



ENERGY TRUST OF OREGON
PERSONAL ENERGY REPORT
OCTOBER 2011 SURVEY REPORT

Prepared for:

ENERGY TRUST OF OREGON

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TABLE OF CONTENTS

- 1. EXECUTIVE SUMMARY 1**
 - 1.1 Customer FeedbackError! Bookmark not defined.
 - 1.2 RecommendationsError! Bookmark not defined.
- 2. STUDY INTRODUCTION AND DATA COLLECTION 4**
- 3. PILOT OVERVIEW 5**
 - 3.1 Pilot Description 5
- 4. CUSTOMER OPT-OUTS 11**
- 5. RESULTS FROM PER CUSTOMER FEEDBACK SURVEY 13**
 - 5.1 Satisfaction with PGE, NW Natural and the Collaboration with ETO..... 13
 - 5.2 What Do Customers Do with the PER? 15
 - 5.3 What Are Customers’ Impressions of PER Content? 17
 - 5.4 What Effect Does the PER Have on Customers’ Awareness and Knowledge of Their Energy Use? 20
 - 5.5 What Effect Has the PER Had on Participants’ Actions? 21
- 6. RECOMMENDATIONS..... 27**
- APPENDIX A. DEMOGRAPHICS 28**
- APPENDIX B. OCTOBER CUSTOMER FEEDBACK SURVEY 28**

1. EXECUTIVE SUMMARY

Energy Trust of Oregon (Energy Trust), in collaboration with NW Natural (NWN) and Portland General Electric (PGE), initiated OPOWER's Personal Energy Report (PER) on a pilot basis to 60,000 single-family households in both NWN and PGE's territories. The goal of the PER is to provide Energy Trust, NWN, and PGE customers with information about their households' electric and natural gas consumption and to offer tips on how they can conserve energy. This pilot represents the first dual fuel, multi-utility collaboration for OPOWER. As of October 31, 2011, the collaboration sent five PERs to customers. This report represents the second of three survey efforts designed to assess the value of the PER to customers and to provide process findings for the pilot. Through this study, we track changes in the last four months to customers' opinions¹ of the report and actions taken since receiving the reports. We present survey data collected in October in comparison to the data collected in June.²

Overall, our October survey demonstrated that the PER continues to provide value to Oregon residents and has a favorable effect on customers' perception of the report's sponsors. Below we detail the key findings from this survey effort.

- **Customers find the PER collaboration valuable and the PER reports have a neutral or positive effect on customers' satisfaction with their utility.** Our survey found that almost 60% of participants find the collaboration between ETO, PGE, and NWN valuable, consistent with the findings of our June report. Further, we found that the report had a neutral or positive effect on participants' satisfaction with its utility sponsors, with 92% of PGE and 88% of NW Natural customers reporting neutral or positive changes in their satisfaction with the utilities.
- **Customers continue to actively read the PER and share the report with others.** After nine months of exposure to the PER, customers consistently read the report, with 45% reading the report cover-to-cover (consistent with our findings in the June report (45%). Further, over a third (36%) of our October survey respondents discussed it with someone, mostly a member of their household or family. These findings are very similar to the findings presented in our June report, where 43% discussed the report with others.
- **Customers have good impressions of the PER report and positive impressions may be increasing over time.** Two-thirds (65%) of participants have a good impression of the PER. Over time, the number of participants who report that the information it provides is useful or valuable has increased from 29% to 37% since our last study. In addition, we found that the number of participants who want more information has decreased from 13% to 4%, indicating that the PER program may be educating customers more effectively through repeated treatment/reports.

➤

¹ This effort does not track changes in the same group of participants over time. We surveyed two distinct groups of participants in the June and October surveys.

² Energy Trust of Oregon Personal Energy Report. 3-Month Study. Final August 2011, henceforth referred to as the "June Report."

- **While the PER report is viewed favorably overall, a small but persistent group of customers have a poor impression of the report.** Eleven percent of customers interviewed in October had poor impressions of the report (consistent with our June findings (9%)). Those who have an unfavorable view of the PER most often state that “the report is not accurate.” Over time the number of customers who feel that the report is inaccurate is increasing (from 8% of those with an unfavorable view from our June survey to 15% from our October survey). Thus, additional reports may not alleviate accuracy concerns for customers who doubt the validity of the data.
- **Most customers find the Neighborhood Rank module valuable.** In our June report, we inquired about customers’ impressions of various report modules included in the PER. In our October survey, customers were interviewed about a new module that was introduced to the program reports: the Neighborhood Rank Module³. In general, participants find this module to be useful, with a mean usefulness rating of 3.6. In particular, 55% of participants who found the Neighborhood Rank Module to be useful indicated that it is useful because it allows them to see where they rank, and 18%, because it taught them how to improve.
 - **When compared to previous usefulness scores of other modules, the Neighborhood Rank has a relatively high usefulness score.** Compared to the usefulness scores of other modules in the June report, the mean usefulness rating of the Neighborhood Rank Module is comparable to the Historical Comparison Module rating (3.7) but higher than the Neighborhood Comparison Module (3.3) and the Energy Savings Tips Module (3.1).
- **Customers continue to take action over time, with a strong focus on conservation-based actions, and plan to take measure-based actions in the future.** The number of participants who report that they have taken action to reduce their homes’ energy consumption since receiving the PER has increased from 29% (in the June report) to 44% (in the October survey). Customers’ most commonly reported actions in the October survey are turning off lights when not in the room (24%), unplugging appliances when not in use (22%), and turning down the thermostat (20%)
- **Customers are more likely to act if the PER provides new information.** Participants who learned something new from the PER report taking more actions since receiving it (45% compared to 21% of those who do not learn something new). In addition, customers who have received new information also report that they have more actions planned for the future (67% compared to 47% of those who do not learn something new). These findings are similar to those of our June report.
- **Very few customers seek out additional information as a result of the PER, however, the PER website is the most commonly cited source for additional information.** A very small percentage of customers (8%) visit the PER website. However, the PER website is the most commonly cited source by those participants who choose to seek out additional information about ways to save energy in their homes.

³ We also asked customers about one module which was not sent to any customers and the Energy Savings Goal Module which was not sent to many customers, and therefore we could not analyze those results.

- Notably, our survey does not show an increase in customer's use of the PER website over time, as this is the same percentage that reported visiting the website in the June survey (8%).

1.1 **RECOMMENDATIONS**

Based on our findings from the October survey efforts, we offer the following recommendations to Energy Trust:

- **Continue to develop methods to ensure that the PER is providing customers with information that is new to them.** Results show that an important factor in influencing customers to take action is whether the report provided them with ways to save energy that they were not aware of before reading the report. Ensuring that participants are learning new information may be key to maximizing energy savings.
- **Clarify the criteria for selecting "Neighbors" in the Neighborhood Comparison Section.** A general misunderstanding of the neighborhood comparison continues to be an issue and most likely leads to skepticism of the data.
- **To the extent possible, better highlight how customers can resolve their accuracy concerns.** Because the primary criticism of the PER stem from perceptions of its accuracy, the collaboration may want to consider methods to better direct customers to the PER website to update their information (and potentially improve their comparison). This may help to resolve concerns among those that have poor impressions of the report.



MEMO

Date: April 20, 2012
To: Board of Directors
From: Philipp Degens, Evaluation Manager
Kate Scott, Home Project Manager
Subject: Staff Response to Personal Energy Report October Survey Report

The Personal Energy Report (PER) appears to be a valued service as the six month survey indicates that customers receiving the PER have a favorable impression (2/3s) are reading it at about the same rate as they did 3 months before (45% cover to cover) and an increasing number are finding the information useful/valuable since the last survey (37% vs. 29%).

Energy Trust is concerned about, and trying to determine how best to address, the concerns of those surveyed customers that are not satisfied with the accuracy of the PER (15%) and report that they do not value the information (8%). Better communications on how to improve the accuracy of the report, as well as offering easier ways to discontinue the service are being considered.

Survey respondents reported energy saving actions had also increased since the last survey (44% vs. 29%), while the number planning future actions remained the same. As expected, conservation actions dominated the actions taken while equipment/measure installations dominated the projects planned for the future.

Energy Trust is also encouraged by the finding that the majority of customers valued the collaboration between Energy Trust, Northwest Natural and Portland General Electric and that the collaboration had a positive or neutral effect on their impression of their gas or electric utility.

A billing analysis performed by OPower, the PER contractor, indicates that energy savings are lower than expected for both fuels (1.7% vs. 2% electric and 0.7% vs. 1% gas). However, gas and electric savings are increasing over time and are expected to continue as the PER service has been extended for an additional year.

2. STUDY INTRODUCTION AND DATA COLLECTION

This report details the findings from the second of three planned surveys conducted as part of the PER process evaluation, consisting of a telephone survey of 200 PER customers. Through this evaluation, our team will conduct three telephone surveys to examine customer trends over time with respect to the PER content and to identify actions taken as a result of the report. Each survey is a random sample of participants and represents the population at a 90±6 precision level⁴.

Our first study⁵ included an analysis of the coordination and implementation of the pilot as well as customer feedback. The primary objective of this second survey was to collect additional feedback on how customers are interacting with the PER, their reactions to the content of the PER after having received reports over a period of approximately 10 months, and actions they may have taken or plan to take as a result of receiving the report. We provide respondent characteristics in Appendix A and a copy of the survey instrument in Appendix B.

Table 1. Dates of Personal Energy Reports and Our Surveys

Date of PER	Date of Survey	Survey n	Process Report	Goal
January 2011	-	-		
May 2011	June 2011	200	Report #1 (August 2011)	Process feedback on PER content
July 2011	-	-	-	
August 2011	-	-	-	
September 2011	October 2011	200	Report #2 (This Report)	Process feedback on PER content
November 2011	-	-	-	
January 2012	March 2012	200	Report #3 (March Report)	Actions taken as a result of the report

Energy Trust will conduct an impact evaluation and cross-program analysis to verify the savings associated with the PER.

⁴ This means we are 90 percent certain that the population values are within 6% of the survey sample values.

⁵ Energy Trust of Oregon Personal Energy Report. 3-Month Study. Final August 2011, henceforth referred to as the "June Report."

