



complex world | CLEAR SOLUTIONS™

# Connecticut Energy Efficiency Board and United Illuminating

UI Behavior Pilot Program Evaluation  
Final Report

April 20, 2012





# Connecticut Energy Efficiency Board and United Illuminating

UI Behavior Pilot Program Evaluation  
Final Report

April 20, 2012

Copyright © 2012 Tetra Tech, Inc. All Rights Reserved.

Prepared For: Connecticut Energy Efficiency Board and United Illuminating

---



---

**Tetra Tech**

6410 Enterprise Lane, Suite 300 | Madison, WI 53719

Tel 608.316.3700 | Fax 608.661.5181

[www.tetrattech.com](http://www.tetrattech.com)



## TABLE OF CONTENTS

|   |             |
|---|-------------|
| <b>1. Executive Summary</b> .....   | <b>1-1</b>  |
| 1.1 Introduction  | 1-1         |
| 1.2 Summary of Key Findings and Conclusions   | 1-2         |
| 1.3 Recommendations   | 1-4         |
| <b>2. Introduction</b> .....  | <b>2-1</b>  |
| 2.1 HER Pilot Background  | 2-1         |
| 2.2 Research Objectives   | 2-1         |
| 2.3 Data Collection Methodologies   | 2-2         |
| 2.3.1 Survey  | 2-2         |
| 2.3.2 Focus Group Discussions   | 2-3         |
| 2.4 Interpretation of the Data Presented in this Report                                     | 2-3         |
| <b>3. Detailed Findings</b> .....   | <b>3-1</b>  |
| 3.1 Survey  | 3-1         |
| 3.1.1 Recall and Reported Readership of HERs  | 3-1         |
| 3.1.2 Overall Rating of Usefulness of HER Reports   | 3-2         |
| 3.1.3 Recall and Use of HER and UI Websites   | 3-3         |
| 3.1.4 Recall of Energy Efficiency Tips and Reported Actions Taken Because of<br>HER Program | 3-3         |
| 3.1.5 Satisfaction with HER Program   | 3-5         |
| 3.1.6 Demographic Characteristics of Auto-enrolled Customers                                | 3-6         |
| 3.2 Focus Group Discussions   | 3-6         |
| 3.2.1 Customers' Evaluation of the HER Program  | 3-6         |
| 3.2.2 Customers' Engagement and Use of the HER Information                                  | 3-6         |
| 3.2.3 Content of the Home Energy Reports  | 3-7         |
| 3.2.4 Effect of HER Program on Participants' Perception of UI                               | 3-8         |
| <b>4. Key findings, conclusions, and Recommendations</b> .....                              | <b>4-9</b>  |
| 4.1 Key Findings and Conclusions  | 4-9         |
| 4.2 Recommendations   | 4-11        |
| <b>APPENDIX A: SURVEY Data Tables</b> .....   | <b>A-1</b>  |
| <b>APPENDIX B: SURVEY Response Rate</b> .....   | <b>B-10</b> |
| <b>APPENDIX C: Survey Questionnaire</b> .....   | <b>C-11</b> |
| <b>APPENDIX D: Focus Group Guide</b> .....  | <b>D-23</b> |
| <b>APPENDIX E: Example HER and Welcome Insert</b> .....                                     | <b>E-28</b> |



# 1. EXECUTIVE SUMMARY

---

## 1.1 INTRODUCTION

This report presents the results of the evaluation of the United Illuminating Company's (UI) Behavior Pilot Program (Program). Program participants received monthly Home Energy Reports (HERs) describing their household electricity usage and presenting comparisons to 100 "neighbors" with similar household characteristics in the same area.

The Program was initiated in late January 2011, when participating customers began receiving their first HERs. A total of 6,060 customers were selected to participate in the Program – 419 'opt-in' customers volunteered to participate, based on recruitment efforts by UI, while the remaining 5,641 customers were 'auto-enrolled' in the Program.

This evaluation report discusses findings for the 'auto-enrolled' participants only. No evaluation activities were conducted with 'opt-in' participants.

The objectives of the evaluation focused specifically on participating customers' acceptance and satisfaction with the Program. The evaluation did not examine changes in energy use attributable to the Program. The objectives of this evaluation were to assess the following:

- Level of awareness and customer engagement with the HERs and other program-supplied information
- Degree to which customers found the HERs, Program website, and Program-supplied information to be useful
- Level of customer satisfaction with the Program
- Changes in the Program that could increase the level of customer engagement and satisfaction
- Whether the Program creates or increases participants' positive impressions of UI

The two primary research activities conducted for this evaluation included the following:

1. A survey, conducted with 100 respondents in September/October 2011, approximately 8 months after receiving their first HER.
2. Three focus group discussions conducted with 23 participants in December 2011, approximately 11 months after receiving their first HER.

The surveys and focus group discussions were conducted with participating customers to address the study objectives. Because customers had to be aware that they were receiving reports in order to express opinions about the program, households that were not aware they were receiving HERS reports were not eligible for the research activities. This means that responses to some questions, such as readership of the HERs, are biased upwards. In other words, customers who are unaware that they receive the HERs will be much less likely to have read the report regularly than are those who are aware of the reports.



## 1.2 SUMMARY OF KEY FINDINGS AND CONCLUSIONS

The combined analysis of the survey results and focus group discussions yielded the following key findings and conclusions related to the five objectives.

### Level of awareness and customer engagement with HERs:

Although awareness of the HERs is high among respondents, there appears to be only a moderate level of customer engagement and readership of the HERs.

- More than 40 percent of respondents could not recall any specific energy saving tips from the HERs. The two most frequently recalled energy saving tips were installing energy efficient light bulbs and shutting off appliances when not in use, actions which are widely known by most consumers.
- When presented with an example HER, nearly all focus group participants quickly noticed key pieces of information they had not noticed previously, especially on the second (back) page. In each focus group discussion, some participants reported they had not realized there was a second page for the HER.
- In the two focus group discussions where the topic of awareness of the Connecticut Energy Efficiency Fund (CEEF) was addressed, participants assumed that the Program was sponsored by UI. When prompted, only a small number reported a 'vague' recollection of seeing the CEEF logo or any mention of CEEF as a sponsor of the Program.<sup>1</sup>

### Usefulness of the HER information:

A majority of survey respondents find the information presented in the HERs only somewhat useful or less (not very or not at all useful). Only about one-quarter of respondents find the HERs very useful for their household.

- Respondents were most likely to cite the last-month consumption comparison with neighbors (19%) and the energy-saving tips (17%) as the most useful HER information. Twenty-three percent indicated the HER provided no useful information.
- Most focus group participants were not aware of the definition of "neighbor group" provided on the HER and believed the neighbor comparison group for their household was not comparable.
- For respondents who rated the HER information as 'Not at all' or 'Not Very' Useful, the perceived inappropriateness of the neighbor comparison was the most frequently cited reason (43%). One quarter of those who rated the HER information as "Somewhat' or 'Very' useful also believed the neighbor comparisons were inappropriate.
- Both focus group and survey respondents indicated that the neighbor comparison information is not useful without more specific diagnostic information about why their household's level of electricity usage is high or low.

---

<sup>1</sup> The awareness and recognition of CEEF sponsorship was discussed in the second and third focus group discussions.



### Satisfaction with the HER Program:

Respondents report a moderate level of satisfaction with the Program. Slightly less than one-half (47.9%) of respondents report a positive overall satisfaction rating (a rating of 4 or 5 on a 5-point scale) for the HER. More than half (52 percent) report a rating of 3 (neutral or indifferent) or lower.<sup>2</sup>

- Increased awareness of household electricity use was cited as a positive program outcome by some survey respondents.
- Some participants in each focus group discussion indicated the neighbor comparisons were “discouraging” or “demotivating” because their energy use was consistently higher than the “average of all neighbors.”
- A small number of participants in each focus group believed they had been singled out by UI as “high energy users,” because they were not aware of any other households in their area who received the HERs.

### Actions participants report taking in response to HERs:

Almost one-half of survey respondents believe they are using less electricity than they did for the same time period last year. A majority of these respondents attribute the perceived decrease in electricity use to greater awareness of their household electricity use and changes they have made in energy-using behaviors.

Forty-four percent of respondents reported implementing one or more of the energy efficiency and conservation actions provided in the HERs.

- Changing to energy-efficient light bulbs (39%) and shutting off or unplugging unused appliances (27%) were the most frequently mentioned actions.
- Respondents were asked about any additional actions they intend to take. About 38% indicated that they did not intend to make more efficiency improvements; of those who indicated they planned additional actions, 47% had no specific improvements in mind.

### Respondents’ and Participants’ suggestions to increase customer engagement and satisfaction:

The most common suggestions for making the program more useful and engaging include the addition of more information about how the neighbor comparison group is selected and more specific information tailored to their household about how to reduce electricity use.

- Some participants in each focus group discussion indicated the HERs presented more information than they wanted to read. These participants wanted more personalized information, specifically tailored to their household, and historical comparisons of their energy use, rather than neighbor comparisons.

---

<sup>2</sup> For the 5-point overall satisfaction scale, where a score of 5 is labeled “Very Satisfied” and a score of 1 is labeled “Very Unsatisfied,” we interpret scores of 4 and 5 as positive or high satisfaction, a score of 3 as neutral or indifferent, and scores of 1 and 2 as low or negative satisfaction.



- Some participants in each focus group discussion described the presentation of information as ‘too impersonal’ or ‘generic.’ This perception was particularly true for the energy saving tips which were not perceived to vary from one month to the next.
- Even though the HERs indicate more tailored information is available to customers who access the Program website and set up an online account, more than one-half of respondents had not even noticed the information about the Program website.

### **1.3 RECOMMENDATIONS**

The recommendations presented below are based on the evaluation findings.

- Provide more explanation of how the ‘neighbor’ comparison group is selected and how to interpret the neighbor comparisons. The appropriateness of the neighbor group for comparisons is a major concern for many auto-enrolled customers.
- Develop a strategy that will motivate (and perhaps reward) customers for visiting the Program website and establishing an on-line account. Customers who establish an on-line account will provide additional information about their household and electricity use and may enable program implementers to provide more tailored energy saving tips and analysis.
- Offer and encourage auto-enrolled customers to take the opportunity to receive HERs by email. For some, receiving HERs by email might increase the likelihood they will access the Program website, which could also lead to establishing an on-line account.
- Provide some form of recognition for households that decrease electricity use, even if they do not qualify for a “Great” or “Good” rating on the HER. This will help to maintain motivation among households who have consistently high use relative to their neighbor comparison group.
- Many auto-enrolled customers who consistently use more electricity than the average of All Neighbors want more detailed diagnostic information on why their electricity use is high. In addition to the HERs, UI might develop a targeted offer of the Home Energy Solutions Program for these customers, indicating that this program will provide them with specific diagnostic information on why their household electricity use is higher than some of their neighbors.





## 2. INTRODUCTION

---

### 2.1 HER PILOT BACKGROUND

This report presents the results of the customer experience assessment of the United Illuminating Company's (UI) Home Energy Reports (HER) Pilot Program (Program). The Program was implemented by Opower, a company that provides a 'turn-key' residential customer information and feedback program, designed to engage customers and influence their energy behaviors.

The Program was initiated in late January 2011, when participating customers began receiving their first Home Energy Reports (HERs). A total of 6,060 customers are participating in the Program – 419 "opt-in" customers volunteered to participate, based on recruitment efforts by UI, while the remaining 5,641 customers were 'auto-enrolled' in the Program. This evaluation focuses only on the auto-enrolled customers in the Program. No evaluation activities were conducted with the opt-in (or volunteer) participants nor with the control group.

