



Appendices

G. Audit & Weatherization Onsite CATI Survey

EU
Audit and Weatherization Program
Onsite Audit CATI Survey
Revised – 3/22/2012

Survey house instructions

31. Text in **bold** should be read.
32. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should **NOT** be read.
33. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
34. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
35. Text in gray boxes is major programming instruction.
36. Unless specifically noted, do **NOT** read answer choices. [Don't know] and [Refused] should **NEVER** be read.

Programming Notes

6. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet. Make separate 0/1 variables for the [Don't know] and [Refused] options as well.

Database variables

Variable	Definition
	(Unless otherwise noted, the database can contain more than one of each variable per respondent)
customer_name	Contact name(s).
gas_utility	name of contact's gas utility
client	Efficiency United
Address	Address where measures were installed
<cfl_qty>	number of cfls directly installed
<sh_qty>	number of low flow showerheads directly installed
<fa_qty>	number of faucet aerators directly installed
<pw_qty>	number of feet of pipe insulation directly installed
<pstat_qty>	number of square feet of conditioned space controlled by setback thermostats
<window_qty>	square feet of EE windows installed after audit
<attic_ins_qty>	square feet of attic/ceiling insulation installed after audit



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<wall_ins_qty>	square feet of above ground wall insulation installed after audit
<joist_ins_qty>	linear feet of joist insulation installed after audit
<basement_ins_qty>	square feet of basement wall insulation installed after audit
<crawl_ins_qty>	square feet of crawlspace wall insulation installed after audit
<floor_ins_qty>	square feet of floor insulation installed after audit
Report_month	Approximate month of audit completion. Equal to database entry date, minus 1 month.



Appendices

INTRODUCTION

Intro1. Hello, my name is _____, and I'm calling on behalf of the Residential On Site Weatherization Program offered through <gas_utility> and Efficiency United. I'd like to discuss a home energy audit that you recently received, any measures the auditor may have installed, and any energy saving actions your household has taken since the audit. Your responses will be kept confidential and your individual responses will not be revealed to anyone.

1	[AGREES TO PARTICIPATE]	Intro2
2	[DOES NOT AGREE TO PARTICIPATE]	TERMINATE

Intro2. Our records show that your household completed an audit around <report_month>. Are you familiar with the audit?

1	[Yes]	Intro6
2	[No]	Intro3
-97	[Don't know]	Intro3
-98	[Refused]	Intro3

Intro3. Who could I speak to that would be familiar with the audit?

[IF NECESSARY: Our records list <customer_name> as the primary contact.]

	[RECORD FIRST and LAST NAME]	Intro4
-98	[Refused]	Intro4
-97	[Don't know]	Intro4

Intro4. Could I speak with <Intro3> now?

1	[Yes]	Intro1
2	[No]	Intro5
-97	[Don't know]	Intro5
-98	[Refused]	Intro5

Intro5. When is a good time I could call back to reach <Intro3>?

	[RECORD DAY and TIME]	Call back later
-98	[Refused]	Call back later
-97	[Don't know]	Call back later

Intro6. What is your name?

	[RECORD FIRST and LAST NAME]	P0
-98	[Refused]	P0
-97	[Don't know]	P0

Intro7. I just want to verify my records that the audit took place at <address>. Is that correct?

1	[Yes]	A1
2	[No]	Intro8
-97	[Don't know]	Terminate
-98	[Refused]	Terminate

Intro8. At what address did the audit take place?

	Intro8a. [RECORD STREET ADDRESS]	Intro8b
	Intro8b. [RECORD CITY]	Intro8c
	Intro 8c. [RECORD ZIP CODE]	Intro9
-98	[Refused]	Terminate
-97	[Don't know]	Terminate

Intro9. What electric utility services <Intro8a>?

1	[Alger Delta Coop]	Intro10
2	[Alpena Power]	Intro10
3	[Bayfield Electric Cooperative]	Intro10
4	[Cloverland Electric Coop]	Intro10
5	[Daggett Electric Department]	Intro10
6	[Edison Sault Electric Company]	Intro10
7	[Great Lakes Energy coop]	Intro10
8	[HomeWorks Tri-County electric Coop]	Intro10
9	[Indiana Michigan Power Company]	Intro10
10	[Midwest Energy Coop]	Intro10
11	[Ontonagon County Rural Electrification]	Intro10
12	[Presque Isle Electric and Gas]	Intro10
13	[Thumb Electric]	Intro10
14	[Upper Peninsula Power Company]	Intro10
15	[WE Energies]	Intro10
16	[Wisconsin Public Service or "WPS"]	Intro10
17	[Xcel Energy]	Intro10
18	City of Escanaba	
19	City of Stephenson	
20	Marquette board of light & power	
21	Newberry water & light	
22	[Detroit Edison or "DTE"]	Intro10
23	[Consumers Energy]	Intro10
77	[Other, Specify____]	Intro10
-97	[Don't know]	Intro10
-98	[Refused]	Intro10

Intro10. What gas utility services <Intro8a>?

1	[Michigan Gas Utilities]	A1
2	[SEMCO Energy]	A1
3	[Wisconsin Public Service or "WPS"]	A1
4	[Xcel Energy]	A1
5	[Detroit Edison or "DTE"]	A1
6	[Consumers Energy]	A1
7	[Home does not have gas service]	A1
77	[Other, Specify_____]	A1
-97	[Don't know]	A1
-98	[Refused]	A1

[IF INTRO9 >=22 AND INTRO10 >=5, TERMINATE AS INELIGIBLE]

A1.How did you find out about the home energy audits?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Utility bill stuffers]	A2
2	[Utility website]	A2
3	[the Internet other than utility's website]	A2
4	[Local newspaper]	A2
5	[A state or national newspaper]	A2
6	[TV, radio]	A2
7	[Friends, Relatives, or Neighbors]	A2
8	[Community Events or Local Schools]	A2
9	[Salesperson where equip purchased]	A2
10	[County Lines or utility magazine]	A2
11	[Utility sponsored meeting]	A2
77	[Other, specify_____]	A2
-97	[Don't know]	A2
-98	[Refused]	A2

A2. Why did you decide to get an audit?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Wanted to get the information while it was free]	SA1
2	[Wanted to get the free CFLs and other energy efficiency stuff]	SA1
3	[Reduce my energy consumption / bills]	SA1
4	[Help the environment / Global warming]	SA1
77	[Other, specify _____]	SA1
-97	[Don't know]	SA1
-98	[Refused]	SA1

S. SATISFACTION WITH AUDIT

SA1. Were you involved in the scheduling of the audit?

1	[Yes]	SA2
2	[No]	SA4
-97	[Don't know]	SA4

-98	[Refused]	SA4
-----	-----------	-----

SA2. How satisfied or dissatisfied are you with the scheduling of the audit? Would you say ...
[READ OPTIONS]

1	very dissatisfied	SA3
2	somewhat dissatisfied	SA3
3	neither satisfied or dissatisfied	SA3
4	somewhat satisfied	SA4
5	very satisfied	SA4
97	[don't know]	SA4
98	[refused]	SA4

SA3. Why were you less than satisfied with the scheduling of the audit?
[ACCEPT MULTIPLE RESPONSES. DO NOT READ]

1	[audit was at an inconvenient time of day]	SA4
2	[audit was at an inconvenient day of week]	SA4
3	[had difficulty reaching someone to schedule audit]	SA4
4	[difficulty rescheduling audit]	SA4
5	[schedulers were unprofessional / or discourteous]	SA4
77	[Other, Specify _____]	SA4
97	[don't know]	SA4
98	[refused]	SA4

SA4. Were you at the home when the audit took place?
[IF NECESSARY: Our records show the audit took place in <report month>]

1	[Yes]	SA5
2	[No]	SA8
-97	[Don't know]	SA8
-98	[Refused]	SA8

SA5. Did you accompany the auditor on the audit?

1	[Yes]	SA6
2	[No]	SA6
-97	[Don't know]	SA6
-98	[Refused]	SA6

SA6. How satisfied or dissatisfied are you with the auditor? Would you say...
[READ OPTIONS]

1	very dissatisfied	SA7
2	somewhat dissatisfied	SA7
3	neither satisfied or dissatisfied	SA7
4	somewhat satisfied	SA8
5	very satisfied	SA8
97	[don't know]	SA8



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98	[refused]	SA8
----	-----------	-----

SA7. Why were you less than satisfied with the auditor?

[ACCEPT MULTIPLE RESPONSES. DO NOT READ]

1	[Auditor was late]	SA8
2	[Took too long]	SA8
3	[Unprofessional / discourteous]	SA8
77	[Other, Specify_____]	SA8
97	[don't know]	SA8
98	[refused]	SA8

SA8. Did the auditor provide you with a clear explanation of areas in your home where energy efficiency could be improved?

1	[Yes]	SA9
2	[No]	SA9
-97	[Don't know]	SA9
-98	[Refused]	SA9

SA9. Did the auditor make specific recommendations as to what improvements could be made?

1	[Yes]	SA10
2	[No]	SA11
-97	[Don't know]	SA11
-98	[Refused]	SA11

SA10. What recommendations did the auditor make?

[DO NOT READ LIST. ACCEPT MULTIPLE ANSWERS]

1	[Ceiling/Attic insulation]	SA11
2	[Wall insulation]	SA11
3	[Basement wall insulation]	SA11
4	[Floor/Crawl space insulation]	SA11
5	[Joist sealing / insulation]	SA11
6	[New windows]	SA11
7	[Air sealing / weather stripping / caulk]	SA11
8	[Dryer vent maintenance]	SA11
9	[Furnace humidifier - install]	SA11
10	[Furnace humidifier – maintenance]	SA11
11	[Fireplace door/damper]	SA11
12	[Add attic venting]	SA11
77	[Other, Specify_____]	SA11
-97	[Don't know]	SA11
-98	[Refused]	SA11

SA11. Did the auditor provide you with a written audit report?

1	[Yes]	SA12
---	-------	------

2	[No]	SA14
-97	[Don't know]	SA14
-98	[Refused]	SA14

SA12. Did you review the audit report?

1	[Yes]	SA13
2	[No]	SA14
-97	[Don't know]	SA14
-98	[Refused]	SA14

SA13. Was the audit report very helpful, somewhat helpful, not very helpful, or not at all helpful in explaining the recommendations?

1	[Very helpful]	SA14
2	[Somewhat helpful]	SA14
3	[Not very helpful]	SA14
4	[Not at all helpful]	SA14
-97	[Don't know]	SA14
-98	[Refused]	SA14

SA14. What other information, if any, did the auditor leave with you?

[ACCEPT MULTIPLE ANSWERS. DO NOT READ]

0	[None]	SA15
1	[Brochures for utility sponsored rebate programs]	SA15
2	[Marketing/Contact information for contractors]	SA15
77	[Other, Specify _____]	SA15
-97	[Don't know]	SA15
-98	[Refused]	SA15

**SA15. How satisfied were you with the Residential On Site Weatherization Program, overall?
Would you say...**

[READ OPTIONS]

1	very dissatisfied	SA16
2	somewhat dissatisfied	SA16
3	neither satisfied or dissatisfied	SA16
4	somewhat satisfied	SA17
5	very satisfied	SA17
97	[don't know]	SA17
98	[refused]	SA17

SA16. Why are you less than satisfied with the program?

1	[RECORD VERBATIM]	SA17
-97	[Don't know]	SA17
-98	[Refused]	SA17



Appendices

SA17. What questions, if any, do you have about the audit?

1	[No questions]	SA18
2	[Questions] [Record questions]	SA18
-97	[Don't know]	SA18
-98	[Refused]	SA18

SA18. What, if anything, could <gas_utility> or <program> do to get more people to get audits?

	[RECORD VERBATIM]	SA19
0	[No suggestions]	SA19
-97	[Don't know]	SA19
-98	[Refused]	SA19

SA19. What, if any, energy efficiency technologies would you like <gas_utility> or <program> to offer rebates for?

	[RECORD VERBATIM]	SA20
0	[No suggestions]	SA20
-97	[Don't know]	SA20
-98	[Refused]	SA20

[IF <cfl_qty> = 0 AND <sh_qty> = 0 AND <fa_qty> = 0 AND <pw_qty> = 0 AND <pstat_qty> = 0, GOTO EE0]

SA20. Next, I have some questions about some equipment the auditor installed during the audit.

[GOTO SKIP INSTRUCTION BEFORE CFL1]



Appendices

CFL INSTALLATION

[IF <cfl_qty> = 0, GOTO SHOWERHEAD SECTION]

CFL1. Our records show the auditor installed a total of <cfl_qty> compact fluorescent or CFL bulbs. Is that correct?

1	[Yes]	CFL3
2	[No]	CFL2
-97	[Don't know]	SH1
-98	[Refused]	SH1

CFL2. How many CFLs did the auditor install?

	[RECORD number]	If 0 GOTO SH1 ELSE CFL3
-97	[Don't know]	SH1
-98	[Refused]	SH1

CFL3. How many of those bulbs are still installed?

	[RECORD number]	If answer = CFL2, GOTO CFL4 ELSE GOTO CFL3b
-97	[Don't know]	SH1
-98	[Refused]	SH1

CFL3b. Why did you remove some of the CFLs?

[ACCEPT MULTIPLE ANSWERS. DO NOT READ.]

1	[didn't like color of the light]	CFL4
2	[too bright]	CFL4
3	[not bright enough]	CFL4
4	[took too long to light up]	CFL4
5	[didn't fit in fixtures]	CFL4
6	[looked bad in fixtures]	CFL4
7	[flicker]	CFL4
8	[bulbs burned out]	CFL4
77	[Other (specify)]	CFL4
97	[Don't know]	CFL4
98	[Refused]	CFL4

CFL4. Prior to the audit, had you ever installed CFL bulbs?

1	[Yes]	CFLI1
2	[No]	CFLI1
-97	[Don't know]	CFLI1
-98	[Refused]	CFLI1

CFLI1. If they had not been installed during the audit, would you have bought compact fluorescent bulbs? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	CFLI2
2	Probably yes	CFLI2
3	Probably no	CFLI2
4	No	CFLI2
97	[Don't know]	CFLI2
98	[Refused]	CFLI2

CFLI2. Of the <<CFL3> bulbs that are still installed, how many replaced a bulb that was still working?

[IF NECESSARY: I'm referring to any kind of replaced bulb, not necessarily another CFL.]

	[RECORD NUMBER]	IF ANSWER > 0 GOTO CFLI3 IF ANSWER = 0 GOTO CFLI4
97	[Don't know]	CFLI4
98	[Refused]	CFLI4

CFLI3. Would you have replaced these working bulbs if the auditor had not? I'm referring to replacing them with any kind of bulb, not necessary a CFL.

1	[Yes]	CFLI3a
2	[No]	CFLI3a
3	[I did not replace any working bulbs]	CFLI3a
97	[Don't know]	CFLI3a
98	[Refused]	CFLI3a

CFLI3a. Did the auditor take the old bulbs or leave them with you?

1	[took them]	CFLI4
2	[left them]	CFLI4
97	[Don't know]	CFLI4
98	[Refused]	CFLI4

CFLI4. You said earlier the auditor installed <<CFLI3>> CFLs. If the auditor had not installed CFLs, how many of each of the following types of bulbs would you have installed in the same fixtures?



Appendices

- i. Incandescent
- j. CFLs
- k. LEDs
- l. Or Something else?

	[RECORD NUMBER 0 OR MORE]	MAKE SURE CFLI4a + CFLI4b + CFLI4c + CFLI4d = CFLI2 THEN GOTO CFLI5
97	[Don't know]	
98	[Refused]	

CFLI5. How many CFLs did the auditor install in each of the following rooms? [ALLOW MULTIPLE RESPONSES. IF RESPONDENT ANSWERS "bathroom" PROBE: **Is that a full or half bath?**]

	[ROOM_TYPE]		
1	Kitchen	RECORD # INSTALLED	CFLS10
2	Dining room	RECORD # INSTALLED	CFLS10
3	Living room	RECORD # INSTALLED	CFLS10
4	Family room/den	RECORD # INSTALLED	CFLS10
5	Bedroom	RECORD # INSTALLED	CFLS10
6	Bathroom (full bath)	RECORD # INSTALLED	CFLS10
7	Bathroom (half bath)	RECORD # INSTALLED	CFLS10
8	Laundry or utility room	RECORD # INSTALLED	CFLS10
9	Closet	RECORD # INSTALLED	CFLS10
10	Garage	RECORD # INSTALLED	CFLS10
11	Hallway or entryway	RECORD # INSTALLED	CFLS10
-77	Other room (specify)	RECORD # INSTALLED	CFLS10
12	Outdoor – porch or patio	RECORD # INSTALLED	CFLS10
13	Outdoor – entryway	RECORD # INSTALLED	CFLS10
14	Outdoor – walkway	RECORD # INSTALLED	CFLS10
15	Outdoor – landscape lighting	RECORD # INSTALLED	CFLS10
-76	Other outdoor location (specify)	RECORD # INSTALLED	CFLS10
-97	[Don't know]		CFLS10
-98	[Refused]		CFLS10

CFLS10. Based on your experience with these CFLs how likely are you to purchase CFLs in the future? Would you say you say very likely, somewhat likely, not very likely, or not at all likely?

1	[Very likely]	CFLS11
2	[Somewhat likely]	CFLS11
3	[Not very likely]	CFLS11
4	[Not at all likely]	GOTO SHOWERHEAD SECTION
97	[Don't know]	CFLS11
98	[Refused]	CFLS11

CFLS11. How likely are you to purchase bulbs in the future at full price of 3 to 4 dollars each? Would you say you say very likely, somewhat likely, not very likely, or not at all likely?

1	[Very likely]	GOTO SHOWERHEAD SECTION
2	[Somewhat likely]	GOTO SHOWERHEAD SECTION
3	[Not very likely]	GOTO SHOWERHEAD SECTION
4	[Not at all likely]	GOTO SHOWERHEAD SECTION
97	[Don't know]	GOTO SHOWERHEAD SECTION
98	[Refused]	GOTO SHOWERHEAD SECTION

SHOWERHEADS

[IF <sh_qty> = 0, GOTO FAUCET AERATOR SECTION]

SH1. Our records show the auditor installed <sh_qty> low flow showerheads. Is that correct??

1	[Yes]	SH3
2	[No]	SH2
-97	[Don't know]	GOTO FAUCET AERATOR SECTION
-98	[Refused]	GOTO FAUCET AERATOR SECTION

SH2. How many low flow showerheads did the auditor install?

	[RECORD number]	<sh_qty> = answer If answer = 0, GOTO FAUCET AERATOR SECTION, ELSE GOTO SH3
-97	[Don't know]	GOTO FAUCET AERATOR SECTION
-98	[Refused]	GOTO FAUCET AERATOR SECTION

SH3. How many of the low flow showerheads are still installed?

	[RECORD number]	If answer = <sh_qty>, GOTO SH5, ELSE GOTO SH4
-97	[Don't know]	SH5
-98	[Refused]	SH5

SH4. Why did you remove some of the low flow showerheads?

1	[Not enough water pressure]	SH5
77	[Other (Specify)]	SH5
-97	[Don't know]	SH5
-98	[Refused]	SH5

SH5. How many showers are taken each week in the showers where the low flow showerheads are installed?

	RECORD #	SH_D0
-97	[Don't know]	SH_D0
-98	[Refused]	SH_D0



Appendices

SH NET TO GROSS

SH_D0. If they had not been installed during the audit, would you have bought new shower heads?

Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	SH_D1a
2	Probably yes	SH_D1a
3	Probably no	SH_D1a
4	No	GOTO FAUCET AERATOR SECTION
97	[Don't know]	SH_D1a
98	[Refused]	SH_D1a

SH TIMING

SH_D1a. You said earlier that you might have bought a shower head if one had not been installed during the audit. I'm referring to your decision to purchase any shower head, not just a high efficiency one. Relative to when the audit occurred, would you have purchased it at the same time, earlier, later, or never?

1	[at the Same time]	SH_D1aO
2	[Earlier]	SH_D1aO
3	[Later]	SH_D1aO
4	[Never]	SH_D1aO
97	[Don't know]	SH_D2a
98	[Refused]	SH_D2a

SH_D1aO. Why do you say that you would have purchased a shower head<<SH_D1a>>?

	[RECORD RESPONSE VERBATIM]	SH_D1b
97	[Don't know]	SH_D1b
98	[Refused]	SH_D1b

IF SH_D1a ≠ 3 LATER, SKIP TO SH_D2a

SH_D1b. Approximately how many months later?

	[RECORD # months]	SH_D2a
97	[Don't know]	SH_D2a
98	[Refused]	SH_D2a

SH EFFICIENCY

SH_D2a. If you had not gotten a shower head in the audit, would you have purchased a standard shower head or a high efficiency one?

1	[high efficiency / low flow shower head]	SH_D2aO
2	[standard]	SH_D2aO

97	[Don't know]	SH_D2aO
98	[Refused]	SH_D3

SH_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	SH_D3
97	[Don't know]	SH_D3
98	[Refused]	SH_D3

SH QUANTITY

[IF <sh_qty> = 1 GOTO FAUCET AERATOR SECTION]

SH_D3. If you had not received the <sh_qty> low flow showerheads in the audit, would you have purchased the same amount, more, less, or none at all?

1	[Same amount]	SH_D3O
2	[Less]	SH_D3O
3	[More]	SH_D3O
4	[None at all]	SH_D3O
97	[Don't know]	SH_D3O
98	[Refused]	GOTO FAUCET AERATOR SECTION

SH_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	SH_D3a
97	[Don't know]	SH_D3a
98	[Refused]	SH_D3a

[IF SH_D3 = 1 same number/size or 4 none at all, SKIP TO FAUCET AERATOR SECTION]

SH_D3a. How many low flow showerheads would you have purchased?

	[RECORD Number]	FAUCET AERATOR SECTION
97	[Don't know]	FAUCET AERATOR SECTION
98	[Refused]	FAUCET AERATOR SECTION

FAUCET AERATORS

[IF <fa_qty> = 0 GOTO PIPE WRAP SECTION]

FA1. Our records show the auditor installed <fa_qty> faucet aerators. Is that correct?