3. PILOT OVERVIEW

3.1 PILOT DESCRIPTION

Energy Trust initiated the OPOWER Pilot to provide customers with information about their household's energy consumption and offer tips on how they can conserve energy in order to achieve energy savings.

The OPOWER Pilot randomly assigned 60,000 qualifying customers to a customer (treatment) group and an equally sized control group. The treatment group receives a PER, while the control group is retained for evaluation purposes as part of an experimental design for an impact evaluation.⁶

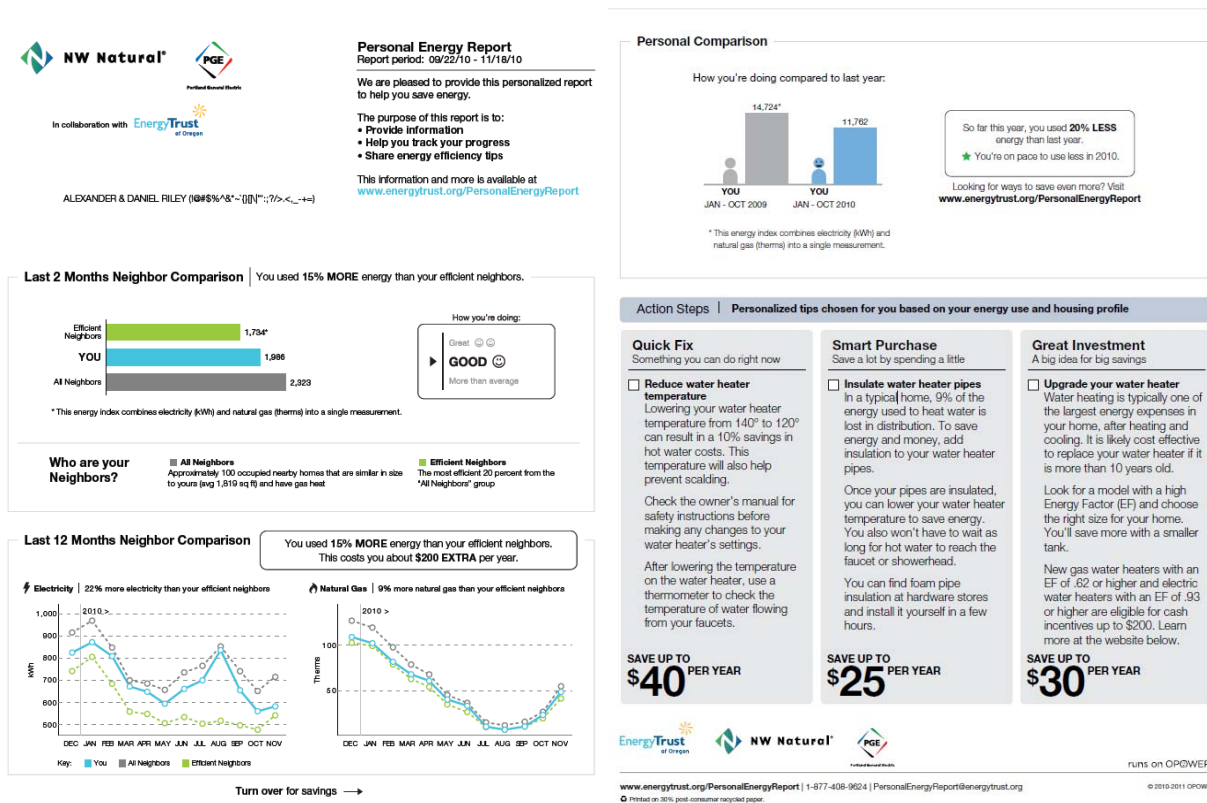
Customers receive a PER bi-monthly through the U.S. Mail. The PER consists of a one-page, double-sided report which details customers' energy consumption (electricity and natural gas). To help customers conserve energy, the back of the report contains customized tips. Additionally, OPOWER maintains a website where customers can access an online version of their PER. The PER cover has the website address. See Figure 1 for a sample PER.

Due to some delays in implementation, the reports were not delivered as originally scheduled. In addition, OPOWER provided an additional 7th report during the first year to help get the project back on schedule.

Although Energy Trust originally designed the pilot to last for one year, Energy Trust board recently approved a contract extension to continue delivery of the reports for an additional year. The January 2012 report was the final report of the first contract year. See **Error! Reference source not found.**, for a schedule of when reports were delivered in the first contract year. Energy Trust expects reports to go out on a regular bi-monthly schedule during contract year two.

⁶ Notably, our process evaluation will interview control group members for our final survey effort in order to examine behavioral changes resulting from PER exposure.

Figure 1. Sample PER



The modules that appear in each report vary by report date and by customer. To date, the reports include seven modules, although each customer may not have received all seven modules. The seven modules are as follows:

- Personal Comparison
- Last Month Neighbor Comparison
- Last 12 Months Neighbor Comparison
- Energy Saving Goal Module (delivered to customers that set goals online)
- Neighbor Rank
- Action Steps
- Holiday Themed Tip Box⁷

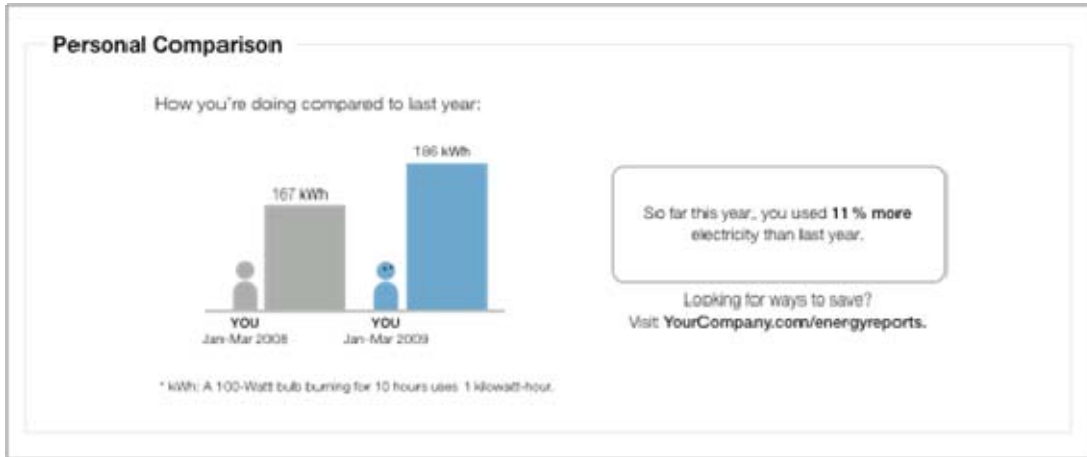
In addition to these seven modules, the September report included two additional panels at the bottom promoting the website and the option to set a personal savings goal.

Next, we indicate what information each module provides and a sample of the module.

⁷ The Holiday Themed Tip Box Module was only included in the November Report.

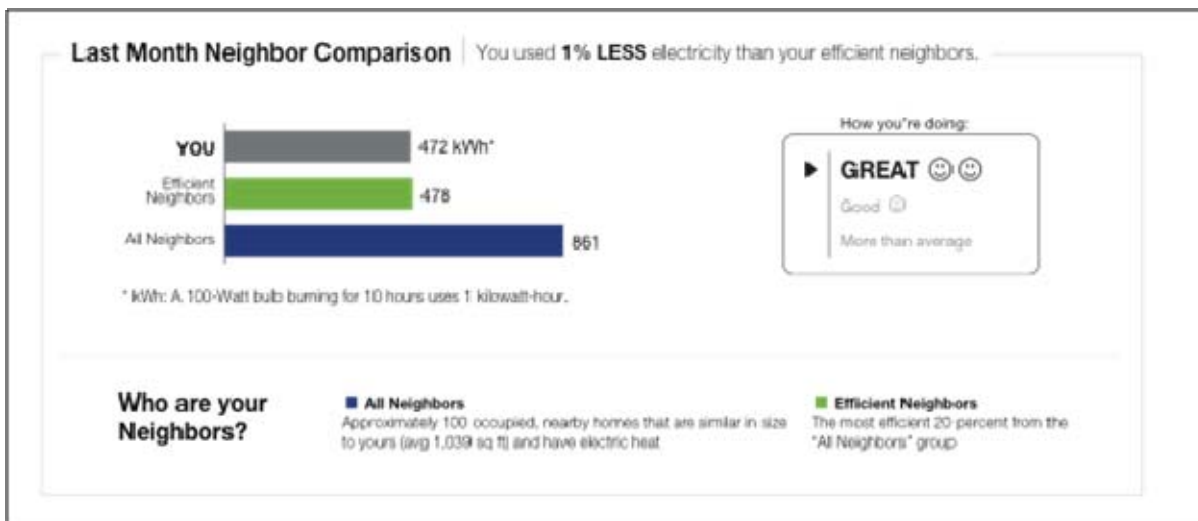
Personal Comparison: A module that compares a customer's current use with their use in the previous year.

Figure 2. Personal Comparison Module



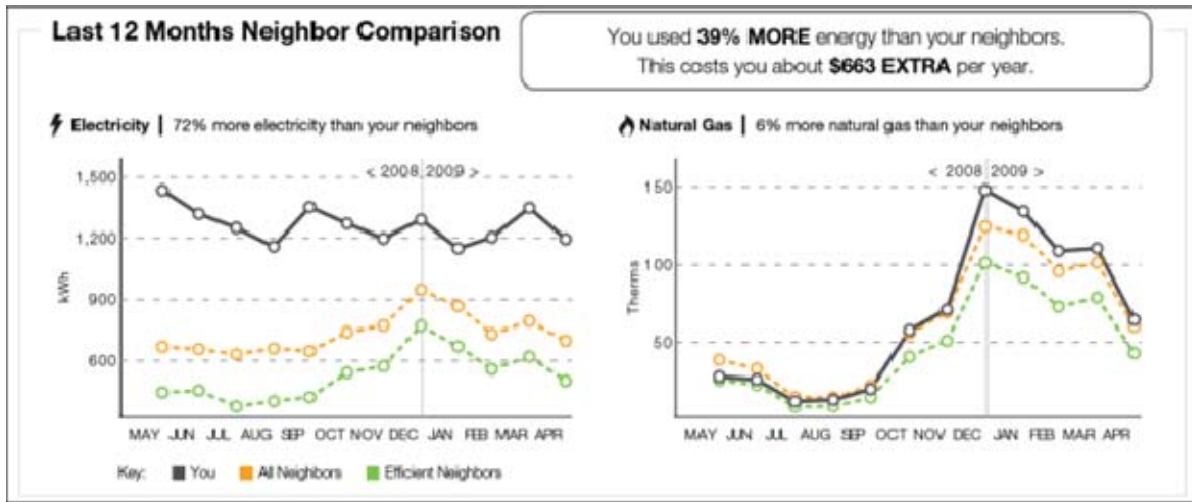
Last Month Neighbor Comparison: A module that compares a customer's energy consumption to neighbors and a group of the most efficient neighbors over the past month.