The auto-enrolled customers were selected, based on eligibility criteria established by UI and Opower, including:

- An active UI account
- A minimum of 12 months of billing history
- A minimum annual consumption threshold
- No gaps in monthly energy use consumption data

To select auto-enrolled customers, the UI residential customer population was first screened for eligibility. From among eligible customers, a study group of customers were selected and randomly assigned to the treatment group (5,641 participants who received a monthly HER) and the control group (10,000 non-participant customers who did not receive HERs).

The HER is a 2-page (printed on front and back) report, branded with the UI and Connecticut Energy Efficiency Fund (CEEF) logos, showing households their electricity consumption for the previous month and the previous 12 months and comparing their usage to a group of 100 "neighbors" who were selected based on similar household characteristics and a reasonably nearby location. The 'neighbor' comparison group is further divided into the "most efficient neighbors (the 20% of the neighbor group with the lowest electricity usage) and the "average of all neighbors. The participant receives the HERs approximately two weeks after the monthly UI bills.

Accompanying the first HER, participants also received a "Welcome Insert," also branded with CEEF and UI logos, providing an introduction and "Frequently Asked Questions and Answers" about the HER and the Program. Examples of an HER and a Welcome Insert are provided in [Appendix E](#).

### 2.2 RESEARCH OBJECTIVES

The objectives of the evaluation were focused on customers' satisfaction and use of the HERs and program-supplied information. The scope of this evaluation did not cover the



changes in behaviors or energy use that are attributable to the Program. The specific objectives of the evaluation are to identify:

- Level of awareness and customer engagement with the HERs and other program-supplied information
- Degree to which customers found the HERs, Program website, and the Program-supplied information to be useful
- Level of customer satisfaction with the HER Program
- Changes in the Program that could increase the level of customer engagement and satisfaction
- Whether the Program creates or increases participants' positive impressions of UI

The evaluation objectives focused on customer acceptance and satisfaction with the Program, and not on measure adoption rates or energy savings. While the survey and focus groups did touch on self-reported measure adoption of participants, such information was collected, using the existing sample, as information that might be of interest to UI, though not related to the study objectives. Therefore, all evaluation activities were conducted with participating customers, who are able to inform our understanding of customer acceptance and satisfaction with the program.

## **2.3 DATA COLLECTION METHODOLOGIES**

The two primary research activities conducted for this evaluation included a survey and three focus group discussions with auto-enrolled Program participants.

### **2.3.1 Survey**

The survey, conducted with 100 auto-enrolled customers in September/October 2011, was designed to identify:

- Recall and reported readership of the Home Energy Reports
- Recall of specific actions or measures that were recommended in the Home Energy Reports
- Understandability and usefulness of the information presented in the Home Energy Reports
- Ease of access and use of the web interface; reasons for setting up/not setting up an on-line account for the HER Program
- Participants overall satisfaction with the program and with specific aspects of the HER Program
- What participants think would make the HER Program more useful

Actions taken to date and actions planned to take in the future, based on Home Energy Reports were also collected.



Computer-assisted telephone interviews were conducted from September 19 to October 4, 2011. At the time of the Survey, customers had been receiving HERs for 8-9 months. Only customers who were aware their household was receiving HERs were interviewed. A detailed explanation of the survey methodology and an accounting of the sample dispositions and response rate are included in [Appendix B](#). A copy of the Survey Questionnaire is included in [Appendix C](#).

### **2.3.2 Focus Group Discussions**

Three focus group discussions were conducted on December 7-8, 2011 in North Haven, Connecticut. Focus group participants were recruited from a sample of customers who had been auto-enrolled in the Program living within a 15-mile radius of North Haven who had not been sampled for the Early Participation Survey. Only customers who were aware their household was receiving HERs were invited to participate in the focus group discussions.

The primary objectives of the focus group discussions with auto-enrolled customers were to:

1. Identify customers' reactions to the Home Energy Reports, including interest in the HERs, usefulness of the HER information, and levels of readership and engagement with the HERs.
2. Examine issues raised by the Survey in more detail and depth, including the level of recall of specific energy saving tips from the HERs, awareness and use of the HER program website, sources of satisfaction or dissatisfaction with the HERs, and what information customers would like to see in the HERs.

At the time of the focus group discussions, customers had been receiving HERs for approximately 10 months.

Customers were offered \$85 as an incentive to participate in the focus group discussions. A total of 23 customers attended the three focus group discussions – nine for the first group, six for the second, and eight for the third group. Across all three focus group discussions, participants were roughly evenly split by gender and all age groups were represented. Focus group discussions ranged from 90 to 120 minutes in length. Observers from UI, the Connecticut Energy Efficiency Board (CEEB), and the Public Utilities Regulatory Authority (PURA) attended one or more of the three focus group discussions. A copy of the Focus Group Discussion Guide is attached in [Appendix C](#).

## **2.4 INTERPRETATION OF THE DATA PRESENTED IN THIS REPORT**

The following guidelines should be used to interpret the findings presented in this report:

- The RFP for this evaluation study specified that surveys should be designed to ensure that 90 percent confidence intervals for parameter estimates were +/- 10 percentage points or less. This is standard for regional and national energy efficiency evaluation



studies.<sup>3</sup> For example, if the survey indicates that 50 percent of respondents report taking a specific action, the 90 percent confidence interval for that parameter estimate would be +/- 8 percentage points.<sup>4</sup> Statistical precision (the width of the confidence interval) is based on the number of customers in the sample. The more customers that are included, the more statistically precise the estimates will be; however, only by surveying the full population can the research provide 100% precision. Numbers far smaller than this can represent the views of the program participants.

- Focus group discussions produce qualitative data. Qualitative data indicate the range of different responses to a question, but not the prevalence of any single response in the population. In other words, the proportion of focus group participants who report a response should not be generalized to the population. For this reason, the focus group discussion findings are stated in qualitative terms, such as “many” or a “few,” rather than in precise quantitative terms.
- This study uses both focus groups and surveys in order to capture the advantages of each method. Focus groups allow researchers to have in-depth discussions with customers that allow for exploration of issues, including those that were not anticipated in advance of the study. The method allows for collection of rich information that is far more nuanced than the information collected in surveys. However, focus groups cannot tell the researcher whether the opinions expressed in the focus groups are shared among all participants. Surveys can provide more precise and replicable information for the population as a whole. However, the range of the information collected is constrained to a pre-set list of questions and generalized sets of response categories<sup>5</sup> in order to maintain precision.
- In this report, the term ‘respondents’ refers to auto-enrolled customers who completed the Survey. The term ‘participants’ refers to auto-enrolled customers who participated in one of the focus group discussions.

---

<sup>3</sup> For example, the California Energy Efficiency Evaluation Protocols: Technical, Methodological, and Reporting Requirements for Evaluation Professionals (State of California Public Utilities Commission, 2006), pages 163-170, present a range of precision levels depending on the purpose of the study, but the desired precision is never less than 10% and in some cases is as high as 30% (i.e., 90/10 or 90/30). The Independent Service Operators of New England accept 80/10 precision for verifying demand savings in the forward capacity market.

<sup>4</sup> A confidence interval describes the precision of an estimate from the survey sample of participants. Precision is not the same thing as the accuracy of the estimate. An estimate can be very precise, but not accurate, if the survey was constructed in ways that introduce biases, such as social desirability or acquiescence biases, or response errors based on inaccurate recall.

<sup>5</sup> Surveys can allow for open-ended responses. However for those responses to be used statistically, they must be developed into groups by category. Verbatim responses to open-ended survey questions can be used; however that data then becomes qualitative.



### 3. DETAILED FINDINGS

---

The survey results and focus group discussion results are presented below in separate sections. The survey addressed a broad range of topics relevant to evaluating the HER Program, while the focus group discussions addressed a selected set of topics in more depth, including some topics that were not addressed in the survey.

#### 3.1 SURVEY

The survey results and interpretations of the data are reported below. For each result and conclusion, a link is provided to the relevant table displaying the data in [Appendix A](#).

##### 3.1.1 Recall and Reported Readership of HERs

###### *a. Awareness and Readership of Home Energy Reports*

All 100 respondents indicate that they are aware they have been receiving the HERs, and this awareness was, in fact, used as an eligibility screening criteria for participating in the survey. Approximately 78 percent reported that someone in their household regularly reads certain parts or all of the HERs. Over one-half of the respondents report that someone reads the entire report on a monthly basis ([Table 1](#)). These results could indicate the Program has been successful in reaching participant households and generating a high level of readership; however the additional survey results presented below suggest that these self-reports of readership of the HERs may include very cursory or “light” reading. A similar finding that participants read the HERs “very lightly” was reported in Ethnographic interviews conducted for the Massachusetts Cross-Cutting Behavioral Program Evaluation.<sup>6</sup>

Overall, 95 percent of respondents said the Home Energy Reports were very or somewhat easy to understand. No respondents indicated the report was very difficult to understand ([Table 2](#)).

Based on an unaided recall question where multiple responses were encouraged, the most commonly recalled pieces of information from the HERs were the last month consumption comparison with neighbor group (38.1%); the household’s ranking among 100 neighbors (30%), and the 12-month consumption comparison with the neighbor group (21%). In contrast, only 18 percent mentioned any energy saving tips and only 17 percent mentioned the rating of how the household was doing (smiley faces and labels). This infrequent recollection of the tips and household rating occurred even though the interviewers encouraged respondents to provide multiple responses to make sure that respondents had the opportunity to name all of the information they recalled from the HERs ([Table 3](#)). These findings suggest that respondents give the HERs a cursory read, and do not recall much of the specific information.

###### *b. Usefulness of Home Energy Reports*

When asked in an open-ended question to name the most useful information from the HERs, 23 percent indicated that none of the information they receive from the HERs is useful. The last

---

<sup>6</sup> Massachusetts Cross-Cutting Behavioral Program Evaluation, Volume II Final, pages 56-57, Opinion Dynamics Corporation, Prepared for the Massachusetts Energy Efficiency Advisory Council, June 2011.



month consumption comparison with the neighbor group (19%) and the energy-saving tips (17%) were most frequently mentioned as the most useful information received from the HERs ([Table 4](#)). These data suggest that while three-quarters of respondent cited some aspect of the HERs as being useful, no single piece of information presented in the HERs is viewed as highly useful by a sizable group of auto-enrolled customers.

When specifically asked to rate the usefulness of the comparison of their household's electricity use with a group of 100 neighbors, 29 percent reported it was Very Useful ([Table 5](#)). A respondent stated, *"It is nice to know what is going on, it is interesting to see if I am the highest or lowest."* Most of the remaining respondents reported the neighbor comparison information was Somewhat Useful (37%) or Not Very or Not at All Useful (34%). One survey respondent argues that more detailed information about the comparisons would help: *"It doesn't tell me why it is happening. Just to have a figure and not explain this is why you are using so much energy compared to my other neighbors, I mean most of my neighbors have houses that are half the size of my own house, which is an unfair comparison."* This suggests that although the neighbor comparisons have a high level of recall, a substantial number of respondents do not find them useful for their household. Participating customers' concerns about the comparability of the "neighbor" comparison group were also noted in the Massachusetts Cross-Cutting Behavioral Program Evaluation.<sup>7</sup>

### 3.1.2 Overall Rating of Usefulness of HER Reports

More than one-half of the respondents indicated the HERs were somewhat useful overall ([Table 6](#)), while another 27 percent rated the HERs as Very Useful and the remaining 21 percent rated the reports as Not Very or Not at All Useful. This finding, together with those above about specific parts of the HERs, suggest that relatively few participants are enthusiastic and fully engaged in the HER Program. The majority of participants appear to be moderately engaged or indifferent to the HER Program.

