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# Xcel Energy

## Colorado & Minnesota Residential Home Energy Insights (HEI) Product Process Evaluation Report

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# Table of Contents

Executive Summary .....	ES-1
Table of Contents.....	ii
1. Introduction .....	1
1.1 Product Overview.....	1
1.1.1 Home Energy Reports.....	2
1.1.2 My Energy Portal.....	3
1.1.3 High-Bill Alerts .....	3
1.2 Evaluation Overview .....	3
1.3 Report Organization.....	4
2. Research Methods & Respondent Characteristics .....	5
2.1 Staff Interviews.....	5
2.2 Peer Utility Benchmarking Interviews.....	6
2.3 Customer Surveys.....	7
2.4 Follow-Up Interviews.....	8
3. Process Evaluation .....	10
3.1 Key Findings .....	10
3.2 Satisfaction and Customer Experiences .....	12
3.2.1 Satisfaction with Overall Report .....	12
3.2.2 Satisfaction with Report Elements.....	13
3.2.3 Reasons for Not Reading Reports .....	15
3.2.4 Peer Utility Benchmarking Findings .....	16
3.3 Neighbor Comparison .....	16
3.3.1 Satisfaction with the Neighbor Comparison .....	17
3.3.2 Customer Experience .....	18
3.3.3 Reasons for Dissatisfaction.....	20
3.3.4 Peer Utility Benchmarking Findings .....	21
3.4 Motivations & Behaviors.....	21
3.4.1 Perceptions & Potential Motivations.....	22
3.4.2 Changes in Energy Use Behavior .....	23
3.5 Increasing Customer Engagement.....	24
3.5.1 Suggestions for Improving the Home Energy Report.....	24
3.5.2 Leveraging the My Energy Portal.....	26
4. Conclusions & Recommendations .....	27

## Appendices

Appendix A: Evaluation Plan.....	A-1
Appendix B: Data Collection Documents .....	B-1
Appendix C: Data Collection Findings .....	C-1

## Tables

Table 1-1. 2021 Home Energy Insights Net Energy Savings Goals & Product Budgets .....	2
Table 1-2. Evaluation Objectives & Research Tasks .....	14
Table 2-1. Home Energy Insights Product Research Summary .....	15
Table 2-2. Peer Utility Program Design Overview <sup>1</sup> .....	13
Table 2-3. HEI Population & Survey Completes, by Strata.....	14
Table 2-4. HEI Population & Follow-Up Interview Completes, by Strata .....	15

## Figures

Figure 3-1. Overall Satisfaction with Home Energy Report (n = 184) <sup>1</sup> .....	13
Figure 3-2. Satisfaction with Home Energy Report Components (n=184) <sup>1</sup> .....	14
Figure 3-3. Value of Home Energy Report Components (n = 184) <sup>1</sup> .....	15
Figure 3-4. Reasons Customers Do Not Read Their Home Energy Reports (n = 51) <sup>1,2</sup> .....	16
Figure 3-5. Respondent Satisfaction with the Neighbor Comparison Tool (n = 184) <sup>1</sup> .....	17
Figure 3-6. Respondent Perception of the Value of the Neighbor Comparison Tool (n = 184) <sup>1</sup> .	18
Figure 3-7. Components of the Home Energy Report that Respondents Found Helpful (n = 123) <sup>1,2</sup> .....	19
Figure 3-8. What do you find confusing about your Home Energy Report? (n = 51) <sup>1,2</sup> .....	19
Figure 3-9. Respondent Reasons for Dissatisfaction with the Neighbor Comparison Tool (n = 34) <sup>1,2</sup> .....	20



Figure 3-10. Respondent Suggestions to Improve Satisfaction with the Home Energy Report (n = 21) <sup>1,2</sup> ..... 21

Figure 3-11. Self-Reported Impact of Home Energy Report on Respondent Behavior (n = 184) <sup>1</sup> ..... 22

Figure 3-12. Top Motivational Components of the Home Energy Report (n = 106) <sup>1,2</sup> ..... 23

Figure 3-13. Energy Use Behavior Changes because of the Home Energy Report (n = 128) <sup>1,2</sup> ..... 23

Figure 3-14. Information Respondents Felt Would Help Better Understand Household Energy Use (n = 54) <sup>1,2</sup> ..... 25

# EXECUTIVE SUMMARY

## 2022 Home Energy Insights (HEI) Product



### Introduction

Xcel Energy contracted with TRC to conduct a process evaluation of the 2022 Home Energy Insights Product (HEI), formerly known as Energy Feedback, which provides targeted direct mailing or emailed Home Energy Reports (HERs) to a designated group of residential customers, giving them specific information and recommendations on ways to reduce their energy consumption. The product's main offerings include individualized reports, an online portal (My Energy), and high-bill alerts.

As part of this evaluation, TRC collected feedback on product experiences, assessed product awareness and marketing, identified barriers to participation, and explored ways to enhance product effectiveness. This summary includes the key findings and recommendations from our evaluation.

### Methods

Staff interviews (n = 10)

Peer utility interviews (n = 9)

Participating customer survey (n = 184)

Follow-up interviews (n = 10)

#### Fielding:

December 2021 – September 2022

### Summary of Findings



While many respondents read their Home Energy Report, respondents who either “sometimes” or “never” read their report most often believe the information to be inaccurate or not useful.



Home Energy Report was selected as one of the top three ways customers learn about other Xcel Energy products. Respondents desired more tailored information on other Xcel Energy offerings beyond energy efficiency.



Respondents noted that energy efficiency tips, Xcel Energy product information, and home energy use data were especially motivating in changing their behaviors related to energy use.



Customers desired more positive tone within the report language. Respondents also expressed their interest in more information on the neighbor comparison criteria.



Follow-up interview respondents were interested in the inclusion of solar programs and information in their reports. Roughly one-third of interviewees mentioned solar power in the interviews.



Most survey respondents were not familiar with the My Energy portal. Customers that had accessed the portal were generally not aware of the rewards program and did not find the portal to be a priority.

### Satisfaction & Customer Experiences

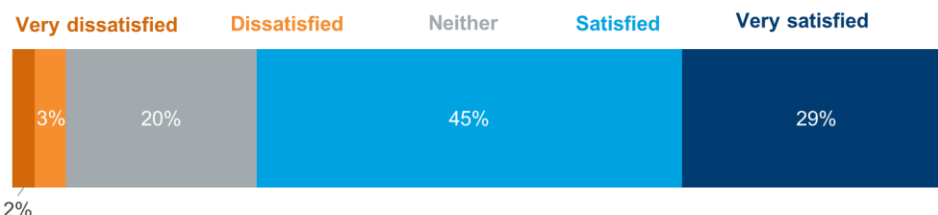
#### Satisfaction with Overall Report



Majority of respondents (74%, n=132) reported **reading their personalized home energy report**.

## 3.9 out of 5

Majority of customers were **satisfied** or **very satisfied** with their Home Energy Report. Almost one-third (**29%, n = 52**) of respondents rated their satisfaction with their home energy report overall as a **5 out of 5**, where 1 meant “not at all satisfied” and 5 meant “very satisfied.”



*“I found out I use a lot of energy by reading the home energy report and now I am more aware to not use much energy when it's not necessary.”*

# EXECUTIVE SUMMARY

## 2022 Home Energy Insights (HEI) Product



### Feedback on Product Experiences

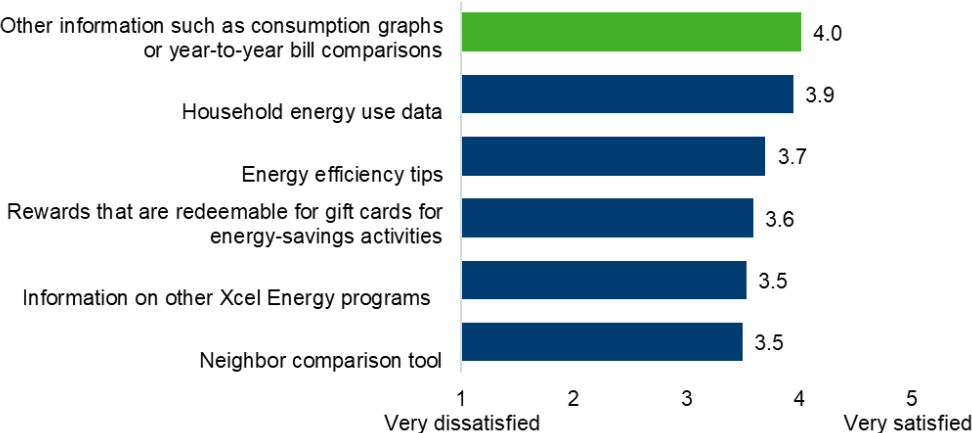
#### Satisfaction with Report Elements



On average, respondents were satisfied with the **features noted as valuable** in their home energy report, with **consumption information** rating the highest (4.0 out of 5).