Figure 3. Last Month Neighbor Comparison Module



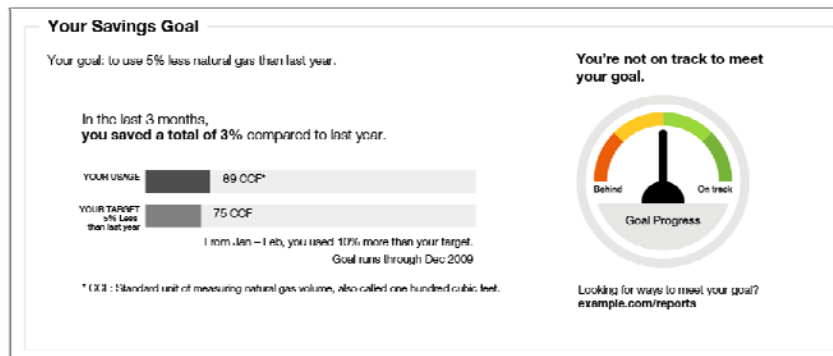
Last 12 Months Neighbor Comparison: A module that provides a dual-fuel comparison of a customer's energy consumption to neighbors and a group of the most efficient neighbors over the past year.

Figure 4. Last 12 Months Neighbor Comparison Module



Energy Saving Goal: A module that tracks a household’s progress toward an energy savings goal. The participants are able to create a goal by signing up on the website or calling the PER line. Customers only received this module if they opted to enroll in setting a goal.

Figure 5. Energy Saving Goal Module



Neighbor Rank: A module that shows how the household ranks against 100 similar homes in the neighborhood.

Figure 6. Neighbor Rank Module



Action Steps: A module that contains energy savings tips.

Figure 7. Action Steps Module



Holiday Themed Tip Box: A module that contains energy savings tips geared toward the holiday season.

Figure 8. Holiday Themed Tip Box Module

Prepare for happy holidays and avoid higher energy bills.

The holiday season often means house guests, decorative lighting, lots of cooking and a boost in energy use. As the holiday season revs up, keep energy costs down.



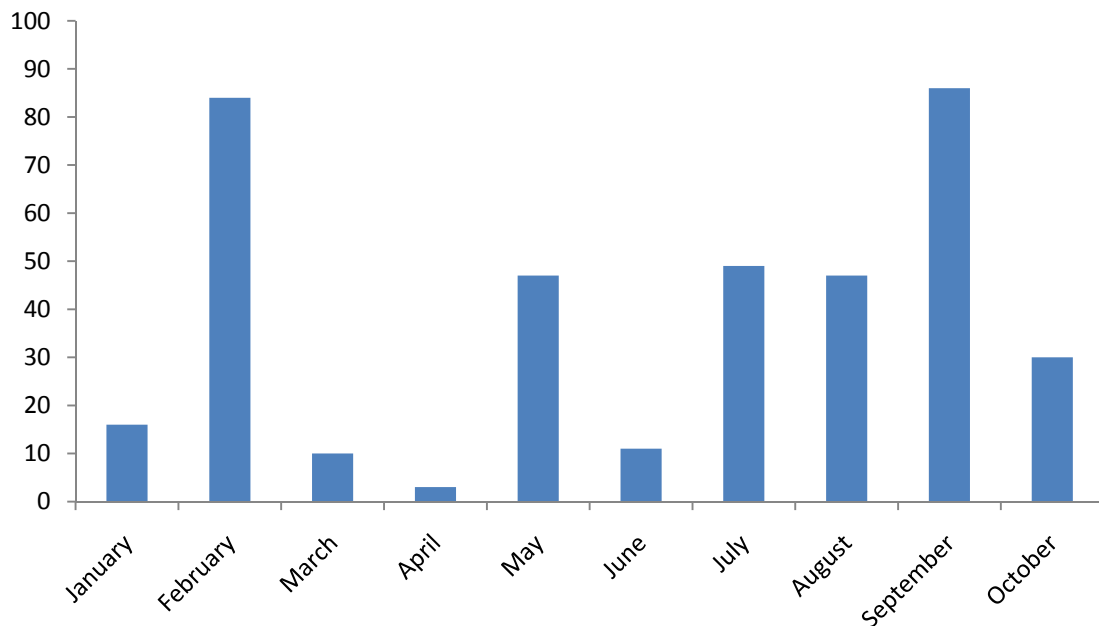
Top Tips For Saving	Save up to
<input type="checkbox"/> Make a New Year's resolution Start the New Year by setting a energy savings goal online. Create a personal goal, find saving tips and track your progress at the website below.	\$90/yr
<input type="checkbox"/> Unplug gadgets and electronics For electronics, unplug battery chargers when the batteries are fully charged or the chargers are not in use.	\$55/yr
<input type="checkbox"/> Make your oven do double-duty Cook several holiday favorites at the same time.	\$25/yr
<input type="checkbox"/> Close the fireplace damper when not in use To reduce heat loss from your chimney, close the damper.	\$20/yr
<input type="checkbox"/> Wash only full loads of dishes Clean full loads and select the energy saving cycle.	\$10/yr
<input type="checkbox"/> Adjust your refrigerator temperature When fully stocked with holiday fare, your fridge is more efficient and can be set a little higher, between 35°-38°F.	\$10/yr
<input type="checkbox"/> Use energy-efficient LED holiday lights They use 10% of the energy of regular mini lights.	\$5/yr

4. CUSTOMER OPT-OUTS

Overall, the program has a very low opt-out rate which is not increasing over time. To accommodate customers concerns regarding the report, Energy Trust maintains a hotline to receive customer comments, complaints, or opt-out requests specifically around this pilot.

The pilot is experiencing a small number of calls overall. The call center experienced a slightly higher volume of calls between July and September. There are two possible explanations for this. One is that customers received a report every month during this period, which they may have found to be too frequent. The other is that the Neighbor Rank Module, appeared for the first time in this report and was cited as a source of customer complaints.

Figure 9. Cumulative Customer Opt-Outs Over Time



Just under a third (29%) of the calls to the hotline are from participants who would like to opt out, although this is a very low proportion of the treatment customers. The total cumulative opt-outs rate is 0.6% of the treatment population. An additional 11% of participants called the hotline with a complaint. Other reasons that customers are calling the hotline include discussing their energy use (29%), providing general feedback (17%), updating profile or personal information (11%) and reporting technical difficulties (3%).

Table 2. Communication to the PER Hotline/Email

Reason for Call/Email (not mutually exclusive)		Jan. 24 - Oct. 31, 2011	
		Number of Calls/Emails	Percentage of Total
Primary Reason	Opt-outs	346	29% (0.6% of treatment population)
	Complaint	124	11%
	Conversations about energy use	338	29%
	General feedback	201	17%
	Update profile/info	127	11%
	Technical difficulties	38	3%
Total calls		1174	

5. RESULTS FROM PER CUSTOMER FEEDBACK SURVEY

The Opinion Dynamics evaluation team designed the October survey to gain feedback on customers' reactions to the first five PERs sent by the collaboration. The goal of this survey was to determine if the findings of the June survey continue to be true for pilot participants. Specifically, the October survey followed up on the following research questions:

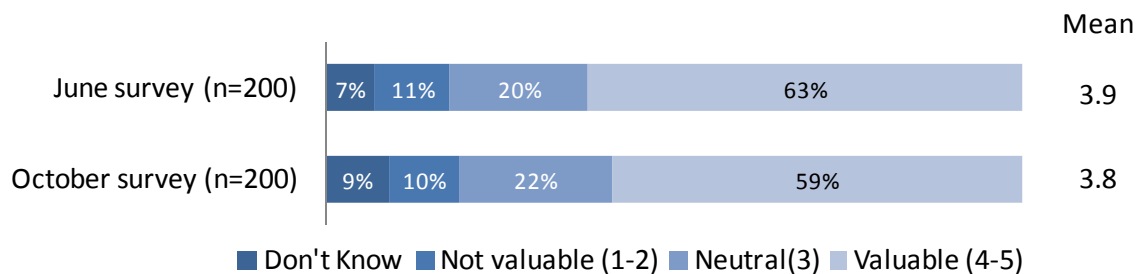
1. How do customers view the collaboration between Energy Trust, PGE, and NWN?
 - a. How does the collaboration affect their satisfaction with PGE and NWN? (new question in October survey)
2. What are customers' impressions of PER content?
3. What do customers do with the PER?
4. What effect does the PER have on customers' awareness and knowledge of their energy use?
5. What effect has the PER had on customers' actions?
 - a. Why are more customers not visiting the website? (new question in October survey)

Most of the questions in the October survey are the same as in the June survey to allow us to track any changes over time in terms of participant satisfaction with the pilot and the effect of the report on participant awareness, knowledge, and actions.