Respondents ranking the program as very or somewhat useful most frequently mentioned that the Home Energy Reports increased awareness of their household electricity use. One respondent stated for example, *"It raises the awareness of what energy I am running."* Respondents ranking the program as not very useful or not at all useful cited their perception of inaccurate or non-comparable neighbor household comparisons, and the lack of information about why their particular household's electricity consumption was high or low as the major factors in their rating in ([Table 7](#)). It is notable that these same two concerns, inaccurate neighbor comparisons and lack of diagnostic information tailored to their household, were also mentioned by a significant number of respondents who rated the HERs as 'Somewhat Useful' overall, and, as cited above, arose in the Massachusetts study as well. This indicates that some respondents' concerns about the neighbor comparisons, as well as other respondents' positive views, contribute to the high level of recall for the neighbor comparison information featured in the HERs.

---

<sup>7</sup> Massachusetts Cross-Cutting Behavioral Program Evaluation, Volume II Final, Opinion Dynamics Corporation, Volume II, page 60. Prepared for the Massachusetts Energy Efficiency Advisory Council, June 2011.



### 3.1.3 Recall and Use of HER and UI Websites

Less than half of the respondents (41%) recall seeing the website address for the Home Energy Report Program website '[uinet.com/energyreports](http://uinet.com/energyreports)' and 10 percent of respondents reported visiting the website ([Table 8](#)). Based on the focus group discussions, we suspect there is some confusion between the UI website ([uinet.com](http://uinet.com)) and the HER Program website, but we do not have quantitative data on the number of customers who might have mistakenly identified the UI website as the Program website.

#### *a. Reasons for not Using the HER Program Website*

Among respondents who noticed the address, but did not visit the website, lack of time (37%), lack of interest (30%), and infrequent use of a computer (15%) were the most frequently reported reasons for not visiting the website ([Table 9](#)). The first two reasons shown above suggest that among the minority of participants who notice the website address, most have not chosen to visit the website.

#### *b. Participant Online Accounts Established at HER Website*

Five percent of all survey respondents report they have set up an on-line account on the HER Program website. We learned from an interview with the program implementers that about 5 percent of auto-enrolled participants in this type of program typically set up an on-line account.<sup>8</sup> With 5 percent of participants using an on-line account, most auto-enrolled customers are not taking advantage of the opportunity to receive energy saving tips that are more tailored to their household energy use, something many of them indicated they would like to see on the reports.

### 3.1.4 Recall of Energy Efficiency Tips and Reported Actions Taken Because of HER Program

#### *a. Types of Energy Efficiency Tips Recalled*

When asked to recall specific energy efficiency tips from their Home Energy Reports, nearly one-half (47 percent) of respondents could not recall any specific tips. This suggests a cursory reading of the sections of the Home Energy Reports containing the energy-savings tips by this group of respondents. Among those who were able to recall one or more tips, changing light bulbs and shutting off or unplugging appliances were the most frequently recalled tips, being mentioned 31 percent and 20 percent of the time, respectively ([Table 10](#)). These energy-saving tips that were more often recalled by respondents also happen to correspond to energy saving advice that is widely available from many sources, in addition to the Home Energy Reports. These data make it difficult to argue that auto-enrolled customers have taken notice of specific energy-saving tips from the Home Energy Reports.

---

<sup>8</sup> Interview with Matt McCaffree, Rachel Zuraw, and Barry Fischer from the Opower program implementation staff conducted on 4/11/2012.



When interpreting the information on tip recollection, it should be noted that the specific energy tips received by customers are tailored to some of the known characteristics of their household, so not all respondents received the same tips.

#### *b. Reported Energy Efficiency Actions Participants Have Implemented or Anticipate Implementing*

Although identifying energy efficiency actions taken by participants was not an objective of the evaluation (and nonparticipants were not surveyed), it was possible to ask respondents if they had implemented one or more of the energy saving tips described in their HERs. Less than one-half (44 percent) of respondents reported having implemented one or more of the energy-saving tips described in their Home Energy Reports ([Table 11](#)). The most commonly reported actions were changing to efficient light bulbs and shutting off or unplugging unused appliances. Turning off lights and buying efficient appliances were also frequently mentioned.

When asked if there are any energy-saving tips from their Home Energy Reports they anticipate implementing in the future, 62 percent indicated there were. The most frequently mentioned responses were non-specific, such as “I don’t recall which ones” and “I will check on the energy-saving tips when I am ready to do something” Among the specific planned actions mentioned, buying energy efficient appliances (13%), changing to energy efficient light bulbs (10%), and unplugging unused appliances (10%) were mentioned most frequently ([Table 12](#)).

It is also notable that some participants cite ‘using energy off-peak’ as one of the tips they have implemented or plan to implement, based on their HERs. Shifting electricity use to off-peak hours is not one of the energy-saving tips provided in the UI HER Program; however, the ‘Wait Until 8’ initiative, which does encourage shifting usage to off-peak hours, was publicized over the summer months.

#### *c. Perception of Change in Electricity Use for Household*

Although documenting actual energy savings was not an objective of the study, understanding the *perceptions* participants had of the program involved asking them whether they believed that their energy use had changed due to the reports. Overall, most respondents reported that their electricity use had decreased a little (41%) or stayed about the same (37%) from last year to this year for the same time period ([Table 13](#)). The self-reports on differences in use compared to last year should be viewed as *perceptions* of household electricity use, rather than definite changes.

Respondents were grouped into two categories, based on their perception of the magnitude of the change in their household electricity use in the last few months, compared to the same time last year (Question T3). Respondents who reported that compared to the same time period last year they had used a lot less or a little less were categorized as ‘Less’ (46 percent of respondents). The remaining respondents were categorized as ‘About the Same or More’ (54 percent of respondents). The respondents in the “Less” category appeared to be slightly more positive regarding the usefulness of the HERs, satisfaction with the HER Program, and appeared to be slightly more likely to recall one or more of the energy-saving tips provided in the HERs, however none of the differences between the respondents in the “Less” and “More” categories were statistically significant at the 90 level of confidence.





For the Less Category, respondents most frequently reported the difference in electricity use was due to increased awareness of their household's energy use and changes they made with respect to their energy behaviors ([Table 14](#)). Those in the 'About the Same or More' category most frequently reported the difference in electricity use were due to a change in household size, or they simply didn't know the reason behind their change in usage. These data suggest the Home Energy Reports may have increased awareness of their household electricity use for at least one-half of participants;

### **3.1.5 Satisfaction with HER Program**

#### *a. Recommend HER Program to Others*

One-third of respondents (32 percent) indicated they would be very likely to recommend the HER Program to others, if it were available. An additional 37 percent indicated they were somewhat likely to recommend the HER Program ([Table 15](#)), indicating that a majority of participants saw some value in the program.

#### *b. Overall Satisfaction with HER Program*

Respondents were asked to rate their overall satisfaction with the program on a scale of one to five, where one is 'Very Unsatisfied' and five is 'Very Satisfied.' Less than one-half (47.8%) reported a high level of satisfaction (a rating of 4 or 5 on the 5-point scale), while 21.3% reported a low level of satisfaction (a rating of 1 or 2 on the 5-point scale), and more than thirty percent (30.9%) rated their satisfaction level as '3,' suggesting they were neutral or indifferent about the Program ([Table 16](#)). We do not have comparable customer satisfaction data on other programs similar to the HER Program, where participants are auto-enrolled, so we are not able to evaluate satisfaction with the UI HER Program relative to other programs with a similar design; however, when compared with other utility-sponsored energy efficiency programs, where participation is voluntary, the auto-enrolled participants report a modest level of satisfaction.

#### *c. Suggestions for HER Program Improvements*

Overall, respondents' most frequently mentioned suggestions for improving the HER Program included providing more information on the selection and characteristics of the neighbor group they are being compared to, diagnostic information about why their household usage is high or low relative to the neighbor comparison group, and additional resources for high usage households ([Table 17](#)). The suggestion to provide additional information about the neighborhood comparison group is consistent with respondents' concerns about the HER Program already discussed above, namely that many respondents do not trust the neighbor comparison to be an appropriate comparison for their household; as one respondent suggests, "I would like to know what type of homes I was being compared to, what were the sizes of the homes, so I can understand if it was a fair comparison." It is beyond the scope of the HER Program to provide diagnostic information on household electricity use to participants, although the HER Program website provides some additional amount of tailoring the energy savings tips and recommendations for households who set up an on-line account. This opportunity to receive more tailored information may appeal to participants if it is presented more effectively. Finally, respondents suggestion to provide resources for high consumption households indicates that recommendations (among the energy-saving tips) that customers use the Home



Energy Solutions (HES) should be emphasized more. One respondent suggests incorporating CL&P rebate opportunities into the report, *“Maybe if you gave immediate hints it would be helpful. I am always looking for rebates. If something like a rebate could be incorporated. I’ve given up trying to get my wife to turn off the lights.”*

### 3.1.6 Demographic Characteristics of Auto-enrolled Customers

The majority of respondents are over the age of 45, and 99 percent owned their residence, most often a single family residence. Over 60 percent of respondents reported at least a college degree and slightly more than one-half report an annual household income of \$100,000 or greater in 2010 ([Table 18](#)).

## 3.2 FOCUS GROUP DISCUSSIONS

### 3.2.1 Customers’ Evaluation of the HER Program

Approximately one-half of focus group participants generally felt receiving the HERs was a positive, however, only a few of these participants felt it would be a serious loss if they did not receive them anymore. Other participants were more critical of the HERs and the Program, with some participants expressing the opinion that customers who receive the HERs are being “singled out” or “punished” by UI for high electricity consumption.<sup>9</sup> The findings from all three groups are consistent with the Early Participant Survey result that showed one-half of the respondents were neutral or dissatisfied with the HERs Program.

When asked how the HER information and format could be improved, a few participants indicated they would prefer not to receive the HERs at all. In response to this question, most participants indicated they would like to see significant changes in the HER, including more personalization of the information, more relevant energy-saving tips (*“Give me practical solutions, not generic ones, then we will get somewhere.”*), streamlining of the HER information presented, less focus on the neighbor comparison, and online delivery (nearly all participants were unaware that online delivery of the HERs was an option). Some participants in each focus group pointed out that delivery of paper copies of the HERs was not an environmentally friendly practice.

All participants attributed sponsorship of the HERs to UI. Only a small number of participants in the second and third focus group discussions recalled seeing the CEEF logo or any indication of CEEF participation in the HER Program.<sup>10</sup> None of the participants recalled the tri-fold ‘Welcome’ brochure, which introduced the program and the sponsors and explained the HER.

### 3.2.2 Customers’ Engagement and Use of the HER Information

Overall, most of the focus group participants were only moderately engaged with the HERs. When we passed out an example of the HER ([Appendix E](#)), almost everyone quickly noticed some basic information they had not noticed before. This suggests that typical readership (outside of the focus group environment) is cursory. In each of the three focus groups, there

---

<sup>9</sup> Since high-use customers were targeted for program participation, the customer perception is understandable.

<sup>10</sup> The awareness and recognition of CEEF sponsorship was discussed in the second and third focus group discussions.



were a small number of participants who did not remember ever seeing a back (second) page. During a session, one participant acknowledged, *“I admit I don’t read the back page.”*

Most participants generally described the overall layout and content of the HER as acceptable. However, some felt the presentation of information was too impersonal, lacking any personalized messages that would suggest the information was tailored to their household. This perception was particularly true for the energy saving tips which many described as ‘generic’ and not varying enough from one month to the next. This is contrary to the description of tips as ‘personalized’ on the HER itself (see sample HER in [Appendix E](#)).