Updating energy report information increased **customer satisfaction and engagement**, as found in recent peer utility interviews.

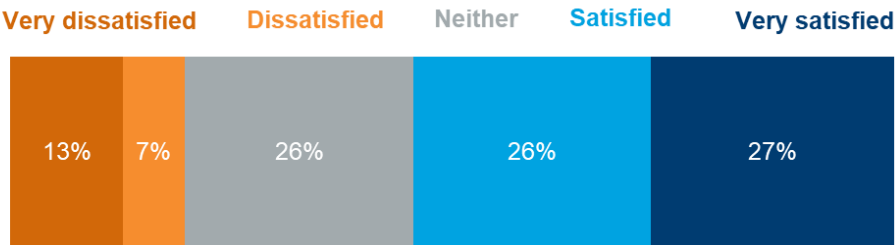


### Neighbor Comparison

#### Satisfaction with the Neighbor Comparison

Survey respondents were **least satisfied with neighbor comparison tool**, with an average rating of 3.5. The tool was also deemed least valuable.

"I don't have a good understanding of where the energy use is coming from. Sometimes I am far below and other times I am far above my neighbors and don't know what makes the difference."



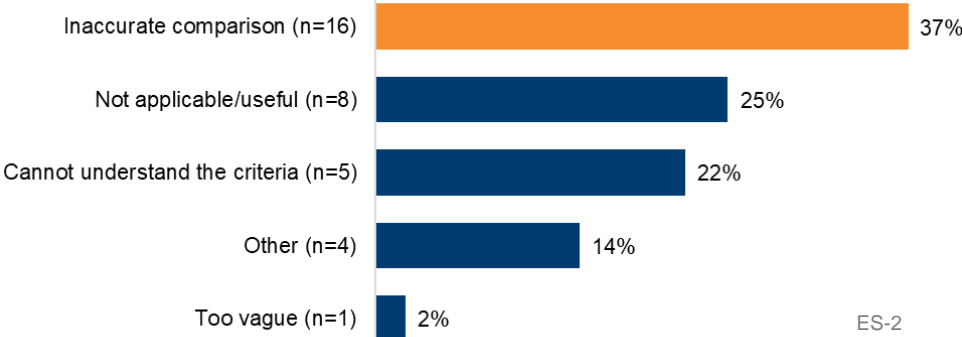
#### Reasons for Dissatisfaction

**37%**

of survey respondents find **inaccurate comparison** to be the biggest concern with the neighbor compare.



Respondents who found their report was confusing or not helpful, found the **neighbor comparison the most confusing** component.



# EXECUTIVE SUMMARY

## 2022 Home Energy Insights (HEI) Product



### Neighbor Comparison

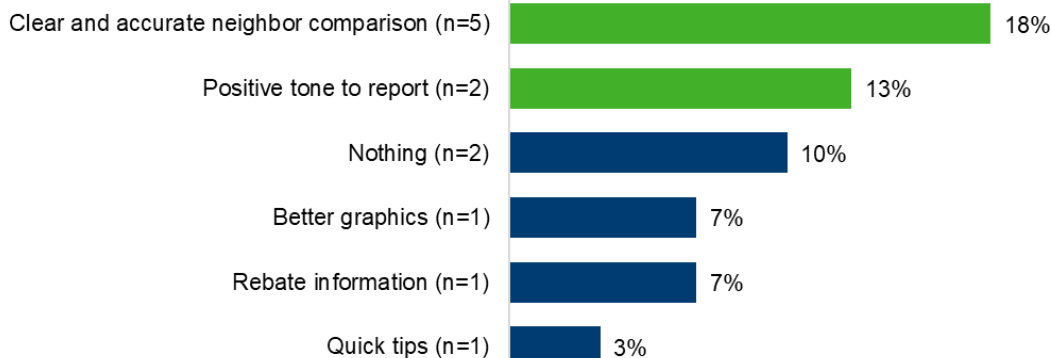
#### Reasons for Dissatisfaction



Respondents that were not satisfied with their report, most often noted the need for a **clear and accurate neighbor comparison**.



TRC found that peer utilities are **shifting to a more optimistic tone** and use of language and **updating or removing** the neighbor comparison feature.



### Motivations & Behaviors



Almost half of the survey respondents (45%) reported hearing about Xcel Energy programs and services **through their Home Energy Report**.

55%

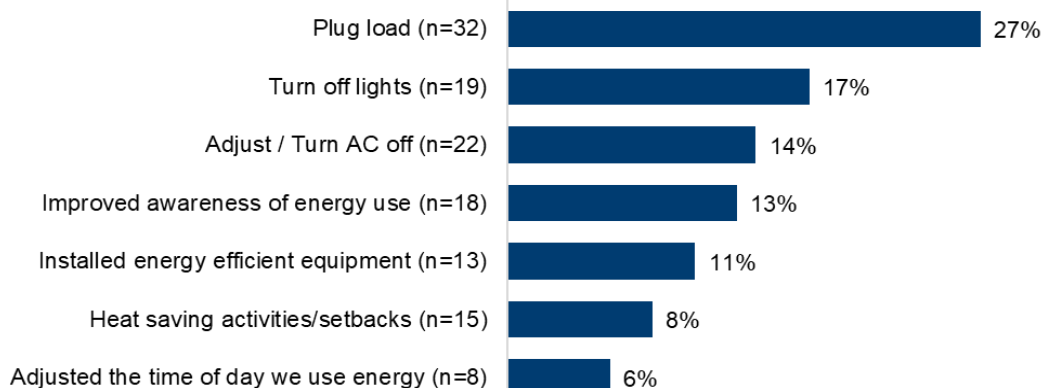
of survey respondents indicated the report **motivated them to change** their energy use behavior.

27%

reported they curb their energy use by **reducing the plug load** (e.g., turning off appliances).



Of the respondents that said the report was **impactful (39%)**, majority of the responses reported having installed efficient light bulbs.



Majority of (58%, n=99) respondents reported they are **likely to make future energy efficiency improvements** in their home.

### Increasing Customer Engagement



Respondents expressed interest in **neighbor comparison criteria** to help them better understand their household's energy use.



Survey respondents and interviewees highlighted interest in connecting **solar power and program information** in their home energy report.



Majority of respondents (65%, n=114) **had not heard of the My Energy portal**. Most survey respondents who knew of the portal, had not used the rewards program (81%, n=58).



# EXECUTIVE SUMMARY

## 2022 Home Energy Insights (HEI) Product



### Conclusions & Recommendations

**1. While majority of respondents read their Home Energy Report, respondents who either “sometimes” or “never” read their report most often believed the information to be inaccurate or not useful.** In addition, some renters noted challenges with implementing savings tips and, therefore, did not find the report helpful. Respondents found household energy use and consumption information to be the most valuable features of the report. Together, these findings indicate that more work can be done to improve the accuracy of the data and information provided through the key report components.

- a. More explicitly highlight how customers can complete the home assessment and how the specific data collected through the assessment on the My Energy portal will help Xcel Energy tailor their Home Energy Report. By completing the home assessment through the My Energy portal, customers update specific information such as the type and vintage of the systems in the home. This information is then incorporated into the algorithm for the neighbor comparison as well as the selection of tips and customer messaging for specific programs.
- b. Work with the implementation team to update report tips, where possible, for different residence types (e.g., renters) to make them more applicable to the residents, and thus more likely to be acted upon. Xcel Energy may also consider ways to include support for landlord engagement as part of the program or tip information provided in the Home Energy Report.
- c. Work with the product implementer to improve the accuracy and timing of the data used to populate the report, including looking at ways to improve the timing between when customers receive their energy bill and the Home Energy Report so the information the customer is receiving in the report is timely. This will help to increase trust in the contents of the report.

**2. Respondents who found their report confusing or not helpful, found the neighbor comparison the most confusing component.** Respondents shared varying assumptions about their own understanding of the definition of the “neighbor” they were being compared to. This most often included an assumption that the neighbor was someone located near their home. When the evaluation team asked what improvements could be made to the report, respondents expressed their interest in more information on the neighbor comparison criteria. This is especially critical, given more than half of all respondents rated the neighbor comparison as valuable; therefore, it will be worthwhile to improve customer clarity on this component of the report.

- a. Enhance detailed information on the specific criteria used to determine the comparable “neighbor” in the Home Energy Report itself. Other peer utilities offer a short explanation of the specific information used to determine the comparison or offer an option for the customer to switch to a self-comparison report.
- b. Assess the feasibility of offering customers the option to select a self-comparison version of the Home Energy Report. Two of the interviewed peer utilities reported having shifted specific cohorts to the self-comparison model. During the early summer months, one utility provides a self-comparison to participants with air conditioning that compares to their own usage from the previous summer. Another utility is attempting to assess the self-comparison model’s impact on savings when compared to the neighbor comparison model and have reported that more people opted out of neighbor compare than their self-compare model. Questions regarding report preferences could be included in the home assessment.