1	[Yes]	FA3
2	[No]	FA2
-97	[Don't know]	GOTO PIPE WRAP SECTION
-98	[Refused]	GOTO PIPE WRAP SECTION

FA2. How many faucet aerators did the auditor install?

	[RECORD number]	<fa_qty> = answer If answer = 0, GOTO PIPE WRAP SECTION, ELSE GOTO FA3
-97	[Don't know]	GOTO PIPE WRAP SECTION
-98	[Refused]	GOTO PIPE WRAP SECTION

FA3. How many of the faucet aerators are still installed?

	[RECORD number]	If answer = <fa_qty>, GOTO FA5, ELSE GOTO FA4
-97	[Don't know]	FA5
-98	[Refused]	FA5

FA4. Why did you remove some of the faucet aerators?

1	[Not enough water pressure]	FA5
77	[Other (Specify)]	FA5
-97	[Don't know]	FA5
-98	[Refused]	FA5

FA5. How many faucet aerators are still installed in each of the following rooms?

FA5a. the kitchen?

FA5b. bathrooms

FA5c. laundry or utility rooms?

	[RECORD NUMBER]	FA_D0
-97	[Don't know]	FA_D0
-98	[Refused]	FA_D0

FA NET TO GROSS

FA_D0. If they had not been installed during the audit, would you have bought faucet aerators?

Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	FA_D1a
2	Probably yes	FA_D1a
3	Probably no	FA_D1a
4	No	GOTO PIPE WRAP SECTION
97	[Don't know]	FA_D1a
98	[Refused]	FA_D1a



Appendices

FA TIMING

FA_D1a. You said earlier that you might have bought faucet aerators if they had not been installed during the audit. I'm referring to your decision to purchase any faucet aerators, not just energy efficient ones. Relative to when the audit occurred, would you have purchased them at the same time, earlier, later, or never?

1	[at the Same time]	FA_D1aO
2	[Earlier]	FA_D1aO
3	[Later]	FA_D1aO
4	[Never]	FA_D1aO
97	[Don't know]	FA_D2a
98	[Refused]	FA_D2a

FA_D1aO. Why do you say that you would have purchased a faucet aerator <<FA_D1a>>?

	[RECORD RESPONSE VERBATIM]	FA_D1b
97	[Don't know]	FA_D1b
98	[Refused]	FA_D1b

IF FA_D1a ≠ 3 LATER, SKIP TO FA_D2a

FA_D1b. Approximately how many months later?

	[RECORD # months]	FA_D2a
97	[Don't know]	FA_D2a
98	[Refused]	FA_D2a

FA EFFICIENCY

FA_D2a. If you hadn't gotten faucet aerators during the audit, would you have purchased standard faucet aerators or energy efficient ones?

1	[energy efficient aerator]	FA_D2aO
2	[standard]	FA_D2aO
97	[Don't know]	FA_D2aO
98	[Refused]	FA_D3

FA_D2aO. Why do you say that?

	[RECORD RESPONSE VERBATIM]	FA_D3
97	[Don't know]	FA_D3
98	[Refused]	FA_D3

FA QUANTITY



Appendices

[IF <fa_qty> = 1, GOTO PIPE WRAP section]

FA_D3. If you had not received the <fa_qty> faucet aerators in the audit, would you have purchased the same number, more, fewer, or none at all?

1	[Same number]	FA_D3O
2	[Fewer]	FA_D3O
3	[More]	FA_D3O
4	[None at all]	FA_D3O
97	[Don't know]	FA_D3O
98	[Refused]	PIPE WRAP section

FA_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	FA_D3a
97	[Don't know]	FA_D3a
98	[Refused]	FA_D3a

IF FA_D3 = 1 same number/size or 4 none at all, SKIP TO PIPE WRAP SECTION

FA_D3a. How many faucet aerators would you have purchased?

	[RECORD Number]	PIPE WRAP SECTION
97	[Don't know]	PIPE WRAP SECTION
98	[Refused]	PIPE WRAP SECTION



Appendices

PIPE WRAP

[IF <pw_qty> = 0 GOTO THERMOSTAT SECTION]

PW1. Our records show the auditor installed <pw_qty> feet of pipe insulation. Is that correct?

1	[Yes]	PW3
2	[No]	PW2
-97	[Don't know]	PW_D0
-98	[Refused]	GOTO THERMOSTAT SECTION

PW2. How many feet of pipe insulation did the auditor install?

	[RECORD number]	<pw_qty> = answer If answer = 0, GOTO THERMOSTAT SECTION, ELSE GOTO PW3
-97	[Don't know]	GOTO THERMOSTAT SECTION
-98	[Refused]	GOTO THERMOSTAT SECTION

PW3. How many feet of the pipe insulation are still installed?

	[RECORD number]	If answer = <pw_qty>, GOTO THERMOSTAT SECTION, ELSE GOTO PW4
-97	[Don't know]	GOTO THERMOSTAT SECTION
-98	[Refused]	GOTO THERMOSTAT SECTION

PW4. Why did you remove some of the pipe insulation?

77	[Other (Specify)]	GOTO THERMOSTAT SECTION
-97	[Don't know]	GOTO THERMOSTAT SECTION
-98	[Refused]	GOTO THERMOSTAT SECTION

PW NET TO GROSS

**PW_D0. If it had not been installed during the audit, would you have bought pipe wrap?
Would you say...**

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	PW_D1a
2	Probably yes	PW_D1a
3	Probably no	PW_D1a
4	No	GOTO THERMOSTAT SECTION
97	[Don't know]	PW_D1a
98	[Refused]	PW_D1a



Appendices

PW TIMING

PW_D1a. You said earlier that you might have bought pipe wrap if it had not been installed during the audit. Relative to when the audit occurred, would you have purchased it at the same time, earlier, later, or never?

1	[at the Same time]	PW_D1aO
2	[Earlier]	PW_D1aO
3	[Later]	PW_D1aO
4	[Never]	PW_D1aO
97	[Don't know]	PW_D2a
98	[Refused]	PW_D2a

PW_D1aO. Why do you say that you would have purchased pipe wrap <<PW_D1a>>?

	[RECORD RESPONSE VERBATIM]	PW_D1b
97	[Don't know]	PW_D1b
98	[Refused]	PW_D1b

IF PW_D1a ≠ 3 LATER, SKIP TO PW_D2a

PW_D1b. Approximately how many months later?

	[RECORD # months]	PW_D3
97	[Don't know]	PW_D3
98	[Refused]	PW_D3

PW EFFICIENCY

[EFFICIENCY NA FOR PIPE WRAP]

PW QUANTITY

PW_D3. If you had not received the <pw_qty> feet of pipe wrap in the audit, would you have purchased the same amount, more, less, or none at all?

1	[Same amount]	PW_D3O
2	[Less]	PW_D3O
3	[More]	PW_D3O
4	[None at all]	PW_D3O
97	[Don't know]	PW_D3O
98	[Refused]	next measure section

PW_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	PW_D3a
97	[Don't know]	PW_D3a
98	[Refused]	PW_D3a



Appendices

IF PW_D3 = 1 same amount or 4 none at all, SKIP TO THERMOSTAT SECTION

PW_D3a. How many feet of pipe wrap would you have purchased?

	[RECORD Number]	THERMOSTAT SECTION
97	[Don't know]	THERMOSTAT SECTION
98	[Refused]	THERMOSTAT SECTION

PROGRAMMABLE THERMOSTATS

[IF <pstat_qty> = 0 GOTO EE ACTION SECTION]

PT0. Did the auditor install a programmable thermostat?

1	[Yes]	PT1
2	[No]	GOTO EE ACTION SECTION
-97	[Don't know]	GOTO EE ACTION SECTION
-98	[Refused]	GOTO EE ACTION SECTION

PT1. Our records show the thermostat installed by the auditor controls <pstat_qty> square feet of conditioned space. Is that correct?

1	[Yes]	PT3
2	[No]	PT2
-97	[Don't know]	PT_D0
-98	[Refused]	PT_D0

PT2. How many square feet of conditioned space does the thermostat control?

	[RECORD number]	If answer = 0, GOTO EE ACTION SECTION, ELSE GOTO PT3
-97	[Don't know]	PT3
-98	[Refused]	PT3

PT3. Is the thermostat still installed and operational?

1	[Yes]	PT_D0
2	[No]	PT4
-97	[Don't know]	PT_D0
-98	[Refused]	PT_D0

PT4. Why is the thermostat no longer installed or operational?

	[RECORD VERBATIM]	PT_D0
-97	[Don't know]	PT_D0
-98	[Refused]	PT_D0



Appendices

PT NET TO GROSS

PT_D0. If it had not been installed during the audit, would you have bought a programmable thermostat? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Yes	KIT4
2	Probably yes	KIT4
3	Probably no	KIT4
4	No	KIT4
97	[Don't know]	KIT4
98	[Refused]	KIT4

PT TIMING

PT_D1a. You said earlier that you might have bought a programmable thermostat if it had not been installed during the audit. Relative to when the audit occurred, would you have purchased it at the same time, earlier, later, or never?

1	[at the Same time]	PT_D1aO
2	[Earlier]	PT_D1aO
3	[Later]	PT_D1aO
4	[Never]	PT_D1aO
97	[Don't know]	PT_D2a
98	[Refused]	PT_D2a

PT_D1aO. Why do you say that you would have purchased a programmable thermostat <<PT_D1a>>?

	[RECORD RESPONSE VERBATIM]	PT_D1b
97	[Don't know]	PT_D1b
98	[Refused]	PT_D1b

IF PT_D1a ≠ 3 LATER, SKIP TO PT_D2a

PT_D1b. Approximately how many months later?

	[RECORD # months]	PT_D3
97	[Don't know]	PT_D3
98	[Refused]	PT_D3

PT EFFICIENCY

[EFFICIENCY NA FOR THERMOSTAT]

PT QUANTITY

[QUANTITY NA FOR PSTATS]



Appendices

ENERGY EFFICIENCY ACTIONS

EE0. Next I have some questions about any energy saving actions you may have taken as a result of the audit.

[IF <window_qty> = 0 GOTO EE3]

EE1. Our records show you installed <window_qty> square feet of energy efficient windows. Is that correct?

1	[Yes]	WN_D0
2	[No]	EE2
-97	[Don't know]	EE3
-98	[Refused]	EE3

EE2. How many square feet of energy efficient windows did you install?

1	[RECORD # SQ FT 0 OR MORE]	<window_qty> = answer IF 0 GOTO EE3 ELSE GOTO WN_D0
-97	[Don't know]	EE3
-98	[Refused]	EE3

WN NET TO GROSS

WN_D0. If not for the audit, how likely is it that would you have installed energy efficient windows? Would you say...

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Very likely	WN_D1a
2	Somewhat likely	WN_D1a
3	Not very likely	WN_D1a
4	Or very unlikely	GOTO EE3
97	[Don't know]	WN_D1a
98	[Refused]	WN_D1a

WN TIMING

WN_D1a. I'd like to know about the effect, if any, that the audit had on your decision to install windows when you did. I'm referring to your decision to install any windows, not just energy efficient ones. Without the audit, would you have installed them at the same time, earlier, later, or never?

1	[at the Same time]	WN_D1aO
2	[Earlier]	WN_D1aO
3	[Later]	WN_D1aO
4	[Never]	WN_D1aO
97	[Don't know]	WN_D2a
98	[Refused]	WN_D2a



Appendices

WN_D1aO. Why do you say that you would have purchased windows <<WN_D1a>>?

	[RECORD RESPONSE VERBATIM]	WN_D1b
97	[Don't know]	WN_D1b
98	[Refused]	WN_D1b

IF WN_D1a ≠ 3 LATER, SKIP TO WN_D2a

WN_D1b. Approximately how many months later?

	[RECORD # months]	WN_D2a
97	[Don't know]	WN_D2a
98	[Refused]	WN_D2a

WN EFFICIENCY

WN_D2a. Next, I'd like to know about the effect, if any, that program incentives had on your decision to install *energy efficient* windows.

Without the program would you have installed windows of the same efficiency, lesser efficiency, or greater efficiency?

1	[Same efficiency]	WN_D2a_O
2	[Lesser efficiency]	WN_D2a_O
3	[Greater efficiency]	WN_D2a_O
-97	[Don't know]	WN_D3
-98	[Refused]	WN_D3

WN_D2a_O. Why do you say that?

	[RECORD RESPONSE VERBATIM]	WN_D2b
-97	[Don't know]	WN_D2b
-98	[Refused]	WN_D2b

IF WN_D2a ≠ 2 LESSER EFFICIENCY, SKIP TO WN_D3

WN_D2b. Without the program, would you have installed windows that were
 “standard efficiency on the market at that time,”
 “slightly higher than standard efficiency”,
 “between standard efficiency and the efficiency that you purchased,”
 or “slightly lower than the high efficiency that was purchased?”

1	[Standard efficiency on the market at time]	WN_D3
2	[Slightly higher than standard efficiency]	WN_D3
3	[Between standard efficiency and what purchased]	WN_D3
4	[Slightly lower than the high efficiency purchased]	WN_D3
-97	[Don't know]	WN_D3
-98	[Refused]	WN_D3

WN QUANTITY

WN_D3. Finally, I'd like to know about the effect, if any, that the audit had on the number of windows that you installed. Without the program would you have installed the same number, more, fewer, or none at all?

1	[Same number]	WN_D3O
2	[Fewer]	WN_D3O
3	[More]	WN_D3O
4	[None at all]	WN_D3O
-97	[Don't know]	EE3
-98	[Refused]	EE3

WN_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	WN_D3a
97	[Don't know]	WN_D3a
98	[Refused]	WN_D3a

IF WN_D3 = 1 same number/size or 4 none at all, SKIP TO EE3

WN_D3a. Approximately how many square feet of windows would you have installed?
 [IF NECESSARY: You said you installed <window_qty> square feet of windows]

	[RECORD Number]	EE3
97	[Don't know]	EE3
98	[Refused]	EE3

[IF <attic_ins_qty> = 0 GOTO EE5]

EE3. Our records show you installed <attic_ins_qty> square feet of ceiling or attic insulation. Is that correct?

1	[Yes]	EE5
---	-------	-----

2	[No]	EE4
-97	[Don't know]	EE5
-98	[Refused]	EE5

EE4. How many square feet of attic insulation did you install?

1	[RECORD # SQ FT 0 OR MORE]	EE5
-97	[Don't know]	EE5
-98	[Refused]	EE5

[IF <wall_ins_qty> = 0 GOTO EE7]

EE5. Our records show you installed <wall_ins_qty> square feet of above ground wall insulation. Is that correct?

1	[Yes]	EE7
2	[No]	EE6
-97	[Don't know]	EE7
-98	[Refused]	EE7

EE6. How many square feet of wall insulation did you install?

1	[RECORD # SQ FT 0 OR MORE]	EE7
-97	[Don't know]	EE7
-98	[Refused]	EE7

[IF <joist_ins_qty> = 0 GOTO EE9]

EE7. Our records show you installed <joist_ins_qty> linear feet of band joist insulation. Is that correct?

1	[Yes]	EE9
2	[No]	EE8
-97	[Don't know]	EE9
-98	[Refused]	EE9

EE8. How many linear feet of band joist insulation did you install?

1	[RECORD # LINEAR FT 0 OR MORE]	EE9
-97	[Don't know]	EE9
-98	[Refused]	EE9



Appendices

[IF <basement_ins_qty> = 0 GOTO EE11]

EE9. Our records show you installed <basement_ins_qty> square feet of basement wall insulation. Is that correct?

1	[Yes]	EE11
2	[No]	EE10
-97	[Don't know]	EE11
-98	[Refused]	EE11

EE10. How many square feet of basement wall insulation did you install?

1	[RECORD # LINEAR FT 0 OR MORE]	EE11
-97	[Don't know]	EE11
-98	[Refused]	EE11

[IF <crawl_ins_qty> = 0 GOTO EE13]

EE11. Our records show you installed <crawl_ins_qty> square feet of crawlspace wall insulation. Is that correct?

1	[Yes]	EE13
2	[No]	EE12
-97	[Don't know]	EE13
-98	[Refused]	EE13

EE12. How many square feet of crawlspace wall insulation did you install?

1	[RECORD # LINEAR FT 0 OR MORE]	EE13
-97	[Don't know]	EE13
-98	[Refused]	EE13

[IF <floor_ins_qty> = 0 GOTO EE15]

EE13. Our records show you installed <floor_ins_qty> square feet of floor insulation. Is that correct?

1	[Yes]	EE15
2	[No]	EE14
-97	[Don't know]	EE15
-98	[Refused]	EE15

EE14. How many square feet of floor insulation did you install?

1	[RECORD # LINEAR FT 0 OR MORE]	IN_D0
-97	[Don't know]	IN_D0
-98	[Refused]	IN_D0

[IF EE3, EE5, EE7, EE9, EE11, or EE13 = 1 (yes) GOTO IN_D0

ELSE IF EE4, EE6, EE8, EE10, EE12, or EE14 > 0 and < 99997 GOTO IN_D0

ELSE (they did not install any insulation) GOTO EE15]

IN NET TO GROSS

IN_D0. If not for the program and incentives, how likely is it that would you have installed insulation? Would you say...



Appendices

[READ BOLD OPTIONS. ACCEPT 1 ANSWER]

1	Very likely	IN_D1a
2	Somewhat likely	IN_D1a
3	Not very likely	IN_D1a
4	Or very unlikely	GOTO IN15
97	[Don't know]	IN_D1a
98	[Refused]	IN_D1a

IN TIMING

IN_D1a. I'd like to know about the effect, if any, that the program and incentives had on your decision to install insulation when you did. Without the audit, would you have installed insulation at the same time, earlier, later, or never?

1	[at the Same time]	IN_D1aO
2	[Earlier]	IN_D1aO
3	[Later]	IN_D1aO
4	[Never]	IN_D1aO
97	[Don't know]	IN_D2a
98	[Refused]	IN_D2a

IN_D1aO. Why do you say that you would have installed insulation <<IN_D1a>>?

	[RECORD RESPONSE VERBATIM]	IN_D1b
97	[Don't know]	IN_D1b
98	[Refused]	IN_D1b

IF IN_D1a ≠ 3 LATER, SKIP TO IN_D2a

IN_D1b. Approximately how many months later?

	[RECORD # months]	IN_D2a
97	[Don't know]	IN_D2a
98	[Refused]	IN_D2a

IN EFFICIENCY

IN_D2a. Next, I'd like to know about the effect, if any, that the program had on your decision to install the level of insulation that you did.

Without the program would you have installed insulation with the same R-value, a lesser R-value or a greater R-value?

[IF NECESSARY: R-value is a measure of how well the insulation keeps in heat.]

1	[Same R-value]	IN_D2a_O
---	----------------	----------

2	[Lesser R-value]	IN_D2a_O
3	[Greater R-value]	IN_D2a_O
-97	[Don't know]	IN_D3
-98	[Refused]	IN_D3

IN_D2a_O. Why do you say that?

	[RECORD RESPONSE VERBATIM]	IN_D2b
-97	[Don't know]	IN_D2b
-98	[Refused]	IN_D2b

IF IN_D2a ≠ 2 LESSER EFFICIENCY, SKIP TO IN_D3

IN_D2b. Without the audit, would you have installed insulation that had
 “standard R-value on the market at the time”
 “a slightly higher than standard R-value”,
 “between the standard R-value and what you installed,”
 or “slightly lower R-values than what you installed?”

[IF NECESSARY: R-value is a measure of how well the insulation keeps in heat.]

1	[Standard R-value on the market at time]	IN_D3
2	[Slightly higher than standard R-value]	IN_D3
3	[Between standard R-value and what purchased]	IN_D3
4	[Slightly lower than the R-value purchased]	IN_D3
-97	[Don't know]	IN_D3
-98	[Refused]	IN_D3

IN QUANTITY

IN_D3. Finally, I'd like to know about the effect, if any, that the program and incentives had on the amount of insulation that you installed. Without the program would you have installed the same amount, more, less, or none at all?

1	[Same amount]	IN_D3O
2	[Less]	IN_D3O
3	[More]	IN_D3O
4	[None at all]	IN_D3O
-97	[Don't know]	EE15
-98	[Refused]	EE15

IN_D3O. Why do you say that ?

	[RECORD RESPONSE VERBATIM]	IN_D3a
97	[Don't know]	IN_D3a
98	[Refused]	IN_D3a



Appendices

IF IN_D3 = 1 same number/size or 4 none at all, SKIP TO EE3

IN_D3a. Approximately how much insulation would you have installed?

	[RECORD Number]	IN_D3b
97	[Don't know]	EE15
98	[Refused]	EE15

IN_D3b. Is that square feet or linear feet?

1	[Square feet]	EE15
2	[Linear feet]	EE15
77	[Other, Specify _____]	EE15
97	[Don't know]	EE15
98	[Refused]	EE15

EE15. In the past 12 months have you taken any actions to reduce drafts coming in through your home's doors, windows, chimney, or basement?

1	[Yes]	EE16
2	[No]	EE17
97	[Don't know]	EE17
98	[Refused]	EE17

EE16. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	EE17
1	Caulked windows or doors	EE17
2	Installed weather stripping on windows or doors	EE17
3	Installed sweeps under your doors	EE17
4	Installed a new threshold	EE17
5	Added weather stripping to attic access doors	EE17
6	Installed a crawl space vapor shield	EE17
7	Insulated attic access doors	EE17
8	Installed damper or internal seal on chimney	EE17
77	or something else (specify _____)	EE17
97	[Don't know/ Not sure/ Can't remember]	EE17
98	[Refused]	EE17

EE17. In the past 12 months, have you done any maintenance on your furnace, boiler, or heat pump?

1	[Yes]	EE18
2	[No]	R0
97	[Don't know]	R0
98	[Refused]	R0

EE18. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	R0
1	replaced furnace or heat pump filter	R0
2	had furnace or boiler tuned-up by a professional	R0
77	Or something else (specify _____)	R0
97	[Don't know/ Not sure/ Can't remember]	R0
98	[Refused]	R0

APPLIANCE RECYCLING

R0. Next I'm going to ask you a few questions that will help us evaluate a different program.

R1. In the past 5 years, have you acquired a new or used refrigerator or stand-alone freezer?