5.1 *SATISFACTION WITH PGE, NW NATURAL AND THE COLLABORATION WITH ETO*

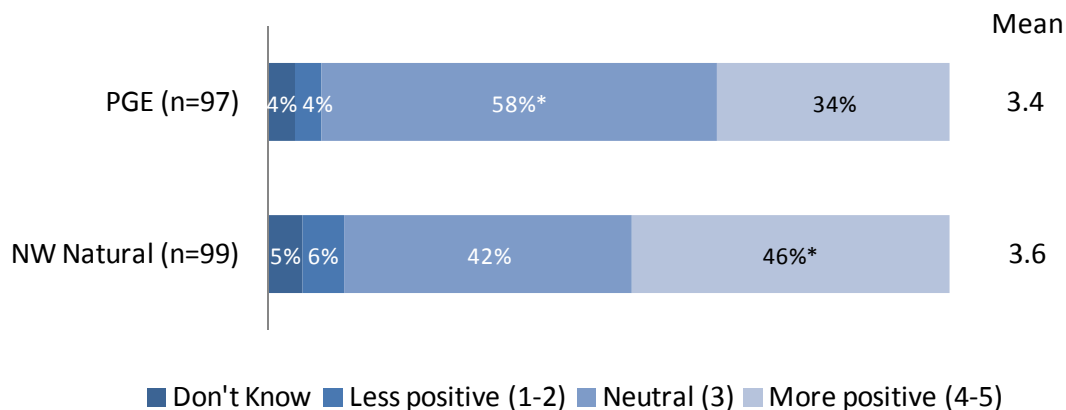
Both the June and October surveys included questions on how participants view the value of the collaboration between Energy Trust, PGE, and NWN on the PER and to determine whether the PER has an effect on customer satisfaction with the sponsoring utilities (PGE and NWN). Our survey efforts found that most customers find value in the collaboration. Currently, 59% of participants find the collaboration to be valuable (a score of 4 or 5 on a 5 point scale), consistent with our findings from the June report.

Figure 10. Perceived Value of the Collaboration between Energy Trust, PGE, and NWN



Our October interviews with customers also sought to gauge the effect of the PER on participant opinion of PGE and NWN. To reduce respondent burden, we asked half the respondents how this collaboration affects their opinion of PGE and the other half how it affects their opinion of NWN. Most participants indicated that the report had a neutral or positive effect on their perceptions of the utilities (PGE (92%) and NWN (88%)) than they did before learning about the collaboration. NW Natural customers indicated a slightly higher “more positive” response (46% compared to 34% for PGE).

Figure 11. Effect of the Collaboration on Participants’ Opinion of PGE and NWN

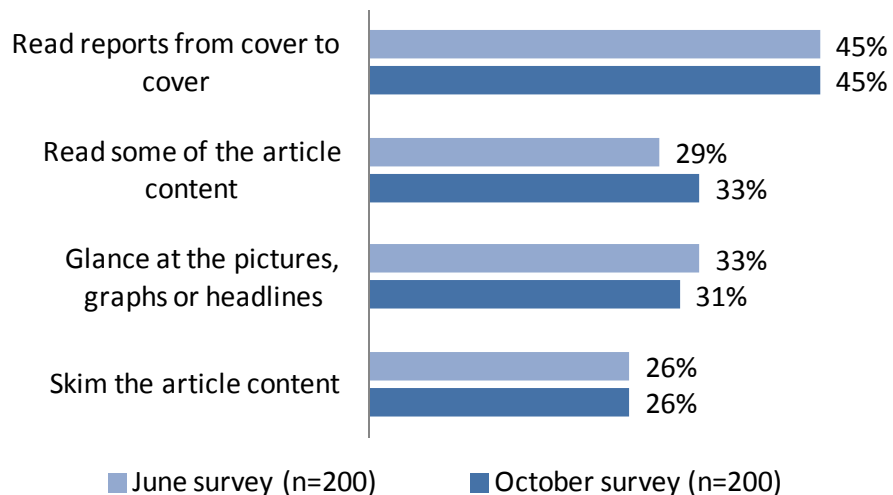


*Denotes statistical significance at the 90% level.

5.2 WHAT DO CUSTOMERS DO WITH THE PER?

Customers engagement with the PER appears to remain constant over time. Almost half (45%) of the participants reported reading the report from cover to cover, an action that connotes the highest degree of interaction with the PER. On the other end of interaction, 26% of participants reported that they just skimmed the article content. When compared to our June report, these percentages remain constant over time, indicating that the type and extent of customer interaction has not changed.

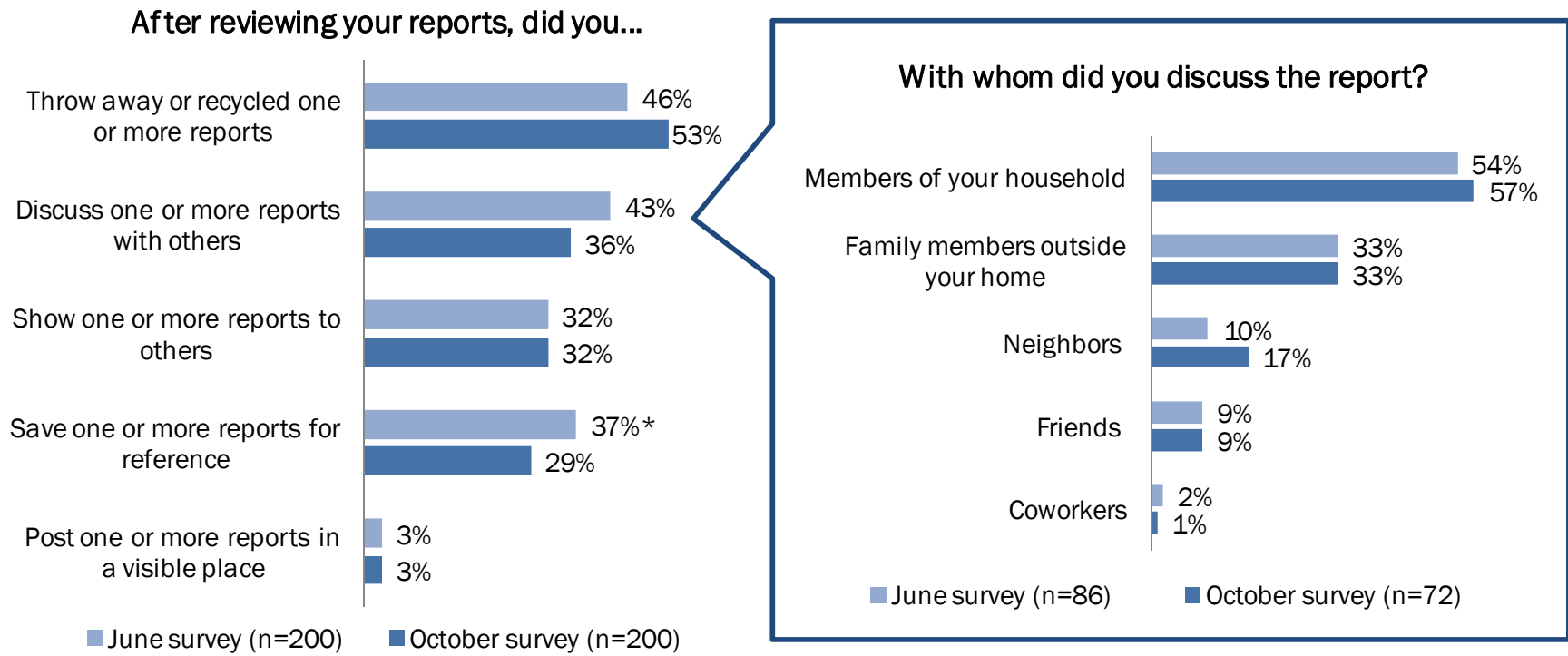
Figure 12. Depth of Report Review (n=200, multiple response)⁸



In the October survey, participants reported that they discuss the report with others (36%) more often than they show the report to others (32%), save it for reference (29%), or post it in a visible place (3%). Of those participants who discussed the report with others, 57% discussed it with a member of the household, 33% discussed it with a family member outside the home, and 17% discussed it with their neighbors. Overall, the number of participants who use the report in some way, either by discussing it, showing it to others, saving it, or posting it in a visible place after their initial read, has not changed significantly over time. However, the number of participants saving a report for reference seems to be decreasing.

⁸ Note this question was included in our survey by request to be compared with other OPOWER survey efforts. The question was design and drafted by OPOWER.

Figure 13. Customer Uses of the PER after Review (n=200)

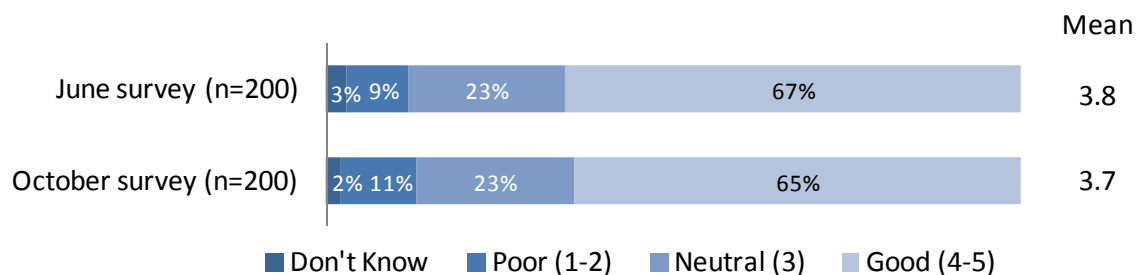


*Denotes statistical significance at 90% level.

5.3 WHAT ARE CUSTOMERS' IMPRESSIONS OF PER CONTENT?

Participants have a favorable overall impression of the PER report, find that the level of detail is sufficient, and consider the Neighbor Rank Module to be useful. Nearly two-thirds of participants (65%) give the report a favorable rating. This number does not seem to be changing over time. Further, only 11% of customers have a poor impression of the report.

Figure 14. Overall Impression of Report (n=200)



In addition to their overall impression, we asked the participants for more specific feedback on the report. The most common positive comment on the report is that the information it provides is useful or valuable (37%). Over time, the number of participants who report this has increased from 29% in the June survey. The next most commonly cited positive comments indicate that customers perceive that the information is interesting (18%) and that the report raises awareness (17%).

In addition, our research indicates that customers are satisfied with the information in the report, and that pilot may be meeting their informational through continued reporting. More than half of participants (59%) are satisfied with the overall level of detail in the report, although this number has decreased from 67% in the June survey. Nearly a third (30%) would like more detail. The number of participants who specifically want more information has decreased from 13% in the June survey to 4% in the October survey, which suggests that the additional modules added in the latest PER may be meeting their informational needs.