# EXECUTIVE SUMMARY

## 2022 Home Energy Insights (HEI) Product



### Conclusions & Recommendations

#### 3. The Home Energy Report was selected by customers as one of the top three ways they learned about other Xcel Energy products.

Customers see the report as a tool to monitor their energy usage and respondents noted that energy efficiency tips, Xcel Energy product information, and home energy use data were especially motivating in changing their behaviors related to energy use. Overall, this indicates the product is successful for those customers who are engaging with the Report. Xcel Energy has the opportunity to leverage these tools to gain higher savings by increasing awareness and access to the information for those customers who are currently less engaged.

- a. Offer customers more streamlined information on how to access energy use information and information on other products, particularly through leveraging the My Energy portal. This will allow customers to better understand, and more easily access, opportunities they can implement to save energy.

#### 4. Customers desired more tailored information on other Xcel Energy offerings beyond energy efficiency, as well as a more positive tone within the report language.

Peer utilities reported that they are working to move away from the harsh language and incorporate more positive tones within their reports to improve customer satisfaction. Follow-up interview respondents were interested in the inclusion of solar programs and information in their reports. Roughly one-third of interviewees mentioned solar power in the interviews.

- a. Work with the implementation contractor to update the report language to a more positive tone to increase customer satisfaction with the report. For example, the text could be altered to be more focused on how customers have improved their usage (if that is the case) or could improve in the future.
- b. Work with the implementation team to update the Home Energy Report to include other Xcel Energy offerings besides energy efficiency. Doing so provides next steps for a client and could lead to greater portfolio-wide energy savings.

#### 5. Most survey respondents were not familiar with the My Energy portal.

Most customers that had accessed the portal were not aware of the rewards program and did not find the portal to be a priority. The My Energy portal provides a wealth of information on customer usage and will be increasing the aggregation capabilities as Xcel Energy administers AMI meter technology. Therefore, this is an opportunity to improve customers' awareness of the current and upcoming features of the portal.

- a. Conduct further research on how customers are directed to the My Energy portal. As many respondents had not heard of the My Energy portal, more research is needed to be able to improve awareness and use of the My Energy portal as well as the connection to My Account.

# 1. Introduction

Xcel Energy offers a comprehensive array of energy services and products to its customers, including demand side management (DSM). For the 2022 product evaluations, Xcel Energy sought to understand the role each evaluated product plays in changing the marketplace, to analyze that influence on customer choices, and to use the findings to improve customer experience and ensure industry-leading product performance. To accomplish this, Xcel Energy contracted with TRC to evaluate nine products offered in Colorado and Minnesota in 2022.<sup>1</sup> This included the Home Energy Insights Product in Colorado and Minnesota, discussed in this report. This introduction includes an overview of the product and the evaluation approach and describes the organization of the report.

## 1.1 Product Overview

The Home Energy Insights Product (HEI), formerly known as Energy Feedback, is offered across Xcel Energy's Colorado (CO), Minnesota (MN), and New Mexico (NM)<sup>2</sup> territories and is fundamentally a behavioral conservation product. The product provides targeted direct mailing or emailed Home Energy Reports (HERs, also referred to as "reports" in this document) to a designated group of residential customers, giving them specific information and recommendations on ways to reduce their energy consumption. Customers receive new energy use information with each report and are compared to their average "neighbor," as determined by the average use of customers with a similar use profile and select characteristics, primarily the square footage of customers' homes and building type.<sup>3</sup> The reports quantify savings by comparing the energy consumption of the recipient group to that of a nonparticipating control group. A nonparticipating control customer is defined as a customer who does not receive a report through HEI. The product's main offerings include the individualized reports, an online portal (My Energy), and high-bill alerts. Product staff recently added the high-bill alert service as a component of the product, launching in summer 2022. The evaluation team provides additional information regarding the addition of High-Bill alerts to HEI below.

HEI leverages the My Energy web portal, which features additional ways for customers to learn about energy use in their homes and possibilities for energy savings and cost reductions. The My Energy web portal is available to all Xcel Energy customers who are enrolled in the Xcel Energy My Account web portal. In addition to the My Energy information, My Account enables customers to complete account management-related tasks, such as locating information about current energy rates, paying bills, and receiving outage alerts.

Table 1-1 below outlines the 2021 HEI Product net energy savings goals and product budgets in Colorado, Minnesota, and New Mexico. Product goals were developed based on prior years' savings, attrition, and refill data. Product savings are claimed by comparing participating

<sup>1</sup> The products selected for evaluation include: Lighting Efficiency (Colorado and Minnesota), Home Energy Insights (Minnesota and Colorado), Whole Home Efficiency (Colorado), Energy Management Systems (Colorado), Energy Savings Kits (Colorado), Low-Income Segment (Minnesota), Home Energy Squad (Minnesota).

<sup>2</sup> The product is currently referred to as the Energy Feedback Product in New Mexico. Research for the New Mexico product was limited to objectives related to the My Energy portal.

<sup>3</sup> It is important to note that the square footage of customers' homes is a current limiting factor in product participation, because Xcel Energy does not have data on the square footage for all residential customers.

customers' (the treatment group) energy use to nonparticipating customers' (control group) energy use.

*Table 1-1. 2021 Home Energy Insights Net Energy Savings Goals & Product Budgets*

	Net GWh	Net kW	Electric Budget	Electric TRC	Net Dth	Gas Budget	Gas TRC
<b>CO Goals<sup>1</sup></b>	30.17	5,763	\$3,914,898	1.03	106,798	\$692,083	1.31
<b>MN Goals<sup>2</sup></b>	19.95	4,409	\$1,428,667	1.53	43,372	\$170,293	2.22
<b>NM Goals<sup>3,4</sup></b>	4.29	908	\$143,485	1.07	NA	NA	NA

<sup>1</sup>2021 Goals as reported in the Public Service Company of Colorado 2021-22 Demand Side Management (DSM) Plan, Proceeding No. 20A-XXXXEG.

<sup>2</sup> 2021 Goals as reported in the Minnesota Electric and Natural Gas 2021-2023 Conservation Improvement Product (CIP) Triennial Plan, Docket No. E, G002/CIP-20-473.

<sup>3</sup> 2021 Goals as reported in the New Mexico Southwestern Public Service Company 2020-2022 Energy Efficiency Triennial Plan, Case No. 19-00140-UT.

<sup>4</sup> The New Mexico Product is not within the process evaluation scope but will be considered for inclusion in some of the evaluation tasks, including the optional online portal usability testing and as needed for the process mapping exercise.

The following sections describe the main offerings of HEI, including Home Energy Reports, the My Energy web portal, and the addition of high-bill alerts.

### 1.1.1 Home Energy Reports

Personalized reports are paper-mailed or emailed, depending on the customers' preference and/or the availability of an email address for the customers in the treatment group. Paper reports are mailed quarterly, and emailed reports are sent out monthly. These reports, combined with the My Energy web portal, give customers easy access to their energy use data paired with timely information about how to change their behaviors and save energy. In general, Home Energy Reports through the product provide:

- Customers' energy use compared to their "neighbors," which are groups of homes with similar usage profiles and home characteristics (e.g., occupancy, heating fuel, square footage) prior to product enrollment
- Targeted efficiency recommendations based on home profile data available
- Other information such as consumption graphs or year-to-year bill comparisons

Recipients are randomly selected from a target group of Xcel Energy's higher consumption residential customers and may "opt out" of the product at any time upon request. As some customers opt out over time, Xcel Energy periodically selects new waves of treatment customers to balance this naturally occurring attrition rate. Savings are calculated by comparing the energy consumption of the treatment group to that of a non-participating control group.

### 1.1.2 My Energy Portal

The My Energy portal is available to all residential customers. Additional savings are claimed by Xcel Energy for the online portal in addition to the regular home energy reports. It provides the same information as the energy usage reports any time a customer chooses to log into the online portal, along with more detail and the features outlined below. When visiting the My Energy web portal, customers can:

- View their neighbor comparison on their most recent report
- See graphs showing energy consumption
- Earn rewards redeemable for gift cards for energy savings activities
- Complete a Home Energy Assessment which provides insight into how energy is used in the home as well as more accurate and actionable energy saving recommendations
- Receive tips and recommendations for a wide array of energy savings measures, from low- and no-cost improvements to major upgrades of building envelope and mechanical systems

Customers are encouraged to visit My Energy through emails, targeted messaging, and social media channels. My Energy offers an avenue for customers to learn about the energy use in their homes, including possibilities for energy savings, load management, and cost reductions.