1	[Yes]	R2
2	[No]	D1
97	[Don't know]	D1
98	[Refused]	D1

R2. Did you get a refrigerator, stand-alone freezer, or both?

1	[Refrigerator]	R3
2	[Freezer]	R3
3	[Both]	R3
97	[Don't know]	R3
98	[Refused]	R3

[If R2 ≠ 1 or 3, SKIP TO R14]

R3. Was the refrigerator used or brand new?

1	[Used]	R4
2	[New]	R4
97	[Don't know]	R4
98	[Refused]	R4

R4. Are you using it as your main refrigerator or as a spare?

1	[Main]	R5
2	[Spare]	R5

97	[Don't know]	R5
98	[Refused]	R5

[If R3 ≠ 1, used; Skip to R7]

R5. Where did you get this used refrigerator?

1	[Purchased from used appliance store]	R6
2	[Received as gift / hand-me-down]	
-77	[Other (Specify _____)]	
-97	[Don't know]	
-98	[Refused]	

R6. At the time you got this used refrigerator, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R7
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
-77	Or something else [SPECIFY]	
-97	[Don't know]	
-98	[Refused]	

R7. Did this refrigerator replace an existing one?

1	[Yes]	R8
2	[No]	R9
97	[Don't know]	R9
98	[Refused]	R9

R8. What did you do with the refrigerator that you replaced?

1	[Threw away / Took to Landfill]	R9
2	[Took to recycling center]	R9
3	[Donated to charity]	R9
4	[Taken by installer of new one]	R9
5	[Sold to used appliance dealer]	R9
6	[Gave to friend/relative]	R9
7	[Kept it - plugged in]	R9
8	[Kept it - not plugged in]	R9
77	[Other (specify)]	R9
97	[Don't know]	R9
98	[Refused]	R9

[If R2 ≠ 2 or 3, SKIP TO D1]

R9. Was the freezer used or brand new?

1	[Used]	R10
2	[New]	R12
97	[Don't know]	R12
98	[Refused]	R12

R10. Where did you get this used freezer?

1	[Purchased from used appliance store]	R11
2	[Received as gift / hand-me-down]	
-77	[Other (Specify _____)]	
-97	[Don't know]	
-98	[Refused]	

R11. At the time you got this used freezer, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R12
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
-77	Or something else [SPECIFY]	
-97	[Don't know]	
-98	[Refused]	

R12. Did this freezer replace an existing one?

1	[Yes]	R13
2	[No]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

R13. What did you do with the freezer that you replaced?

1	[Threw away / Took to Landfill]	EA1
2	[Took to recycling center]	EA1
3	[Donated to charity]	EA1
4	[Taken by installer of new one]	EA1
5	[Sold to used appliance dealer]	EA1
6	[Gave to friend/relative]	EA1
7	[Kept it - plugged in]	EA1
8	[Kept it - not plugged in]	EA1
77	[Other (specify)]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

ENERGY ATTITUDES

EA1. Before today, had you heard of ENERGY STAR?

1	[Yes]	EA2
2	[No]	EA2
97	[Don't know]	EA2
98	[Refused]	EA2

EA2. How concerned are you with reducing your home's energy use? Would you say...

[READ UNBRACKETED OPTIONS.]

1	Not at all concerned	EA4
2	Somewhat concerned	EA3
3	or Very concerned?	EA3
97	[Don't know]	D1
98	[Refused]	D1

EA3. Why are you concerned with reducing your home's energy use?

[DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Cost of energy / Reduce energy bill]	D1
2	[Environment / Global warming]	D1
3	[Power availability / reliability]	D1
4	[Dependence on foreign oil]	D1
5	[Other, Specify _____]	D1
97	[Don't know]	D1
98	[Refused]	D1

EA4. Why aren't you concerned with reducing your home's energy use?

	[RECORD VERBATIM]	D1
97	[Don't know]	D1
98	[Refused]	D1

DEMOGRAPHICS

D35. Do you own or rent <address>?

1	[Own]	D2
2	[Rent]	D2
-97	[Don't know]	D2
-98	[Refused]	D2

D36. What type of building is that address? [IF NECESSARY: <address>]? [READ LIST]

1	Mobile home	WH1
2	One-family home detached from any other house	WH1
3	One-family home attached to one or more houses	WH1
4	A building with 2 apartments	WH1
5	A building with 3 or 4 apartments	WH1
6	A building with 5 or more apartments	WH1
-77	[Other (specify)]	WH1
-97	[Don't know]	WH1
-98	[Refused]	WH1

WH1. What type of fuel does your current water heater use?

1	[Gas]	D3
2	[Electricity]	D3
77	[Other, Specify _____]	D3
-97	[Don't know]	D3
-98	[Refused]	D3

D37. Is that address a seasonal home? [IF NECESSARY: <address>]

1	[Yes]	D4
2	[No]	D4
-97	[Don't know]	D4
-98	[Refused]	D4

D38. How many months per year is that address occupied? [IF NECESSARY: <address>]

	[RECORD #]	D5; if <6, skip to D5e
-97	[Don't know]	D5
-98	[Refused]	D5

D39. Including yourself, and children how many people live in that address at least 6 months per year? [IF NECESSARY: <address>]

	[RECORD #]	D5a
-97	[Don't know]	D5e
-98	[Refused]	D5e

D5a. How many people are 65 or older?

	[RECORD #]	D5b
-97	[Don't know]	D5b
-98	[Refused]	D5b

D5b. How many people are 19 to 64?

	[RECORD #]	D5c
-97	[Don't know]	D5c
-98	[Refused]	D5c

D5c. How many people are 5 to 18?

	[RECORD #]	D5d
-97	[Don't know]	D5d
-98	[Refused]	D5d

D5d. How many people are less than 5?

	[RECORD #]	D5e
-97	[Don't know]	D5e
-98	[Refused]	D5e

[CHECK THAT SUM OF D5A TO D5D = D5. IF NOT, REPEAT D5 TO D5D.]

D5e. What is *your* age?

	[RECORD #]	D6
-97	[Don't know]	D6
-98	[Refused]	D6

D40. What is the highest level of education you have completed?

1	No schooling	D7
2	Less than high school	D7
3	Some high school	D7
4	High school graduate or equivalent (e.g., GED)	D7
5	Trade or technical school	D7
6	Some college	D7
7	College degree	D7
8	Some graduate school	D7
9	Graduate degree	D7
77	[Other (specify _____)]	D7
-97	[Don't know]	D7
-98	[Refused]	D7



Appendices

D41. Which of the following best represents your annual household income from all sources in 2010, before taxes? Was it . . . ?

1	Less than \$20,000 per year,	D8
2	\$20,000-49,999,	D8
3	\$50,000-74,999,	D8
4	\$75,000-97,999,	D8
5	\$100,000-149,999,	D8
6	\$150,000-199,999, or	D8
7	\$200,000 or more?	D8
-97	[Don't know]	D8
-98	[Refused]	D8

D42. RECORD GENDER [DO NOT ASK.]

1	Male	END_1
2	Female	END_1
-97	[Don't know]	END_1

THANK & TERMINATE

END_6. Those are all of the questions I have for you today. Thank you for your time.



Appendices

H. Commercial and Industrial CATI Survey

EO-EU
Commercial and Industrial Program
Participant CATI Survey
Revised –03/22/2012

SURVEY HOUSE INSTRUCTIONS

- 37. Text in bold should be read.
- 38. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should NOT be read.
- 39. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
- 40. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
- 41. Text in gray boxes is major programming instruction.
- 42. Unless specifically noted, do NOT read answer choices. Don't know and Refused should NEVER be read.

Programming Notes

- 7. Text in big grey boxes are programming instructions.
- 8. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet". Make separate 0/1 variables for the don't know and refused options as well.

Applies to: R5, P2, P3, P5, P7, DAT2bb



Appendices

DATABASE VARIABLES

Variable	Definition (Unless otherwise noted, the database can contain more than one of each variable per respondent)	Level Does variable pertain to a participant or a measure?
fnl_cust_name	name of company	participant
fnl_cust_phone	phone number to call	participant
contact_name	name of person to contact at participating company	participant
Utility_name	Name of the contact's utility. One per customer.	Participant
Program	Name of the program the contact is likely to recognize. One per customer. "Efficiency United" or "Energy Optimization"	Participant
confirm_contact	Name of person to give out to confirm survey	Participant
confirm_contact_phone	phone number of person to give out to confirm survey	Participant
Measure_description1, measure_description2, ..., measure_descriptionn	Energy efficiency measures installed. (Text identifier). Max # of measures by anyone in CATI sample (as of 9/24/2010) is 10.	measure
m1_mtype_code, m2_mtype_code, ..., mn_mtype_code	Numeric code for measure.	measure
Measure_group1, measure_group2, ..., measure_groupy	Measure group. There can be multiple measures under a single measure group, so the number of measure groups may not equal the number of measures.	measure group
m1_mtype, m2_mtype, ..., mn_mtype	measure group at the measure level	measure
m1_wording, m2_wording, ..., mn_wording	Variable for shortened wording for the measure	measure

m1_exist_equip, m2_exist_equip, ..., mn_exist_equip	Wording for existing equipment substitution	measure
m1_address, m2_address, ..., mn_address	Address where measure was installed.	measure
m1_city, m2_city, ..., mn_city	City where measure was installed.	measure
m1_qty, m2_qty, ..., mn_qty	The number of this measure that were installed. Survey uses mn_qty1 and mn_qty2 OR mn_qty3	measure
m1_rebate, m2_rebate, ..., mn_rebate	The rebate received for the measure.	measure
m1_fuel_type, m2_fuel_type, ..., mn_fuel_type	Electric or gas	Measure
m1_dat0_verb, m2_dat0_verb, ..., mn_dat0_verb	"Performing" or "installing" depending on whether the measure was equipment or maintenance	measure
m1_dat1_verb, m2_dat1_verb, ..., mn_dat1_verb	"perform" or "install" depending on whether the measure was equipment or maintenance	Measure
m1_dat1_any_sentence, m2_dat1_any_sentence, ..., mn_dat1_any_sentence	Sentence to fill into DAT1: "I am referring to your decision to install any ____, not just a high efficiency one." If the measure is one where efficiency applies	Measure
m1_binary, m2_binary, ..., mn_binary	1 or 0 if efficiency applies to the measure	Measure
m1_dat3_verb, m2_dat3_verb, ..., mn_dat3_verb	"performed" or "installed" depending on whether measure is equipment or maintenance	Measure
m1_dat4_word, m2_dat4_word, ..., mn_dat4_word	"performance" or "installation" depending on whether measure is equipment or maintenance	Measure
Totalreb	Total amount of rebate customer received for all measures installed (one per respondent)	Participant



Appendices

1 INFORMED RESPONDENT (INF)

Section 1 can be repeated multiple times, once for each contact (contact1, contact2, ..., contact n) in the database and each contact obtained from INF3a.

The contact name inserted into INF1 should be changed each time to list the person we are currently trying to get.

Inf1. Hello, may I please speak with <contact1>?

[Contact available] 1 [GOTO INF2]
[Contact currently unavailable] 2 [ARRANGE CALL BACK]
[No contact] 3 [GOTO INF2]

Inf2. Hello, my name is _____ and I'm calling from ____ on behalf of the <program> program offered through <utility_name>.

According to our records, the <program> program helped your organization make some energy efficiency improvements in 2011.

Are you familiar with your organization's decision to make these energy efficiency improvements? [READ LIST OF IMPROVEMENTS BY LOCATION]

<m1_wording>s at <m1_address> <m1_city>

<m2_wording>s at <m2_address> <m2_city>

...

<mn_wording>s at <mn_address> <mn_city>

[Yes (all or some)] 1 [GOTO INF2b]

[No to all] 2 [GOTO INF3a]

[Don't know] -97 [GOTO INF3a]

[Refused] -98 [GOTO INF3a]

Inf2b. [RECORD RESPONDENT'S NAME] _____ [GOTO NEXT SECTION]

[IF RESPONDENT WANTS TO CONFIRM SURVEY, THEY CAN CONTACT <CONFIRM_CONTACT> AT <CONFIRM_CONTACT_PHONE>]

Inf3a. Is there someone else who might know the right person for me to speak to?

[Yes] 1 [GOTO INF3b]

[No] 2 [GOTO INF4]

[Don't know] -97 [GOTO INF4]

[Refused] -98 [GOTO INF4]

Inf3b. Who could I speak to?



Appendices

[RECORD ADDITIONAL CONTACT NAMES AND NUMBERS]_____ [GOTO INF4]

- Inf4. [CHECK TO MAKE SURE ALL CONTACTS HAVE BEEN TRIED]
[Not all contacts have been tried] 1 [GOTO INF1 AND USE NEXT
CONTACT]
[All contacts have been tried] 2 [GOTO INF5]

- Inf5. Thank you very much for your time today. Those are all the questions I have.
No one familiar with decision 1 [TERMINATE]

2 INFO ABOUT RESPONDENT (R)

R1. I'd like to start out by getting a little information about you. [GOTO R2]

- R2. What is your job title?
[RECORD RESPONSE VERBATIM]_____ [GOTO R3]
[Don't know] -97 [GOTO R3]
[Refused] -98 [GOTO R3]

- R3. What are your general responsibilities?
[RECORD RESPONSE VERBATIM]_____ [GOTO R4]
[Don't know] -97 [GOTO R4]
[Refused] -98 [GOTO R4]

- R4. Which of the following best describes your role in making decisions regarding the purchase of energy using equipment? [READ UNBRACKETED OPTIONS, SELECT ONE]
Sole responsibility for decisions 1 [GOTO R5]
Part of a group that makes decisions 2 [GOTO R5]
Provide recommendations to decision makers 3 [GOTO R5]
Not involved in making decisions 4 [GOTO R5]
[Other (Specify _____)] 20 [GOTO R5]
[Don't know] -97 [GOTO R5]
[Refused] -98 [GOTO R5]



Appendices

R5. How did you find out about the <program> program? [Check all that apply.]

[The internet]	1	[GOTO V0]
[Previous project].....	2	[GOTO V0]
[Contractor / Vendor / Supplier].....	3	[GOTO R6]
[Franklin Energy]	4	[GOTO V0]
[CLEAResult]	5	[GOTO V0]
[Utility]	6	[GOTO V0]
[Colleague within organization]	7	[GOTO V0]
[Someone outside organization].....	8	[GOTO V0]
[Other] [Specify].....	20	[GOTO V0]
[Don't know].....	-97	[GOTO V0]
[Refused]	-98	[GOTO V0]

[Skip R6 If R5 ≠ 3 (contractor, vendor, or supplier)]

R6. You said a contractor or vendor gave you information about the <program> program. Did you complete any other projects with this contractor or vendor prior to the projects we are discussing today?

[Yes]	1	[GOTO V0]
[No].....	2	[GOTO V0]
[Don't know].....	-97	[GOTO V0]
[Refused]	-98	[GOTO V0]

3 VERIFY MEASURE INSTALLATION (V)

V0. Next, I want to verify my records about which energy efficiency improvements your organization made.

V1a through V2e must be repeated for each measure <m1>, <m2>, ... <m*n*> the respondent has in the database. On average, respondents have 2.4 measures.

The first time through, append a “_1” to each question number. Each time through, increment the number after the _. So the 2nd time through, the numbers will be V1a_2, V1d_2, ... The third time, V1a_3, V1d_3, ... etc. This applies to the skips and anywhere the <m1> variable appears as well.

It could be helpful for the callers to be able to see the whole list of measures on the same screen as V1a, V1b, and VQ1a

V1a. Was a <mn_wording> or something similar <mn_dat3_verb> at <mn_address>, <mn_city>?

[Yes].....	1	[<<address>> = <mn_address> GOTO V1b]
[No, did not install at all].....	2	[GOTO V2b]
[Installed at a different address].....	3	[GOTO V1a2]



Appendices

[Don't know].....-97 [GOTO V1a for next measure]
[Refused].....-98 [GOTO V1a for next measure]

V1a2. What address was the <mn_wording> <mn_dat3_verb> at?

[RECORD VERBATIM]_____ [<<address>> = answer; GOTO V1a3]
[Don't know].....-97 [GOTO V1a3]
[Refused].....-98 [GOTO V1a3]

V1a3. What city is that in?

[RECORD VERBATIM]_____ [GOTO V1a4]
[Don't know].....-97 [GOTO V1a4]
[Refused].....-98 [GOTO V1a4]

[IF <mn_fuel_type> = electric or both ASK V1a4]

V1a4. What electric utility services that address?

[Alger Delta Coop]..... 1 [GOTO V1a5]
[Alpena Power] 2 [GOTO V1a5]
[Bayfield Electric Cooperative] 3 [GOTO V1a5]
[Cloverland Electric Coop] 4 [GOTO V1a5]
[Daggett Electric Department] 5 [GOTO V1a5]
[Edison Sault Electric Company]..... 6 [GOTO V1a5]
[Great Lakes Energy coop] 7 [GOTO V1a5]
[HomeWorks Tri-County electric Coop]..... 8 [GOTO V1a5]
[Indiana Michigan Power Company] 9 [GOTO V1a5]
[Midwest Energy Coop] 10 [GOTO V1a5]
[Ontonagon County Rural Electrification] 11 [GOTO V1a5]
[Presque Isle Electric and Gas] 12 [GOTO V1a5]
[Thumb Electric] 13 [GOTO V1a5]
[Upper Penninsula Power Company] 14 [GOTO V1a5]
[WE Energies] 15 [GOTO V1a5]
[Wisconsin Public Service or "WPS"] 16 [GOTO V1a5]
[Xcel Energy] 17 [GOTO V1a5]
[Detroit Edison or "DTE"]..... 18 [GOTO V1a5]
[Consumers Energy]..... 19 [GOTO V1a5]
[Other, Specify]..... 20 [GOTO V1a5]
[SEMCO Energy Gas Co]..... 21 [GOTO V1a5]
[Escanaba Energy] 22 [GOTO V1a5]
[Marquette Board of Light & Power]..... 23 [GOTO V1a5]
[Don't know].....-97 [GOTO V1a5]
[Refused].....-98 [GOTO V1a5]



Appendices

[IF <mn_fuel_type> = gas or both ASK V1a5]

V1a5. What gas utility services that address?

[Michigan Gas Utilities].....	1	[GOTO V1b]
[SEMCO Energy].....	2	[GOTO V1b]
[Wisconsin Public Service or "WPS"].....	3	[GOTO V1b]
[Xcel Energy]	4	[GOTO V1b]
[Detroit Edison or "DTE"].....	5	[GOTO V1b]
[Consumers Energy].....	6	[GOTO V1b]
[Other, Specify].....	20	[GOTO V1b]
[Don't know].....	-97	[GOTO V1b]
[Refused].....	-98	[GOTO V1b]

IF <mn_rebate> = 0, THEN GOTO V1c

V1b. Our records show that you received an incentive of <mn_rebate> dollars for this energy efficiency improvement. Is that correct?

[Yes].....	1	[GOTO VQ1a]
[No]	2	[GOTO V1c]
[We did not receive ANY incentive].....	3	[GOTO VQ1a]
[Don't know].....	-97	[GOTO VQ1a]
[Refused].....	-98	[GOTO VQ1a]

V1c. What was the dollar amount of incentive you received?

[RECORD VERBATIM]_____dollars.....	[GOTO VQ1a]
[Don't know].....	-9999997 [GOTO VQ1a]
[Refused].....	-9999998 [GOTO VQ1a]

VQ1a. Our records show <mn_qty> <mn_wording> were <mn_dat3_verb> at your facility. Is that quantity correct? [If necessary: At <<address>>]

[Yes].....	1	[GOTO VQ1d]
[No]	2	[GOTO VQ1b]
[Don't know].....	-9999997	[GOTO VQ1d]
[Refused].....	-9999998	[GOTO VQ1d]

VQ1b. How many <mn_wording> were <mn_dat3_verb>?

[RECORD NUMBER]_____	[IF VQ1b = <mn_qty> GOTO VQ1d, ELSE GOTO VQ1c]
[Don't know].....	-9999997 [GOTO VQ1c]



Appendices

[Refused]..... -99999998 [GOTO VQ1c]

VQ1c. Why did you have a different quantity of <mn_wording> <mn_dat3_verb>?

[RECORD RESPONSE VERBATIM]..... .. [if <n_meas> = 1, GOTO VQ1d]

[Don't know]..... -97 [if <n_meas> = 1, GOTO VQ1d]

[Refused]..... -98 [if <n_meas> = 1, GOTO VQ1d]

VQ1d. Who <mn_dat3_verb> this energy efficiency improvement?

[Respondent/respondent's company]..... 1 [GOTO VQ3a]

[Outside contractor] [RECORD NAME OF CONTRACTOR] 2 [GOTO VQ3a]

[Other] [RECORD VERBATIM] 3 [GOTO VQ3a]

[Don't know]..... -97 [GOTO VQ3a]

[Refused] - -98 [GOTO VQ3a]

GOTO V1a for next measure if <mn_mtype_cd> = 3, 4, 5, 41

(Ask VQ3 sequence if <mn_type_cd> = 1 or 2

VQ3a. Did the <mn_wording> replace <mn_exist equip>?

[Yes]..... 1 [GOTO V1a for next measure]

[No] 2 [GOTO VQ3b]

[Don't know]..... -97 [GOTO V1a for next measure]

[Refused]..... -98 [GOTO V1a for next measure]

VQ3b. What type of existing equipment did the <mn_wording> replace?

[None]..... 0 [GOTO V1a for next measure]

[T12 Fixtures]..... 1 [GOTO V1a for next measure]

[Incandescent bulbs] 2 [GOTO V1a for next measure]

[T8 Fixtures]..... 3 [GOTO V1a for next measure]

[T8 Lamps] 4 [GOTO V1a for next measure]

[Standard HID lamps]..... 5 [GOTO V1a for next measure]

[Standard HID fixtures] 6 [GOTO V1a for next measure]

[Standard Efficiency Ice machines]..... 7 [GOTO V1a for next measure]

[Incandescent Exit Signs]..... 8 [GOTO V1a for next measure]

[Fluorescent Exit signs]..... 9 [GOTO V1a for next measure]

[Incandescent fixtures] 10 [GOTO V1a for next measure]

[Other, Specify.....]..... 20 [GOTO V1a for next measure]

[Don't know]..... -97 [GOTO V1a for next measure]

[Refused]..... -98 [GOTO V1a for next measure]



Appendices

If V1a ≠ 2 then GOTO V1a for next measure

V2b. Why wasn't <m/n_wording> installed?