Some participants felt too much information was presented in the HERs. These participants were most interested in more personalized information, specifically tailored to their household, including more focus on historical comparisons of their own household’s electricity consumption, rather than comparisons with ‘neighbor’ groups.

Only a small number of participants recalled noticing the information about the HER Program website. Further, there was some confusion among these participants about the distinction between the general UI website ([uinet.com](#)) and the HER Program website ([uinet.com/energyreports](#)).

### 3.2.3 Content of the Home Energy Reports

The neighbor comparisons were the most noticed and most recalled information from the HERs. Most mentioned the current month bar graph or the 12-month line graph as the information they notice first. Nearly all participants reported their monthly consumption was always greater than the average of the “All Neighbors” group. This led many to believe they were being compared to households that were not comparable to theirs. A participant stated, *“Mine’s above everybody’s. Mine’s way up there. I have a grandchild, but no pool. [My] neighbors are at home all the time. [I used to] keep my porch light on at night - now I turn it off. You like it lit though. How can mine be higher than all my neighbors?”*

For many participants, the neighbor comparisons were described as discouraging, rather than motivating them to consider how to reduce their electricity use. Most participants indicated they did not even look at the monthly use for the “Efficient Neighbors” group, because it was so different from theirs and seemed ‘unrealistic.’ The Massachusetts Cross-Cutting Behavioral Program Evaluation also reported the HERs evoke a sense of competitiveness among participants toward their neighbors that can be negative and distrustful of the data when it shows they consistently use substantially more electricity than the neighbors.<sup>11</sup>

Only a few participants recalled seeing the explanation that described the ‘Neighbors’ as households with similar characteristics within a specified distance from their residence. Many thought they were being compared to all households in their immediate neighborhood and cited examples of households they knew to be very different than theirs.

Participants in the third focus group were asked to interpret the Last Month Neighbor Comparison (bar graph) and the Last 12 Months Neighbor Comparison (line graph). Only a few participants understood that the “All Neighbors” group represented an average of the approximately 100 comparison households. When their usage was higher than the “All

---

<sup>11</sup> Massachusetts Cross-Cutting Behavioral Program Evaluation, Volume II Final, pages 59-60, Opinion Dynamics Corporation, Prepared for the Massachusetts Energy Efficiency Advisory Council, June 2011.



Neighbors” group, some participants interpreted this as an indication they were the highest use household in the entire ‘neighbor’ group.

### 3.2.4 Effect of HER Program on Participants’ Perception of UI

Overall, the HER Program appears to have had a small impact on participating customers’ view of UI, at best. In the focus group discussions, participants were asked to write a short answer to the question, “Has receiving the Home Energy Reports Program affected your perception of United Illuminating - either positively, negatively or no effect? Of the 23 focus group participants who recorded a response to this question, more than one-half indicated the HER Program did not affect their view of UI. A respondent stated, *“No effect. UI is an energy provider; I consider the report about me not the company.”* A small number reported more positive perceptions of UI, based on the HER Program, *“I think it is positive. It is a way to inform you more about your energy usage.”* The Massachusetts Cross-Cutting Behavioral Program Evaluation also concluded that “the HER Reports have a neutral effect on National Grid customer satisfaction.”<sup>12</sup>

---

<sup>12</sup> Massachusetts Cross-Cutting Behavioral Program Evaluation, Volume II Final, page 62, Opinion Dynamics Corporation, Prepared for the Massachusetts Energy Efficiency Advisory Council, June 2011.



## 4. KEY FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

---

The Key Findings and Conclusions presented below, organized by study objective, reflect the combined results and conclusions based on the Survey and the Focus Group Discussions.

### 4.1 KEY FINDINGS AND CONCLUSIONS

#### Level of awareness and customer engagement:

Although awareness of the HERs is high, there is only a modest level of customer engagement. Specifically, while most participants say they read the HERs, the depth of reading appears to be at a cursory level.

- More than 40 percent of respondents could not recall any specific energy saving tips from the HERs. The two most frequently recalled energy saving tips were installing energy efficient light bulbs and shutting off appliances when not in use, actions which are widely known by most consumers.
- When presented with an example HER, nearly all focus group participants quickly noticed key pieces of information they had not noticed previously, especially on the second (back) page. In each focus group discussion, some participants reported they had not realized there was a second page for the HER.
- In the two focus group discussions where the topic was addressed, participants assumed that the Program was sponsored by UI. When prompted, only a small number reported a 'vague' recollection of seeing the CEEF logo or any mention of CEEF as a sponsor of the Program.<sup>13</sup>

#### Usefulness of the HER information:

A majority of survey respondents find the information presented in the HERs only somewhat useful or less (not very or not at all useful). About one-quarter of respondents rate the HERs as 'Very Useful' for their household.

- Survey respondents were most likely to cite the last-month consumption comparison with neighbors (19%) and the energy-saving tips (17%) as the single most useful HER information, although 23 percent indicated the HER provided no useful information.
- Most focus group participants were not aware of the definition of "neighbor group" provided on the HER and believed the neighbor comparison group for their household was not comparable.
- For respondents who rated the HER information as 'Not at all' or 'Not Very' Useful, the perceived inappropriateness of the neighbor comparison was the most frequently cited reason (43%). One quarter of those who rated the HER information as "Somewhat" or 'Very' useful also believed the neighbor comparisons were inappropriate.

---

<sup>13</sup> The awareness and recognition of CEEF sponsorship was discussed in the second and third focus group discussions.



- Both focus group and survey respondents indicated that the neighbor comparison information is not useful without more specific diagnostic information about why their household's level of electricity usage is high or low.

#### Satisfaction with the HER Program:

Respondents report a moderate level of satisfaction with the Program. Less than one-half (47.9%) of respondents report a positive overall satisfaction rating (a rating of 4 or 5 on a 5-point scale) for the HER. More than half (52 percent) report a rating of 3 or lower.<sup>14</sup>

- Some participants in each focus group discussion indicated the neighbor comparisons were “discouraging” or “demotivating” because their energy use was consistently higher than the “average of all neighbors.”
- A small number of participants in each focus group believed they had been singled out by UI as “high energy users,” because they were not aware of any other households in their area who received the HERs.

#### Actions participants report taking in response to HERs:

Almost one-half of respondents believe they are using less electricity than they did for the same time period last year. A majority of these respondents attribute their perceived decrease in electricity use to greater awareness of their household electricity use and changes they have made in energy-using behaviors.

Less than one-half of respondents (44%) reported implementing one or more of the energy efficiency and conservation actions provided in the HERs.

- Changing to energy-efficient light bulbs (39%) and shutting off or unplugging unused appliances (27%) were the most frequently mentioned actions.

Respondents were asked about any additional actions they intend to take. About 38% indicated they did not intend to make more energy efficiency improvements; however, of those who indicated they planned additional actions, 47% had no specific improvements in mind. It is possible that these findings on participants' self-reported actions and intentions, based on information from their HERs, may be subject to attribution bias. It has been shown in some studies that individuals are not always able to accurately identify the factors that influence their behaviors.<sup>15</sup> In this case, it is possible that the HERs served to influence some participants' decisions, even though they attributed the key factors to other sources.

---

<sup>14</sup> For the 5-point overall satisfaction scale, where a score of 5 is labeled “Very Satisfied” and a score of 1 is labeled “Very Unsatisfied,” we interpret scores of 4 and 5 as positive (or high satisfaction), a score of 3 as neutral or indifferent, and scores of 1 and 2 as negative (or low satisfaction).

<sup>15</sup> Breaking Out of the Economic Box: Energy Efficiency, Social Rationality and Non-Economic Drivers of Behavioral Change, Karen Erhardt-Martinez and John A. (Skip) Laitner, ACEEE, Paper ID# 1350, 2009.



### Respondents' and Focus Group Participants' suggestions to increase customer engagement and satisfaction:

The most common suggestions for making the program more useful and engaging include the addition of more information about how appropriate the neighbor comparison group is and more specifically tailored information for their household about how to reduce electricity use.

- Some participants in each focus group discussion indicated the HERs presented more information than they wanted to read. These participants wanted more personalized information, specifically tailored to their household, and on historical comparisons of their energy use, rather than neighbor comparisons.
- Some participants in each focus group discussion described the presentation of information as too impersonal or too generic. This perception was particularly true for the energy saving tips which were not perceived to vary much from one month to the next.
- Even though the HERs indicate more tailored information is available to customers who access the Program website and set up an online account, more than one-half of respondents had not noticed the information about the Program website.

Similar recommendations from participants' were reported in the Massachusetts Cross-Cutting Behavioral Program Evaluation.<sup>16</sup>

## **4.2 RECOMMENDATIONS**

The recommendations presented below are based on the evaluation findings.

- Provide more explanation of how the neighbor comparison group is selected and how to interpret the neighbor comparisons. The appropriateness of the neighbor group that was selected for comparisons is a major concern for many auto-enrolled customers.
- Develop a strategy that will motivate (and perhaps reward) customers for visiting the Program website and establishing an on-line account. Customers who establish an on-line account will provide additional information about their household and electricity use and this should enable program implementers to provide more tailored energy saving tips and analysis.
- Offer and encourage auto-enrolled customers to take the opportunity to receive HERs by email. For some, receiving HERs by email might increase the likelihood they will access the Program website, which might lead to establishing an on-line account.
- Provide some form of recognition on the HERs for households that decrease electricity use, even if they do not qualify for a "Great" or "Good" rating. This will help to maintain motivation among households who have consistently high use relative to their neighbor comparison group.

---

<sup>16</sup> Massachusetts Cross-Cutting Behavioral Program Evaluation, Volume II Final, pages 63-64, Opinion Dynamics Corporation, Prepared for the Massachusetts Energy Efficiency Advisory Council, June 2011.



- Many auto-enrolled customers who consistently use more electricity than the average of the “All Neighbors” group want more detailed diagnostic information on why their electricity use is high. In addition to the HERs, UI might develop a targeted offer of the Home Energy Solutions Program for these customers, indicating that this program will provide them with specific diagnostic information on why their household electricity use is higher than some of their neighbors.