### 1.1.3 High-Bill Alerts

Launched in summer 2022, Xcel Energy and the product vendor worked to develop an automated system that send customers an alert by email, before the end of a billing cycle, when they are trending towards having a high energy bill. Customers on AMI meters are provided alerts when their bill is projected to be a minimum of 30% higher than their previous bill. Xcel Energy is currently in progress with the rollout of AMI meter installations across Colorado and Minnesota. Currently customers are auto-enrolled in high-bill alerts once they have an AMI meter installed and can opt out at any time. This product was added in 2022 as a strategy to increase product savings.

## 1.2 Evaluation Overview

This process evaluation focused on identifying opportunities for improvement for the My Energy portal and Home Energy Reports, as Xcel Energy plans to transition to a more digital customer experience. The evaluation team designed a comprehensive evaluation of HEI to provide information on four key research objectives:

1. Collect feedback on customers' experiences with HEI, including understanding customer satisfaction and what leads to customer dissatisfaction with the components of the product.
2. Identify opportunities to increase customer engagement with the Home Energy Report component and better understand how the information in the report influences energy-saving behavior.

3. Improve product tracking and processes, including identifying opportunities to improve the tracking of data on customer use of the My Energy portal, assessment information, and interaction with the online portal and rewards.
4. Assess peer utilities' product practices including customer messaging, data tracking and AMI integration, and monitoring of customer complaints.

Table maps these objectives to the evaluation tasks outlined in Section 2. This report captures the results from the peer utility research, customer surveys, and follow-up interviews.

*Table 1-2. Evaluation Objectives & Research Tasks*

<b>Evaluation Objective</b>	<b>Research Task(s)<sup>a</sup></b>
<b>Collect feedback on customer experience and satisfaction with the product.</b>	Customer surveys, follow-up interviews, and usability testing
<b>Identify opportunities to increase customer engagement with Home Energy Reports.</b>	Customer survey, follow-up interviews, and usability testing
<b>Improve product tracking and processes.</b>	Internal process map workshops, peer utility benchmarking
<b>Understand peer utilities' product practices.</b>	Peer utility benchmarking

<sup>a</sup> Customer usability testing and the internal product process mapping workshops each have separate final deliverables and the results from these activities are not covered in this report.

## 1.3 Report Organization

The remainder of this report is organized into the following chapters:

- Chapter 2 presents our research methods for the process evaluation, as well as characteristics of respondents from our data collection efforts.
- Chapter 3 discusses the process evaluation results, including product satisfaction and customer experiences, details regarding the neighbor comparison, customer motivations and behaviors, and results related to increasing customer engagement.
- Chapter 4 presents the evaluation team's conclusions and recommendations.
- The report's appendices provide supporting documents, such as the evaluation plan, data collection instruments, and task-specific results.

## 2. Research Methods & Respondent Characteristics

To accomplish the objectives of the Home Energy Insights (HEI) Product evaluation, TRC completed a suite of intersecting and complementary research activities in 2022. This section highlights the research topics addressed by each of the research activities presented in this report: staff interviews, peer benchmarking interviews, customer surveys and follow up interviews. Within each research activity description, we also include a summary of respondent characteristics to help frame the results presented in Chapter **Error! Reference source not found.** Table presents an overview of how each of these research activities relate to each research objective of the HEI evaluation. The evaluation team has included additional detailed information on the sampling approach used for the research in the evaluation plan in Appendix A.

*Table 2-1. Home Energy Insights Product Research Summary*

Primary Research Objectives	Staff Interviews (n = 10)	Peer Utility Benchmarking Interviews (n = 9)	Customer Surveys (n = 184)	Follow-Up Interviews (n = 10)
Collect feedback on customer experiences with HEI.			X	X
Identify opportunities to increase customer engagement with Home Energy Reports.			X	X
Improve product tracking and processes.	X	X		
Understand peer utilities' product practices; inform evaluation plan.	X	X		

### 2.1 Staff Interviews

In December 2021, the evaluation team conducted telephone interviews with key staff managing and implementing HEI, as well as staff from Xcel Energy's Customer Care and Advanced Grid Intelligence and Security (AGIS) teams. The staff interviews captured the following objectives:

- **Product tracking and processes:** The evaluation team collected staff feedback on implementation successes and challenges and explored Xcel Energy's current Minnesota & Colorado Home Energy Insights offerings, while also researching any differences in the New Mexico offering.
- **Peer utilities' product practices:** The evaluation team assessed the extent to which the product design supported product objectives and customer service and/or

satisfaction objectives to identify themes and issues for possible revisions to the standard evaluation plan. We also assessed the degree to which product resources are sufficient to conduct product activities with fidelity to the implementation plan.

The evaluation team led ten telephone interviews with key staff managing and implementing the Xcel Energy Colorado, Minnesota, and New Mexico HEI products.<sup>4</sup> Those interviewed from Xcel Energy included the current and former product managers, team lead, product engineer, and product support staff.

Appendix B.1 presents the interview guide used for these discussions, and Appendix C.1 provides results specific to this research activity.

## 2.2 Peer Utility Benchmarking Interviews

The evaluation team conducted peer utility interviews in February and March of 2022. For this effort, we targeted benchmarking Home Energy Report efforts for nine utilities to understand peer residential Home Energy Report program success related to customer engagement. We provided the peer utility interview guide to Xcel Energy for approval prior to beginning data collection. Interviews with peer utility program managers captured the following research objectives:

- **Program design and tracking:** The evaluation team assessed peer utilities' ability to track customer use of the tools and information provided through Home Energy Reports, integration with other energy efficiency offerings, opt-out strategies, program staffing and operation, and the ability to leverage AMI data. We also asked peer utilities about their strategies regarding knowledge sharing with their vendor to track processes.
- **Peer program performance:** The evaluation team assessed strategies utilized to improve the cost-effectiveness of peer products, challenges with achieving savings, methods for investigating discrepancies between actual and planned savings, and overall residential portfolio energy savings goals.
- **Customer engagement:** The evaluation team asked peers about cross-promotional strategies used across residential products, tips, and information utilized to motivate customer behavior, as well as customer satisfaction and energy monitoring tools.

Table lists the peer utilities that the evaluation team identified to include in the peer utility sample. When selecting peer utilities, we considered program size, fuel type, geographic location, implementation contractor, and program components (such as AMI integration). Target respondents were managers of the Home Energy Report programs or behavioral modification programs that contain a Home Energy Report component.

The nine peers the evaluation team interviewed represented a range of utilities from across the country. As shown in Table , some Home Energy Report programs focused only on electric use, while others focused on both electric and gas energy savings. All interviewed program managers relied on a third-party implementer to implement their Home Energy Report program. We incorporated results from this initial peer benchmarking task into subsequent research tasks, including the customer survey and follow-up interview design.

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<sup>4</sup> The HEI product has also been referred to as Energy Feedback (CO and MN) and is currently referred to as the Energy Feedback Product in New Mexico.



Table 2-2. Peer Utility Program Design Overview<sup>1</sup>

Utility	Program Type	Treatment Group Participants	Location
Xcel Energy	Electric & Gas	812,000	West
Peer Utility A	Electric	927,200	South
Peer Utility B	Electric & Gas	650,000	Northeast
Peer Utility C	Electric	1,700,000	Midwest
Peer Utility D	Electric & Gas	1,800,000	West
Peer Utility E	Electric & Gas	8,018,200*	Northeast
Peer Utility F	Electric	115,200	West
Peer Utility G	Electric & Gas	429,900*	Midwest
Peer Utility H	Electric	2,500,000	West
Peer Utility I	Electric	37,335	South

<sup>1</sup>TRC pulled the most recent publicly available report, which was 2019, 2020 or 2021 at the time of this research.

## 2.3 Customer Surveys

The evaluation team also conducted customer surveys fielded via Qualtrics with participating treatment group customers across Colorado and Minnesota.<sup>5</sup> For the purposes of this survey, the evaluation team defined a participating customer as a customer who was selected to participate as part of the treatment group for HEI in 2021. This section presents the survey objectives, customer sample, and key characteristics of the survey respondents. The customer survey was designed to address the following research objectives:

- **Customer experience and satisfaction with the product:** The evaluation team analyzed what aspects of the product customers were satisfied with, as well as what led to dissatisfaction with, the product, if anything. We asked questions to help understand which information in the Home Energy Report customers found valuable and which they

<sup>5</sup> The New Mexico Product will not be included in the customer survey research task; however, New Mexico participants will be included in subsequent usability testing research.

did not. The team also asked questions to explore whether customers consult their utility bill or their Home Energy Report to understand their energy usage.

- **Increase customer engagement and energy-saving behavior:** The evaluation team asked respondents questions on the role HEI played in helping them to monitor their energy use. We also researched customers' familiarity with other residential Xcel Energy products and offerings and sought understand if customers have adopted or installed (or plan to adopt or install) energy-saving behaviors and/or energy-efficient measures in their homes as a result of reviewing their Home Energy Report.