[RECORD RESPONSE VERBATIM] _____ .. [GOTO V2c]

[Don't know].....-97 [GOTO V2c]

[Refused].....-98 [GOTO V2c]

V2c. Do you plan to have the <m/n_wording> installed?

[Yes]..... 1 [GOTO V2d]

[No] 2 [GOTO V2e]

[Don't know].....-97 [GOTO V1a for next measure]

[Refused].....-98 [GOTO V1a for next measure]

V2d. When do you plan to have it installed?

V2d_month [RECORD MONTH] ____

V2d_year [RECORD YEAR] ____ [GOTO V1a for next measure]

[Don't know].....-97 [GOTO V1a for next measure]

[Refused].....-98 [GOTO V1a for next measure]

V2e. Why not?

[RECORD RESPONSE VERBATIM]____ [GOTO V1a for next measure]

[Don't know].....-97 [GOTO V1a for next measure]

[Refused].....-98 [GOTO V1a for next measure]

Once this section has been asked for all measures, move on to next section.

If none of the measures were installed (V1a ... V1a_n ALL = 2) then TERMINATE survey.

If the respondent doesn't know about or refuses to talk about all the measures (V1a to V1a_n ALL = -97 don't know or -98 refused) then end survey with this respondent and start the survey over again with the next contact.

4 GENERAL EQUIPMENT PURCHASE PRACTICES

G0. Next, I have a few questions about your organization's general equipment purchase practices. [GOTO G1]

G1. Does your organization have any formal requirements for the purchase of energy-using equipment?

[Yes].....1 [GOTO G2]

[No]2 [Goto G3]

[Don't know].....-97 [Goto G3]

[Refused].....-98 [Goto G3]

G2. What are these requirements?

Savings Calculations	1	
Payback Period/ROI	2	
Decision at corporate level	3	
Look for energy efficient models.....	4	
Non-energy reasons.....	5	
Save money/ get deals.....	6	
Other	20	
[RECORD RESPONSE VERBATIM]		[GOTO G3]
[Don't know].....	-97	[GOTO G3]
[Refused].....	-98	[GOTO G3]

G3. Does your organization have any informal guidelines about the purchase of energy-using equipment?

[Yes].....	1	[GOTO G4]
[No]	2	[Goto G5]
[Don't know].....	-97	[Goto G5]
[Refused]	-98	[Goto G5]

G4. What are these guidelines?

Savings Calculations	1	
Payback Period/ROI	2	
Decision at corporate level	3	
Look for energy efficient models.....	4	
Non-energy reasons.....	5	
Save money/ get deals.....	6	
Other20[RECORD RESPONSE VERBATIM]		[GOTO G5]
[Don't know].....	-97	[GOTO G5]
[Refused].....	-98	[GOTO G5]

G5. How often does your organization consider the entire life-cycle cost of equipment, including fuel costs, when purchasing equipment? Would you say it was ... [Read unbracketed options, select one]?

Never	1	[GOTO G6]
Rarely	2	[GOTO G6]
Sometimes	3	[GOTO G6]
Most of the time.....	4	[GOTO G6]
Always	5	[GOTO G6]



Appendices

[Don't know] -97 [GOTO G6]
[Refuse] -98 [GOTO G6]

G6. Does your organization have a person whose job responsibilities include managing the energy use of your location?

[Yes] 1 [GOTO G7]
[No] 2 [GOTO G7]
[Don't know] -97 [GOTO G7]
[Refused] -98 [GOTO G7]

G7. Which of the following sources of information does your organization use when making equipment purchase or maintenance decisions? [Read list, accept multiple responses]

Sources within your organization 1 [GOTO G8a]
Contractors, vendors, or suppliers 2 [GOTO G8a]
Trade organizations and trade magazines 3 [GOTO G8a]
Your electric or gas utility 4 [GOTO G8a]
Architecture or engineering firms 5 [GOTO G8a]
Colleagues outside your organization 6 [GOTO G8a]
Trade shows 7 [GOTO G8a]
Internet 8 [GOTO G8a]
Any other sources? [Specify] 20 [GOTO G8a]
[Don't know] -97 [GOTO G8a]
[Refuse] -98 [GOTO G8a]

G8a. Has the recent economic downturn affected your organization's equipment purchase or maintenance decisions?

[Yes] 1 [GOTO G8b]
[No] 2 [GOTO G9]
[Don't know] -97 [GOTO G9]
[Refused] -98 [GOTO G9]

G8b. How so?

Not enough capital 1 [GOTO G9]
Buying used equipment 2 [GOTO G9]
Hold off buying 3 [GOTO G9]
Not purchasing new/doing more maintenance 4 [GOTO G9]
Other [Specify] 20 [GOTO G9]
[RECORD RESPONSE VERBATIM] [GOTO G9]
[Don't know] -97 [GOTO G9]
[Refused] -98 [GOTO G9]



Appendices

G9. What factors besides the economy might have affected your organization's equipment purchase or maintenance decisions?

None.....	1 [GOTO P0]
Lack of revenue	2 [GOTO P0]
Return on Investment/ROI	3 [GOTO P0]
Government/State Funding	4 [GOTO P0]
Utility Cost	5 [GOTO P0]
Rebates.....	6 [GOTO P0]
Other [Specify	20[GOTO P0]
[RECORD RESPONSE VERBATIM]	[GOTO P0]
[Don't know].....	-97 [GOTO P0]
[Refused].....	-98 [GOTO P0]



Appendices

5 PROJECT SPECIFIC QUESTIONS (P)

This section must be repeated for each measure group (<measure_group1>, <measure_group2>, ..., <measure_groupy>). The first time through, append a “_1” to the end of each number. Each time through, increment the number after the _. So the first time through (<measure_group1>) the numbers are P1_1, P2_1, etc. The 2nd time through (<measure_group2>), P1_2, P2_2, etc. This applies to skips and anywhere the <measure_group1> variable appears as well.

Most respondents have a single measure group.

P0. Now I would like to ask you a few questions about the <mgx_mtype> project that received incentives from the <program> program offered through <utility_name>.

[CFLs are a separate project from Lighting. Ask this sequence separately for CFLs and Lighting]

[GOTO P1]

P1. When did your organization start thinking about doing this <measure_groupx> project?

P1_month [RECORD MONTH] ____

P1_year [RECORD YEAR] ____ [GOTO P2]

[Don't know].....-97 [GOTO P2]

[Refused].....-98 [GOTO P2]

P2. Did the idea for this project come from within your organization, from your contractor, from a representative of the <utility_name> or <program>, or some combination of these sources? [Select all that apply.]

[Within my organization]1 [GOTO P3]

[Contractor/Vendor/Supplier]2 [GOTO P3]

[Utility / Energy Optimization / Efficiency United / Program]3 [GOTO P3]

[Other sources, SPECIFY_____]4 [GOTO P3]

[Don't know]-97 [GOTO P3]

[Refused]-98 [GOTO P3]



Appendices

P3. Why did you decide to do this project? Was it... [READ UNBRACKETED OPTIONS. SELECT ALL THAT APPLY.]

- New construction or a major addition 1 [GOTO P4]
- A renovation or planned upgrade 2 [GOTO P4]
- To replace failed or broken equipment 3 [GOTO P4]
- To improve equipment efficiency 4 [GOTO P4]
- To Improve operational efficiency 5 [GOTO P4]
- Planned maintenance 6 [GOTO P4]
- Part of a retro-commissioning project 7 [GOTO P4]
- [Other: Specify _____] 10 [GOTO P4]
- [Don't know] -97 [GOTO P4]
- [Refused] -98 [GOTO P4]

IF <mgx_mtype_cd> = 5, (Boiler Tune-Up) GOTO P4b

P4. Did you consider options for this <measure_group> equipment that were lower efficiency than what you installed?

- [Yes] 1 [GOTO P5]
- [No] 2 [GOTO P5]
- [Don't know] -97 [GOTO P5]
- [Refused] -98 [GOTO P5]

THE ORDER OF OPTIONS AND NUMBERS ASSOCIATED ARE CORRECT (1, 3, 2)

P5. Which, if any, of the following efficiency levels did you consider?

[READ UNBRACKETED OPTIONS, CHOOSE ALL THAT APPLY]

- Standard efficiency on the market at the time 1 [Goto P8]
- The efficiency you installed 3 [Goto P8]
- Or something in between? 2 [Goto P8]
- [Don't know] -97 [Goto P8]
- [Refused] -98 [Goto P8]

If <mgx_mtype_cd> ≠ 5, (Boiler Tune-Up) GOTO P8

P4b. Did you consider maintenance options that were less extensive than what you performed?

- [Yes] 1 [GOTO P5b]
- [No] 2 [GOTO P6b]
- [Don't know] -97 [GOTO P6b]
- [Refused] -98 [GOTO P6b]



Appendices

P5b. Which, if any, of the following service levels did you consider?

[READ OPTIONS, CHOOSE ALL THAT APPLY]

Actions you could perform with in-house staff 1 [GOTO P6b]

Hiring an outside contractor to do the work 3 [GOTO P6b]

Or something in between? 2 [GOTO P6b]

[Don't know] -97 [GOTO P6b]

[Refused] -98 [GOTO P6b]

P6b. Prior to receiving this rebate, did your organization perform regular boiler tune-ups?

[Yes] 1 [GOTO P8]

[No] 2 [GOTO P8]

[Don't know] -97 [GOTO P8]

[Refused] -98 [GOTO P8]

P8. For the <mgx_mtype> project, did you become aware of <program> program incentives . . .

[READ ENTIRE UNBRACKETED LIST BEFORE ACCEPTING A RESPONSE AND CHOOSE ONE RESPONSE]

Before starting the project 1 [GOTO P11]

As soon as you began exploring equipment or service options 2 [GOTO P11]

While exploring equipment or service options, but before making a decision 3

..... [GOTO P11]

After making a decision 4 [GOTO P11]

or After completing the project? 5 [GOTO P11]

[Don't know] -97 [GOTO P11]

[Refused] -98 [GOTO P11]



Appendices

P11. Did your organization receive financial assistance, such as rebates or tax credits, from any sources other than the <program> program for the project(s) we're discussing?

[Yes]..... 1 [GOTO P11_s1]
[No] 2 [GOTO P9]
[Don't know]..... -97 [GOTO P9]
[Refused]..... -98 [GOTO P9]

How much did you receive and from what sources?

P11_s1. [SOURCE #1] _____
P11_a1. [AMOUNT FROM SOURCE #1] \$ _____
P11_s2. [SOURCE #2] _____
P11_a2. [AMOUNT FROM SOURCE #2] \$ _____
P11_s3. [SOURCE #3] _____
P11_a3. [AMOUNT FROM SOURCE #3] \$ _____
P11_s4. [SOURCE #4] _____
P11_a4. [AMOUNT FROM SOURCE #4] \$ _____

P9. Prior to the <mgx_mtype> project, did your organization make similar energy efficiency improvements at this or a different location?

[Yes].....1 [GOTO P10]
[No].....2 [GOTO P10]
[Don't know]..... -97 [GOTO P10]
[Refused] -98 [GOTO P10]

P10. Did your organization receive incentives from <utility_name> for any <mgx_mtype> projects completed before the one we're discussing?

[Yes]..... 1 [GOTO P0 for next measure grp]
[No]..... 2 [GOTO P0 for next measure grp]
[Don't know]..... -97 [GOTO P0 for next measure grp]
[Refused] -98 [GOTO P0 for next measure grp]



Appendices

6 DIRECT ATTRIBUTION (DAT)

DAT_INTRO. The <program> program provided you with financial assistance and may have provided you with other services. Now that we've talked about your decision-making process, I'd like you to think about the effect that the program services and incentives had on your decision to make energy efficiency improvements.

DAT0 through DAT4 must be repeated for each measure (<m1>, <m2>, ..., <m_n>). The first time through, append a _1 to the end of each number. Each time through, increment the number after the _. So the first time through (<m1>) the numbers are DAT0_1, DAT1_1, etc. The 2nd time through (<m2>), DAT0_2, DAT1_2, etc. This applies to skips and to anywhere the <m1> variable appears as well.

On average, each respondent has 2 measures.

If V1a = 2 for a measure, skip entire DAT sequence for that measure. Goto DAT0 for next measure.

OVERALL INFLUENCE

DAT0. Without the <program> program, would you say the likelihood of <m_n_DAT0_verb> the <m_n_wording> at <<address>> was... [READ UNBRACKETED OPTIONS]

Very likely.....	1	[GOTO DAT1a]
Somewhat likely	2	[GOTO DAT1a]
Not very likely	3	[GOTO DAT1a]
Or very unlikely	4	[GOTO DAT1a]
[Don't know].....	97	[GOTO DAT1a]
[Refused]	98	[GOTO DAT1a]

TIMING

DAT1a. I'd like to know about the effect, if any, that program incentives and services had on the timing of your decision to <m_n_DAT1_verb> the <m_n_wording>.

<m_n_dat1_any_sentence>

m_n Would you have <m_n_DAT3_verb> the <m_n_wording> at the same time, earlier, later, or never?

[at the Same time]	1	[GOTO DAT1a_conf1]
[Earlier]	2	[GOTO DAT1a_O]
[Later]	3	[GOTO DAT1a_O]
[Never]	4	[GOTO DAT1a_conf2]
[Don't know].....	97	[GOTO DAT1a_O]
[Refused]	98	[GOTO DAT2a]



Appendices

IF DAT0 = 4 very unlikely AND DAT1a = 1 same time, THEN ASK DAT1a_conf1

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat DAT1a_ for whatever measure they are currently on so that they can change their answer.

DAT1a_conf1. I'd just like to confirm, you said that without the program, you were very unlikely to install <mn_wording> at all and that you would have done it at the same time? Is that correct?

[Yes]..... 1 [GOTO DAT1a_O]
[No] 2 [GOTO DAT0]
[Don't know]..... 97 [GOTO DAT0]
[Refused] 98 [GOTO DAT1a_O]

IF DAT0 = 1 very likely AND DAT1a = 4 never, THEN ASK DAT1a_conf2

DAT1a_conf2. I'd just like to confirm, you said that without the program, you were very likely to install <mn_wording> and that you would never have done it? Is that correct?

[Yes]..... 1 [GOTO DAT1a_O]
[No] 2 [GOTO DAT0]
[Don't know]..... 97 [GOTO DAT0]
[Refused] 98 [GOTO DAT1a_O]

DAT1a_O. Why do you say that you would have installed the <mn_wording> <<DAT1a>>?

[RECORD RESPONSE VERBATIM]..... [GOTO DAT1b]
[Don't know] -97 [GOTO DAT1b]
[Refused] -98 [GOTO DAT1b]

IF DAT1a ≠ 3 LATER, GOTO DAT2a

DAT1b. Approximately how many months later?

[RECORD # MONTHS]..... [GOTO DAT2a]
[Don't know] -999997 [GOTO DAT2a]
[Refused] -999998 [GOTO DAT2a]



Appendices

EFFICIENCY

IF mn_binary = 1 THEN DAT2a = 4 N/A AND GOTO DAT3

IF <mn_mtype_cd> = 5, (Boiler Tune-Up) GOTO DAT2ab

DAT2a. Next, I'd like to know about the effect, if any, that program incentives and services had on your decision to install a *high efficiency* <mn_wording>.

Without the program, would you have installed <mn_wording> of the same efficiency, lesser efficiency, or greater efficiency?

[Same efficiency]	1	[GOTO DAT2a_O]
[Lesser efficiency]	2	[GOTO DAT2a_O]
[Greater efficiency]	3	[GOTO DAT2a_O]
[Don't know]	97	[GOTO DAT2a_O]
[Refused]	98	[GOTO DAT2a_O]

DAT2a_O. Why do you say that?

[RECORD RESPONSE VERBATIM]	[GOTO DAT2b]
[Don't know]	-97 [GOTO DAT2b]
[Refused]	-98 [GOTO DAT2b]

IF DAT2a ≠ 2 LESSER EFFICIENCY, GOTO DAT3

DAT2b. Without the program, would you have installed a <mn_wording> that was
"standard efficiency on the market at that time,"
"slightly higher than standard efficiency",
"between standard efficiency and the efficiency that you installed,"
or "slightly lower than the high efficiency that was installed?"

[Standard efficiency on the market at time]	1	[GOTO DAT3]
[Slightly higher than standard efficiency]	2	[GOTO DAT3]
[Between standard efficiency and what installed]	3	[GOTO DAT3]
[Slightly lower than the high efficiency installed]	4	[GOTO DAT3]
[Don't know]	-97	[GOTO DAT3]
[Refused]	-98	[GOTO DAT3]



Appendices

IF <mn_mtype> ≠ "Boiler Tune-Up" GOTO DAT3

DAT2ab_1. Next, I'd like to know about the effect, if any, that <<program>> incentives and services had on how extensive the <mn_wording> were.

Without <<program>> would you have performed <mn_wording> that were more extensive, less extensive, or the same as what you did?

[Same as what you did] 1
[Less extensive] 2
[More extensive]..... 3
[Don't know] 97
[Refused]..... 98

DAT2ab_O_1. Why do you say that?

[RECORD RESPONSE VERBATIM] _____

[Don't know] -97

[Refused] -98

IF DAT2ab_1 ≠ 2 LESS EXTENSIVE, SKIP TO DAT3_1

DAT2bb_1. Without <<program>>, would you have performed <mn_wording> that required...

[READ OPTIONS, CHOOSE ALL THAT APPLY]

Actions you could perform with in-house staff 1

Hiring an outside contractor to do the work..... 3

Or something in between? 2

[Don't know] -97

[Refused] -98

QUANTITY

DAT3. I'd like to know about the effect, if any, that program incentives and services had on the quantity of <mn_wording> that you <mn_DAT3_verb>. Without the program would you have <mn_DAT3_verb> the same amount, less, more, or none at all?

[Same number/size].....1 [GOTO DAT3 conf1]

[Fewer/smaller].....2 [GOTO DAT3_O]

[More/larger]3 [GOTO DAT3_O]

[None at all]4 [GOTO DAT3_conf2]

[Don't know]-97 [GOTO DAT3_O]

[Refused]-98 [GOTO DAT4]

IF DAT0 = 4 very unlikely AND DAT3 = 1 same number/size THEN ASK DAT3_conf1

For these confirmation questions, if the respondent does not confirm (does not answer yes to the question) we need to repeat DAT3_ for whatever measure they are currently on so that they can change their answer.

DAT3_conf1. I'd just like to confirm, you said that without the program, you were very unlikely to <mn_dat1_verb> <mn_wording> at all and that you would have done the same amount? Is that correct?

[Yes]..... 1 [GOTO DAT3_O]
 [No] 2 [GOTO DAT3]
 [Don't know]..... 97 [GOTO DAT3]
 [Refused] 98 [GOTO DAT3_O]

IF DAT0 = 1 very likely AND DAT3 = 4 none at all, THEN ASK DAT3_conf2

DAT3_conf2. I'd just like to confirm, you said that without the program, you were very likely to <mn_dat1_verb> <mn_wording> and that you would not have done anything at all? Is that correct?

[Yes]..... 1 [GOTO DAT3_O]
 [No] 2 [GOTO DAT3]
 [Don't know]..... 97 [GOTO DAT3]
 [Refused] 98 [GOTO DAT3_O]

DAT3_O. Why do you say that ?

[RECORD RESPONSE VERBATIM]..... [GOTO DAT3a]
 [Don't know] -97 [GOTO DAT3a]
 [Refused] -98 [GOTO DAT3a]

IF DAT3 = 1 same number/size or 4 none at all, GOTO DAT4

DAT3a. By what percentage did you change the quantity of <mn_wording> that you <mn_dat3_verb> because of the program?

[RECORD RESPONSE VERBATIM].....% [GOTO DAT4]
 [Don't know] -9997 [GOTO DAT4]
 [Refused] -9998 [GOTO DAT4]

- DAT4.** We've just discussed the different effects that the program had on your organization's decisions regarding the <mn_dat4_word> of the <mn_wording>. I'd like you to summarize the programs' influence on the timing, efficiency and quantity of <mn_wording> that you <mn_dat3_verb>.
- [RECORD RESPONSE VERBATIM] [GOTO DAT5]
 [Don't know]-97 [GOTO DAT5]
 [Refused]-98 [GOTO DAT5]
- DAT5.** Do you have any additional comments about these projects or the program?
 [RECORD RESPONSE VERBATIM] [Goto DAT0 for next measure]
 [Don't know]-97 [Goto DAT0 for next measure]
 [Refused]-98 [Goto DAT0 for next measure]

7 Satisfaction (S)

S0. We're almost done. Next I have a series of questions about how satisfied you are with different aspects of the <program> program. For all of these questions, use a 5 point scale where 5 means very satisfied and 1 means very *dissatisfied*

S1. How satisfied or dissatisfied are you with the rebated equipment?

- 1 or Very Dissatisfied..... 1 [GOTO S1b]
 2 2 [GOTO S1b]
 3 3 [GOTO S1b]
 4 4 [Goto S2]
 5 or Very Satisfied 5 [Goto S2]
 [Don't know]-97 [Goto S2]
 [Refused]-98 [Goto S2]

S1b. Why do you say that?

- Rebates a plus/ happy with fixtures 1 [GOTO S2]
 Satisfied with bulbs 2 [GOTO S2]
 Satisfied 3 [GOTO S2]
 Unsatisfied 4 [GOTO S2]
 Other [Specify] 20 [GOTO S2]
 [RECORD RESPONSE VERBATIM] [GOTO S2]
 [Don't know]-97 [GOTO S2]
 [Refused]-98 [GOTO S2]

S2. How about the amount of the financial incentives from the program? [REPEAT SCALE IF NECESSARY]

- 1 or Very Dissatisfied..... 1 [GOTO S2b]
 2 2 [GOTO S2b]
 3 3 [GOTO S2b]



Appendices

4	4	[Goto S3]
5 or Very Satisfied	5	[Goto S3]
[Don't know]	-97	[Goto S3]
[Refused]	-98	[Goto S3]

S2b. Why do you say that?