## APPENDIX A: SURVEY DATA TABLES

**Table 1 – Reported Household Use of the Home Energy Reports**

| Personal Use of HER                            | Percent (N=98) |
|--|----------------|
| Someone reads the whole report                 | 55.1%          |
| Someone reads certain parts of the report      | 23.5%          |
| Someone skims it or just glances at it quickly | 20.4%          |
| No one reads it - we ignore it                 | 1.0%           |

Source: Question A7

**Table 2 – Ease of Understanding Home Energy Reports**

| Ease of Understanding HER        | Percent (N=97) |
|----------------------------------|----------------|
| Very easy to understand          | 60.8%          |
| Somewhat easy to understand      | 34.0%          |
| Somewhat difficult to understand | 5.2%           |
| Very difficult to understand     | 0.0%           |

Source: Question A10

**Table 3 – Home Energy Report Information Recalled by Participants**

| HER Information Recall                                 | Percent (N=97) |
|--|----------------|
| *Last month neighbor comparison                        | 38.1%          |
| Your rank out of 100 neighbors                         | 29.9%          |
| *12 month neighbor comparison                          | 20.6%          |
| *Neighbor comparison, not specified                    | 18.6%          |
| Energy-savings tips                                    | 18.6%          |
| How you are doing, Smiley faces and labels             | 17.5%          |
| Amount of annual savings or cost compared to neighbors | 8.2%           |
| *Total energy use                                      | 5.2%           |
| Other  | 4.0%           |
| *Changes in use or bill                                | 2.1%           |
| Don't know   | 2.1%           |

Source: Question A8

\* Category created by coding 'Other' responses

Note: Multiple responses allowed, so total is greater than 100%



**Table 4 – Most Useful Aspects of Home Energy Reports**

| <b>Most Useful Aspects of HER</b>                      | <b>Percent (N=97)</b> |
|--|-----------------------|
| No information is useful                               | 22.7%                 |
| *Last month comparison                                 | 18.6%                 |
| Energy-savings tips                                    | 17.5%                 |
| Your rank out of 100 neighbors                         | 14.4%                 |
| *Neighbor comparison, not specified                    | 14.4%                 |
| *12 month comparison                                   | 12.4%                 |
| Don't know   | 6.2%                  |
| *Total consumption                                     | 6.2%                  |
| How you are doing, Smiley faces and labels             | 4.1%                  |
| *Changes in bill or usage                              | 3.1%                  |
| Amount of annual savings or cost compared to neighbors | 2.1%                  |
| Other  | 2.1%                  |
| *Link to website                                       | 1.0%                  |
| *Customer service number                               | 1.0%                  |
| *Whole report  | 1.0%                  |

Source: Question A9

\* Category created by coding 'Other' responses

Note: The question format was open-ended with multiple responses, and responses were coded and combined into categories. Confidence intervals were not calculated for these response categories since the responses are not independent and there are differences in the number of responses given by respondents.

**Table 5 – Reported Usefulness of Neighbor Comparison**

| <b>Neighbor Comparison</b> | <b>Percent (N=94)</b> |
|----------------------------|-----------------------|
| Very useful                | 28.7%                 |
| Somewhat useful            | 37.2%                 |
| Not very useful            | 21.3%                 |
| Not at all useful          | 12.8%                 |

Source: Question A12

**Table 6 – Overall Rating of Usefulness of Home Energy Reports**

| <b>HER Overall</b> | <b>Percent (N=96)</b> |
|--------------------|-----------------------|
| Very useful        | 27.1%                 |
| Somewhat useful    | 51.0%                 |
| Not very useful    | 10.4%                 |
| Not at all useful  | 11.5%                 |

Source: Question A14



**Table 7 – Reported Reasons for Usefulness Rating for Home Energy Reports**

| Reasons for Home Energy Reports Usefulness Rating         | Rating of Not useful** (N=25) | Rating of Useful** (N=75) |
|---|-------------------------------|---------------------------|
| *Neighbor information is inaccurate for comparison        | 42.9%                         | 25.0%                     |
| *Neighbor comparison is informative                       | 0.0%                          | 8.7%                      |
| *Enforces changes in energy usage                         | 4.8%                          | 13.0%                     |
| *Does not provide information on why usage is high or low | 28.6%                         | 17.4%                     |
| * Raises awareness to household usage                     | 4.8%                          | 26.1%                     |
| *More people should have the report                       | 0.0%                          | 0.0%                      |
| *No changes can be made in energy usage                   | 9.5%                          | 2.2%                      |
| *Energy tips are helpful                                  | 4.8%                          | 4.3%                      |
| *Nothing specified  | 4.8%                          | 3.3%                      |

Source: Question A15 by usefulness ranking

\* Category created by coding 'Other' responses

\*\* Rating of 'Not Useful = Not very useful + Not at all useful; Rating of Useful = Very or Somewhat useful

Note: Multiple responses allowed, so total is greater than 100%

**Table 8 – Reported Recall and Use of HER Program Website  
Address from HER Program**

| Recall of Website from HER | Percent (N=96) |
|----------------------------|----------------|
| Yes                        | 41.1%          |
| No                         | 58.9%          |

| Visited HER Website | Percent (N=38) |
|---------------------|----------------|
| Yes                 | 26.3%          |
| No                  | 73.7%          |

Source: Questions B1, B2



**Table 9 – Reported Reasons for Not Visiting Home Energy Report Website**

| <b>Reasons for Not Visiting HER Website</b>          | <b>Percent (N=27)</b> |
|--|-----------------------|
| *No time   | 37.0%                 |
| *Don't use computer often                            | 14.8%                 |
| *It is not useful                                    | 14.8%                 |
| *Don't want to                                       | 14.8%                 |
| *Don't know  | 11.1%                 |
| *Had problems with website when previously attempted | 3.7%                  |
| *Other family member looks at website                | 3.7%                  |

Source: Question B2A

\* Category created by coding 'Other' responses

Note: Multiple responses allowed, so total is greater than 100%

**Table 10– Recalled Energy Efficiency Tips**

| <b>Recalled Energy Efficiency Tips</b>     | <b>Percent (N=85)</b> |
|--|-----------------------|
| *I don't know or Can't remember            | 47.1%                 |
| *Changing light bulbs to efficient ones    | 31.8%                 |
| *Shutting off/Unplugging unused appliances | 20.0%                 |
| *Turn off lights                           | 14.1%                 |
| *Buying efficient appliances               | 10.6%                 |
| *Weather stripping                         | 8.2%                  |
| *Energy audit                              | 7.1%                  |
| *Using at off peak times                   | 7.1%                  |
| *Lowering/raising temperature settings     | 5.9%                  |
| *Unplug chargers                           | 3.5%                  |

Source: Question T0

\* Category created by coding 'Other' responses

Note: Multiple responses allowed, so total is greater than 100%



**Table 11 – Reported Energy Efficiency Actions Taken from Home Energy Reports**

| <b>Energy Efficiency Actions Taken from HER</b> | <b>Percent (N=44)</b> |
|---|-----------------------|
| *Changing light bulbs to efficient ones         | 38.6%                 |
| *Shutting off/Unplugging unused appliances      | 27.3%                 |
| *I don't know or Can't remember                 | 18.2%                 |
| *Turn off lights                                | 18.2%                 |
| *Buying efficient appliances                    | 18.2%                 |
| *Using at off peak times                        | 15.9%                 |
| *Weather stripping                              | 6.8%                  |
| *Energy audit                                   | 6.8%                  |
| *Reduce run time on pool timer                  | 4.5%                  |
| *Unplug chargers                                | 4.5%                  |
| *Lowering/raising temperature settings          | 4.5%                  |
| *Using cold water for clothes washer            | 2.3%                  |
| *Using a clothes line instead of clothes dryer  | 2.3%                  |
| *Sectional lighting                             | 2.3%                  |
| *I have done everything                         | 2.3%                  |

Source: Question T1A

\* Category created by coding 'Other' responses

Note: Multiple responses allowed, so total is greater than 100%



**Table 12 – Anticipated Energy Efficiency Actions to Implement from HERs**

| <b>Anticipated Energy Efficiency Actions to Take from HER</b> | <b>Percent (N=62)</b> |
|---|-----------------------|
| *I don't know or Can't remember                               | 25.8%                 |
| *I will refer to report for tips at a later time              | 21.0%                 |
| *Buying efficient appliances                                  | 12.9%                 |
| *If they pertain to me, I would try them                      | 11.3%                 |
| *Shutting off/Unplugging unused appliances                    | 9.7%                  |
| *Changing light bulbs to efficient ones                       | 9.7%                  |
| *I have done everything                                       | 6.5%                  |
| *Turn off lights  | 3.2%                  |
| *Energy audit   | 3.2%                  |
| *Using at off peak times                                      | 3.2%                  |
| *Weather stripping  | 1.6%                  |
| *Some tips do not pertain to me                               | 1.6%                  |
| *Lowering/raising temperature settings                        | 21.0%                 |

Source: Question T2A

\* Category created by coding 'Other' responses.

Note: Multiple responses allowed, so total is greater than 100%

**Table 13 – Reported Difference in Electricity**

| <b>Difference in Electricity Use</b> | <b>Percent (N=96)</b> |
|--------------------------------------|-----------------------|
| A lot less                           | 5.2%                  |
| A little less                        | 40.6%                 |
| About the same                       | 37.5%                 |
| A little more                        | 7.3%                  |
| A lot more                           | 9.4%                  |

Source: Question T3



**Table 14 – Reported Reasons for Difference in Electricity**

| <b>Reasons for Difference in Electricity Use</b>   | <b>About the Same or More (N=18)</b> | <b>Less (N=42)</b> |
|--|--------------------------------------|--------------------|
| *Changes in energy behavior                        | 11.1%                                | 42.9%              |
| *Don't know  | 33.3%                                | 9.5%               |
| *Household size has changed                        | 27.8%                                | 14.3%              |
| *More aware of usage                               | 5.6%                                 | 26.2%              |
| *Changes in weather                                | 16.7%                                | 14.3%              |
| *The reports                                       | 0.0%                                 | 11.9%              |
| *Changes to home                                   | 11.1%                                | 4.8%               |
| *Household events are different from previous year | 11.1%                                | 0.0%               |

Source: Question T4 by difference in electricity use from this year to last year

\* Category created by coding 'Other' responses, Multiple responses allowed



**Table 15 – Recommending HER Program**

| Likelihood of recommending program to friend or colleague | Percent (N=97) |
|---|----------------|
| Very likely   | 31.96%         |
| Somewhat likely   | 37.11%         |
| Somewhat unlikely   | 12.37%         |
| Very unlikely   | 18.56%         |

Source: Question C2

**Table 16 – Overall Program Satisfaction**

| Overall HER Satisfaction | Percent (N=94) |
|--------------------------|----------------|
| 1 - Very Unsatisfied     | 8.5%           |
| 2                        | 12.8%          |
| 3                        | 30.9%          |
| 4                        | 31.9%          |
| 5 - Very Satisfied       | 16.0%          |
| Mean                     | 3.0            |

Source: Question C3

**Table 17 – Recommendations for HER Program Improvements**

| Recommendations for HER Program Improvements                       | Percent (N=94) |
|--|----------------|
| *More information on neighbor comparison                           | 23.4%          |
| *More information on why usage is high or low, household specifics | 16.0%          |
| *Nothing   | 16.0%          |
| *Additional resources for high usage scores                        | 10.6%          |
| *Comparison of rates for other utility providers, lower rates      | 5.3%           |
| *Show time of day and usage  | 3.2%           |
| *Real time feedback on usage                                       | 2.1%           |
| *Monetary incentives for participation                             | 1.1%           |
| *Tracking monthly changes  | 1.1%           |
| *Don't know  | 21.3%          |

Source: Question C4

\* Category created by coding 'Other' responses

Note: Multiple responses allowed, so total is greater than 100%





**Table 18 – Household Characteristics of Participants**

| <b>Household Characteristics of Participants</b>                       |  | <b>Percent</b> |
|--|--|----------------|
| Age Category   | Less than 18 years old                             | 26.9%          |
|  | 18-24 years old                                    | 19.2%          |
|  | 25-34 years old                                    | 23.1%          |
|  | 35-44 years old                                    | 15.4%          |
|  | 45-54 years old                                    | 32.7%          |
|  | 55-64 years old                                    | 34.6%          |
|  | 65 or older  | 23.1%          |
|  | Total  | N=52           |
| Do you own or rent your current residence?                             | Own  | 99.0%          |
|  | Rent   | 1.0%           |
|  | Total  | N=99           |
| What type of residence do you live in?                                 | Single family residence                            | 91.8%          |
|  | Duplex or two family residence                     | 5.1%           |
|  | Apartment or condo with 2-4 units/families         | 1.0%           |
|  | Apartment or condo with more than 4 units/families | 2.0%           |
|  | Total  | N=98           |
| Education completed  | Some high school                                   | 2.0%           |
|  | High school graduate or equivalent                 | 14.0%          |
|  | Trade or technical school                          | 5.0%           |
|  | Some college                                       | 13.0%          |
|  | College graduate degree                            | 30.0%          |
|  | Some graduate degree                               | 4.0%           |
|  | Graduate degree                                    | 30.0%          |
|  | Other  | 1.0%           |
|  | Refused  | 1.0%           |
| Total  | N=100  |                |
| Which of the following best represents your household's annual income? | Less than \$20,000 per year                        | 1.2%           |
|  | \$20,000 to \$50,000                               | 8.4%           |
|  | \$50,000 to \$75,000                               | 15.7%          |
|  | \$75,000 to \$100,000                              | 22.9%          |
|  | \$100,000 to \$150,000                             | 30.1%          |
|  | \$150,000 to \$200,000                             | 13.3%          |
|  | \$200,000 or more                                  | 8.4%           |
|  | Total  | N=83           |



## APPENDIX B: SURVEY RESPONSE RATE

Table 1b lists the disposition of all sample records and the study cooperation and response rate. An original sample of 500 participants was selected. Prior to calling, an advance letter was mailed to the participants' household. To minimize the potential for non-response bias, an initial group of 300 sample records was activated. The remaining 200 sample records were not activated, because the survey reached the completion target of 100 with the initial sample allocation.