For the customer survey, the evaluation team designed the sample to be representative of the participating treatment group customers across the separate states, by fuel type and report mode (mail or email). Additionally, we leveraged the pool of survey respondents to recruit customers for the follow-up interviews (Section 2.4). Table provides a summary of the sampled population, target completes, and survey completes for all treatment group respondents. Cleaning was performed on the sampled population to remove duplicates, respondents that had participated in other programs, and can be called for feedback etc. The evaluation team developed sample weights based on state and fuel type to better align the survey results with the distribution of fuel type within the HEI treatment group population. Additional information about our process for cleaning and analyzing the raw data and development of the weights can be found in Appendix B.4. It is important to note that half of respondents reported a household income greater than \$75,000 annually (55%, n = 99), which may limit the applicability of the survey results for lower income populations.

*Table 2-3. HEI Population & Survey Completes, by Strata*

Strata	Fuel Type	2021 HEI Population <sup>a</sup>	Sampled Population	Target Completes	Survey Completes
<b>CO HEI Treatment Group</b>	Electric	598,782 (80%)	28,000	35	52 (51%)
	Electric & Gas	149,397 (20%)	12,000	35	50 (49%)
<b>MN HEI Treatment Group</b>	Electric	282,065 (83%)	21,000	35	51 (62%)
	Electric & Gas	59,931 (18%)	9,000	35	31 (38%)
<b>Total</b>		<b>1,090,175</b>	<b>70,000</b>	<b>140</b>	<b>184</b>

<sup>a</sup> Franklin Energy provided treatment group participation data from January through December of 2021.

## 2.4 Follow-Up Interviews

The evaluation team also conducted follow-up phone interviews with participating customers in Colorado and Minnesota who completed the online participant survey.<sup>6</sup> For the purposes of these phone interviews, the evaluation team defined a participating customer as a customer who was selected to participate as part of the treatment group for the HEI Product in 2021 and who completed the online survey. The additional research was conducted to enable the

<sup>6</sup> The New Mexico Product will not be included in the customer survey research task; however, New Mexico participants were included in subsequent usability testing research.

evaluation team to gain a deeper understanding of customers' experience with the current HEI product. This information will help to identify potential opportunities to increase customer engagement and energy-saving behavior through receiving the HEI report. The evaluation team interviewed ten respondents who were selected as part of the HEI treatment group in 2021 and completed the participant customer survey and indicated they had some familiarity with the online portal. Table 2-4 provides a summary of the sampled population and target interview completes for all treatment group respondents.

*Table 2-4. HEI Population & Follow-Up Interview Completes, by Strata*

Strata	Fuel Type	2021 HEI Population <sup>1</sup>	Sampled Population	Interview Completes
<b>CO HEI Treatment Group</b>	Electric	598,782 (80%)	28,000	3
	Electric & Gas	149,397 (20%)	12,000	2
<b>MN HEI Treatment Group</b>	Electric	282,065 (83%)	21,000	3
	Electric & Gas	59,931 (18%)	9,000	2
<b>Total</b>		<b>1,090,175</b>	<b>70,000</b>	<b>10</b>

<sup>1</sup> Franklin Energy provided treatment group participation data from January through December of 2021.

## 3. Process Evaluation

TRC conducted a process evaluation to determine how Xcel Energy can optimize the design and delivery of the Xcel Energy Home Energy Insights (HEI) product to its customers. To accomplish the objectives laid out in Sections 2.2 through 2.4, the evaluation team elicited feedback from product staff, peer utilities, and participating customers in Xcel Energy's Colorado and Minnesota service territory. This section presents key findings from the process evaluation tasks and detailed findings related to each key finding. Sub-sections have been organized according to the HEI product module and/or theme that the findings focus on. Our synthesis of findings places an emphasis on helping Xcel Energy to interpret research findings and identify actionable opportunities for improving the current HEI product. These findings inform the conclusions and recommendations presented in the final section of this report.

This section presents:

- **Key Findings** – presents the key findings based on the evaluation team's synthesis of findings from customer survey respondents.
- **Satisfaction and Customer Experiences** – presents satisfaction with the HEI product and product components by the respondents included in this evaluation.
- **Neighbor Comparison** – presents customer respondents' satisfaction and perception of the neighbor comparison component.
- **Motivations and Behaviors** – presents potential motivations and energy use behaviors of respondents included in this evaluation.
- **Increasing Customer Engagement** – presents customer feedback regarding how to improve their experience with the HEI product including respondents' perceptions of the report information and the My Energy portal.

### 3.1 Key Findings

Overall, the evaluation team found that customers were generally satisfied with their Home Energy Report with household energy use and consumption information rated as the most valuable features of the product. In addition, the neighbor comparison and energy saving tips provided in the report were key components that customers cited as helpful and motivating in changing their energy use behavior. As the Xcel Energy HEI product is well established, TRC expected to see good satisfaction ratings; therefore, our analysis focused on those customers who were less satisfied with their experience to determine areas for improvement and growth for the product. The following bullets present the key findings from the peer utility interviews, customer survey, and follow-up participant interviews summarized by research objective.

- **Satisfaction and Customer Experience:** Most respondents are satisfied with and read their Home Energy Report. However, respondents who either "sometimes" or "never" read their report most often believe the information to be inaccurate or not useful. As energy use and consumption information are the key features of the Home Energy Report, it will be important to improve the accuracy of the data and information provided for the group of customers that found the information to be inaccurate or confusing.

- **Customer Satisfaction:** The majority of customers were satisfied or very satisfied with their Home Energy Report. Respondents were most satisfied with detailed information such as consumption graphs and year-to-year bill comparisons.
- **Reading their Home Energy Report:** While many respondents read their Home Energy Report, respondents who either “sometimes” or “never” read their report most often believe the information to be inaccurate or not useful. Some renters also noted challenges with implementing savings tips and, therefore, did not find the report helpful.
- **Understanding the Neighbor Comparison:** Respondents who found their report confusing or not helpful, found the neighbor comparison the most confusing component. However, the neighbor comparison is a key component of the report as over one-half of all respondents rated the neighbor comparison as valuable; therefore, it will be worthwhile to improve customer clarity on this component of the Home Energy Report.
- **Understanding the Neighbor Comparison:** Respondents shared varying assumptions about their own understanding of the definition of the “neighbor” they were being compared to. This most often included an assumption that the neighbor was someone located near their home.
- **Suggestions for Improvements:** When the evaluation team asked what improvements could be made to the report, respondents expressed their interest in more information on the neighbor comparison criteria.
- **Motivations and Behaviors:** Respondents indicated the Home Energy Report had motivated them to change their energy use behavior and make energy efficiency improvements in their home. When asked about the specific report features that motivated them to change their energy use at home, respondents reported energy efficiency tips, information on other programs, and household energy data as their top choices. While customers overall found the report motivating, they desired more tailored information on other Xcel Energy offerings beyond energy efficiency, as well as a more positive tone within the report language.
- **Home Energy Report Language:** Customers desired more positive tone within the report language. Peer utilities reported that they are working to move away from the harsh language and incorporate more positive tones within their reports to improve customer satisfaction.
- **Information Beyond Energy Efficiency:** Customers desired more tailored information on other Xcel Energy offerings beyond energy efficiency. Follow-up interview respondents were interested in the inclusion of solar programs and information in their reports. Roughly one-third of interviewees mentioned solar power in the interviews.
- **Motivating Behavior Changes:** Respondents noted that energy efficiency tips, Xcel Energy product information, and home energy use data were especially motivating in changing their behaviors related to energy use. As a result of the Home Energy Report, respondents reported reducing plug load, turning off lights, and adjusting/turning their air conditioner off as their top energy use behavior changes.
- **Customer Engagement:** Home Energy Report was selected as one of the top three ways customers learn about other Xcel Energy products. In addition, the My Energy

portal provides a wealth of information on customer usage and will be increasing the aggregation capabilities as Xcel Energy administers AMI meter technology. Therefore, this is an opportunity to improve customers' awareness of the current and upcoming features of the portal.

- **Beyond Energy Efficiency:** Both survey respondents and follow-up interviewees highlighted interest in connecting solar power and program information in their Home Energy Report. The Home Energy Report was also selected by customers as one of the top three ways they learned about other Xcel Energy products. This indicates that customers are using the Home Energy Report as an avenue for staying informed on Xcel Energy offerings.
- **My Energy Portal:** Most survey respondents were not familiar with the My Energy portal. Customers that had accessed the portal were generally not aware of the rewards program and did not find the portal to be a priority. As the My Energy portal is seen as an avenue for customers to learn about the energy use in their homes, increasing customers awareness of and use of the portal will enhance their engagement with the information on cost reduction strategies.

The remainder of this chapter presents detailed findings related to each objective.