Rebates are a plus	1	[GOTO S3]
Would like more money	2	[GOTO S3]
Direct install/ did not receive rebate	3	[GOTO S3]
Other [Specify]	20	[GOTO S3]
[RECORD RESPONSE VERBATIM]		[GOTO S3]
[Don't know]	-97	[GOTO S3]
[Refused]	-98	[GOTO S3]

S3. How satisfied or dissatisfied were you with the timeliness of the incentive payments?

1 or Very Dissatisfied	1	[GOTO S3b]
2	2	[GOTO S3b]
3	3	[GOTO S3b]
4	4	[Goto S4]
5 or Very Satisfied	5	[Goto S4]
[Don't know]	-97	[Goto S4]
[Refused]	-98	[Goto S4]

S3b. Why do you say that?

Quick	1	[GOTO S4]
Slow	2	[GOTO S4]
Faster than previous years	3	[GOTO S4]
Went to contractor	4	[GOTO S4]
Haven't received yet	5	[GOTO S4]
Timing fine	6	[GOTO S4]
Took 3 months or longer	7	[GOTO S4]
Other [Specify]	20	[GOTO S4]
[RECORD RESPONSE VERBATIM]		[GOTO S4]
[Don't know]	-97	[GOTO S4]
[Refused]	-98	[GOTO S4]

S4. How about the rebate application forms and other paperwork?

1 or Very Dissatisfied	1	[GOTO S4b]
2	2	[GOTO S4b]
3	3	[GOTO S4b]
4	4	[Goto S5]
5 or Very Satisfied	5	[Goto S5]
[Don't know]	-97	[Goto S5]



Appendices

[Refused]-98 [Goto S5]

S4b. Why do you say that?

Easy 1 [GOTO S5]
Lengthy 2 [GOTO S5]
Complicated 3 [GOTO S5]
Contractor handled 4 [GOTO S5]
Didn't get involved in paperwork 5 [GOTO S5]
Other [Specify] 20 [GOTO S5]
[RECORD RESPONSE VERBATIM] [GOTO S5]
[Don't know]-97 [GOTO S5]
[Refused]-98 [GOTO S5]

S5. How satisfied or dissatisfied were you with program requirements that the installed equipment be inspected, measured, or verified?

1 or Very Dissatisfied 1 [GOTO S5b]
2 2 [GOTO S5b]
3 3 [GOTO S5b]
4 4 [Goto S6]
5 or Very Satisfied 5 [Goto S6]
[Don't know]-97 [Goto S6]
[Refused]-98 [Goto S6]

S5b. Why do you say that?

Went well/ verification performed 1 [GOTO S6]
Verification not performed 2 [GOTO S6]
Other [Specify] 20 [GOTO S6]
[RECORD RESPONSE VERBATIM] [GOTO S6]
[Don't know]-97 [GOTO S6]
[Refused]-98 [GOTO S6]

S6. How satisfied or dissatisfied were you with your interactions with program staff?

1 or Very Dissatisfied 1 [GOTO S6b]
2 2 [GOTO S6b]
3 3 [GOTO S6b]
4 4 [Goto S7]
5 or Very Satisfied 5 [Goto S7]
[Don't know]-97 [Goto S7]
[Refused]-98 [Goto S7]



Appendices

S6b. Why do you say that?

Good	1	[GOTO S7]
No problem.....	2	[GOTO S7]
Helpful.....	3	[GOTO S7]
Disorganized	4	[GOTO S7]
Contractor handled	5	[GOTO S7]
Other [Specify]	20	[GOTO S7]
[RECORD RESPONSE VERBATIM]		[GOTO S7]
[Don't know]	-97	[GOTO S7]
[Refused]	-98	[GOTO S7]

S7. The program as a whole?

1 or Very Dissatisfied.....	1	[GOTO S7b]
2	2	[GOTO S7b]
3	3	[GOTO S7b]
4	4	[Goto S9]
5 or Very Satisfied	5	[Goto S9]
[Don't know]	-97	[Goto S9]
[Refused]	-98	[Goto S9]

S7b. Why do you say that?

Electricity rate still went higher	1	[GOTO S9]
Satisfied	2	[GOTO S9]
Effortless	3	[GOTO S9]
More money/ raise incentive	4	[GOTO S9]
Other [Specify]	20	[GOTO S9]
[RECORD RESPONSE VERBATIM]		[GOTO S9]
[Don't know]	-97	[GOTO S9]
[Refused]	-98	[GOTO S9]



Appendices

S9. What, if anything, could <utility_name> do to get more companies or organizations to participate in the rebate program?

[RECORD RESPONSE VERBATIM]_____		
Marketing.....	1	[GOTO S10]
Larger Rebate.....	2	[GOTO S10]
Simplify process/less paperwork/less bureaucracy	3	[GOTO S10]
Expand Program more measures	4	[GOTO S10]
Communicate/more proactive	5	[GOTO S10]
Other [Specify].....	20	[GOTO S10]
[No suggestions]	0	[GOTO S10]
[Don't know]	-97	[GOTO S10]
[Refused]	-98	[GOTO S10]

S10. What, if any, energy efficiency technologies would you like <utility_name> to offer rebates for?

[RECORD RESPONSE VERBATIM]_____		
Refrigeration	1	[GOTO S11]
Motors.....	2	[GOTO S11]
Solar/Renewable	3	[GOTO S11]
Laundry.....	4	[GOTO S11]
HVAC.....	5	[GOTO S11]
Computers.....	6	[GOTO S11]
Insulation	7	[GOTO S11]
Boilers.....	8	[GOTO S11]
Compressors.....	9	[GOTO S11]
Lighting.....	10	[GOTO S11]
Everything covered/great as is	11	[GOTO S11]
Kitchen Equipment.....	12	[GOTO S11]
Manufacturing /Custom	13	[GOTO S11]
Controls/EMS	14	[GOTO S11]
Other [Specify].....	20	[GOTO S11]
[No suggestions]	0	[GOTO S11]
[Don't know]	-97	[GOTO S11]
[Refused]	-98	[GOTO S11]

S11. What, if anything, could <utility_name> do to improve the program?

[RECORD RESPONSE VERBATIM]_____		[GOTO	NEXT
SECTION]			
[No suggestions]	0	[GOTO NEXT SECTION]	



Appendices

[Don't know]	-97	[GOTO NEXT SECTION]
[Refused]	-98	[GOTO NEXT SECTION]

8 Firmographics (F)

I just have a few more questions about the facility where your organization made the energy efficiency improvements we discussed earlier. Just to remind you, all of your responses will remain confidential.

[If customer has multiple addresses, use <m1_address>]

F1. What is the principal activity of your organization at this location? **[Choose one. If respondent tells you multiple, ask them which one best describes the main activity at the location.]**

Office	1	[GOTO F2]
Retail (non-food).....	2	[GOTO F2]
College/university	3	[GOTO F2]
School.....	4	[GOTO F2]
Grocery store.....	5	[GOTO F2]
Convenience store	6	[GOTO F2]
Restaurant	7	[GOTO F2]
Health care/hospital.....	8	[GOTO F2]
Hotel or motel	9	[GOTO F2]
Warehouse	10	[GOTO F2]
Community Service/Church/Temple/Municipality	11	[GOTO F2]
Industrial Process/Manufacturing/Assembly	12	[GOTO F2]
Agriculture/Farm	13	[GOTO F2]
[Other (Record)]	14	[GOTO F2]
Don't know.....	-97	[GOTO F2]
Refused	-98	[GOTO F2]

F2. At this location, does your organization **[READ UNBRACKETED LIST]**

Own all of the space it occupies?	1	[Goto F4]
Lease all of the space it occupies?	2	[GOTO F3]
Or own some and lease some of the space it occupies? ...	3	[GOTO F3]
[Don't know].....	-97	[GOTO F4]
[Refused]	-98	[GOTO F4]



Appendices

F3. Are any of your energy costs included in your normal lease payment?

[Yes]. 1 [GOTO F4]
[No]. 2 [GOTO F4]
[Don't know] -97 [GOTO F4]
[Refused]. -98 [GOTO F4]

F4. What is the total enclosed square footage of the space your organization occupies at this location? Your best estimate is fine.

[RECORD # SQ FT] [GOTO F5]
[Don't know] -99999997 [Get Best Guess; GOTO F5]
[Refused] -99999998 [GOTO F5]

F5. How many full-time employees work for your organization at this location?

[Record number of employees] [GOTO RCR1]
[Don't know] -99999997 [Get Best Guess] [GOTO RCR1]
[Refused] -99999998 [GOTO RCR1]

RCR1. The <program> program is interested in developing a more accurate assessment of the efficiency and capacity ratings of different types of subsidized equipment in commercial buildings within the state of Michigan. To achieve this, the program would like to have a third party auditor, from KEMA, visit your facility to gather information on the equipment the program provided you incentives for. All information will be kept strictly confidential and will be used only by KEMA and your utility.

Are you interested in participating in this research project?

[Yes]... 1 [GOTO RCR2]
[No] 2 [Goto F6]
[Don't know / Not sure / Can't remember] -97 [Goto F6]
[Refused to answer] -98 [Goto F6]

RCR2. What is the name of the person (facility manager) that our energy auditor should call to schedule an appointment?

[RECORD RESPONSE] [GOTO RCR3]
[Don't know / Not sure / Can't remember] -97 [GOTO RCR3]
[Refused to answer] -98 [GOTO RCR3]

RCR3. What is the best phone number to use for scheduling this appointment?

[RECORD RESPONSE] [GOTO RCR4]
[Don't know / Not sure / Can't remember] -97 [GOTO RCR4]
[Refused to answer] -98 [GOTO RCR4]

RCR4. Is there a cell phone number that would be better to use?



Appendices

[RECORD RESPONSE]_____ [GOTO RCR5]
[Don't know / Not sure / Can't remember]-97 [GOTO RCR5]
[Refused to answer]-98 [GOTO RCR5]

RCR5. In the event that the primary contact is not available, is there an alternative name and number?

[RECORD RESPONSE]_____ [GOTO RCR6]
[Don't know / Not sure / Can't remember]-97 [GOTO RCR6]
[Refused to answer]-98 [GOTO RCR6]

RCR6. What days are best to call to arrange an appointment?

[RECORD RESPONSE]_____ [GOTO RCR7]
[Don't know / Not sure / Can't remember]-97 [GOTO RCR7]
[Refused to answer]-98 [GOTO RCR7]

RCR7. Our records show that your address is <m1_ADDRESS>. Is this correct?

[Yes]... 1 [Goto F6]
[No]..... 2 [GOTO RCR8]
[Don't know / Not sure / Can't remember]-97 [GOTO RCR8]
[Refused to answer]-98 [GOTO RCR8]

RCR8. What is the correct address?

[RECORD RESPONSE]_____ [GOTO F6]
[Don't know / Not sure / Can't remember]-97 [GOTO F6]
[Refused to answer]-98 [GOTO F6]

F6. Thank you for taking the time to talk with me today. Would it be okay if I called you back to clarify my notes, if necessary?

[Yes] 1 [GOTO F7]
[No]..... 2 [GOTO F7]
[Don't know] -97 [GOTO F7]
[Refused] -98 [GOTO F7]

F7. What is your name?

[RECORD RESPONSE]_____



Appendices

I. Residential Nonparticipant CATI Survey

EO-EU
General Population Survey
Residential
Revised –03/22/2012

Survey house instructions

- 43. Text in bold should be read.
- 44. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should NOT be read.
- 45. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
- 46. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
- 47. Text in gray boxes is major programming instruction.
- 48. Unless specifically noted, do NOT read answer choices. [Don't know] and [Refused] should NEVER be read.

Programming Notes

- 9. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet. Make separate 0/1 variables for the [Don't know] and [Refused] options as well.

Database Fields

<elec_utility> respondent's electrical utility
<gas_utility> respondents gas utility
<UTILITIES FROM ZIP CODE> electric and gas utilities that services respondent's zip code. May not be 100% accurate
<confirm_contact_1> Name of contact to confirm the study
<confirm_contact_phone_1> Phone # for confirm_contact_1
<confirm_contact_2> Name of 2nd contact to confirm study. If not blank, it means we are not sure who is the correct contact and you will have to provide both.
<confirm_contact_phone_2> phone # for confirm_contact_2



Appendices

INTRODUCTION

Intro1.

[IF <ELEC_UTILITY> & <GAS_UTILITY> BLANK]

Hello, my name is _____, and I'm calling on behalf of <UTILITIES STRING>, Efficiency United, and Energy Optimization to discuss your household's awareness of energy efficiency programs in your area. I'm not selling anything; I'd just like to ask your opinions. Your responses will be kept confidential and your individual responses will not be revealed to anyone.

1	[AGREES TO PARTICIPATE]	Intro2
2	[DOES NOT AGREE TO PARTICIPATE]	TERMINATE

[IF NECESSARY: It shouldn't take more than 15 minutes.]

[IF NECESSARY: Respondent can call:

<confirm_contact_1> at <confirm_contact_phone_1> or
<confirm_contact_2> at <confirm_contact_phone_2>
to confirm the study.]

Intro2. Are you the person most familiar with your household's purchases of appliances and energy using equipment?

1	[Yes]	Intro6
2	[No]	Intro3
97	[Don't know]	Intro3
98	[Refused]	Intro3

Intro3. Who is the person most familiar with your household's purchase of appliances and other energy using equipment?

	[RECORD FIRST and LAST NAME]	Intro4
98	[Refused]	Intro4
97	[Don't know]	Intro4

Intro4. Could I speak with <Intro3> now?

1	[Yes]	Intro1
2	[No]	Intro5
97	[Don't know]	Intro5
98	[Refused]	Intro5

Intro5. When is a good time I could call back to reach <Intro3>?

	[RECORD DAY and TIME]	Call back later
97	[Don't know]	Call back later
98	[Refused]	Call back later



Appendices

Intro6. Can I get your name?

	[RECORD FIRST and LAST NAME]	Scr0
97	[Don't know]	Scr0
98	[Refused]	Scr0

Screening

Scr0. First, I have a couple of questions to confirm my records.

[GOTO Scr1b IF <ELEC_UTILITY> = blank]

Scr1a. Does <ELEC_UTILITY> supply your home's electricity?

1	[Yes]	Scr2a
2	[No]	Scr1b
97	[Don't know]	Scr2a
98	[Refused]	Scr2a

Scr1b. Who supplies your home's electricity?

1	[Alger Delta Coop]	Scr2a
2	[Alpena Power]	Scr2a
3	[Bayfield Electric Cooperative]	Scr2a
4	[Cloverland Electric Coop]	Scr2a
5	[Daggett Electric Department]	Scr2a
6	[Edison Sault Electric Company]	Scr2a
7	[Great Lakes Energy coop]	Scr2a
8	[HomeWorks Tri-County electric Coop]	Scr2a
9	[Indiana Michigan Power Company]	Scr2a
10	[Midwest Energy Coop]	Scr2a
11	[Ontonagon County Rural Electrification]	Scr2a
12	[Presque Isle Electric and Gas]	Scr2a
13	[Thumb Electric]	Scr2a
14	[Upper Peninsula Power Company]	Scr2a
15	[WE Energies]	Scr2a
16	[Wisconsin Public Service or "WPS"]	Scr2a
17	[Xcel Energy]	Scr2a
18	[City of Escanaba]	Scr2a
19	[City of Stephenson]	Scr2a
20	[Marquette Board of Light & Power]	Scr2a
21	[Newberry Water & Light]	Scr2a
22	[Detroit Edison or "DTE"]	Scr2a
23	[Consumers Energy]	Scr2a
24	SEMCO	Scr2a
25	Michigan Gas & Electric	Scr2a
26	General Electric	Scr2a
27	Local Public Utility	Scr2a
77	[Other (specify _____)]	Scr2a
97	[Don't know]	Scr2a
98	[Refused]	Scr2a

[IF <GAS_UTILITY> = BLANK GOTO Scr2b
ELSE IF <GAS_UTILITY> = <ELECUTILITY> GOTO A0]

Scr2a. And does <GAS_UTILITY> supply your home's gas?

1	[Yes]	A0
2	[No]	Scr2b
97	[Don't know]	A0
98	[Refused]	A0



Appendices

Scr2b. Who supplies your home's gas?

0	[Home does not have gas service]	A0
1	[Michigan Gas Utilities]	A0
2	[SEMCO Energy]	A0
3	[Wisconsin Public Service or "WPS"]	A0
4	[Xcel Energy]	A0
5	[Detroit Edison or "DTE"]	A0
6	[Consumers Energy]	A0
7	Propane	A0
8	Amerigas	A0
9	Electric Gas	A0
10	Ferrell Gas	A0
11	Lowes Bottled Gas	A0
12	Local Utility	A0
13	Autore Oil	A0
14	Aurora	A0
15	Decock	A0
77	[Other (specify) _____]	A0
97	[Don't know]	A0
98	[Refused]	A0

[RESPONDENT QUALIFIES IF ONE OR MORE OF THE FOLLOWING ARE TRUE:

1. Scr1a = 1 (yes)
2. Scr1b = 1 to 21
3. Scr2a = 1 (yes)
4. Scr2b = 1 to 4

OTHERWISE, TERMINATE RESPONDENT AND MARK AS INELIGIBLE]

Program Awareness

A0. Next, I'd like to ask a few questions about your awareness of the energy efficiency programs in your area. [GOTO A1]

A1. Prior to this call, were you aware of the Energy Optimization or Efficiency United programs that provide rebates or discounts for energy efficient equipment?

1	[Yes]	A2
2	[No]	A3
97	[Don't know]	A3
98	[Refused]	A3

A2. Which, if any, Energy Optimization or Efficiency United programs have you participated in?

[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES]



Appendices

0	[None]	A3
1	[Energy Star Products]	TERMINATE - INELIGIBLE
2	[In-person Audit]	TERMINATE - INELIGIBLE
3	[Online Energy Audit]	TERMINATE - INELIGIBLE
4	[Recycling Refrigerators or Freezers]	TERMINATE - INELIGIBLE
5	[Furnaces, air conditioner, water heater, boiler rebates]	TERMINATE - INELIGIBLE
6	[Energy saving kit purchase]	TERMINATE - INELIGIBLE
7	[Compact fluorescent bulb or CFL rebates]	TERMINATE - INELIGIBLE
8	[Smart Power Strip rebates]	TERMINATE - INELIGIBLE
9	[Dishwasher, washing machine, clothes dryer rebates]	TERMINATE - INELIGIBLE
10	[New home construction]	TERMINATE - INELIGIBLE
77	[Other, specify _____]	TERMINATE - INELIGIBLE
97	[Don't know]	A3
98	[Refused]	A3

A3. Prior to this call, were you were aware of your electric or gas utility offering rebates or discounts on energy efficient equipment or energy related services?

1	[Yes]	A4
2	[No]	P0
97	[Don't know]	P0
98	[Refused]	P0

A4. What types of energy efficient equipment discounts or energy related services are you aware of your utilities offering?

[DO NOT READ LIST. ACCEPT MULTIPLE ANSWERS]

0	[None]	A8
1	[CFLs or Compact Fluorescent Light bulbs]	A5
2	[Smart Power Strips]	A5
3	[Kits with several different items]	A5
4	[Online energy audits]	A5
5	[In-person energy audits]	A5
6	[Central air conditioners]	A5
7	[Furnaces or Boilers]	A5
8	[Recycling Refrigerators or Freezers]	A5
9	[Pipe wrap / Pipe insulation]	A5
10	[Dishwashers]	A5
11	[Clothes washers / Washing machines]	A5
12	[Clothes dryers]	A5
13	[Ceiling Fans]	A5
14	[Attic or wall insulation]	A5
15	[Air sealing / Weather stripping / Caulking]	A5
16	[Faucet aerators]	A5
17	[Showerheads]	A5
18	[New home construction]	A5
19	Thermostat	A5
20	Windows and Doors	A5
21	Energy Efficient Appliances	A5
22	Bill Discount	A5
23	Renewable	A5
24	Gas	A5
77	[Other, specify _____]	A5
97	[Don't know]	A8
98	[Refused]	A8

A5. Which, if any, of those rebates or services have you participated in?
[DO NOT READ LIST. ACCEPT MULTIPLE ANSWERS]

0	[None]	A6
1	[CFLs or Compact Fluorescent Light bulbs]	A7
2	[Smart Power Strips]	A7
3	[Kits with several different items]	A7
4	[Online energy audits]	A7
5	[In-person energy audits]	A7
6	[Central air conditioners]	A7
7	[Furnaces or Boilers]	A7
8	[Recycling Refrigerators or Freezers]	A7
9	[Water heater / tankless water heater]	A7
10	[Pipe wrap / Pipe insulation]	A7
11	[Dishwashers]	A7
12	[Clothes washers / Washing machines]	A7
13	[Clothes dryers]	A7
14	[Ceiling Fans]	A7
15	[Attic or wall insulation]	A7
16	[Air sealing / Weather stripping / Caulking]	A7
17	[Faucet aerators]	A7
18	[Showerheads]	A7
19	[New home construction]	A7
20	Heating and Cooling	A7
21	Appliance Maintenance	A7
22	Gas	A7
23	Bill Discount	A7
77	[Other, specify _____]	A7
97	[Don't know]	A7
98	[Refused]	A7

A6. Why haven't you participated in any of the rebates or services?
[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Did not purchase eligible equipment / no opportunity]	A7
2	[Rebates not enough to justify high initial cost of eligible equipment]	A7
3	[Rebates not big enough to justify hassle/paperwork]	A7
4	[Was going to buy equipment anyway]	A7
5	[Didn't find out about program until too late]	A7
6	No time	A7
7	Personal Preference	A7
8	Did not know about rebates	A7
9	Did not qualify for rebates	A7
10	Already received rebates	A7
77	[Other, specify _____]	A7
97	[Don't know]	A7
98	[Refused]	A7



Appendices

A7. Where did you hear about the rebates or services?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Salesperson where equipment purchased]	A8
2	[Utility bill stuffers]	A8
3	[Utility website]	A8
4	[the Internet other than utility's website]	A8
5	[Local newspaper]	A8
6	[A state or national newspaper]	A8
7	[TV, radio]	A8
8	[Friends, Relatives, or Neighbors]	A8
9	[Community Events or Local Schools]	A8
10	Other printed advertisement	A8
77	[Other, specify _____]	A8
97	[Don't know]	A8
98	[Refused]	A8

A8. If you were looking for information on energy efficiency or ways to lower your energy bill, where would you look or who would you talk to? Anywhere else?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Utility bill or utility bill flyer/insert]	P0
2	[Call utility]	P0
3	[Go to utility office]	P0
4	[Attend utility workshop]	P0
5	[Utility website]	P0
6	[Other website]	P0
7	[Friend or relative]	P0
8	[Trades person (contractor, electrician, builder)]	P0
9	[Product manufacturer]	P0
10	[Library]	P0
11	[Government agency]	P0
12	[Advertising]	P0
13	[Mail]	P0
14	[Newspaper]	P0
15	[Television]	P0
16	Retailer/ Department Store	P0
17	Already aware	P0
18	Nobody	P0
77	[Other, specify _____]	P0
97	[Don't know]	P0
98	[Refused]	P0

PURCHASE EXPERIENCE

P0. Next, I'd like to ask some questions about where you purchase energy using equipment.