The United Illuminating Home Energy Reports Pilot Program Survey was in the field from September 19, 2011 to October 4, 2011. The average survey length was 14 minutes. A detailed breakdown of the dispositions for all sampled cases, as well as the survey response rate is shown below.

**Table 1b – Sample Cooperation and Response Rate**

| <b>Sample Disposition</b>                  | <b>Total Sample</b> |
|--|---------------------|
| <b>Starting Sample</b>                     | <b>300</b>          |
| <b>Duplicates<sup>5</sup></b>              | <b>0</b>            |
| <b>Sample Size</b>                         | <b>300</b>          |
| Not at number <sup>4</sup>                 | 8                   |
| Fax/data line <sup>4</sup>                 | 2                   |
| Number not in service <sup>4</sup>         | 21                  |
| Disconnected number <sup>4</sup>           | 4                   |
| Non-household number                       | 4                   |
| Ineligible - Deceased                      | 2                   |
| Ineligible - Does not recall participation | 11                  |
| <b>Adjusted Sample Size</b>                | <b>248</b>          |
| Hard Refusal                               | 29                  |
| Soft Refusal <sup>1</sup>                  | 3                   |
| Incompletes (partial interviews)           | 3                   |
| Unavailable for duration                   | 1                   |
| Incapable/incoherent                       | 0                   |
| Language barrier/non-English               | 3                   |
| Active <sup>2</sup>                        | 209                 |
| <b>Completed Surveys</b>                   | <b>100</b>          |
| <b>Cooperation Rate<sup>3</sup></b>        | <b>40.3%</b>        |
| <b>Response Rate</b>                       | <b>33.3%</b>        |

<sup>1</sup> Attempts were made to convert all soft refusals.

<sup>2</sup> An average of 9 contacts per active case were made to attempt to complete the interview.

<sup>3</sup> Number of completed surveys divided by Adjusted Sample Size.

<sup>4</sup> All bad numbers were traced with a telephone append service or directory assistance service.

<sup>5</sup> Case had combination of same contact name, company name, account number, and/or phone



## APPENDIX C: SURVEY QUESTIONNAIRE

### UNITED ILLUMINATING RESIDENTIAL HOME ENERGY REPORTS PILOT PROGRAM SURVEY QUESTIONNAIRE

#### SURVEY OBJECTIVES

- Recall, readership, and evaluation of Home Energy Reports
- Use of UI Home Energy Reports website and general UI website
- Actions participants have taken or anticipate taking because of HER Program
- Participants' satisfaction with HER Program and suggestions for improvement
- Household and Respondent Characteristics

#### Introduction to Telephone Survey

Hello, my name is [interviewer name], and I'm calling on behalf of United Illuminating. May I speak with [named respondent]?

- 1 Yes
- 2 No [*If named respondent is not available: ask for another adult who is most involved in managing their household's energy use*]

I'm with Tetra Tech, an independent research firm. We are talking with customers of United Illuminating to understand their views on energy use and conservation. You may have received a letter regarding this. I'm not selling anything; I'd just like to briefly talk about your household's energy use. Your responses will be kept confidential and your name will not be revealed to anyone. For quality assurance, these calls are recorded.

**(Who is United Illuminating?)** *United Illuminating is the second largest investor-owned electric distribution company in the state, serving more than 324,000 customers.*

**(Why are you conducting this study?)** *Studies like this will help United Illuminating better understand customers' needs and to design their energy conservation programs accordingly.*

**(How did you get my name or number?)** *Your name and phone number were provided by United Illuminating. You were one of 200 customers randomly selected for this study.*

**(How long will this take?)** *This survey should take 15 minutes or less. IF THIS IS NOT A GOOD TIME, SET UP A CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070.*

**(Are you trying to sell me something?)** *This is not a sales call; we would simply like to learn about your household's experiences with energy use and conservation. Your responses will be kept confidential. If you would like to talk with someone at United Illuminating regarding this work, please call [NAME OF UI Contact Person or Customer Service Center] at XXXXX.*



## Recall, Readership, and Evaluation of Home Energy Reports

### *[A1 AND A2 FOR AUTO-ENROLLED (OPT-OUT) SAMPLE ONLY]*

**A1** Our records show that you are currently participating in the Home Energy Reports Program sponsored by United Illuminating and the Connecticut Energy Efficiency Board. Is that correct?

- 1 Yes
- 2 No -----→ You would have received a letter in January or February, as well as a report each month telling you about your electricity consumption. Do you remember receiving the letter and the monthly Home Energy Reports?
  1. Yes
  2. No -----→ THANK AND TERMINATE
- D Don't know -----→ You would have received a letter in January or February, as well as a report each month telling you about your electricity consumption. Do you remember receiving the letter and the monthly Home Energy Reports?
  1. Yes
  2. No -----→ THANK AND TERMINATE

**A2** How did you initially find out that you had been selected to participate in the Home Energy Reports Program?

- 1 Letter from UI
- 2 Received our first Home Energy Report
- 3 Other (SPECIFY)

### *[A3 – A5 FOR OPT-IN PARTICIPANT SAMPLE ONLY]*

**A3** Our records indicate that you recently signed up to participate in the Home Energy Reports sponsored by United Illuminating and the Connecticut Energy Efficiency Board. Is that correct?

- 1 Yes
- 2 No --→ You would have received a letter in January or February, as well as a report each month telling you about your electricity consumption. Do you remember receiving the letter and the monthly Home Energy Reports?
  1. Yes
  2. No -----→ THANK AND TERMINATE
- D Don't know
- R Refused



**A4** How did you first find out about the Home Energy Reports Program? [DO NOT READ]

- 1 From the UI Facebook page
- 2 An energy efficiency blog or article
- 3 Event or visit to Smart Living Center
- 4 Clean Energy Task Force in your community
- 5 UI Company e-mail (for UI Employees living in CT)
- 8 Other [PLEASE SPECIFY]
- D Don't recall
- R Refused

**A5** What were your primary reasons for deciding to participate in the Home Energy Reports Program? (DO NOT READ LIST, RECORD MULTIPLE RESPONSES)

- 1 I wanted to save money on my utility bill
- 2 I wanted to learn how to conserve electricity in my household
- 3 I wanted to learn more about how my household uses electricity
- 4 I wanted to support United Illuminating in their programs
- 5 I just signed up and wasn't sure what was involved in the program
- 6 Other (SPECIFY)
- D Don't know
- R Refused

*[ALL PARTICIPANTS]*

**A6** The Home Energy Reports Program provides a monthly report from United Illuminating showing your household's energy use and a comparison with some of your neighbors. Do you remember receiving any of these reports since January, 2011?

- 1 Yes
- 2 No → SKIP TO B1
- D Don't know
- R Refused

**A7** When you receive the monthly Home Energy Report in the mail, which of the following most accurately reflects what you personally do with the report? (CHOOSE ONE)

- 1 No one reads it – we ignore it
- 2 Someone skims it or just glances at it quickly
- 3 Someone reads certain parts of the report
- 4 Someone reads the whole report



- A8** What types of information, if any, do you remember from the Home Energy Reports for your household? [DON'T READ RESPONSE CATEGORIES, ASK "ANYTHING ELSE" UNTIL R SAYS "NO," CHECK ALL THAT APPLY]
- 1 None – don't remember any information from report
  - 2 Last month's consumption
  - 3 Neighbor's consumption for the last month
  - 4 How you are doing – Smiley faces and label 'Great, Good, More than average'
  - 5 Amount of annual savings/extra cost compared to neighbors
  - 6 Your rank out of 100 neighbors
  - 7 Energy-savings tips
  - 8 Other (SPECIFY)
- A9** [IF A8 = 2-8] What information, if any, from the Home Energy Reports do you find is most useful for your household? [DON'T READ RESPONSE CATEGORIES, CHECK ALL THAT APPLY]
- 1 None – don't find any of the information useful
  - 2 Last month's consumption
  - 3 Neighbor's consumption for the last month
  - 4 How you are doing – Smiley faces and label 'Great, Good, More than average'
  - 5 Amount of annual savings/extra cost compared to neighbors
  - 5 Your rank out of 100 neighbors
  - 6 Energy-savings tips
  - 7 Other (SPECIFY)
- A10** How easy is it to understand the information that is presented in the Home Energy Report? Would you say it is (CHOOSE ONE):
- 1 Very easy to understand
  - 2 Somewhat easy to understand
  - 3 Somewhat difficult to understand
  - 4 Very difficult to understand
- A11** [Skip if A8=5 or A9=5] Do you recall seeing a comparison of your household's electricity use compared to a group of your neighbors in your Home Energy Reports?
- 1 Yes
  - 2 No ---→ SKIP TO A14
- A12** How useful do you find the comparison of your household's electricity consumption with a group of your neighbors? Would say this comparison is:
- 1 Very useful
  - 2 Somewhat useful



- 3 Not very useful
- 4 Not at all useful

**A13** [IF A12 = 3 or 4] Why do you say that? (OPEN-END RECORD VERBATIM)

---

**A14** Overall, would you say the Home Energy Report is useful or not useful for your household? Would say the report is:

- 5 Very useful
- 6 Somewhat useful
- 7 Not very useful
- 8 Not at all useful
- 9

**A15** Why do you say that? (OPEN-END RECORD VERBATIM)

---

### Use of UI Home Energy Reports Website and General UI Website

**B1** Do you remember seeing a link to a website on your Home Energy Report where you can find additional information about your energy use and energy efficiency tips and set up an online account to track your progress in saving energy?

- 1 Yes
- 2 No -----→ SKIP TO B6

**B2** Have you visited the website [uinet.com/energyreports](http://uinet.com/energyreports), using the link that is shown on your Home Energy Reports?

- 1 Yes
- 2 No -----→ Why have you not visited the website? AFTER OPEN, SKIP TO B6 (OPEN-END Record Verbatim) \_\_\_\_\_
- D Don't know
- R Refused

**B3** How easy or difficult was the website to use? Would you say it was:

- 1 Very easy to use
- 2 Somewhat easy to use
- 3 Somewhat difficult to use
- 4 Very difficult to use



**B4** How helpful did you find the information that was available at this website? Would you say it was:

- 1 Very helpful
- 2 Somewhat helpful
- 3 Somewhat unhelpful
- 4 Very unhelpful

**B5** [IF B2 = 1] Have you set up an online account for the Home Energy Reports Program, at the website [uinet.com/energyreports](http://uinet.com/energyreports)?