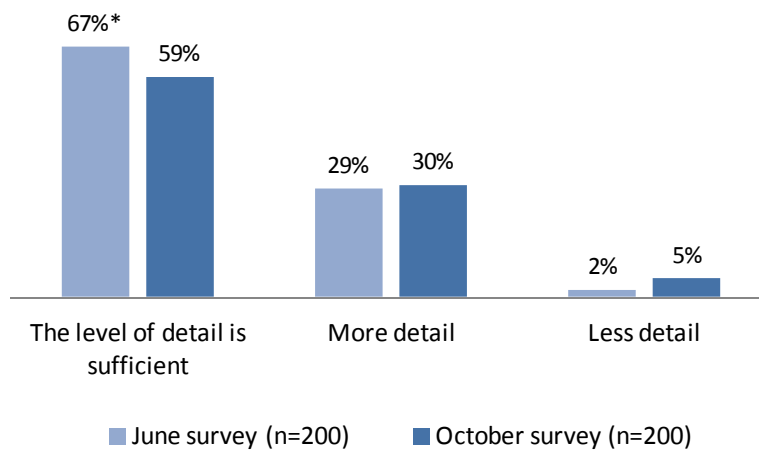
Table 3. Overall Participant Comments on Report

Top Three Positive Participant Comments	June Survey (n=196)	October Survey (n=197)
Information is useful/valuable.	29%	37%*
Information is interesting.	18%	18%
Report raises awareness.	17%	17%
Top Three Negative Participant Comments	June Survey (n=196)	October Survey (n=197)
Report is not accurate.	8%	15%*
Information is not useful.	10%	8%
Want more information.	13%**	4%

* Denotes statistical significance at the 90% level.

**Denotes statistical significance at the 95% level.

Figure 15. Satisfaction with Level of Detail in Report

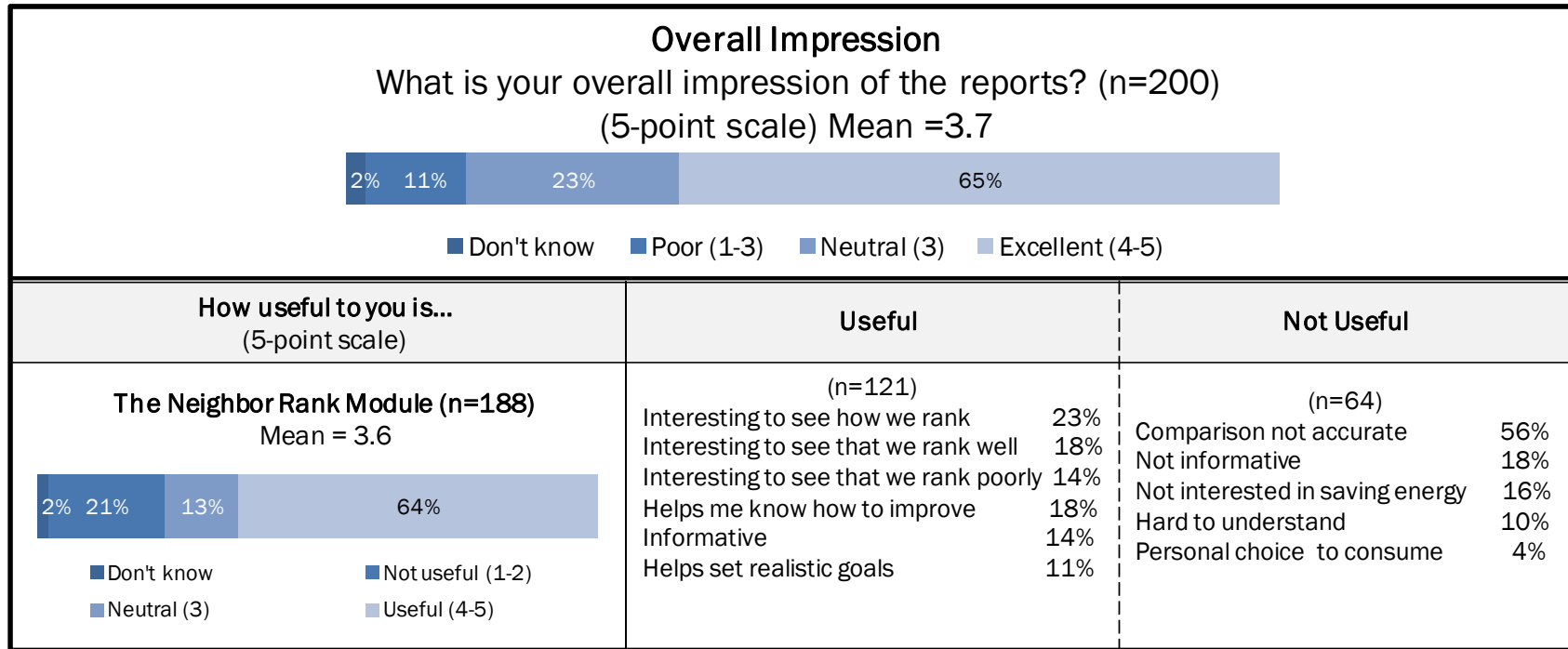


* Denotes statistical significance at the 90% level.

We asked participants to give the Neighbor Rank Module a usefulness score from 1 to 5, where 1 is not useful and 5 is very useful. Participants gave this module a mean usefulness score of 3.6. More than half of the participants who found this module useful thought it was interesting to see how they rank (55%), i.e., whether they ranked high or low among their neighbors. One participant said, “The report showed me that I can improve and that my neighbors have found ways to do so.”

Over one-half (56%) of the participants who did not find the module useful felt that the comparison was inaccurate. Specifically, some participants are concerned about the number of people in their household (“you can’t compare our house to [others] when I have more people [in my house]”) and unique characteristics of their homes (“I have a pool and [my neighbors] don’t” or “we all have different size homes.”) The June survey effort also found that participants have doubts about the accuracy of modules that compare them to their neighbors. See the Three Month Report for more discussion of perceived inaccuracy in neighbor comparisons.

Figure 16. Customer-rated Usefulness of Neighbor Rank Module⁹



⁹ For detailed customer feedback on the Historical Comparison, Neighborhood Comparison, or Energy Savings Tip Modules, see the June Report.

Each of the two surveys we conducted asked participants for feedback on different modules of the PER, for a total of four different modules on which we have feedback. Table 4 shows how the mean usefulness scores compare for these modules. The Historical Comparison Module and the Neighbor Rank Module has comparable and relatively high usefulness scores (3.7 and 3.6) The Neighbor Comparison and the Energy Savings Tips Modules have slightly lower mean usefulness scores (3.3 and 3.1). However, no module is less than the mid-point of the scale.

Table 4. Mean Usefulness Score Compared across all Modules

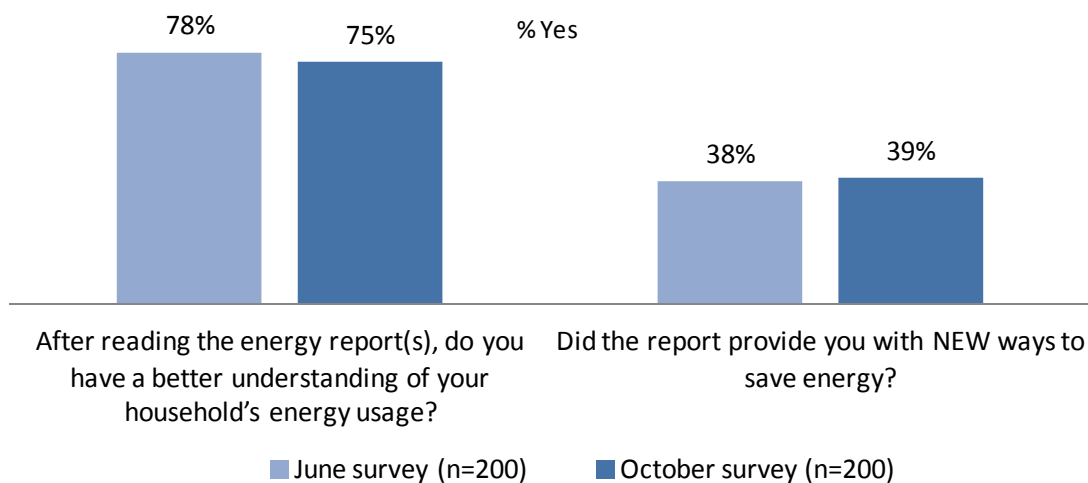
Module	Mean Usefulness Score (5-Point Scale)*	Source Survey
Historical Comparison (HC) (n=200)	3.7 (NC, EST)	June Survey
Neighbor Rank (NR) (n=188)	3.6 (NC, EST)	October Survey
Neighborhood Comparison (NC) (n=200)	3.3	June Survey
Energy Saving Tips (EST) (n=200)	3.1	June Survey

*Note: The letters after the mean usefulness score indicate the modules with mean usefulness scores that are significantly lower in comparison.

5.4 WHAT EFFECT DOES THE PER HAVE ON CUSTOMERS' AWARENESS AND KNOWLEDGE OF THEIR ENERGY USE?

Overall, the PER is effectively educating customers. The purpose of the PER is to raise customers' awareness of their energy consumption and to give them informational tools to decrease their usage. The report primarily educates customers on their household energy use, and to a lesser extent, educates them on new ways to save energy. Three-fourths (75%) of participants thought they had a better understanding of their energy consumption after reading the report while 39% had learned new ways to save energy.

Figure 17. Educational Effects of the PER



5.5 WHAT EFFECT HAS THE PER HAD ON PARTICIPANTS' ACTIONS?

An important aspect of this research effort is to determine what actions participants are taking as a result of reading the report. These actions may include seeking out additional information or taking action to conserve energy in their home. Some participants have sought out additional information on ways to save energy in their homes (16%) or visited the PER website since receiving the report (8%).