[GOTO P1a]

-----LIGHTBULBS-----

P1a. Where do you typically shop for light bulbs? Anywhere else?

[DO NOT READ LIST. ACCEPT MULTIPLE ANSWERS]

1	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	P1b
2	[Department Store (Target, K-Mart, Wal-Mart, Sears)]	P1b
3	[Big Box Retailer (Best Buy)]	P1b
4	[Warehouse store (Costco, Sam's Club)]	P1b
5	[Supermarket, food store (Meijer, Kroger, Farmer Jack, Busch's)]	P1b
6	[Drug store (Atlas, CVS, Walgreen's, Medicine Shoppe)]	P1b
7	[Discount/\$1 dollar store]	P1b
8	[Lighting supply store, lighting showroom]	P1b
9	[Mail-order catalog]	P1b
10	[Over the Internet]	P1b
11	[Home energy show]	P1b
12	[Phone book/yellow pages]	P1b
13	[Contractor]	P1b
14	Anywhere	P1b
15	Do not purchase	P1b
16	Where the best prices are	P1b
17	Community events	P1b
77	[Other (specify)]	P1b
97	[Don't know]	P1b
98	[Refused]	P1b

P1b. When you purchase light bulbs, how often do you purchase compact fluorescent bulbs?

Would you say... [READ UNBRACKETED OPTIONS]

1	Never	P1c
2	Rarely	P1c
3	Sometimes	P1c
4	Often	P1c
5	Or Always	P1d
97	[Don't know]	P1c
98	[Refused]	P1d

P1c. Why don't you purchase compact fluorescent bulbs more often than you do?
[DO NOT READ LIST. DO ACCEPT MULTIPLE ANSWERS]

1	[Price / too expensive]	P1d
2	[Quality of light]	P1d
3	[Don't fit in fixtures]	P1d
4	[Look ugly in fixtures]	P1d
5	[Flicker]	P1d
6	[Mercury / hazardous contents/ disposal of burnouts]	P1d
7	[Not available in stores]	P1d
8	[Burnout too quickly]	P1d
9	CFLs last long	P1d
10	Do not need more	P1d
11	Do not like	P1d
12	Someone else purchases for me	P1d
13	No time	P1d
14	Need more information	P1d
77	[Other (specify)]	P1d
97	[Don't know]	P1d
98	[Refused]	P1d

P1d. About what percent of the light bulbs in your home are compact fluorescents?

	[RECORD %]	P2a
97	[Don't know]	P2a
98	[Refused]	P2a

-----DISHWASHER-----

P2a. Have you or anyone in your household purchased a new dishwasher since January 2008?

1	[Yes]	P2b
2	[No]	P3a
97	[Don't know]	P3a
98	[Refused]	P3a

P2b. When you were shopping for the dishwasher, where did you get information about what to buy? Anywhere else?

[DO NOT READ LIST. ALLOW MULTIPLE RESPONSES]

1	[Consumer Reports or other product-oriented magazines]	P2c
2	[Other magazines]	P2c
3	[Electric or gas utility]	P2c
4	[Retailers or salesperson]	P2c
5	[Contractors]	P2c
6	[Friend, neighbor, relative, or co-worker]	P2c
7	[Internet]	P2c
8	[Newspaper]	P2c
9	[Radio]	P2c
10	[Television]	P2c
77	[Other] (RECORD) _____	P2c
97	[Don't know/Not sure/Can't remember]	P2c
98	[Refused]	P2c

P2c. When you were shopping for the dishwasher, what characteristics were important to you? Anything else?

[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES]

1	[Price/Cost]	P2d
2	[Features/Controls]	P2d
3	[Size/ Capacity]	P2d
4	[Brand]	P2d
5	[Operating cost]	P2d
6	[Efficiency level]	P2d
7	[Energy Star]	P2d
8	[Rebates]	P2d
9	[Reliability/Warranty]	P2d
10	[Color]	P2d
11	[Salesperson / Contractor recommendation]	P2d
12	[Consumer magazine / online recommendation]	P2d
77	[Other] (RECORD) _____	P2d
97	[Don't know/Not sure/Can't remember]	P2d
98	[Refused]	P2d

[GOTO P2e IF ANSWER TO P2C HAS ONLY ONE ANSWER]

P2d. Which of those characteristics was the most important one?

1	[Price/Cost]	P2e
2	[Features/Controls]	P2e
3	[Size/ Capacity]	P2e
4	[Brand]	P2e
5	[Operating cost]	P2e
6	[Efficiency level]	P2e
7	[Energy Star]	P2e
8	[Rebates]	P2e
9	[Reliability/Warranty]	P2e
10	[Color]	P2e
11	[Salesperson / Contractor recommendation]	P2e
12	[Consumer magazine / online recommendation]	P2e
77	[Other] (RECORD) _____	P2e
97	[Don't know/Not sure/Can't remember]	P2e
98	[Refused]	P2e

P2e. From where did you purchase the dishwasher?

1	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	P2f
2	[Department Store (Target, K-Mart, Wal-Mart, Sears)]	P2f
3	[Big Box Retailer (Best Buy)]	P2f
4	[Warehouse store (Costco, Sam's Club)]	P2f
5	[Local appliance store]	P2f
6	[Mail-order catalog]	P2f
7	[Over the Internet]	P2f
8	[Home energy show]	P2f
9	[Phone book/yellow pages]	P2f
10	[Contractor]	P2f
11	Rental	P2f
12	Gift	P2f
13	Manufacturer	P2f
14	Individual	P2f
77	[Other (specify)]	P2f
97	[Don't know]	P2f
98	[Refused]	P2f

P2f. Were there any rebates available for dishwashers at the time of your purchase?

1	[Yes]	P2g
2	[No]	P3a
97	[Don't know]	P3a
98	[Refused]	P3a

P2g. Who offered the rebate?

[DO NOT READ. ACCEPT MULTIPLE RESPONSES]

1	<ELEC_UTILITY> or <GAS_UTILITY>	P2h
2	[Efficiency United]	P2h
3	[Energy Optimization]	P2h
4	[Another utility]	P2h
5	[Manufacturer]	P2h
6	[Retailer]	P2h
7	[Energy Star]	P2h
77	[Other – (specify)]	P2h
97	[Don't know/ Not sure/ Can't remember]	P2h
98	[Refused]	P2i

P2h. Did you purchase a dishwasher that was eligible for the rebate?

1	[Yes]	P3a
2	[No]	P2i
97	[Don't know/ Not sure/ Can't remember]	P2i
98	[Refused]	P2i

P2i. Why didn't you purchase a dishwasher that was eligible for the rebate?

[DO NOT READ. ALLOW MULTIPLE RESPONSES]

1	[Too expensive]	P3a
2	[The rebate not big enough]	P3a
3	[Too much trouble/hassle to fill out rebate forms/ paperwork]	P3a
4	[The dealer/ contractor didn't recommend it]	P3a
5	[A consumer magazine didn't recommend it]	P3a
6	[It didn't have the controls/features I was looking for]	P3a
7	[It didn't have the style or color I was looking for]	P3a
8	[I prefer another brand/manufacturer]	P3a
9	[Wasn't in stock / Not quickly available]	P3a
10	[It didn't have the size/capacity I needed]	P3a
77	[Other](RECORD) _____	P3a
78	[Other] (RECORD) _____	P3a
79	[Other] (RECORD) _____	P3a
97	[Don't know/ Not sure/ Can't remember]	P3a
98	[Refused]	P3a

-----CLOTHES WASHER-----

P3a. Have you or anyone in your household purchased a new clothes washer since January 2008?

1	[Yes]	P3b
2	[No]	P4a
97	[Don't know]	P4a
98	[Refused]	P4a

P3b. When you were shopping for the clothes washer, where did you get information about what to buy? Anywhere else?

[DO NOT READ LIST. ALLOW MULTIPLE RESPONSES]

1	[Consumer Reports or other product-oriented magazines]	P3c
2	[Other magazines]	P3c
3	[Electric or gas utility]	P3c
4	[Retailers or salesperson]	P3c
5	[Contractors]	P3c
6	[Friend, neighbor, relative, or co-worker]	P3c
7	[Internet]	P3c
8	[Newspaper]	P3c
9	[Radio]	P3c
10	[Television]	P3c
11	I did not get information from anyone	P3c
12	Shopped around for best deal	P3c
13	Purchased the same brand/ model as before	P3c
77	[Other] (RECORD) _____	P3c
97	[Don't know/Not sure/Can't remember]	P3c
98	[Refused]	P3c

P3c. When you were shopping for the clothes washer, what characteristics were important to you? Anything else?

[DO NOT READ LIST. DO ACCEPT MULTIPLE RESPONSES]

1	[Price/Cost]	P3d
2	[Features/Controls]	P3d
3	[Size/ Capacity]	P3d
4	[Brand]	P3d
5	[Operating cost]	P3d
6	[Efficiency level]	P3d
7	[Energy Star]	P3d
8	[Rebates]	P3d
9	[Reliability/Warranty]	P3d
10	[Color]	P3d
11	[Salesperson / Contractor recommendation]	P3d
12	[Consumer magazine / online recommendation]	P3d
13	Quality	P3d
14	Noise	P3d
15	Simple to fix	P3d
77	[Other] (RECORD) _____	P3d
97	[Don't know/Not sure/Can't remember]	P3d
98	[Refused]	P3d

[GOTO P3e IF ANSWER P3C HAS ONLY ONE ANSWER]

P3d. Which of those characteristics was the most important one?

1	[Price/Cost]	P3e
2	[Features/Controls]	P3e
3	[Size/ Capacity]	P3e
4	[Brand]	P3e
5	[Operating cost]	P3e
6	[Efficiency level]	P3e
7	[Energy Star]	P3e
8	[Rebates]	P3e
9	[Reliability/Warranty]	P3e
10	[Color]	P3e
11	[Salesperson / Contractor recommendation]	P3e
12	[Consumer magazine / online recommendation]	P3e
77	[Other] (RECORD) _____	P3e
97	[Don't know/Not sure/Can't remember]	P3e
98	[Refused]	P3e

P3e. From where did you purchase the clothes washer?

1	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	P3f
2	[Department Store (Target, K-Mart, Wal-Mart, Sears)]	P3f
3	[Big Box Retailer (Best Buy)]	P3f
4	[Warehouse store (Costco, Sam's Club)]	P3f
5	[Local appliance store]	P3f
6	[Mail-order catalog]	P3f
7	[Over the Internet]	P3f
8	[Home energy show]	P3f
9	[Phone book/yellow pages]	P3f
10	[Contractor]	P3f
11	Rental	P3f
12	Individual	P3f
13	Manufacturer	P3f
77	[Other (specify)]	P3f
97	[Don't know]	P3f
98	[Refused]	P3f

P3f. Were there any rebates available for clothes washers at the time of your purchase?

1	[Yes]	P3g
2	[No]	P4a
97	[Don't know]	P4a
98	[Refused]	P4a

P3g. Who offered the rebate?

[DO NOT READ. ACCEPT MULTIPLE RESPONSES]

1	[<ELEC_UTILITY> or <GAS_UTILITY>]	P2h
2	[Efficiency United]	P2h
3	[Energy Optimization]	P2h
4	[Another utility]	P2h
5	[Manufacturer]	P2h
6	[Retailer]	P2h
7	[Energy Star]	P2h
8	Federal Government	P2h
9	Local Government	P2h
77	[Other – (specify)]	P2h
97	[Don't know/ Not sure/ Can't remember]	P2h
98	[Refused]	P2i

P3h. Did you purchase a clothes washer that was eligible for the rebate?

1	[Yes]	P4a
2	[No]	P3i
97	[Don't know/ Not sure/ Can't remember]	P3i
98	[Refused]	P3i

P3i. Why didn't you purchase a clothes washer that was eligible for the rebate?

[DO NOT READ. DO ALLOW MULTIPLE RESPONSES]

1	[Too expensive]	P4a
2	[The rebate not big enough]	P4a
3	[Too much trouble/hassle to fill out rebate forms/ paperwork]	P4a
4	[The dealer/ contractor didn't recommend it]	P4a
5	[A consumer magazine didn't recommend it]	P4a
6	[It didn't have the controls/features I was looking for]	P4a
7	[It didn't have the style or color I was looking for]	P4a
8	[I prefer another brand/manufacturer]	P4a
9	[Wasn't in stock / Not quickly available]	P4a
10	[It didn't have the size/capacity I needed]	P4a
77	[Other](RECORD) _____	P4a
78	[Other] (RECORD) _____	P4a
79	[Other] (RECORD) _____	P4a
97	[Don't know/ Not sure/ Can't remember]	P4a
98	[Refused]	P4a

-----HEATING AND AIR CONDITIONING-----

P4a. Have you or anyone in your household purchased a new furnace, heat pump, boiler, or central air conditioner since January 2008?

[ALLOW MULTIPLE RESPONSES]

1	[Furnace]	P4aa
2	[Heat pump (ground or air sourced)]	P4aa
3	[Boiler]	P4aa
4	[Central Air Conditioner]	P4aa
5	[No purchases]	P4k
97	[Don't know]	P4k
98	[Refused]	P4k

[IF P4a HAS ONLY 1 ANSWER, <<HVAC>> = P4a AND GOTO P4b
ELSE <<HVAC>> = P4aa]

P4aa. Let's just discuss the one you purchased most recently. Which is that?

1	[Furnace]	P4b
2	[Heat pump (ground or air sourced)]	P4b
3	[Boiler]	P4b
4	[Central AC]	P4b
97	[Don't know]	P4b
98	[Refused]	P4b

P4b. When you were shopping for the <<HVAC>> where did you get information about what to buy? Anywhere else?

[ALLOW MULTIPLE RESPONSES]

1	[Contractors]	P4c
2	[Consumer Reports or other product-oriented magazines]	P4c
3	[Other magazines]	P4c
4	[Electric or gas utility]	P4c
5	[Retailers or salesperson]	P4c
6	[Friend, neighbor, relative, or co-worker]	P4c
7	[Internet]	P4c
8	[Newspaper]	P4c
9	[Radio]	P4c
10	[Television]	P4c
11	Previous shopping experiences	P4c
12	Manufacturer	P4c
77	[Other] (RECORD) _____	P4c
97	[Don't know/Not sure/Can't remember]	P4c
98	[Refused]	P4c

**P4c. When you were shopping for the <<HVAC>>, what characteristics were important to you?
Anything else?**

[DO NOT READ LIST. DO ACCEPT MULTIPLE RESPONSES]

1	[Salesperson / Contractor recommendation]	P4d
2	[Price/Cost]	P4d
3	[Size (tons/ Btus/capacity)]	P4d
4	[Brand]	P4d
5	[Operating cost]	P4d
6	[Efficiency level/ SEER/ EER]	P4d
7	[Energy Star]	P4d
8	[Rebates]	P4d
9	[Reliability / Warranty]	P4d
10	[Color]	P4d
11	[Consumer magazine / online recommendation]	P4d
12	Safety	P4d
13	Someone else purchased for me	P4d
77	[Other] (RECORD) _____	P4d
97	[Don't know/Not sure/Can't remember]	P4d
98	[Refused]	P4d

[GOTO P4e IF ANSWER P3c HAS ONLY ONE ANSWER]

P4d. Which of those characteristics was the most important one?

1	[Salesperson / Contractor recommendation]	P4d
2	[Price/Cost]	P4d
3	[Size (tons/ Btus/capacity)]	P4d
4	[Brand]	P4d
5	[Operating cost]	P4d
6	[Efficiency level/ SEER/ EER]	P4d
7	[Energy Star]	P4d
8	[Rebates]	P4d
9	[Reliability / Warranty]	P4d
10	[Color]	P4d
11	[Consumer magazine / online recommendation]	P4d
77	[Other] (RECORD) _____	P4d
97	[Don't know/Not sure/Can't remember]	P4d
98	[Refused]	P4d

P4e. From where did you purchase the <<HVAC>>?

1	[Contractor]	P4f
2	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	P4f
3	[Department Store (Target, K-Mart, Wal-Mart, Sears)]	P4f
4	[Big Box Retailer (Best Buy)]	P4f
5	[Local appliance store]	P4f
6	[Home energy show]	P4f
7	Someone else purchased	P4f
8	Individual	P4f
9	Internet	P4f
10	Free	P4f
11	Community Event	P4f
77	[Other (specify)]	P4f
97	[Don't know]	P4f
98	[Refused]	P4f

P4f. Were there any rebates available for <<HVAC>>s at the time of your purchase?

1	[Yes]	P4g
2	[No]	P4k
97	[Don't know]	P4k
98	[Refused]	P4k

P4g. Who offered the rebate?

1	[<ELEC_UTILITY> or <GAS_UTILITY>]	P4h
2	[Efficiency United]	P4h
3	[Energy Optimization]	P4h
4	[Another utility]	P4h
5	[Manufacturer]	P4h
6	[Contractor / Retailer]	P4h
7	[Energy Star]	P4h
8	Federal Government	P4h
77	[Other – (specify)]	P4h
97	[Don't know/ Not sure/ Can't remember]	P4h
98	[Refused]	P4k

P4h. Did you purchase a <<HVAC>> that was eligible for the rebate?

1	[Yes]	P4j
2	[No]	P4i
97	[Don't know/ Not sure/ Can't remember]	P4i
98	[Refused]	P4i



Appendices

P4j. Why didn't you purchase a <<HVAC>> that was eligible for a rebate?

[DO NOT READ. DO ALLOW MULTIPLE RESPONSES]

1	[Too expensive]	P4k
2	[The rebate not big enough]	P4k
3	[Too much trouble/hassle to fill out rebate forms/ paperwork]	P4k
4	[The dealer/ contractor didn't recommend it]	P4k
5	[A consumer magazine didn't recommend it]	P4k
6	[It didn't have the controls/features I was looking for]	P4k
7	[It didn't have the style or color I was looking for]	P4k
8	[I prefer another brand/manufacture]	P4k
9	[Wasn't in stock / Not quickly available]	P4k
10	[It didn't have the size/capacity I needed]	P4k
77	[Other](RECORD) _____	P4k
78	[Other] (RECORD) _____	P4k
79	[Other] (RECORD) _____	P4k
97	[Don't know/ Not sure/ Can't remember]	P4k
98	[Refused]	P4k

P4k. Do you have a programmable thermostat?

1	[Yes]	P4L
2	[No]	P5a
97	[Don't know]	P5a
98	[Refused]	P5a

P4L. What year was it installed?

1	[Before 2008]	P5a
2	[2008]	P5a
3	[2009]	P5a
4	[2010]	P5a
5	[2011]	P5a
97	[Don't know]	P5a
98	[Refused]	P5a

-----WATER HEATING-----

P5a. Have you or any in your household purchased a new water heater since January 2008?

1	[Yes]	P5b
2	[No]	EE1
97	[Don't know]	EE1
98	[Refused]	EE1



Appendices

P5b. When you were shopping for the water heater, where did you get information about what to buy? Anywhere else?

[DO NOT READ LIST. DO ALLOW MULTIPLE RESPONSES]

1	[Contractors]	P5c
2	[Consumer Reports or other product-oriented magazines]	P5c
3	[Other magazines]	P5c
4	[Electric or gas utility]	P5c
5	[Retailers or salesperson]	P5c
6	[Friend, neighbor, relative, or co-worker]	P5c
7	[Internet]	P5c
8	[Newspaper]	P5c
9	[Radio]	P5c
10	[Television]	P5c
11	Did not need more information	P5c
12	Good Deal	P5c
77	[Other] (RECORD) _____	P5c
97	[Don't know/Not sure/Can't remember]	P5c
98	[Refused]	P5c

P5c. When you were shopping for the water heater, what characteristics were important to you? Anything else?

[DO NOT READ LIST. DO ACCEPT MULTIPLE RESPONSES]

1	[Salesperson / Contractor recommendation]	P5d
2	[Price/Cost]	P5d
3	[Size (tons/ Btus/capacity)]	P5d
4	[Brand]	P5d
5	[Operating cost]	P5d
6	[Efficiency level]	P5d
7	[Energy Star]	P5d
8	[Rebates]	P5d
9	[Reliability / Warranty]	P5d
10	[Color]	P5d
11	[Consumer magazine / online recommendation]	P5d
12	Someone else purchased	P5d
13	Easy installation	P5d
14	Quality	P5d
15	Gas	P5d
77	[Other] (RECORD) _____	P5d
97	[Don't know/Not sure/Can't remember]	P5d
98	[Refused]	P5d

[IF ANSWER TO P5c HAS ONLY ONE ANSWER, GOTO P5e]

P5d. Which of those characteristics was the most important one?