- 1 Yes
- 2 No -----→ Why have you not set up an online account for the program?  
(OPEN-END Record Verbatim) \_\_\_\_\_
- D Don't know
- R Refused

**B6** Have you visited the general UI website [uinet.com](http://uinet.com) to look for energy efficiency information or identify strategies to save energy in your home since January, 2011?

- 1 Yes ----→ About how often have you logged on to the UI website to look for energy efficiency information of energy-savings tips since January, 2011?
  - 1 Daily
  - 2 Several times per week
  - 3 Once per week
  - 4 Several times per month
  - 5 Monthly
  - 6 Less frequently than once per month
- 2 No
- D Don't know
- R Refused

**B7** How easy or difficult was the website to use? Would you say it was:

- 1 Very easy to use
- 2 Somewhat easy to use
- 3 Somewhat difficult to use
- 4 Very difficult to use

**B8** How helpful did you find the information that was available at this website? Would you say it was:

- 1 Very helpful
- 2 Somewhat helpful
- 3 Somewhat unhelpful
- 4 Very unhelpful





**Participants' Satisfaction with HER Program and Suggestions for Improvement**

**C1** Now I'd like to ask you about your experience with the program Overall. So far, has the Home Energy Reports program helped your household reduce your electricity use? Would you say: (CHOOSE ONE)

- 1 Definitely yes
- 2 Probably yes
- 3 Probably no
- 4 Definitely no

**C2** How likely is that you would recommend participating in the Home Energy Reports Program to a friend or colleague, if it were to be offered to all UI customers? Would you say you are:

- 1 Very likely
- 2 Somewhat likely
- 3 Somewhat unlikely
- 4 Very unlikely

**C3** Overall, on a scale from 1 – 5, where 1 equals Very Unsatisfied and 5 equals Very Satisfied, how satisfied are you with your household's participation in the Home Energy Report Program?

- 1 Very unsatisfied
- 2
- 3
- 4
- 5 Very satisfied

**C4** What, if anything, would you like to see in the Home Energy Reports Program to make it more helpful for your household? (OPEN-END RECORD VERBATIM)

---

**C5** Has anyone in your household called the UI Customer Service with a question or concern about the Home Energy Reports Program you began receiving them?

- 1 Yes
- 2 No -----> SKIP TO T1
- D Don't know -----> SKIP TO T1
- R Refused -----> SKIP TO T1



**C6** What was discussed with UI Customer Service regarding the Home Energy Reports Program? [OPEN-END – RECORD VERBATIM] \_\_\_\_\_

**Actions Participants Taken or Anticipate Taking Because of HER Program**

**T1** Have you tried any of the suggested energy efficiency tips from the Home Energy Reports Program website, the general UI website, or in your Home Energy Report?

- 1 Yes -----→ Which ones? (RECORD VERBATIM, ASK “ANYTHING ELSE” UNTIL R SAYS “NO,” RECORD MULTIPLE RESPONSES)
- 2 No
- 3 Don’t Know
- 4 Refused

**T2** [IF T1=2 OR T1=3] Do you anticipate trying any of the suggested energy efficiency tips from the Home Energy Reports Program website, the general UI website, or in your Home Energy Report?

- 1 Yes -----→ Which ones? (RECORD VERBATIM, ASK “ANYTHING ELSE” UNTIL R SAYS “NO,” RECORD MULTIPLE RESPONSES)
- 2 No
- 3 Don’t Know
- 4 Refused

**[Note: T1 and T2 open-end responses will be tabulated based on energy saving actions from UI HER website]**

**T3** I’d like you to think about whether there has been a difference in the amount of electricity your household has used in the last few months, compared to the same time last year. Would you say your household’s electricity use has been (CHOOSE ONE):

- 1 A lot less
- 2 A little less
- 3 About the same
- 4 A little more
- 5 A lot more
- D Don’t know
- R Refused

**T4** [IF T3=1, 2, 4, or 5] Why do you think there has been a difference in electricity use compared to the same time last year? (OPEN-END RECORD VERBATIM)

---





## Household and Respondent Characteristics

In this last section, I would like to ask you a few questions about yourself and your household. All of your responses will be kept completely confidential.

**D1** Including yourself, how many people currently live in your home year-round?

- \_\_\_\_\_ People living in home year-round  
D Don't know  
R Refused

**D2** *[IF D1 = 1]* Which of the following best describes your age? *[READ LIST]*

- 1 Less than 18 years old  
2 18-24 years old  
3 25-34 years old  
4 35-44 years old  
5 45-54 years old  
6 55-64 years old  
7 65 or older  
D Don't know  
R Refused

**D2\_A** *[IF D1 > 1]* Including yourself, how many people currently living in your home year-round are in the following age groups? *[READ CATEGORIES]*

- \_\_\_\_\_ Less than 18 years old  
\_\_\_\_\_ 18-24 years old  
\_\_\_\_\_ 25-34 years old  
\_\_\_\_\_ 35-44 years old  
\_\_\_\_\_ 45-54 years old  
\_\_\_\_\_ 55-64 years old  
\_\_\_\_\_ 65 or older

**D3** Do you own or rent your current residence? *[SELECT ONE]*

- 1 Own  
2 Rent  
D Don't know  
R Refused

**D4** What type of residence do you live in? *[READ CATEGORIES]* *[SELECT ONE]*

- 1 Single family residence  
2 Duplex or two family residence  
3 Apartment or condo with 2-4 units/families  
4 Apartment or condo with more than 4 units/families



- 5 Townhouse
- 6 Mobile home
- 7 Other (specify) \_\_\_\_\_
- D Don't know
- R Refused

**D5** Does your home have: *[READ CATEGORIES, SELECT ALL THAT APPLY]*

- 1 Electric heating
- 2 Electric dryer
- 3 Electric hot water heater
- 4 Electric stove or range
- 5 Hot tub
- D Don't know
- R Refused

**D6** In approximately what year was your house built? *[READ CATEGORIES] [SELECT ONE]*

- 1 Before 1900
- 2 1900 to 1930
- 3 1931 to 1950
- 4 1951 to 1970
- 5 1971 to 1990
- 6 1991 to present
- D Don't know
- R Refused

**D7** How many bedrooms are in your house?

- \_\_\_\_\_ Total bedrooms
- D Don't know
  - R Refused

**D8** What is the highest level of education you have completed? *[Read categories] (Select one)*

- 1 Less than high school
- 2 Some high school
- 3 High school graduate or equivalent (e.g., GED)
- 4 Trade or technical school
- 5 Some college
- 6 College graduate degree
- 7 Some graduate school
- 8 Graduate degree
- 9 Other (specify) \_\_\_\_\_
- D Don't know
- R Refused



**D9** Which of the following best represents your annual household income from all sources in 2010, before taxes? Was it...? [Read categories 1-7] (Select one)

- 1 Less than \$20,000 per year
- 2 \$20,000 - \$50,000
- 3 \$50,000 - \$75,000
- 4 \$75,000 - \$100,000
- 5 \$100,000 - \$150,000
- 6 \$150,000 - \$200,000
- 7 \$200,000 or more
- D Don't know
- R Refused

**D10** Respondent gender: [DO NOT READ] Is respondent male or female?

- 1 Female
- 2 Male



## APPENDIX D: FOCUS GROUP GUIDE

---

### UI 2011 Home Energy Report Pilot Program Focus Group Discussion Guide

#### I. Moderator Introduction (5 minutes)

**Welcome & Brief Introduction:** Welcome....As you may remember from the invitation call, United Illuminating and the Connecticut Energy Efficiency Board are interested in your feedback from the Home Energy Reports (the “Reports”) you have been receiving over the last eight months or so.

**Confidentiality:** The results of the discussion will be aggregated with results from other focus group discussions to develop a report for United Illuminating and the Connecticut Energy Efficiency Board. Specific names will not be attributed to any comments made and results from this group will be included with results from other groups in the report, so what you tell me tonight will remain confidential.

**No Right or Wrong Answers:** There are not any ‘right’ or ‘wrong’ answers for the questions we will discuss tonight. I don’t work for United Illuminating or the EEB, so nothing you say will hurt my feelings or make me feel better. I want to get your honest responses to the questions I ask during this discussion. If you have a different opinion than someone else in the group, I want to hear it. I want to hear the full range of opinions and there is no need to reach an agreement or a consensus for any of the questions.

**Recording:** We will record the session (audio and video), but let me assure you it will be used only for internal purposes. I do have [NUMBER] colleagues (indicate behind the glass) who will be listening in and taking notes. This is to help us capture all your input.

**Rules:** Please talk one at a time. When more than one person is talking, we can’t get all of the information you are providing. We want to hear from everyone, so I might ask you to hold that idea for a moment, so I can hear from someone else. Please be patient and we will give you a chance to say whatever you have to contribute. Please mute cell phones. The discussion will last about 90 minutes.

**Participant HERs:** If you brought your own Home Energy Report, please put them away for the entire discussion tonight.

**Logistics:** Availability of refreshments and food; directions to restrooms, any questions before we begin?

#### II. Participant Warm-up (5 minutes)

1. As we go around the table, please introduce yourself (identify your occupation, and the number of people who live in your household).

#### III. Customer Awareness of Pilot Program, Design, and Materials (10 minutes)

##### A. Initial Awareness and First HERs



1. Think back, when did you first become aware that you were receiving Home Energy Reports? [If not mentioned, probe for recall of a tri-fold introduction accompanying the first HER]
2. What did you think of the first HER that you received?
  - i. What did you do with the first HER you received (ignore, toss, quick read, keep, etc.)?
  - ii. Did you have any questions about the report or the information in the report? [Probe for any actions participants have taken to answer the questions and what they 'found out.']
  - iii. What does your household do with the HERs now when you receive them?

#### **IV. Customer Use and Satisfaction with HERs (30 minutes)**

**A. Pen and Paper Exercise** (remind participants there are no “right” or “wrong” answers for this exercise and we want to know them it is alright if they don’t do much with the Home Energy Reports. Ask Participants to record their first name only, as we will collect them after the discussion).

1. Hand out exercise and ask respondents to take a few minutes to write down answers to following 3 questions:
  - a. What, if anything, is the first thing you look at when you receive a Home Energy Report? [If you don’t look at the HERs, please indicate this].
  - b. If someone asked you to describe the Home Energy Reports you receive, how would you describe them?
  - c. Has receiving the Home Energy Reports affected your perception of United Illuminating – either positively, negatively, or no effect? Please explain briefly.

**B. Describe household’s level of readership of HERs** [NOTE: Begin discussion again]

1. Does anyone in your household read the HER? [IF YES] Who in your household reads the Home Energy Report? Do you discuss the energy information provided?
2. [If they read it] How do they read it – read entire report, read specific parts, glance/skim, ignore,
3. Do you share any of the information from the report with others in household who don’t read the report? Do you share the Report with anyone else outside of your household? [IF YES, who was it shared with and why]





4. Do you recall seeing information about a website for the Home Energy Reports? Has anyone visited the website? [IF YES, ask when they visited the website and what did they look for and find?]
  - a. Has anyone set up an on-line account on the Home Energy Reports website? Why or why not? [PROBE to see if anyone is aware of benefits of an online account]
  - b. If you could get information that is more tailored to your household by setting up an on-line account on the Home Energy Reports website, how likely would you be to do this? [Probe to see if anyone is aware that they can set up an account on the UI HER website and get more information and energy saving tips that are specifically tailored to your household]

**C. Recall of report content (not showing report yet) [Topics in this section may already be discussed – Discuss tip recall if not mentioned]**

1. When you think of the Home Energy Report, what's the first thing that comes to mind?
2. How interesting is the report? When the report arrives, is it something you look at right away or is it something you set aside and look at it later?
3. What types of information from the report do you recall?
4. What types of information provided are most interesting? Surprising?
5. What kinds of energy saving tips or advice do you recall from the Home Energy Report?