Figure 18. Number of Participants Who Sought out Additional Information

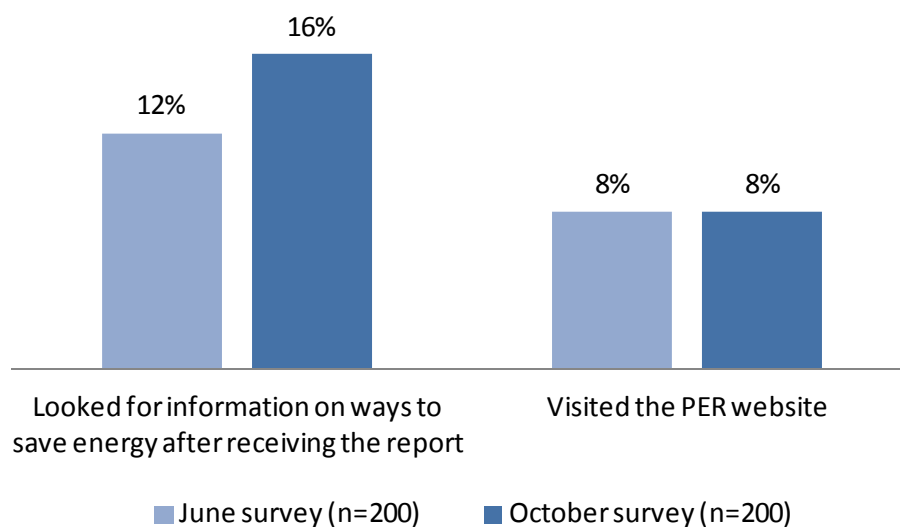


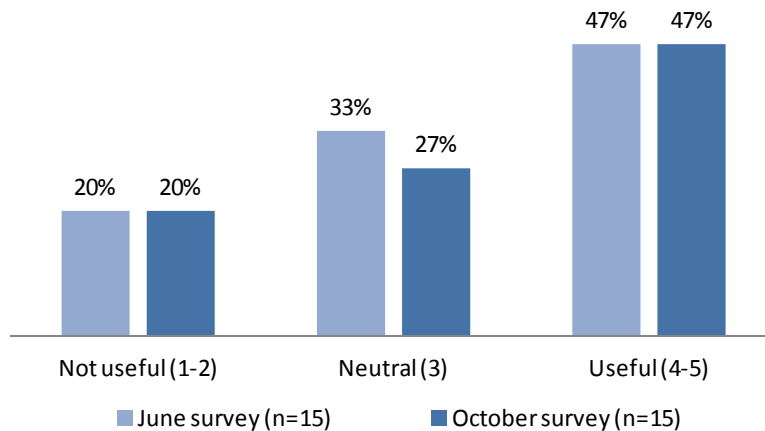
Table 5 lists the sources that participants turned to for additional information. Overall, when asked specifically if they had visited the PER website, more participants reported visiting the website than any other information resource. However, it does not appear that over time, more participants are visiting the website – 15 participants reported visiting the website on both the June and October surveys.

Table 5. Sources Participants Consulted for Additional Information (n=32)

Source	# of participants June survey	# of participants October survey
The PER website	15	15
Other websites	11	9
Word of mouth	3	7
Newspaper	2	7
Bill insert	2	6
TV	2	5
Utility website	2	5
Utility Company	2	4
Contractors	2	4
Energy Trust website	2	3
Community events	2	0
Radio	1	1
Home improvement stores	1	0

Although only 15 customers were able to comment on the usefulness of the website, slightly less than half (47%) said they found it useful. Six of the fifteen visited the website only once, which may indicate that they did not find it useful.

Figure 19. Usefulness of the PER Website



One of our goals in this survey effort is to learn why more participants are not visiting the website. Almost a quarter (24%) of the respondents said that they do not have time to visit the PER website and another 22% said that they do not use the Internet.

Figure 20. Reasons for Not Visiting the Website (n=166)

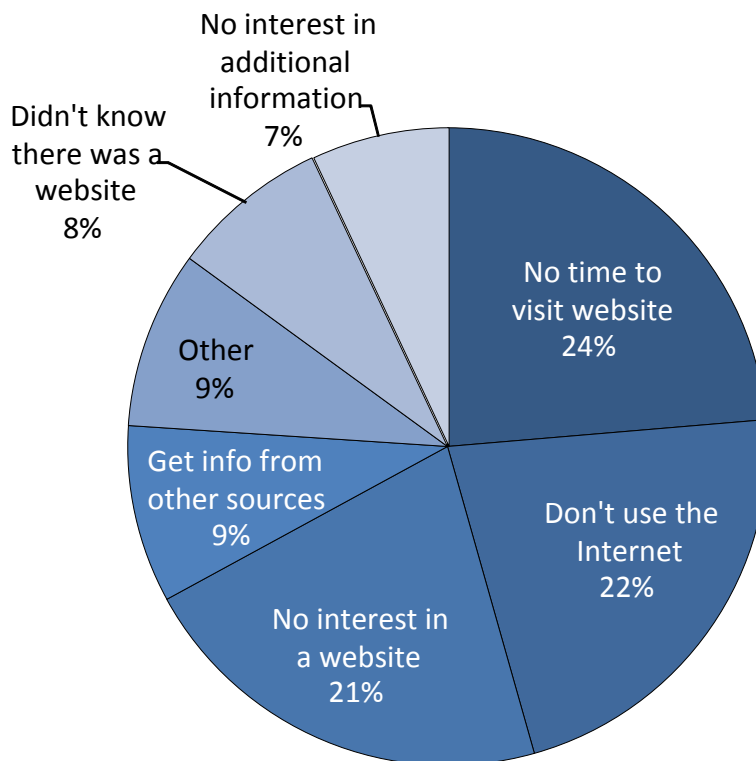
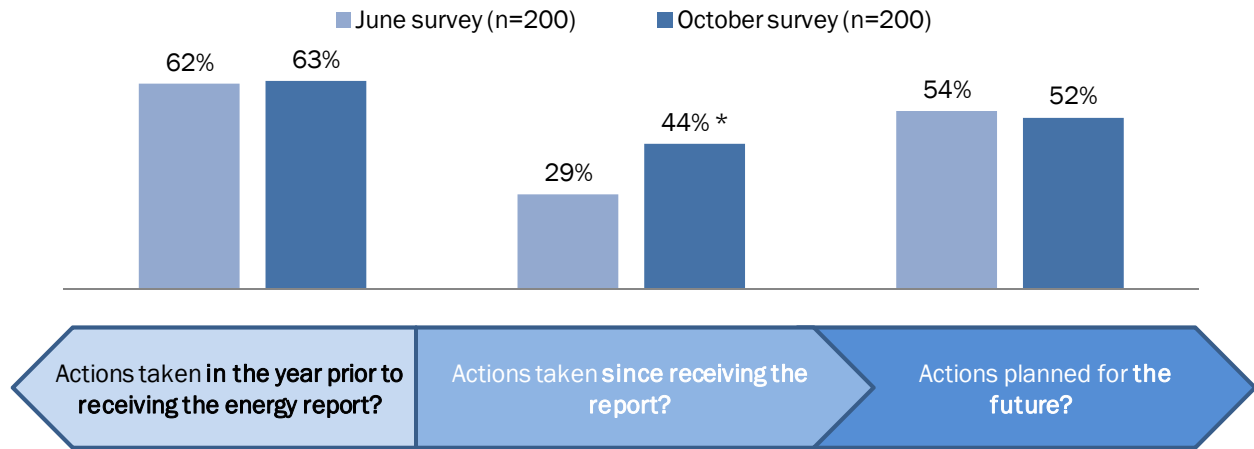


Figure 21 shows what energy saving actions participants reported in the year prior to receiving the report and since receiving the report, and what energy saving actions they plan to take in the future. Almost two-thirds of participants (63%) reported that they had taken action in the year prior to receiving the PER, and just over half (52%) reported having plans to take action in the future.

Over time, the number of participants who reported taking action to reduce their energy consumption since receiving the first report has increased from 29% to 44%. This is likely because customers have had additional time to take action. Interestingly, the number of customers that intend to take action in the future is relatively unchanged, indicating that customers continue to plan to take more action, irrespective of whether or not they have taken actions in the past.

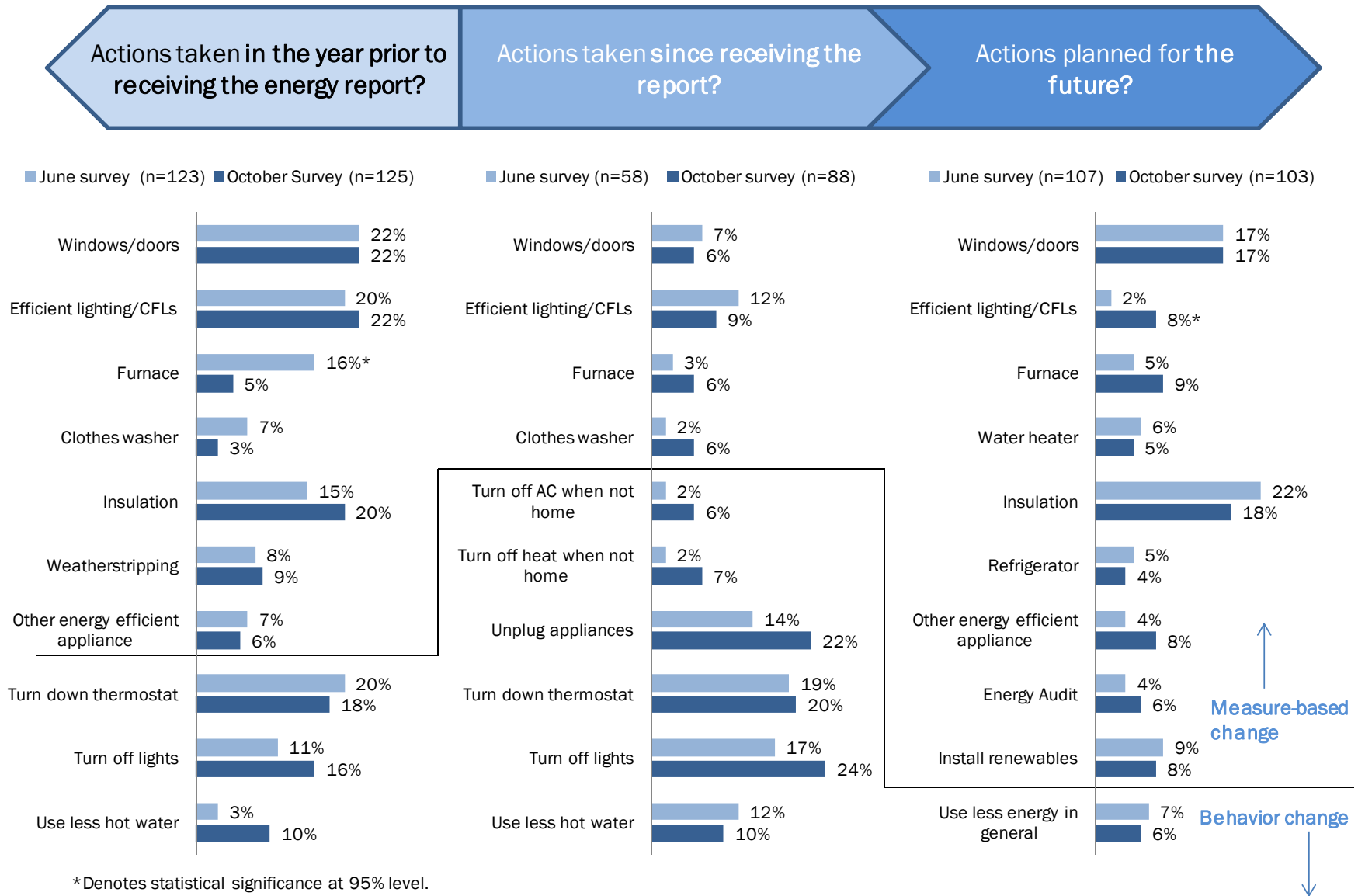
Figure 21. Energy Saving Actions Taken by PER Recipients over Time



*Denotes statistical significance at 95% level.