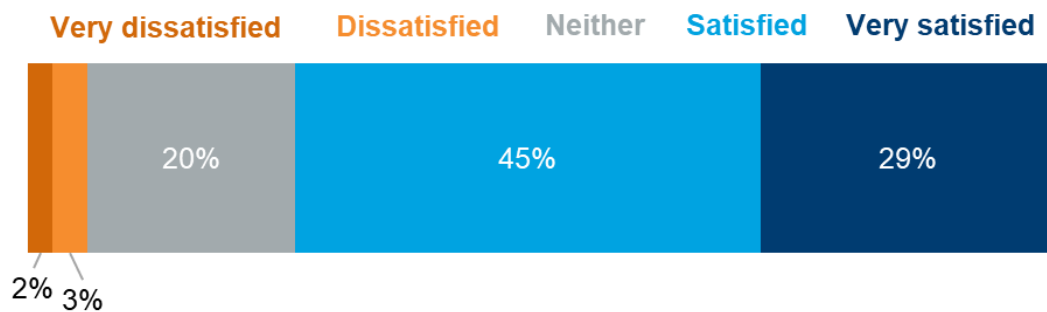
## 3.2 Satisfaction and Customer Experiences

This section describes product satisfaction results from the 2022 Xcel Energy HEI customer surveys, including detailed results on satisfaction with the overall report, satisfaction with report elements, reasons for not engaging with the report, and peer utility benchmarking results. Results from the follow-up customer interviews have been incorporated throughout and additional results from the peer utility interviews are included at the end of the section. Overall, customers were satisfied with their Home Energy Report, providing an average rating of 3.9 on a 1-to-5 scale. Of the report elements, respondents rated information such as consumption graphs or year-to-year bill comparisons, as well as household energy data as the most valuable components of their reports.

### 3.2.1 Satisfaction with Overall Report

Overall, customers reported they were satisfied with the Home Energy Report. Figure 3-1 summarizes the distribution of overall satisfaction with the Home Energy Report. Respondents on average rated their overall satisfaction a 3.9 (n = 184) on a 1-to-5 scale, where 1 meant "Very Dissatisfied" and 5 meant "Very Satisfied." Nearly three-quarters of respondents (74%, n = 130) reported they were satisfied or very satisfied, rating their satisfaction a 4 or above. Very few respondents indicated dissatisfaction with the program, with only 5% (n = 13) rating their satisfaction below a 3.

*Figure 3-1. Overall Satisfaction with Home Energy Report (n = 184)<sup>1</sup>*



<sup>1</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

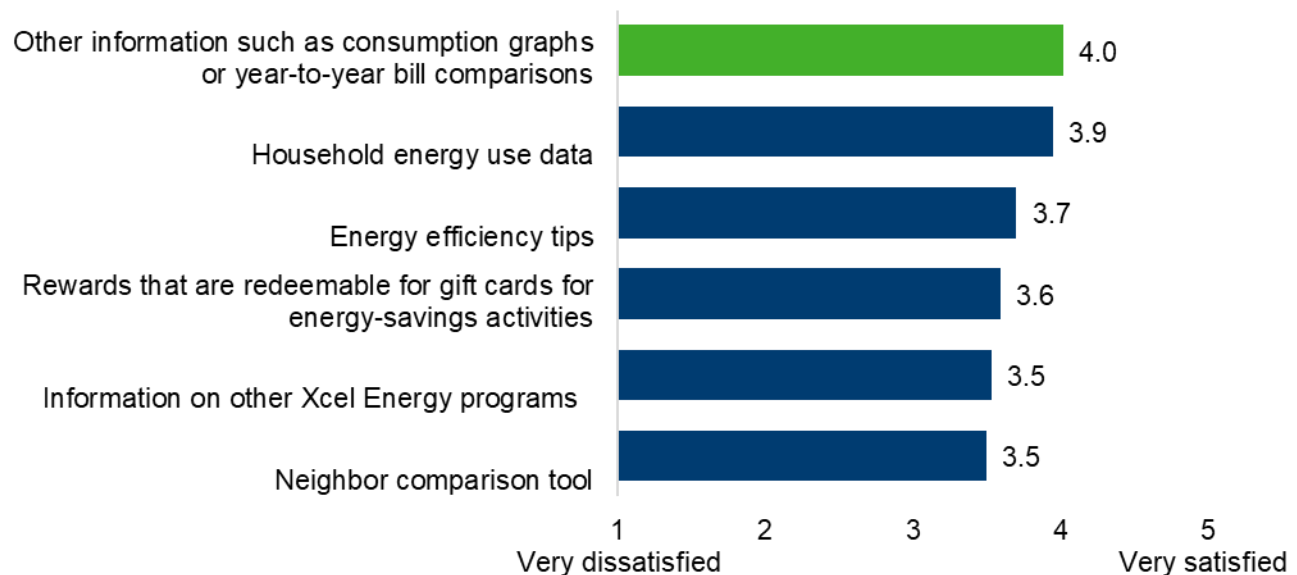
### 3.2.2 Satisfaction with Report Elements

TRC also asked respondents to rate their satisfaction with specific report elements. Figure 3-2 summarizes satisfaction with the different components of the Home Energy Report.

Respondents were most satisfied with detailed information, such as consumption graphs and year-to-year bill comparisons, rating their satisfaction an average of 4.0 on a 1-to-5 scale, where 1 meant “Very Dissatisfied” and 5 meant “Very Satisfied.” While customers were on average happy with the detailed consumption information offered through the Home Energy Report, this indicates there may be room for improvements. The evaluation team will explore what customers suggested for improvements in Section 3.5 below. It is also important to note that respondents rated the neighbor comparison tool lowest among the report components, with an average rating of 3.5. Since the neighbor comparison is a key component of the Home Energy Report, the evaluation team will explore the results for this component in more detail in Section 3.3 below.



Figure 3-2. Satisfaction with Home Energy Report Components (n=184)<sup>1</sup>

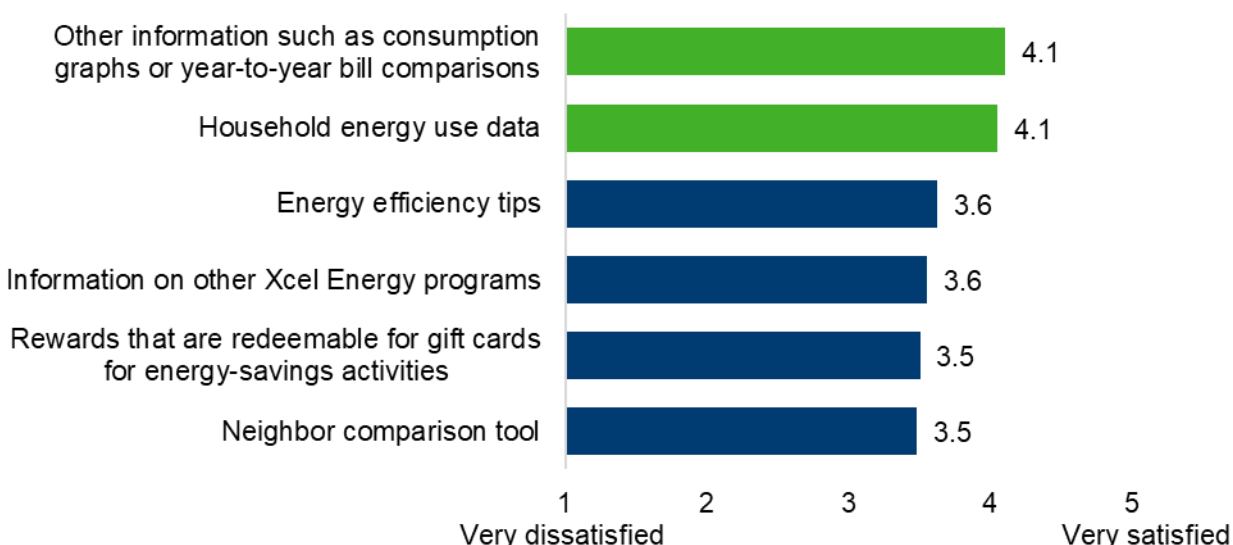


<sup>1</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

Fewer than one-tenth (6%, n = 13) of respondents indicated dissatisfaction with report components (rating their satisfaction a 1 or 2 out of 5). These lower scores were driven by feelings that the Home Energy Report was not relevant, did not clearly state *who* respondents are being compared against, and was not sufficiently motivating.

To better understand customers' perspectives on the report information, the evaluation team asked customers about how *valuable* each of the report components were for them. Household energy use and consumption information were also rated the most valuable features of the Home Energy Report, which makes sense as these factors also received the highest satisfaction rating. Figure 3-3 summarizes how respondents rated the value each component provided. Similar to the satisfaction responses, respondents rated information such as consumption graphs or year-to-year bill comparisons and household energy data as the most valuable, with average ratings of 4.1 on the same 1-to-5 scale; whereas the neighbor comparison tool was rated the lowest component, with an average rating of 3.5 on a 1-to-5 scale. While this indicates that customers are finding value in these components, there is still work to be done to increase the value to customers.