1	[Salesperson / Contractor recommendation]	P5d
2	[Price/Cost]	P5d
3	[Size (tons/ Btus/capacity)]	P5d
4	[Brand]	P5d
5	[Operating cost]	P5d
6	[Efficiency level]	P5d
7	[Energy Star]	P5d
8	[Rebates]	P5d
9	[Reliability / Warranty]	P5d
10	[Color]	P5d
11	[Consumer magazine / online recommendation]	P5d
77	[Other] (RECORD) _____	P5d
97	[Don't know/Not sure/Can't remember]	P5d
98	[Refused]	P5d

P5e. From where did you purchase the water heater?

1	[Contractor]	P5f
2	[Home improvement/hardware store (Ace, Home Depot, Menards, True Value)]	P5f
3	[Department Store (Target, K-Mart, Wal-Mart, Sears)]	P5f
4	[Big Box Retailer (Best Buy)]	P5f
5	[Local appliance store]	P5f
6	[Home energy show]	P5f
7	Someone else purchased	P5f
8	Individual	P5f
9	Catalog/ Online	P5f
10	Manufacturer	P5f
11	Gas Company	P5f
77	[Other (specify)]	P5f
97	[Don't know]	P5f
98	[Refused]	P5f

P5f. Were there any rebates available for water heaters at the time of your purchase?

1	[Yes]	P5g
2	[No]	EE1
97	[Don't know]	EE1
98	[Refused]	EE1

P5g. Who offered the rebate?

1	[<ELEC_UTILITY> or <GAS_UTILITY>]	P5h
2	[Efficiency United]	P5h
3	[Energy Optimization]	P5h
4	[Another utility]	P5h
5	[Manufacturer]	P5h
6	[Contractor / Retailer]	P5h
7	[Energy Star]	P5h
8	Federal Government	P5h
77	[Other – (specify)]	P5h
97	[Don't know/ Not sure/ Can't remember]	P5h
98	[Refused]	EE1

P5h. Did you purchase a water heater that was eligible for the rebate?

1	[Yes]	R0
2	[No]	P5i
97	[Don't know/ Not sure/ Can't remember]	P5i
98	[Refused]	P5i

P5i. Why didn't you purchase a water heater that was eligible for the rebate?

[DO NOT READ. DO ALLOW MULTIPLE RESPONSES]

1	[Too expensive]	EE1
2	[The rebate not big enough]	EE1
3	[Too much trouble/hassle to fill out rebate forms/ paperwork]	EE1
4	[The dealer/ contractor didn't recommend it]	EE1
5	[A consumer magazine didn't recommend it]	EE1
6	[It didn't have the controls/features I was looking for]	EE1
7	[It didn't have the style or color I was looking for]	EE1
8	[I prefer another brand/manufacturer]	EE1
9	[Wasn't in stock / Not quickly available]	EE1
10	[It didn't have the size/capacity I needed]	EE1
77	[Other](RECORD) _____	EE1
78	[Other] (RECORD) _____	EE1
79	[Other] (RECORD) _____	EE1
97	[Don't know/ Not sure/ Can't remember]	EE1
98	[Refused]	EE1

EE Actions

EE1. In the past 12 months have you taken any actions to reduce drafts coming in through your home's doors, windows, attic, or chimney?

1	[Yes]	EE2
2	[No]	EE3
97	[Don't know]	EE3
98	[Refused]	EE3

EE2. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	EE3
1	Added window shades or curtains	EE3
2	Caulked windows or doors	EE3
3	Installed weather stripping on windows or doors	EE3
4	Installed sweeps under your doors	EE3
5	Installed a new threshold	EE3
6	Added weather stripping to attic access doors	EE3
7	Installed a crawl space vapor shield	EE3
8	Added plastic on windows	EE3
9	Installed new insulation	EE3
10	Installed new doors and windows	EE3
77	or something else (specify_____)	EE3
97	[Don't know/ Not sure/ Can't remember]	EE3
98	[Refused]	EE3

EE3. In the past 12 months, have you taken any actions to reduce heat loss in your air ducts, water pipes, or chimney?

1	[Yes]	EE4
2	[No]	EE5
97	[Don't know]	EE5
98	[Refused]	EE5

EE4. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	EE5
1	Insulated hot water pipes	EE5
2	Insulated air ducts	EE5
3	Sealed air ducts	EE5
4	Insulated attic access doors	EE5
5	Installed damper or internal seal on chimney	EE5
6	Cleaned pipes/ air ducts	EE5
7	Installed new products	EE5
77	or something else (specify _____)	EE5
97	[Don't know/ Not sure/ Can't remember]	EE5
98	[Refused]	EE5

EE5. In the past 12 months, have you done any maintenance on your furnace, boiler, or heat pump?

1	[Yes]	EE6
2	[No]	EE7
97	[Don't know]	EE7
98	[Refused]	EE7

EE6. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	EE7
1	replaced furnace or heat pump filter	EE7
2	had furnace or boiler tuned-up by a professional	EE7
3	Replace/ clean	EE7
4	Regularly monitor and maintain appliances	EE7
5	Insulate	EE7
77	Or something else (specify _____)	EE7
97	[Don't know/ Not sure/ Can't remember]	EE7
98	[Refused]	EE7

EE7. In the past 12 months, have you done anything to reduce how much energy your major home appliances use?

1	[Yes]	EE8
2	[No]	R1
97	[Don't know]	R1
98	[Refused]	R1

EE8. Which of the following have you done?

[READ UNBRACKETED CHOICES. ACCEPT MULTIPLE ANSWERS]

0	[None]	R1
1	lowered water heater temperature	R1
2	set back thermostat temperature	R1
3	increase refrigerator or freezer temperature	R1
4	used clothesline to dry clothes	R1
5	installed a water heater blanket	R1
6	added occupancy or daylight sensors to lights	R1
7	replaced or cleaned dryer vent	R1
97	[Don't know/ Not sure/ Can't remember]	R1
98	[Refused]	R1

APPLIANCE RECYCLING

R1. In the past 5 years, have you acquired a new or used refrigerator or stand-alone freezer?

1	[Yes]	R2
2	[No]	D0
97	[Don't know]	D0
98	[Refused]	D0

R2. Did you get a refrigerator, stand-alone freezer, or both?

1	[Refrigerator]	R3
2	[Freezer]	R3
3	[Both]	R3
97	[Don't know]	R3
98	[Refused]	R3

[IF R2 ≠ 1 OR 3, SKIP TO R14]

R3. Was the refrigerator used or brand new?

1	[Used]	R4
2	[New]	R4
97	[Don't know]	R4
98	[Refused]	R4

R4. Are you using it as your main refrigerator or as a spare?

1	[Main]	R5
2	[Spare]	R5
97	[Don't know]	R5
98	[Refused]	R5

[IF R3 ≠ 1, USED; SKIP TO R7]

R5. Where did you get this used refrigerator?

1	[Purchased from used appliance store]	R6
2	[Received as gift / hand-me-down]	
3	Purchased from an individual	
77	[Other (Specify _____)]	
97	[Don't know]	
98	[Refused]	

R6. At the time you got this used refrigerator, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R7
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
7	Paid anything, needed a new refrigerator	
77	Or something else [SPECIFY]	
97	[Don't know]	
98	[Refused]	

R7. Did this refrigerator replace an existing one?

1	[Yes]	R8
2	[No]	R9
97	[Don't know]	R9
98	[Refused]	R9

R8. What did you do with the refrigerator that you replaced?

1	[Threw away / Took to Landfill]	R9
2	[Took to recycling center]	R9
3	[Donated to charity]	R9
4	[Taken by installer of new one]	R9
5	[Sold to used appliance dealer]	R9
6	[Gave to friend/relative]	R9
7	[Kept it - plugged in]	R9
8	[Kept it - not plugged in]	R9
9	[Utility recycling program / was paid to have it recycled]	R9
10	Sold to an individual	R9
77	[Other (specify)]	R9
97	[Don't know]	R9
98	[Refused]	R9

[If R2 ≠ 2 or 3, SKIP TO D0]

R9. Was the freezer used or brand new?

1	[Used]	R10
2	[New]	R12
97	[Don't know]	R12
98	[Refused]	R12

R10. Where did you get this used freezer?

1	[Purchased from used appliance store]	R11
2	[Received as gift / hand-me-down]	
3	Purchased from an individual	
77	[Other (Specify _____)]	
97	[Don't know]	
98	[Refused]	

R11. At the time you got this used freezer, if this specific one had not been available, which of the following would you most likely have done... [READ – ONE ANSWER ALLOWED]

1	Bought a similar used refrigerator somewhere else	R12
2	Purchased a lower quality or less expensive used one	
3	Purchased a higher quality or more expensive used one	
4	Purchased a brand new refrigerator	
5	Repaired an old non-working one	
6	Not replaced my refrigerator at that time	
77	Or something else [SPECIFY]	
97	[Don't know]	
98	[Refused]	

R12. Did this freezer replace an existing one?

1	[Yes]	R13
2	[No]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

R13. What did you do with the freezer that you replaced?

1	[Threw away / Took to Landfill]	EA1
2	[Took to recycling center]	EA1
3	[Donated to charity]	EA1
4	[Taken by installer of new one]	EA1
5	[Sold to used appliance dealer]	EA1
6	[Gave to friend/relative]	EA1
7	[Kept it - plugged in]	EA1
8	[Kept it - not plugged in]	EA1
9	[Utility recycling program / was paid to have it recycled]	EA1
77	[Other (specify)]	EA1
97	[Don't know]	EA1
98	[Refused]	EA1

ENERGY ATTITUDES

EA1. Before today, had you heard of ENERGY STAR?

1	[Yes]	EA2
2	[No]	EA2
97	[Don't know]	EA2
98	[Refused]	EA2

EA2. How concerned are you with reducing your home's energy use? Would you say... [READ UNBRACKETED OPTIONS.]

1	Not at all concerned	EA4
2	Somewhat concerned	EA3
3	or Very concerned?	EA3
97	[Don't know]	D0
98	[Refused]	D0

EA3. Why are you concerned with reducing your home's energy use? [DO NOT READ. ACCEPT MULTIPLE ANSWERS]

1	[Cost of energy / Reduce energy bill]	D0
2	[Environment / Global warming]	D0
3	[Power availability / reliability]	D0
4	[Dependence on foreign oil]	D0
5	Set a good example for others	D0
5	[Other, Specify _____]	D0
97	[Don't know]	D0
98	[Refused]	D0

EA4. Why aren't you concerned with reducing your home's energy use?

	[RECORD VERBATIM]	D0
1	No need	D0
2	Already energy efficient	D0
3	Bill is not high	D0
4	Cannot upgrade	D0
5	Not important	D0
97	[Don't know]	D0
98	[Refused]	D0

DEMOGRAPHICS

D0. We're almost done. I just have a few more questions to better characterize your household. [GOTO BEE1]

BEE1. Which, if any, of the following appliances in your home are ENERGY STAR rated?

- a. Furnace or primary heating system
- b. Central air conditioner
- c. Refrigerator
- d. Dishwasher
- e. Clothes washer

1	[Yes]	D1
2	[No]	D1
3	[Don't have one / Not Applicable]	D1
97	[Don't know]	D1
98	[Refused]	D1

D43. Do you own or rent your home?

1	[Own]	D2
2	[Rent]	D2
97	[Don't know]	D2
98	[Refused]	D2

D44. What type of building is your home? Is it a ... [READ LIST]

1	Mobile home	D5
2	One-family home detached from any other house	D5
3	One-family home attached to one or more houses	D5
4	A building with 2 apartments	D5
5	A building with 3 or 4 apartments	D5
6	A building with 5 or more apartments	D5
77	[Other (specify)]	D5
97	[Don't know]	D5
98	[Refused]	D5

D5. Including yourself, and children how many people live in your home at least 6 months per year?

	[RECORD #]	D5a
97	[Don't know]	D5e
98	[Refused]	D5e

D5a. How many people are 65 or older?

	[RECORD #]	D5b
97	[Don't know]	D5b
98	[Refused]	D5b

D5b. How many people are 19 to 64?

	[RECORD #]	D5c
97	[Don't know]	D5c
98	[Refused]	D5c

D5c. How many people are 5 to 18?

	[RECORD #]	D5d
97	[Don't know]	D5d
98	[Refused]	D5d

D5d. How many people are less than 5?

	[RECORD #]	D5e
97	[Don't know]	D5e
98	[Refused]	D5e

[Check that sum of D5a to D5d = D5. If not, repeat D5 to D5d.]

D5e. What is *your* age?

	[RECORD #]	D6
97	[Don't know]	D6
98	[Refused]	D6



Appendices

D6. What is the highest level of education you have completed?

1	No schooling	D7
2	Less than high school	D7
3	Some high school	D7
4	High school graduate or equivalent (e.g., GED)	D7
5	Trade or technical school	D7
6	Some college	D7
7	College degree	D7
8	Some graduate school	D7
9	Graduate degree	D7
77	Other (Specify _____)	D7
97	[Don't know]	D7
98	[Refused]	D7

D7. Which of the following best represents your annual household income from all sources in 2010, before taxes? Was it . . . ?

1	Less than \$20,000 per year,	D8
2	\$20,000-49,999,	D8
3	\$50,000-74,999,	D8
4	\$75,000-99,999,	D8
5	\$100,000-149,999,	D8
6	\$150,000-199,999, or	D8
7	\$200,000 or more?	D8
97	[Don't know]	D8
98	[Refused]	D8

D8. For verification purposes, can I get your zip code?

	[RECORD 5 digits]	D9
97	[Don't know]	D9
98	[Refused]	D9

D9. RECORD GENDER [DO NOT ASK.]

1	Male	END_1
2	Female	END_1
97	[Don't know]	END_1

THANK & TERMINATE

END_7. Those are all of the questions I have for you today. Thank you for your time.

J. Commercial and Industrial Nonparticipant CATI Survey

EO-EU
Commercial and Industrial Program
Nonparticipant CATI Survey
Revised –03/22/2012

Survey house instructions

49. Text in bold should be read.
50. Text in brackets [] are instructions for interviewer, minor programming such as skips, or answer choices and should NOT be read.
51. Text in carrots < > are database variables that should be filled in on a case-by-case basis.
52. Text in double-carrots << >> are larger blocks of text that will change on a case-by-case basis depending on database variables.
53. Text in gray boxes is major programming instruction.
54. Unless specifically noted, do NOT read answer choices. [Don't know] and [Refused] should NEVER be read.

Programming Notes

10. Code multiple response questions as a series of variables that have a 0 or 1 value. One variable for each answer option. For example, R5_1 = 1 if the respondent answers "internet" to R5. R5_1 = 0 if the respondent does not answer "internet. Make separate 0/1 variables for the [Don't know] and [Refused] options as well.

Database Fields

<primaddr>	primary address number and street
<multiple_primaddr>	1 if person had multiple addresses
<elec_utility>	respondent's electrical utility
<gas_utility>	respondents gas utility
<utility_string>	electric and gas utilities that services respondent's zip code. May not be 100% accurate
<confirm_contact_1>	Name of contact to confirm the study
<confirm_contact_phone_1>	Phone # for confirm_contact_1
<confirm_contact_2>	Name of 2 nd contact to confirm study. If not blank, it means we are not sure who is the correct contact and you will have to provide both.
<confirm_contact_phone_2>	phone # for confirm_contact_2



Appendices

INTRODUCTION

Intro1.

Hello, my name is _____, and I'm calling on behalf of <utility_string> to discuss your organization's awareness of energy efficiency programs in your area. I'm not selling anything; I'd just like to ask your opinions. Your responses will be kept confidential and your individual responses will not be revealed to anyone.

1	[AGREES TO PARTICIPATE]	Intro2
2	[DOES NOT AGREE TO PARTICIPATE]	TERMINATE

[IF NECESSARY: It shouldn't take more than 15 minutes.]

[IF NECESSARY: Respondent can call:

<confirm_contact_1> at <confirm_contact_phone_1> or
<confirm_contact_2> at <confirm_contact_phone_2>
to confirm the study.]

Intro2. Are you the person most familiar with your organization's purchases of energy using equipment?

1	[Yes]	Intro6
2	[No]	Intro3
97	[Don't know]	Intro3
98	[Refused]	Intro3

Intro3. Who is the person most familiar with your organization's purchase of energy using equipment?

	[RECORD FIRST and LAST NAME]	Intro4
98	[Refused]	Intro4
97	[Don't know]	Intro4

Intro4. Could I speak with <Intro3> now?

1	[Yes]	Intro1
2	[No]	Intro5
97	[Don't know]	Intro5
98	[Refused]	Intro5

Intro5. When is a good time I could call back to reach <Intro3>?

	[RECORD DAY and TIME]	Call back later
97	[Don't know]	Call back later
98	[Refused]	Call back later

Intro6. Can I get your name?



Appendices

	[RECORD FIRST and LAST NAME]	Scr0
97	[Don't know]	Scr0
98	[Refused]	Scr0

Screening

Scr0. First, I have a couple of questions to confirm my records.

[IF <elec_utility> BLANK, GOTO Scr1b]

Scr1a. Our records show <elec_utility> supplies your electricity. Is that correct?

1	[Yes]	Scr2a
2	[No]	Scr1b
97	[Don't know]	Scr2a
98	[Refused]	Scr2a



Appendices

Scr1b. Who supplies your organization's electricity?
[DO NOT READ OPTIONS. ACCEPT ONLY ONE RESPONSE]

1	[Alger Delta Coop]	Scr2a
2	[Alpena Power]	Scr2a
3	[Bayfield Electric Cooperative]	Scr2a
4	[Cloverland Electric Coop]	Scr2a
5	[Daggett Electric Department]	Scr2a
6	[Edison Sault Electric Company]	Scr2a
7	[Great Lakes Energy coop]	Scr2a
8	[HomeWorks Tri-County electric Coop]	Scr2a
9	[Indiana Michigan Power Company]	Scr2a
10	[Midwest Energy Coop]	Scr2a
11	[Ontonagon County Rural Electrification]	Scr2a
12	[Presque Isle Electric and Gas]	Scr2a
13	[Thumb Electric]	Scr2a
14	[Upper Penninsula Power Company]	Scr2a
15	[WE Energies]	Scr2a
16	[Wisconsin Public Service or "WPS"]	Scr2a
17	[Xcel Energy]	Scr2a
18	[City of Escanaba]	Scr2a
19	[City of Stephenson]	Scr2a
20	[Marquette Board of Light & Power]	Scr2a
21	[Newberry Water & Light]	Scr2a
22	[Detroit Edison or "DTE"]	Scr2a
23	[Consumers Energy]	Scr2a
77	[Other (specify) _____]	Scr2a
97	[Don't know]	Scr2a
98	[Refused]	Scr2a

[IF <gas_utility> BLANK, GOTO Scr2b]

Scr2a. Our records show <gas_utility> supplies your gas. Is that correct?

1	[Yes]	F1
2	[No]	Scr2b
97	[Don't know]	F1
98	[Refused]	F1



Appendices

Scr2b. Who supplies your organization's gas?

0	[Organization does not have gas service]	F1
1	[Michigan Gas Utilities]	F1
2	[SEMCO Energy]	F1
3	[Wisconsin Public Service or "WPS"]	F1
4	[Xcel Energy]	F1
5	[Detroit Edison or "DTE"]	F1
6	[Consumers Energy]	F1
77	[Other (specify) _____]	F1
97	[Don't know]	F1
98	[Refused]	F1

F1. What is the principal activity of your organization at this location?

[DO NOT READ CHOICES. CHOOSE ONE. IF RESPONDENT TELLS YOU MULTIPLE, ASK THEM WHICH ONE BEST DESCRIBES THE MAIN ACTIVITY AT THE LOCATION.]

1	Office	A0
2	Retail (non-food)	A0
3	College/university	A0
4	School	A0
5	Grocery store	A0
6	Convenience store	A0
7	Restaurant	A0
8	Health care/hospital	A0
9	Hotel or motel	A0
10	Warehouse	A0
11	Community Service/Church/Temple/Municipality	A0
12	Industrial Process/Manufacturing/Assembly	A0
13	Agriculture/Farm	A0
14	Multifamily residential (apartment building)	A0
77	[Other (Record)] _____	A0
97	Don't know	A0
98	Refused	A0

[RESPONDENT QUALIFIES IF ONE OR MORE OF THE FOLLOWING ARE TRUE:

1. Scr1a = 1 (yes)
2. Scr1b = 1 to 21
3. Scr2a = 1 (yes)
4. Scr2b = 1 to 4

OTHERWISE, TERMINATE RESPONDENT AND MARK AS INELIGIBLE]

Program Awareness



Appendices

A0. Next, I'd like to ask a few questions about your awareness of the energy efficiency programs in your area. [GOTO A2a]

A1. Prior to this call, had you heard of the Efficiency United or Energy Optimization programs that offer rebates or financial assistance for energy efficient equipment?

1	[Yes]	A2
2	[No]	A3
97	[Don't know]	A3
98	[Refused]	A3

A2. Which, if any, of the Efficiency United or Energy Optimization programs has your organization participated in?

0	[None]	A3
1	[Prescriptive]	[TERMINATE – INELIGIBLE]
2	[Custom]	[TERMINATE – INELIGIBLE]
3	[Lighting rebates]	[TERMINATE – INELIGIBLE]
4	[Heating/Air conditioning rebates]	[TERMINATE – INELIGIBLE]
5	[Refrigerator/Freezer recycling]	[TERMINATE – INELIGIBLE]
77	[Other rebates]	[TERMINATE – INELIGIBLE]
97	[Don't know]	A3
98	[Refused]	A3

[IF A1 = 2, GOTO A4]

A3. Where did you hear about the Efficiency United or Energy Optimization programs?

[ALLOW MULTIPLE RESPONSES. DO NOT READ RESPONSES]

1	[Sources within organization]	A4
2	[Contractors, vendors, or suppliers]	A4
3	[Trade organizations and trade magazines]	A4
4	[Electric or gas utility, including account representatives]	A4
5	[Efficiency United/Energy Optimization programs]	A4
6	[Architecture or engineering firms]	A4
7	[Colleagues outside organization]	A4
8	[Trade shows]	A4
9	[Product Manufacturers]	A4
77	[Other, Specify _____]	A4
97	[Don't know]	A4
98	[Refuse]	A4



Appendices

A4. Prior to this call, were you were aware of your electric or gas utility offering any of the following?