We looked at the types of actions that participants reported taking (see Figure 22). We categorized these actions into conservation behaviors (turning down their thermostat, turning off lights, or unplugging appliances) or measure-based actions (installing insulation or purchasing a new appliance). In general, participants took mostly conservation behavior actions since receiving the report and measure-based actions in the year prior to receiving the report. Participants who are planning to take action in the future are mostly planning measure-based actions. In general, over the past three months, the types of actions that participants have taken or are planning to take have not changed.

Figure 22. Energy Saving Actions Taken by PER Customers Over Time



Participants who learned something new from the PER continue to report that they have taken more actions since receiving it (45% compared to 21% of those who did not learn something new) and have more actions planned for the future (67% compared to 47% of those who did not learn something new) (see Figure 23 and Figure 24.) This trend is consistent across our June and October efforts. These results show that it is important to provide new information to participants as this correlates with their likelihood of taking energy saving actions.

Figure 23. Energy Saving Actions by Knowledge Gain (June Survey)

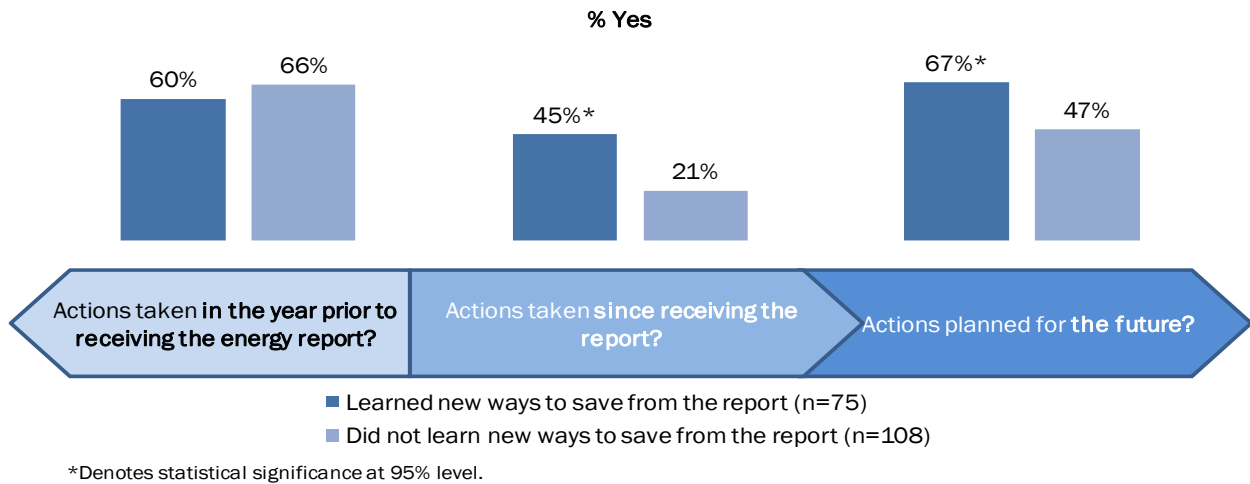
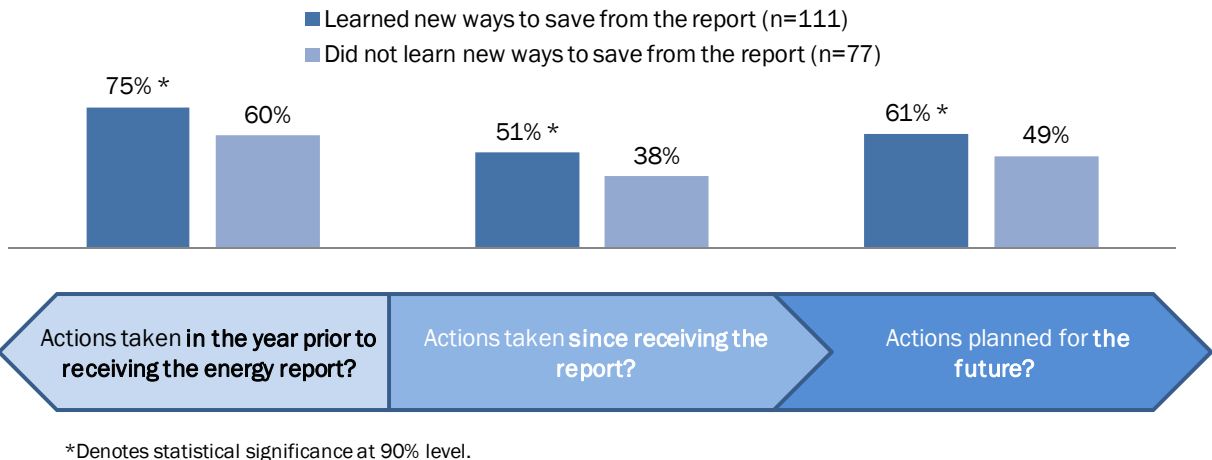


Figure 24. Energy Saving Actions by Knowledge Gain (October Survey)



6. RECOMMENDATIONS

The findings of the October survey support most of the recommendations our team made in the June report. In particular, the results support the following recommendations:

- **Continue to develop methods to ensure that the PER is providing customers with information that is new to them.** Results show that an important factor in influencing customers to take action is whether the report provided them with ways to save energy that they were not aware of before reading the report. Ensuring that participants are learning new information may be key to maximizing energy savings.
- **Clarify the criteria for selecting “Neighbors” in the Neighborhood Comparison Section.** A general misunderstanding of the neighborhood comparison continues to be an issue and most likely leads to skepticism of the data.
- **To the extent possible, better highlight how customers can resolve their accuracy concerns.** Because the primary criticism of the PER stem from perceptions of its accuracy, the collaboration may want to consider methods to better direct customers to the PER website to update their information (and potentially improve their comparison). This may help to resolve concerns among those that have poor impressions of the report.

APPENDIX A. DEMOGRAPHICS

Table 6. Demographics and Household Characteristics

House type		Primary Fuel Source	
Single-Family detached home	93%	Natural Gas	89%
Single-Family attached home	4%	Electric	6%
Duplex, triplex, four-plex	1%	Wood	3%
Manufactured or Mobile Home	1%	Income	
Age		Less than \$10,000	1%
25-34 years	2%	\$10,000-\$29,999	5%
35-44 years	7%	\$30,000-\$49,999	14%
45-54 years	17%	\$50,000-\$69,999	17%
55-64 years	38%	\$70,000-\$89,999	10%
65 years and over	38%	\$90,000-\$109,999	11%
Homeownership		\$110,000-\$149,999	8%
Own/buying	98%	\$150,000-\$199,999	3%
Rent/lease	3%	\$200,000 or more	4%
		Don't Know/Refused	29%

APPENDIX B. OCTOBER CUSTOMER FEEDBACK SURVEY

Energy Trust of Oregon OPower Personal Energy Report

October Participant Phone Survey

October 6, 2011

This is a telephone survey that will go to 200 randomly selected customers who received Personal Energy Reports (PERs) from Energy Trust of Oregon. The goal of the survey is to understand customer reactions to the format and content of the PER and any actions they may have taken as a result of receiving the PER. The survey will also measure customers' perception of Energy Trust and collaborating utilities. This is a follow-up to the participant survey that was fielded in June 2011.

Introduction

Hello, my name is _____, calling from Opinion Dynamics Corporation on behalf of Northwest Natural, Portland General Electric and Energy Trust of Oregon. We are conducting a survey for Energy Trust regarding a Personal Energy Report. Your answers will be completely confidential and we are not selling anything. This survey should only take 10-15 minutes of your time. Your feedback is very important and we appreciate your time. For quality purposes, this call may be monitored or recorded.

Northwest Natural, Portland General Electric and Energy Trust began sending Personal Energy Reports to customers in your area earlier this year. The Personal Energy Report is a one page, double-sided report sent by mail, separate from your gas or electric bill. It compares your energy use to your neighbors' and provides tips for saving energy and reducing your bill.

Do you recall receiving the Personal Energy Report?

Are you the person in your household who is most familiar with the energy report?

(CONTINUE WITH CORRECT CONTACT)

SCREENERS

Before we talk about the Personal Energy Report, I have a few questions about your household.

SC1. Do you own or rent your home?

1. Own
2. Rent
8. Don't Know
9. Refused

SC2. What is your age?

1. (24 yrs or younger)
2. (25 to 34 yrs)
3. (35 to 44 yrs)
4. (45 to 54 yrs)
5. (55 to 64 yrs)
6. (65 years and over)
98. (Don't Know)
99. (Refused)

SC3. What is the primary fuel you use to heat your home?

01. Natural gas
02. Bottled, tank or LP gas
03. Electric

- 04. Oil, kerosene
- 05. Coal (coke)
- 06. Wood
- 07. Solar
- 00. Other, specify: [OPEN END]
- 96. No fuel
- 98 (Don't know)
- 99 (Refused)

[THANK YOU AND TERMINATE IF ANY SC1-SC3=DK/REF]

"Thank you for your responses. Now we are going to begin the main survey."