*Figure 3-3. Value of Home Energy Report Components (n = 184)<sup>1</sup>*



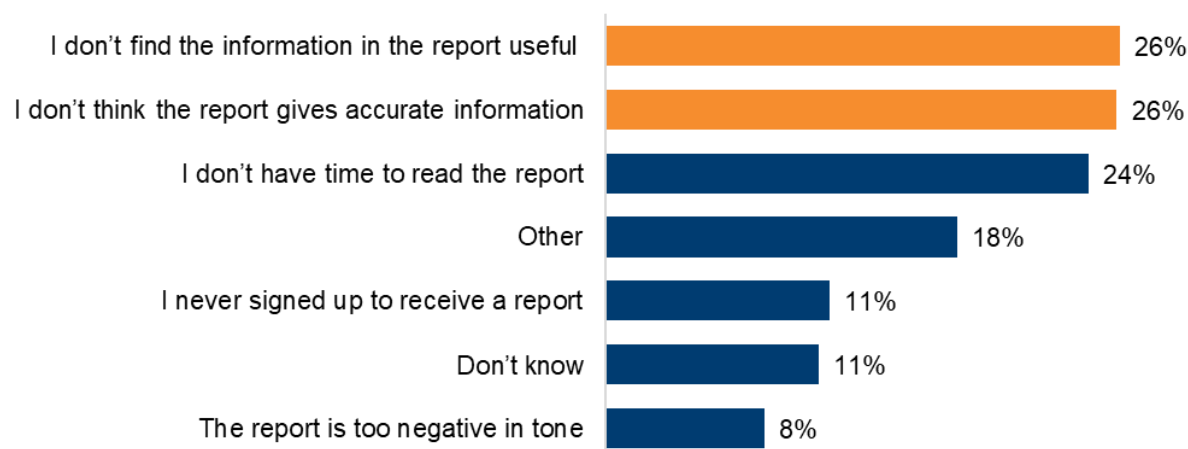
<sup>1</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

### 3.2.3 Reasons for Not Reading Reports

While most respondents reported being satisfied with their Home Energy Report and found value in the information, more than one-quarter of customers (26%, n = 51) reported only reading the report sometimes or not at all. For these customers, the evaluation team asked them why they did not, or only sometimes, read their Home Energy Report. Respondents rated usefulness and accuracy of the information as the top two reasons for not reading the Home Energy Report. Of the 51 respondents, just over half (53%, n = 27) provided ratings of 3 or below for their satisfaction with the Home Energy Report. This indicates that Xcel Energy has an opportunity to re-engage with many of the inactive participants by improving the accuracy and usefulness of the information.

Figure 3-4 provides more detail on reasons why respondents reported they did not read their personalized Home Energy Reports.

Figure 3-4. Reasons Customers Do Not Read Their Home Energy Reports (n = 51)<sup>1,2</sup>



<sup>1</sup>Percentages do not sum to 100% because multiple responses were accepted.

<sup>2</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

The third most frequently cited reason for not engaging was limited time, almost one-quarter of respondents (24%, n = 15) reported that they do not have time to read the report. One respondent reported a declining value to the usefulness of the report:

*"Most of the things it [the report] suggests are habits by now, which is why I say it has impacted us but that it is no longer particularly useful. It doesn't have new information and the recommendations to reduce energy usage are things we already do."*

### 3.2.4 Peer Utility Benchmarking Findings

The evaluation team discussed peer utilities' cadence for updates to their Home Energy Reports and found that frequent and targeted updates to report information increased customer satisfaction and engagement. One peer utility manager reported receiving positive feedback from customers upon updating report content quarterly. Some peers also reported they provided customized Home Energy Reports to engage with targeted customer segments each month. For example, one utility has an electric space heating flag and an air conditioning flag for all customers so they can issue customized messaging throughout the year that is related to the different seasons. Detailed findings of the Peer Utility Benchmarking effort can be found in Appendix C.2.

## 3.3 Neighbor Comparison

This section summarizes detailed findings related to the neighbor comparison component of Xcel Energy's Home Energy Reports. As previously shown in Figure 3-2 and Figure 3-3, the neighbor comparison tool was, on average, the lowest rated component in terms of both satisfaction (3.5 out of 5) and the perceived value (3.5 out of 5) it provides to the customer. As the neighbor comparison is a key component of the report, we would expect to see satisfaction more in line with customers' overall experience of the report which was rated a 3.9 out of 5 (Figure 3-1). However, this lower satisfaction with the neighbor comparison indicates that only

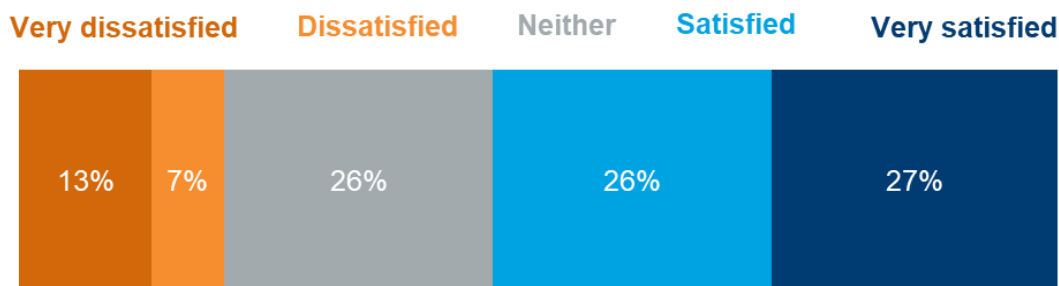
some customers were satisfied with this key report component, and some were not. This section provides an understanding of these two different perspectives and explores opportunities for Xcel Energy to improve the neighbor comparison.

### 3.3.1 Satisfaction with the Neighbor Comparison

As shown in

Figure 3-5. Respondent Satisfaction with the Neighbor Comparison Tool (n = 184), customers provided an average rating of 3.5 on a 1-to-5 scale for overall satisfaction with the neighbor comparison tool, where 1 meant “Very Dissatisfied” and 5 meant “Very Satisfied.” Almost one-third (27%, n= 48) of all respondents rated the neighbor comparison a 5, indicating that most customers are satisfied with their Home Energy Report. However, 26% (n = 48) are neither satisfied or dissatisfied and one-fifth of respondents (20%, n = 38) reported they were not satisfied with the neighbor comparison tool, rating it a 2 or below.

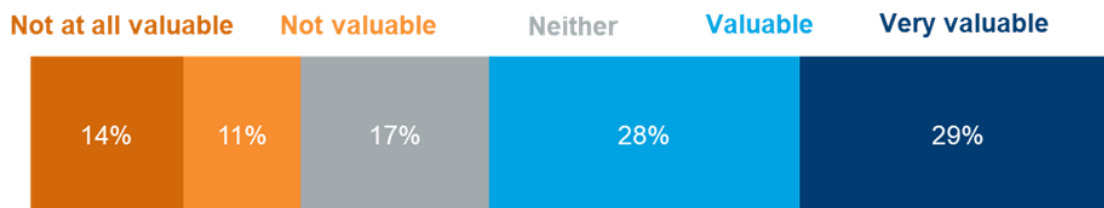
Figure 3-5. Respondent Satisfaction with the Neighbor Comparison Tool (n = 184)<sup>1</sup>



<sup>1</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

In addition, the evaluation team asked customers about how *valuable* the neighbor comparison tool was for them. Figure 3-6Error! Reference source not found. provides a summary of the distribution of value ratings from survey respondents. The average overall product value was 3.5 on a 1-to-5 scale, where 1 was “Not at all valuable” and 5 was “Very valuable”. More than half of respondents (57%, n = 99) reported that they found the tool valuable, rating it a 4 or 5. One-fourth of all respondents (25%, n = 46) did not see value in the neighbor comparison, as it was rated a 2 or below.