[READ BOLD OPTIONS. ALLOW MULTIPLE RESPONSES]

0	[None]	R1
1	rebates for compact fluorescent bulbs	A5
2	rebates for other energy efficient lighting measures	A5
3	rebates for energy efficient heating or air conditioning equipment	A5
4	rebates for other energy efficient equipment	A5
97	[Don't know]	R1
98	[Refused]	R1

A5. Which, if any, of the utility sponsored rebate programs have you participated in?

[DO NOT READ. ALLOW MULTIPLE RESPONSES]

0	[None]	R1
1	[rebates for compact fluorescent bulbs]	R1
2	[rebates for other energy efficient lighting measures]	R1
3	[rebates for energy efficient heating or air conditioning equipment]	R1
4	[rebates for other energy efficient equipment]	R1
97	[Don't know]	R1
98	[Refused]	R1

Energy Purchasing Policies

R1. Next, I'd like to get a little information about you and your organization. [GOTO R2]

R2. What is your job title?

	[RECORD RESPONSE VERBATIM]____	R3
97	[Don't know]	R3
98	[Refused]	R3

R3. What are your general responsibilities?

	[RECORD RESPONSE VERBATIM]____	R4
97	[Don't know]	R4
98	[Refused]	R4

R4. Which of the following best describes your role in making decisions regarding the purchase of energy using equipment? [READ UNBRACKETED OPTIONS, SELECT ONE]

1	Sole responsibility for decisions	G1
2	Part of a group that makes decisions	G1
3	Provide recommendations to decision makers	G1
4	Not involved in making decisions	G1
77	[Other (Specify _____)]	G1
97	[Don't know]	G1
98	[Refused]	G1

G1. Does your organization have any formal requirements for the purchase of energy-using equipment?

1	[Yes]	G2
2	[No]	G3
97	[Don't know]	G3
98	[Refused]	G3

G2. What are these requirements?

	[RECORD RESPONSE VERBATIM]____	G3
97	[Don't know]	G3
98	[Refused]	G3

G3. Does your organization have any informal guidelines about the purchase of energy-using equipment?

1	[Yes]	G4
2	[No]	G5
97	[Don't know]	G5
98	[Refused]	G5

G4. What are these guidelines?

	[RECORD RESPONSE VERBATIM]____	G5
97	[Don't know]	G5
98	[Refused]	G5

G5. Does your organization have a person whose job responsibilities include managing the energy use of your location?

1	[Yes]	G6
2	[No]	G6
97	[Don't know]	G6
98	[Refused]	G6

G6. How often does your organization consider the entire life-cycle cost of equipment, including fuel costs, when purchasing equipment? Would you say it was ...

[READ UNBRACKETED OPTIONS, SELECT ONE]?

1	Never	G7
2	Rarely	G7
3	Sometimes	G7
4	Most of the time	G7
5	Always	G7
97	[Don't know]	G7
98	[Refuse]	G7

G7. What sources of information does your organization use when making equipment purchase or maintenance decisions?

[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES]

1	[Sources within your company]	G8
2	[Contractors, vendors, or suppliers]	G8
3	[Trade organizations and trade magazines]	G8
4	[Electric or gas utility, including account representatives]	G8
5	[Efficiency United/Energy Optimization programs]	G8
6	[Architecture or engineering firms]	G8
7	[Colleagues outside your company]	G8
8	[Trade shows]	G8
9	[Product Manufacturers]	G8
77	[Other (Record)] _____]	G8
97	[Don't know]	G8
98	[Refused]	G8

G8. What are the main barriers to purchasing energy efficient equipment? Anything else?

[DO NOT READ LIST. DO ACCEPT MULTIPLE RESPONSES]

1	[Initial cost]	G9a
2	[Lack of financing]	G9a
3	[Availability of EE equipment]	G9a
4	[Quality of EE equipment]	G9a
5	[Availability of qualified contractors]	G9a
6	[Identifying EE opportunities]	G9a
7	[Company rules about minimum project payback]	G9a
8	[Energy savings claims are hard to verify]	G9a
9	[Company leases building]	G9a
10	[None]	G9a
77	[Other] SPECIFY _____	G9a
97	[Don't know]	G9a
98	[Refused]	G9a

G9a. Has the recent economic downturn affected your organization's equipment purchase or maintenance decisions?

1	[Yes]	G9b
2	[No]	G10
97	[Don't know]	G10
98	[Refused]	G10

G9b. How so?

	[RECORD RESPONSE VERBATIM]____	G10
97	[Don't know]	G10
98	[Refused]	G10

G10. What factors besides the economy might have affected your organization's equipment purchase or maintenance decisions?

	[RECORD RESPONSE VERBATIM]____	P0
97	[Don't know]	P0
98	[Refused]	P0

PURCHASE EXPERIENCE

P0. Next, I'd like to ask some questions about your purchasing of energy using equipment.

[GOTO P2a]

[P1a INTENTIONALLY BLANK]

-----LIGHTING-----

P2a. Has your organization purchased new lighting since January 2008?

1	[Yes]	P2b
2	[No]	P3a
97	[Don't know]	P3a
98	[Refused]	P3a

P2b. When you were considering the lighting purchase where did you get information about what to buy? Anywhere else?

[DO NOT READ LIST. DO ALLOW MULTIPLE RESPONSES]

1	[Sources within organization]	P2c
2	[Contractors, vendors, or suppliers]	P2c
3	[Trade organizations and trade magazines]	P2c
4	[Electric or gas utility, including account representatives]	P2c
5	Efficiency United/Energy Optimization programs	P2c
6	[Architecture or engineering firms]	P2c
7	[Colleagues outside organization]	P2c
8	[Trade shows]	P2c
9	[Product Manufacturers]	P2c
77	[Other, Specify _____]	P2c
97	[Don't know]	P2c
98	[Refuse]	P2c

P2c. When you were considering the lighting purchase, what characteristics were important to you? Anything else?

[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES]

1	[Price/Cost]	P2d
2	[Light produced / Lumens per sq ft]	P2d
3	[Brand]	P2d
4	[Operating cost / Fuel cost / Lifetime cost]	P2d
5	[Efficiency level]	P2d
6	[Energy Star]	P2d
7	[Rebates]	P2d
8	[Warranty]	P2d
9	[Color]	P2d
10	[Salesperson / Contractor recommendation]	P2d
11	[Consumer magazine / online recommendation]	P2d
77	[Other] (RECORD) _____	P2d
97	[Don't know/Not sure/Can't remember]	P2d
98	[Refused]	P2d



Appendices

[GOTO P2f IF ANSWER TO P2C HAS ONLY ONE ANSWER]

P2d. Which of those characteristics was the most important one?

[REREAD RESPONSES TO P2C IF NECESSARY]

1	[Price/Cost]	P2d
2	[Light produced / Lumens per sq ft]	P2d
3	[Brand]	P2d
4	[Operating cost / Fuel cost / Lifetime cost]	P2d
5	[Efficiency level]	P2d
6	[Energy Star]	P2d
7	[Rebates]	P2d
8	[Warranty]	P2d
9	[Color]	P2d
10	[Salesperson / Contractor recommendation]	P2d
11	[Consumer magazine / online recommendation]	P2d
77	[Other] (RECORD) _____	P2d
97	[Don't know/Not sure/Can't remember]	P2d
98	[Refused]	P2d

[P2e INTENTIONALLY BLANK]

P2f. Were there any rebates available for lighting at the time of your purchase?

1	[Yes]	P2g
2	[No]	P2j
97	[Don't know]	P2j
98	[Refused]	P2j

P2g. Who offered the rebate?

1	[<ELECTRIC UTILITY> or <GAS UTILITY>]	P2h
2	[Efficiency United]	P2h
3	[Energy Optimization]	P2h
4	[Another utility]	P2h
5	[Manufacturer]	P2h
6	[Retailer/Contractor]	P2h
7	[Energy Star]	P2h
77	[Other – (specify)]	P2h
97	[Don't know/ Not sure/ Can't remember]	P2i
98	[Refused]	P2i

P2h. Did you purchase lighting that was eligible for the rebate?

1	[Yes]	P2j
2	[No]	P2i
97	[Don't know/ Not sure/ Can't remember]	P2i
98	[Refused]	P2i

P2i. Why didn't you purchase lighting that was eligible for the rebate?

[DO NOT READ. DO ALLOW MULTIPLE RESPONSES]

1	[Too expensive]	P2j
2	[The rebate not big enough]	P2j
3	[Too much trouble/hassle to fill out rebate forms/ paperwork]	P2j
4	[The dealer/ contractor didn't recommend it]	P2j
5	[A consumer magazine didn't recommend it]	P2j
6	[It didn't have the features I was looking for]	P2j
7	[It didn't have the style or color I was looking for]	P2j
10	[I prefer another brand/manufacture]	P2j
11	[Wasn't in stock / Not quickly available]	P2j
77	[Other](RECORD) _____	P2j
78	[Other] (RECORD) _____	P2j
79	[Other] (RECORD) _____	P2j
97	[Don't know/ Not sure/ Can't remember]	P2j
98	[Refused]	P2j

P2j. Did you purchase lighting that was standard efficiency on the market at the time, or lighting that was considered more energy efficient?

1	[Standard efficiency]	P2k
2	[Energy efficient]	P3a
97	[Don't know]	P3a
98	[Refused]	P3a

P2k. Why didn't you purchase lighting that was considered more energy efficient?

[DO NOT READ. DO ALLOW MULTIPLE RESPONSES]

1	[Initial costs]	P3a
2	[No rebates available]	P3a
3	[Maintenance costs]	P3a
4	[The dealer/ contractor didn't recommend it]	P3a
5	[A consumer magazine didn't recommend it]	P3a
6	[It didn't have the features I was looking for]	P3a
7	[It didn't have the style or color I was looking for]	P3a
8	[I prefer another brand/manufacture]	P3a
9	[Wasn't in stock / Not quickly available]	P3a
77	[Other](RECORD) _____	P3a
78	[Other] (RECORD) _____	P3a
79	[Other] (RECORD) _____	P3a
97	[Don't know/ Not sure/ Can't remember]	P3a
98	[Refused]	P3a



Appendices

-----HEATING AND AIR CONDITIONING-----

P3a. Has your organization purchased new air conditioning equipment or boilers, or performed any boiler tune-ups since January 2008?

[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES]

0	[None]	P5a
1	[AC]	P3b
2	[Boiler]	P3b
3	[Boiler tune-up]	P3b
77	[Other, Specify_____]	P3b
97	[Don't know/ Not sure/ Can't remember]	P5a
98	[Refused]	P5a

P3b. Where did you get information about what equipment to buy or maintenance to perform? Anywhere else?

[DO NOT READ LIST. ALLOW MULTIPLE RESPONSES]

1	[Sources within organization]	P3c
2	[Contractors, vendors, or suppliers]	P3c
3	[Trade organizations and trade magazines]	P3c
4	[Electric or gas utility, including account representatives]	P3c
5	[Efficiency United/Energy Optimization programs]	P3c
6	[Architecture or engineering firms]	P3c
7	[Colleagues outside organization]	P3c
8	[Trade shows]	P3c
9	[Product Manufacturers]	P3c
77	[Other, Specify_____]	P3c
97	[Don't know]	P3c
98	[Refuse]	P3c

[IF P3a ONLY INCLUDES 3 (BOILER TUNE-UP), GOTO P3I]



Appendices

P3c. When you were considering the purchase of the HVAC equipment, what characteristics were important to you? Anything else?

[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES]

1	[Price/Cost]	P3d
2	[Size (tons/ Btus/capacity)]	P3d
3	[Brand]	P3d
4	[Operating cost / Fuel cost / Lifetime cost]	P3d
5	[Efficiency level/ SEER/ EER]	P3d
6	[Energy Star]	P3d
7	[Rebates]	P3d
8	[Warranty]	P3d
9	[Color]	P3d
10	[Salesperson / Contractor recommendation]	P3d
11	[Consumer magazine / online recommendation]	P3d
77	[Other] (RECORD) _____	P3d
97	[Don't know/Not sure/Can't remember]	P3d
98	[Refused]	P3d

[GOTO P3f IF ANSWER P3c HAS ONLY ONE ANSWER]

P3d. Which of those characteristics was the most important one?

[REREAD RESPONSES TO P3C IF NECESSARY]

1	[Price/Cost]	P3f
2	[Size (tons/ Btus/capacity)]	P3f
3	[Brand]	P3f
4	[Operating cost / Fuel cost / Lifetime cost]	P3f
5	[Efficiency level/ SEER/ EER]	P3f
6	[Energy Star]	P3f
7	[Rebates]	P3f
8	[Warranty]	P3f
9	[Color]	P3f
10	[Salesperson / Contractor recommendation]	P3f
11	[Consumer magazine / online recommendation]	P3f
77	[Other] (RECORD) _____	P3f
97	[Don't know/Not sure/Can't remember]	P3f
98	[Refused]	P3f

[P3e INTENTIONALLY MISSING]

P3f. Were there any rebates available for the HVAC equipment at the time of your purchase?

1	[Yes]	P3g
2	[No]	P3j
97	[Don't know]	P3j
98	[Refused]	P3j

P3g. Who offered the rebate?

1	[<ELECTRIC UTILITY> or <GAS UTILITY>]	P3h
2	[Efficiency United]	P3h
3	[Energy Optimization]	P3h
4	[Another utility]	P3h
5	[Manufacturer]	P3h
6	[Retailer/Contractor]	P3h
7	[Energy Star]	P3h
77	[Other – (specify)]	P3h
97	[Don't know/ Not sure/ Can't remember]	P3h
98	[Refused]	P3h

P3h. Did you purchase HVAC equipment that was eligible for the rebate?

1	[Yes]	P3i
2	[No]	P3i
97	[Don't know/ Not sure/ Can't remember]	P3j
98	[Refused]	P3j

P3i. Why didn't you purchase HVAC equipment that was eligible for a rebate?

[DO NOT READ. DO ALLOW MULTIPLE RESPONSES]

1	[Too expensive]	P3j
2	[The rebate not big enough]	P3j
3	[Too much trouble/hassle to fill out rebate forms/ paperwork]	P3j
4	[The dealer/ contractor didn't recommend it]	P3j
5	[A consumer magazine didn't recommend it]	P3j
6	[It didn't have the features I was looking for]	P3j
7	[It didn't have the style or color I was looking for]	P3j
8	[It didn't meet my needs]	P3j
9	[I prefer another brand/manufacturer]	P3j
10	[Wasn't in stock / Not quickly available]	P3j
77	[Other](RECORD) _____	P3j
78	[Other] (RECORD) _____	P3j
79	[Other] (RECORD) _____	P3j
97	[Don't know/ Not sure/ Can't remember]	P3j
98	[Refused]	P3j

P3j. Did you purchase HVAC equipment that was standard efficiency on the market at the time, or something that was considered more energy efficient?

1	[Standard efficiency]	P3k
2	[Energy efficient]	P3l
97	[Don't know]	P3l
98	[Refused]	P3l



Appendices

P3k. Why didn't you purchase HVAC equipment that was considered more energy efficient?
[DO NOT READ. DO ALLOW MULTIPLE RESPONSES]

1	[Initial costs]	P3l
2	[No rebates available]	P3l
3	[Maintenance costs]	P3l
4	[The dealer/ contractor didn't recommend it]	P3l
5	[A consumer magazine didn't recommend it]	P3l
6	[It didn't have the features I was looking for]	P3l
7	[It didn't have the style or color I was looking for]	P3l
8	[It didn't meet my needs]	P3l
9	[I prefer another brand/manufacture]	P3l
10	[Wasn't in stock / Not quickly available]	P3l
77	[Other](RECORD) _____	P3l
78	[Other] (RECORD) _____	P3l
79	[Other] (RECORD) _____	P3l
97	[Don't know/ Not sure/ Can't remember]	P3l
98	[Refused]	P3l

[IF P3a DOES NOT INCLUDE 3 (BOILER TUNE-UP), GOTO P5a]

P3l. Were there any rebates available for the boiler tune-ups at the time they were performed?

1	[Yes]	P3m
2	[No]	P4
97	[Don't know]	P4
98	[Refused]	P4

P3m. Who offered the rebate?

1	[<ELECTRIC UTILITY> or <GAS UTILITY>]	P3n
2	[Efficiency United]	P3n
3	[Energy Optimization]	P3n
4	[Another utility]	P3n
5	[Manufacturer]	P3n
6	[Retailer/Contractor]	P3n
7	[Energy Star]	P3n
77	[Other – (specify)]	P3n
97	[Don't know/ Not sure/ Can't remember]	P3n
98	[Refused]	P3n

P3n. Did you choose to do tune-ups that were eligible for the rebate?

1	[Yes]	P4
2	[No]	P3o
97	[Don't know/ Not sure/ Can't remember]	P4
98	[Refused]	P4



Appendices

P30. Why not?

[DO NOT READ. DO ALLOW MULTIPLE RESPONSES]

1	[Too expensive]	P4
2	[The rebate not big enough]	P4
3	[Too much trouble/hassle to fill out rebate forms/ paperwork]	P4
4	[The dealer/ contractor didn't recommend it]	P4
5	[A consumer magazine didn't recommend it]	P4
6	[Rebate required more maintenance than necessary]	P4
77	[Other](RECORD) _____	P4
78	[Other] (RECORD) _____	P4
79	[Other] (RECORD) _____	P4
97	[Don't know/ Not sure/ Can't remember]	P4
98	[Refused]	P4

P4. Does your organization perform regular boiler maintenance?

1	[Yes]	P5a
2	[No]	P5a
97	[Don't know/ Not sure/ Can't remember]	P5a
98	[Refused]	P5a

-----MF HOUSING-----

[IF F1 ≠ 14 (MULTI-FAMILY HOUSING), GOTO F0]

P5. Has your organization installed any of the following in tenant areas since January 2008?

- a. Programmable thermostats
- b. Compact Fluorescent Light bulbs
- c. Low flow showerheads
- d. Faucet aerators
- e. Pipe insulation

1	[Yes]	IF RESPONDENT SAYS YES TO ANY OF THE MEASURES IN P5, ASK P6a-e, P7, AND P8a-e THAT CORRESPOND TO THOSE YES's. FILL THE MEASURE INTO <<MEASURE>> ASK ALL OF THE P6s, THEN ALL P7s, THEN ALL P8s AFTER GOING THROUGH P6-P8 FOR ALL YES's TO P5, GOTO P9 FOR ANY NO's TO P5 IF RESPONDENT SAYS DON'T KNOW OR REFUSED TO ALL P5's, GOTO P9
2	[No]	
97	[Don't know]	
98	[Refused]	

P6. In what percentage of your tenant areas have you installed <<MEASURE>>?

- a. Programmable thermostats
- b. Compact Fluorescent Light bulbs
- c. Low flow showerheads
- d. Faucet aerators
- e. Pipe insulation

	[RECORD %]	P7
97	[Don't know]	TRY TO GET BEST GUESS; P7
98	[Refused]	P7



Appendices

P7. Where did you get the idea to install <<MEASURE>> in your tenant areas?

- a. Programmable thermostats
- b. Compact Fluorescent Light bulbs
- c. Low flow showerheads
- d. Faucet aerators
- e. Pipe insulation

[DO NOT READ LIST. DO ACCEPT MULTIPLE RESPONSES]

1	[Sources within organization]	P8
2	[Contractors, vendors, or suppliers]	P8
3	[Trade organizations and trade magazines]	P8
4	[Electric or gas utility, including account representatives]	P8
5	[Architecture or engineering firms]	P8
6	[Colleagues outside organization]	P8
7	[Trade shows]	P8
8	[Product Manufacturers]	P8
77	[Other, Specify _____]	P8
97	[Don't know]	P8
98	[Refuse]	P8

P8. Why did you install the <<MEASURE>>s?

- a. Programmable thermostats
- b. Compact Fluorescent Light bulbs
- c. Low flow showerheads
- d. Faucet aerators
- e. Pipe insulation

	[RECORD VERBATIM]	F0
97	[Don't know]	F0
98	[Refused]	F0

P9. Why didn't you install the <<MEASURE>>s?

- a. Programmable thermostats
- b. Compact Fluorescent Light bulbs
- c. Low flow showerheads
- d. Faucet aerators
- e. Pipe insulation

	[RECORD VERBATIM]	F0
97	[Don't know]	F0
98	[Refused]	F0

Firmographics (F)

F0. I just have a few more questions about your organization's facility at your location. Just to remind you, all of your responses will remain confidential.

F2. At your location, does your organization [READ UNBRACKETED LIST]



Appendices

Own all of the space it occupies?1 [Goto F4]
Lease all of the space it occupies?2 [GOTO F3]
Or own some and lease some of the space it occupies? ...3 [GOTO F3]
[Don't know]..... 97 [GOTO F4]
[Refused] 98 [GOTO F4]

F3. Are any of your energy costs included in your normal lease payment?

[Yes].1 [GOTO F4]
[No]..... 2 [GOTO F4]
[Don't know] 97 [GOTO F4]
[Refused]. 98 [GOTO F4]

F4. What is the total enclosed square footage of the space your organization occupies at this location? Your best estimate is fine.

[RECORD # SQ FT] [GOTO F5]
[Don't know]..... 99999997 [Get Best Guess; GOTO F5]
[Refused] 99999998 [GOTO F5]

F5. How many full-time employees work for your organization at this location?

[Record number of employees]..... [GOTO F5b]
[Don't know].....99999997 [Get Best Guess] [GOTO F5b]
[Refused] 99999998 [GOTO F5b 1]

F5b. For verification purposes only, can I get the zip code where you are located?

[record verbatim] [GOTO F6]
[Don't know]..... 999997 [GOTO F6]
[Refused] 999998 [GOTO F6]

F6. Thank you for taking the time to talk with me today. Would it be okay if I called you back to clarify my notes, if necessary?

[Yes] 1 [GOTO F7]
[No]..... 2 [GOTO F7]
[Don't know]..... 97 [GOTO F7]
[Refused] 98 [GOTO F7]

F7. What is your name?

[RECORD RESPONSE]_____

THANK & TERMINATE



Appendices

END_8. Those are all of the questions I have for you today. Thank you for your time.