**D. Discuss example Home Energy Report**

1. [BEFORE HANDING OUT REPORT, SHOW FRONT PAGE AND ASK] 'Do you recall what information is included on the back page? How often do you look at the back page of the HER? How much time do you spend reading the back page, compared to the front page?

**[HAND OUT COPY OF REPORT TO PARTICIPANTS – note to participants that this report may be structured slightly differently from your own. Remind participants to focus on this report, rather than their own]**

2. What does this report tell you ? [IF NEEDED, PROBE: How is this household doing compared to last year? How is this household doing compared to their neighbors? What could they do to decrease electricity use?]
  - a. [IF NEIGHBOR COMPARISON IS MENTIONED] Who are the neighbors you are being compared to?



- b. Have you seen any change in your household's rank, relative to your neighbors over the eight months?
  - c. [SHOW OF HANDS] How many of you have received at least one "Great" rating (2 smiley faces?) How many of you have received at least one "More than average" rating (no smiley faces)?
3. Is the information understandable, interesting, or motivational?
  4. How has your perception of the HER changed over the last 8 months?
  5. Do you have any questions after reading the report?
  6. Is anyone has heard about or is familiar with the Connecticut Energy Efficiency Fund? [If yes, ask them to explain what they know about CEEF]. If no one is familiar point out the logo on the example HER and ask if anyone has noticed this logo on their HER].
  7. If you were to describe the Home Energy Reports to someone, how would you describe them?
  8. Has receiving the Home Energy Reports changed your opinion of United Illuminating? How?
  9. [IF NOT MENTIONED, ASK] Is there anything about the Home Energy Reports that you don't like or don't feel is useful for your household? [PROBE FOR trust or distrust comparison with neighbors, feel competitive or resigned to position among neighbors, if R is rated in top 1/3, does this make you want to improve or do you think you are already doing what you need to do]

**V. Suggestions for Improving HER Satisfaction and Customer Benefit (20 minutes)**

**A. How could the Home Energy Reports be of more use to your household? [IF NEEDED, PROBE:]**

1. What additional energy use information or comparisons?
2. Are there any changes you would like to see in the way the information is presented?
3. How useful are the energy-saving tips for your household?
4. Are there any other types of information that would improve report's usefulness (info other programs, rebates, potential savings)?

**VI. [OPTIONAL SECTION, Time Permitting] Response to the HER Energy Use Information and Tips (20 minutes)**



1. [SHOW OF HANDS] How many of you have done one or more of the things suggested in the HER to reduce electricity use in your household?
2. [IF MENTION HAVING DONE SOMETHING] What motivated you to do those actions?
3. [IF HAVEN'T DONE ANYTHING] Why haven't you done any of the energy-saving actions suggested in HER?
4. Have you discussed the HER with friends, other family or colleagues? [IF YES, PROBE:]
  1. What did you discuss?
  2. What were the reactions?
5. What would motivate you to do more to reduce your electricity use? [IF NOT MENTIONED, PROBE:]
  1. What other types of information would motivate you to take actions?
  2. What changes to the HER Program might motivate you to take actions?

## **VII. Wrap Up (5 minutes)**

### **A. Last Questions for Discussion [Around the room]**

- a. What's the most important takeaway today for United Illuminating regarding the HER pilot.
- b. Does anyone have any last questions or comments?

Thank you for sharing your opinions and taking the time to participate, your input is greatly appreciated. And don't forget to pick up your incentive on your way out.



# APPENDIX E: EXAMPLE HER AND WELCOME INSERT



## Home Energy Report

Account number: 0100000354337  
Report period: 08/15/11 - 09/13/11

We are pleased to provide this personalized report to help you save energy.

The purpose of the report is to:

- Provide information
- Help you track your progress
- Share energy efficiency tips

JEANETTE ALLAMADAN|



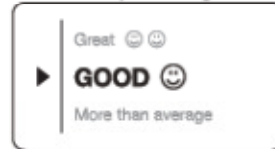
This information and more is available at [www.uinet.com/energyreports](http://www.uinet.com/energyreports)

### Last Month Neighbor Comparison | You used 47% MORE electricity than your efficient neighbors.



\* kWh: A 100-Watt bulb burning for 10 hours uses 1 kilowatt-hour.

How you're doing:



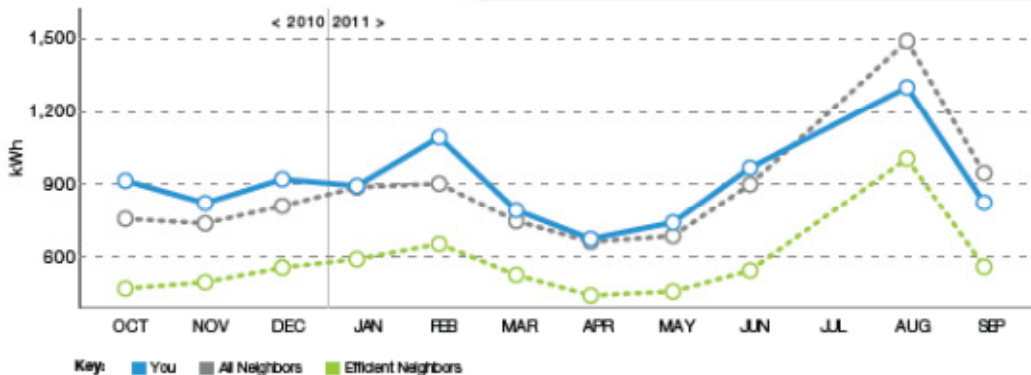
#### Who are your Neighbors?

■ All Neighbors: Approximately 100 occupied, nearby homes that are similar in size to yours (avg 2,373 sq ft)

■ Efficient Neighbors: The most efficient 20 percent from the "All Neighbors" group

### Last 12 Months Neighbor Comparison

You used 57% MORE electricity than your efficient neighbors. This costs you about \$770 EXTRA.

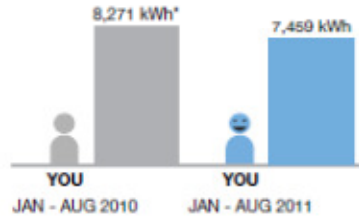


Key: ■ You ■ All Neighbors ■ Efficient Neighbors

Turn over for savings →

## Personal Comparison

How you're doing compared to last year:



So far this year, you used **10% LESS** electricity than last year.

★ You're on pace to use less in 2011.

Looking for ways to save even more? Visit [www.uinet.com/energyreports](http://www.uinet.com/energyreports)

\* kWh: A 100-Watt bulb burning for 10 hours uses 1 kilowatt-hour.

## Action Steps | Personalized tips chosen for you and your energy use and housing profile

### Smart Purchase

Save a lot by spending a little

**Switch to compact fluorescent light bulbs (CFLs)**

Incandescent bulbs are inexpensive but very inefficient. Compact fluorescent light bulbs (CFLs) offer both an easy and affordable way to save energy and money.

CFLs use 75% less energy and last ten times longer, saving you money on energy bills and replacement costs.

You can find discounted CFLs and efficient light fixtures in our online SmartLiving™ Catalog — find it at [www.smartlivingcatalog.com](http://www.smartlivingcatalog.com).

SAVE UP TO  
**\$205** OVER BULB LIFE

### Quick Fix

Something you can do right now

**Turn off lights when not needed**

It's a common misconception that turning a light off and on consumes more energy than leaving it on all the time. This is not the case.

Turn off incandescent lights every time they are not needed. For compact fluorescent lights, it's cost effective to turn them off when you won't need them for 15 minutes or more.

Turning off unneeded lights can save energy and money.

SAVE UP TO  
**\$50** PER YEAR

### Smart Purchase

Save a lot by spending a little

**Use dimmers**

A standard light switch gives you two lighting options: full brightness or none at all.

Dimmers give you more control over the level of light in a room, which opens up stylistic possibilities and saves electricity. By using only as much light as you need, you can save on your lighting costs while extending the life of your bulbs.

For even more savings, look for dimmers that are compatible with compact fluorescent light bulbs or LEDs.

SAVE UP TO  
**\$5** PER FIXTURE

Sponsored by



[www.uinet.com/energyreports](http://www.uinet.com/energyreports) | 877-WISE-USE | [energyreports@uinet.com](mailto:energyreports@uinet.com)

runs on OP@WER®

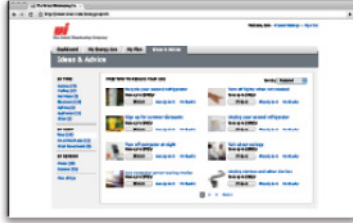
© 2010-2011 Opower

Connecticut's Energy Efficiency Programs are funded by a Charge on Customer energy bills. The programs are designed to help customers manage their energy usage and cost.

♻️ Printed on 30% post-consumer recycled paper.



Visit [www.uinet.com/energyreports](http://www.uinet.com/energyreports) today for more insights on how to save



Find the best tips for your area



Track your progress

Visit [www.uinet.com/energyreports](http://www.uinet.com/energyreports) today

### Frequently Asked Questions

#### Why is UI sending me this report?

You are among a group of randomly selected UI customers included in the Home Energy Reports program. This is part of the Energy Efficiency Fund's ongoing effort to help customers manage their energy use and cost.

#### How did you choose the homes used in these comparisons?

We chose approximately 100 homes that are near you with similar characteristics—such as square footage and fuel types—that typically lead to similar energy needs. We only chose homes that appear to be occupied at the time of the comparison.

#### How do 'efficient households' use such little energy?

Efficient households likely take a number of the steps we recommend to reduce their energy use, including using the thermostat to manage heating and cooling costs, taking shorter showers and always running full loads of laundry. By putting these and other tips into practice, you also can make your home more efficient.



What does it take to save a whole lot of energy?



877-WISE-USE | [energyreports@uinet.com](mailto:energyreports@uinet.com)

Connecticut's Energy Efficiency Programs are funded by a Charge on Customer energy bills. The programs are designed to help customers manage their energy usage and cost.





## A little bit of good information

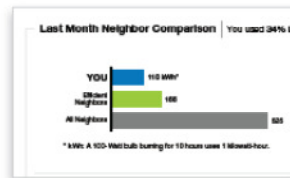


### Introducing your free Home Energy Report

You've been selected to receive Home Energy Reports as part of an energy-saving program.

The report provides new information on your energy use and offers easy, personalized tips to help you save. It's all part of the ongoing efforts by UI and the Energy Efficiency Fund to help customers save energy and money.

### Learn more about your energy use and how to save

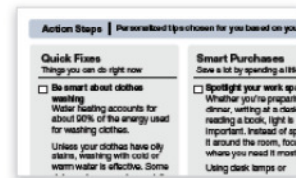


#### See how you compare

Find out if you're using more or less energy than other houses like yours in your area based on

- Home size
- Home type (apartment or single-family)
- Heating source

*Note: Vacant homes are excluded.*



#### Find out how to save more

Most people don't realize how much money they could save just by making small changes. We provide personalized tips and show how much you can save.

Learn more at

[www.uinet.com/energyreports](http://www.uinet.com/energyreports)