MAIN QUESTIONNAIRE

Customer Satisfaction

VC1. Energy Trust, NW Natural and Portland General Electric are working together to provide programs to their customers that help them improve the efficiency of their homes and to save money on their energy bills.

On a scale of 1 to 5 where 1 is "not at all valuable" and 5 is "very valuable," how valuable do you find the collaboration between these three organizations? [RECORD NUMBER 1-5; 8=Don't Know; 9=Refused]

VC2. The OPOWER report required the partnership of PGE, NW Natural, and ETO. Having received these reports, how do they make you feel about PGE?

- 1. Much Less Positive
- 2. Somewhat Less Positive
- 3. Neutral
- 4. Somewhat More Positive
- 5. Much More Positive
- 8. Don't Know
- 9. Refused

VC3. The OPOWER report required the partnership of PGE, NW Natural, and ETO. Having received these reports, how do they make you feel about NW Natural?

- 1. Much Less Positive
- 2. Somewhat Less Positive
- 3. Neutral
- 4. Somewhat More Positive
- 5. Much More Positive
- 8. Don't Know
- 9. Refused

Readership Frequency

RS2. About how many Personal Energy Reports have you read or at least looked through?

0. All
1. Most
2. Some
3. None [THANK AND TERMINATE]
98. (Don't Know) [THANK AND TERMINATE]
99. (Refused) [THANK AND TERMINATE]

[ASK IF RS2=2,3]

RS6. Can you briefly explain why you did not read all of the reports? [OPEN END, 98=Don't know; 99=Refused]

RS3. Thinking of all the reports you have received, in general, what have you done with them? Did you... [MULTIPLE RESPONSE]

1. Glance at the pictures, graphs, or headlines
2. Skim the article content
3. Read some of the article content
4. Read the reports from cover to cover
00. (Other [Specify])
98. (Don't Know)
99. (Refused)

RS4. After reviewing your reports, did you... [MULTIPLE RESPONSE]

1. Show one or more reports to others
2. Discuss one or more reports with others
3. Post one or more reports in a visible place
4. Save one or more reports for reference
5. Throw away or recycled one or more reports
00. (Other - Specify)
98. (Don't Know)
99. (Refused)

[ASK IF RS4=2]

A7. With whom did you discuss the report? [MULTIPLE RESPONSE]

1. Family members who live outside your home
2. Members of your household
3. Neighbors
4. Friends
5. Coworkers
00. Other [SPECIFY]
98. (Don't Know)
99. (Refused)

Format and Content

Now I'd like to ask you about some of the information included in the Personal Energy Report.

IM1a. Based on what you have seen in the energy reports, what is your overall impression of the reports? Please rate the report using a 5-point scale where "1" is "poor" and "5" is "excellent." If you are not sure, please provide your best impression. [RECORD NUMBER 1-5; 8=Don't Know; 9=Refused]

[SKIP IF IM1a=8 or 9]

IM1b. Would you briefly explain why you gave this rating? [OPEN END]

FC1. After reading the energy report(s), do you have a better understanding of your household's energy usage?

1. Yes
2. No
8. (Don't Know)
9. (Refused)

FC2. Did the report provide you with new ways to save energy?

1. Yes
2. No
8. (Don't Know)
9. (Refused)

FC3. The energy report contains several sections, each containing different information about your household's energy consumption. These sections may change each time you receive a report. Which of the following sections do you recall seeing on your report? [1=recalls, 2=does not recall, 8=don't know, 9=refused]

- a. how your household ranks in terms of energy efficiency compared to 100 neighbors, for example you might be number 34 out of 100.
- b. a graph tracking your progress toward an energy savings goal that you may have set for your household through the mail or on the website.
- c. a pie chart showing how homes in your area typically use energy, such as heating, refrigeration or lighting.

FC4. On a scale of 1-5 where 1 is not useful at all and 5 is very useful, how useful were each of the following sections of the report: [ROTATE, RECORD NUMBER 1-5, 8=Don't know;9=Refused]¹⁰

¹⁰ Note questions FC3b and c were asked, however due to low exposure to these modules, the results were not analyzed in this study.

[ASK IF FC3a=1] a. how your household ranks in terms of energy efficiency compared to 100 neighbors.

[ASK IF FC3b=1] b. the graph tracking your progress toward your energy savings goal.

[ASK IF FC3c=1] c. the pie chart showing how homes in your area typically use energy.

[ASK IF FC4a<4]

FC5a. Would you briefly explain why you did not find your household's ranking compared to 100 neighbors useful? [OPEN END, 8=Don't Know, 9=Refused]

[ASK IF FC4b<4]

FC5b. Would you briefly explain why you did not find the graph tracking your progress toward your energy saving goal useful? [OPEN END, 8=Don't Know, 9=Refused]

[ASK IF FC4c<4]

FC5c. Would you briefly explain why you did not find the pie chart showing how homes in your area typically use energy useful? [OPEN END, 8=Don't Know, 9=Refused]

[ASK IF FC4a>3]

FC6a. Would you briefly explain why you found your household's ranking compared to 100 neighbors useful? [OPEN END, 8=Don't Know, 9=Refused]

[ASK IF FC4b>3]

FC6b. Would you briefly explain why you found the graph tracking your progress toward your energy saving goal useful? [OPEN END, 8=Don't Know, 9=Refused]

[ASK IF FC4c>3]

FC6c. Would you briefly explain why you found the pie chart showing how homes in your area typically use energy useful? [OPEN END, 8=Don't Know, 9=Refused]

IM2. Overall, how could the report or the delivery of the report be improved? [MULTIPLE RESPONSE]

1. (Receive the report more frequently)
2. (Receive the report less frequently)
3. (Receive the report via email)
4. (Additional information) [SPECIFY]
00. (Other)[SPECIFY]
98. (Don't Know)
99. (Refused)

FC16. Do you feel that the level of detail in the report is sufficient, or would you like to receive more or less detailed information?

1. The level of detail is sufficient
2. More detail

- 3. Less detail
- 8. (Don't Know)
- 9. (Refused)

Actions Taken After Reading the Report

A1. Have you visited the website listed on the report?

- 1. Yes
- 2. No
- 8. (Don't Know)
- 9. (Refused)

[ASK IF A1=2]

A1a. Why haven't you visited the website? [OPEN END, 8=Don't Know; 9=Refused]

[ASK IF A1=1]

A2. How often do you visit the website?

- 1. (Only visited once)
- 2. Once a week
- 3. Once a month
- 4. Once every two months
- 5. Once every six months
- 6. Once a year
- 00. (Other [SPECIFY])
- 98. (Don't Know)
- 99. (Refused)

[ASK IF A1=1]

A3. On a scale of 1-5 where 1 is not very useful and 5 is very useful, how useful did you find the website? [RECORD NUMBER 1-5; 8=Don't Know; 9=Refused]

A4. Are you using the energy report to track your energy consumption over time?

- 1. Yes
- 2. No
- 8. (Don't Know)
- 9. (Refused)

[ASK IF A4=1]

A5. How do you use the report? [OPEN END, 98=Don't know; 99=Refused]

Now I have a few questions about actions to reduce your home's energy use that you may have taken before receiving the energy report, since reading the report, or are planning to take in the future.

A8. Did you or anyone in your household take any actions to reduce your home's energy use in the year prior to receiving the energy report?

1. Yes
2. No
8. (Don't Know)
9. (Refused)

[ASK IF A8=1]

A9. What did you do? [OPEN END]

A10. Did you or anyone in your household take any actions to reduce your home's energy use after you received the report(s)?

1. Yes
2. No
8. (Don't Know)
9. (Refused)

[ASK IF A10=1]

A11. What did you do? [OPEN END]

A12. Do you have plans to take any actions to reduce your home's energy use in the future?

1. Yes
2. No
8. (Don't Know)
9. (Refused)

[ASK IF A12=1]

A12b. What do you plan to do? [OPEN END]

A13. Have you or anyone else in your household looked for information on ways to save energy in your home since receiving the Personal Energy Report?

1. Yes
2. No
8. (Don't Know)
9. (Refused)

[ASK A14 and A15 if A13=1]

A14. What energy-saving information did you find? [OPEN END]

A15. What sources do you go to for this information?

1. (Newspaper)
2. (Radio)

3. (TV)
4. (Utility website)
5. (Energy trust website)
6. (Other websites)
7. (Friends, family, coworkers)
8. (Contractors)
9. (Home improvement stores)
10. (Magazines)
11. (Books)
12. (Utility newsletters)
13. (Bill Inserts)
14. (Community Events)
00. (Other) [SPECIFY]
98. (Don't know)
99. (Refused)

Program Participation

PP1. Have you participated in any programs run by Energy Trust since receiving the Personal Energy Report?

1. Yes
2. No
8. (Don't Know)
9. (Refused)

[ASK IF PP1=1]

PP2. Which programs did you participate in? [OPEN END MULTIPLE RESPONSE]

98. (Don't Know)
99. (Refused)

Demographics

D2. How many people live in your home? {RECORD NUMBER; 98=Don't Know; 99=Refused}

D3. What type of home is your primary residence?

1. Single-Family detached home
2. Single-Family attached home (such as a townhouse)
3. Duplex, triplex or four-plex
4. Apartment or Condominium, 5-units or more
5. Manufactured or Mobile Home
00. Other (specify)
98. (Don't Know)
99. (Refused)

D4. What is your household's total annual income before taxes?

1. Less than \$10,000

2. \$10,000 - \$29,999
3. \$30,000 - \$49,999
4. \$50,000 - \$69,999
5. \$70,000 - \$89,999
6. \$90,000 - \$109,999
7. \$110,000 - \$149,999
8. \$150,000 - \$199,999
9. \$200,000 or more
98. (Don't Know)
99. (Refused)

On behalf of Opinion Dynamics, Energy Trust, Northwest Natural and Portland General Electric, thank you for your time and cooperation. Your answers have been extremely valuable. Have a good day/evening.

D5. RECORD GENDER BY OBSERVATION:

1. MALE
2. FEMALE