Figure 3-6. Respondent Perception of the Value of the Neighbor Comparison Tool (n = 184)<sup>1</sup>



<sup>1</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

The results on customer satisfaction and perceived value of the neighbor comparison suggest there is a subset of respondents that are unsatisfied with or misunderstand the information provided in their report in some way. One respondent stated:

*"The tool is meant to prod people to modify their energy usage behavior...but the implied behavior modifications aren't in my window of plausibility...I assume it's because of poor comparisons and I mostly ignore it."*

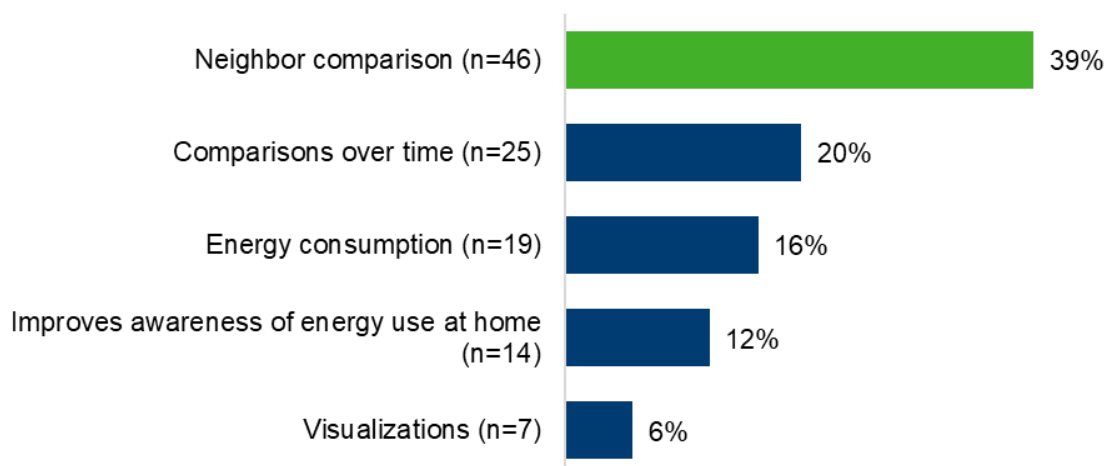
While overall there are many customers who are seeing value in the information, it will be critical for Xcel Energy to understand more about how to improve the experience for those who are less than satisfied.

### 3.3.2 Customer Experience

The neighbor comparison is often identified by customers as a key component to why they either like or dislike their Home Energy Report. To better understand customers' experiences, the evaluation team asked respondents how much they agreed or disagreed with specific statements about their Home Energy Report and looked for places where the neighbor comparison was mentioned. For example, customers were asked if they agree or disagree that *the Home Energy Report has helpful information about my home's energy use*. Depending on their responses, the evaluation team followed up with specific probes to understand why customers agreed or disagreed with this statement. The neighbor comparison was voluntarily identified by customers as a key component of the report experience underscoring the opportunity for Xcel Energy to enhance this component of the report.

Looking at respondents who found the Home Energy Report helpful, Figure 3-7 summarizes the report components respondents found to be most helpful. One respondent stated: "How much I am using compared to my neighbors. Helps me make changes the next month to keep the cost low," indicating that some customers do find the neighbor comparison tool helpful to their decisions related to energy use.

Figure 3-7. Components of the Home Energy Report that Respondents Found Helpful (n = 123)<sup>1,2</sup>

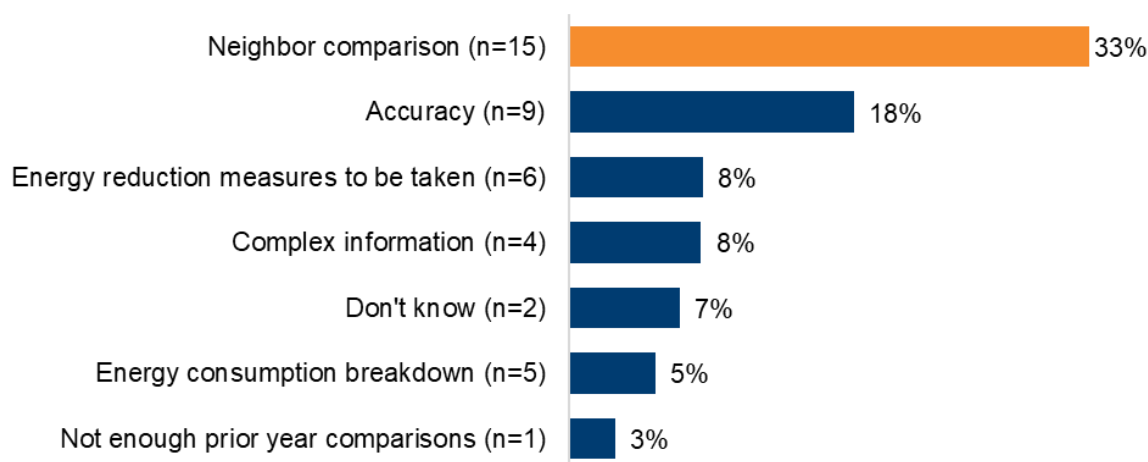


<sup>1</sup>Percentages do not sum to 100% because multiple responses were accepted.

<sup>2</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

For customers that disagreed with the statement that the report contained helpful information, the neighbor comparison tool was cited as the most confusing component. As summarized by Figure 3-8, one-third of respondents (33%, n = 15) who found their report confusing or not helpful reported the neighbor comparison the most confusing component. Customers also questioned the accuracy of the information provided (18%, n = 9) and described the energy reduction measures and breakdowns (8%, n = 6) as confusing. This indicates the need to improve existing report language regarding the energy consumption information and neighbor comparison. While on average, customers understand and appreciate the neighbor comparison tool, increasing the clarity and accuracy of this information will help improve customer satisfaction and engagement with the report.

Figure 3-8. What do you find confusing about your Home Energy Report? (n = 51)<sup>1,2</sup>



<sup>1</sup>Percentages do not sum to 100% because multiple responses were accepted.

<sup>2</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

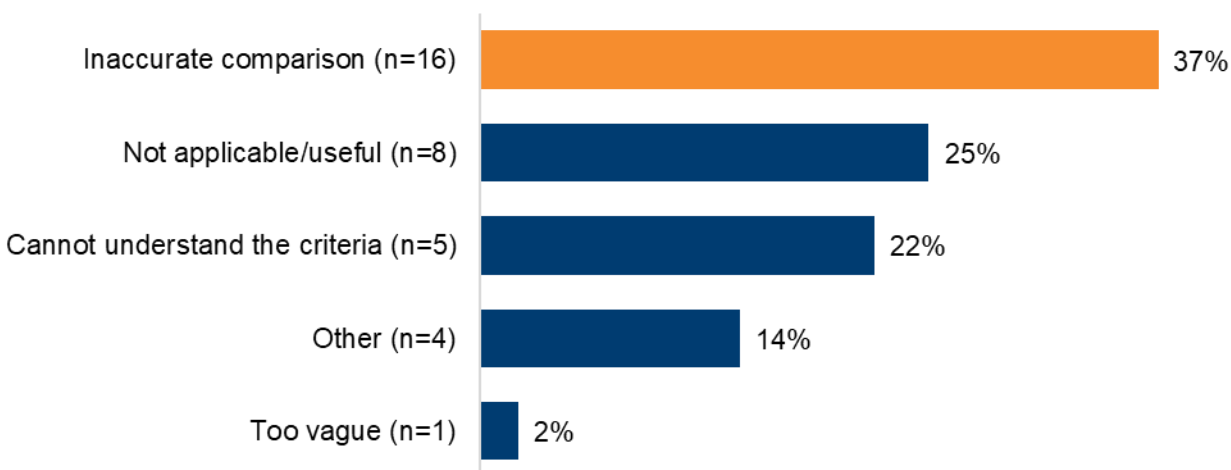
### 3.3.3 Reasons for Dissatisfaction

The evaluation team asked specifically why customers were unhappy with the neighbor comparison. Respondents most often felt that it did not provide accurate comparisons and/or the comparison did not apply to them. Figure 3-9 summarizes respondents' thoughts on the neighbor comparison tool indicating inaccurate comparison as their biggest concern (37%, n = 16). They also reported they did not find the tool applicable or useful (25%, n = 8), they were unable to understand the criteria for comparisons (22%, n = 5), and that the tool was too vague (2%, n = 1). Respondents shared varying assumptions about their own understanding of the definition of the "neighbor" they were being compared to. This most often included an assumption that the neighbor was someone located near their home. One respondent stated:

*"I don't have a good understanding of where the energy use is coming from. Sometimes I am far below and other times I am far above my neighbors and don't know what makes the difference."*

These responses suggest many customers may lack understanding of the neighbor comparison tool and its functionality and customers could benefit from clearer and more detailed language about the neighbor comparison criteria in the report. There may also be some issues with inaccurate information being reflected in some of the comparisons, as this has been discussed previously with product and implementation staff. However, most of the inaccurate comparisons result from a limited amount of data on the household specific end uses and systems. Xcel Energy has an opportunity to address this by encouraging customers to complete the home energy assessment as well as continue to work with the implementation contractor to improve the accuracy of the report comparisons.

Figure 3-9. Respondent Reasons for Dissatisfaction with the Neighbor Comparison Tool (n = 34)<sup>1,2</sup>



<sup>1</sup>Percentages do not sum to 100% because multiple responses were accepted.

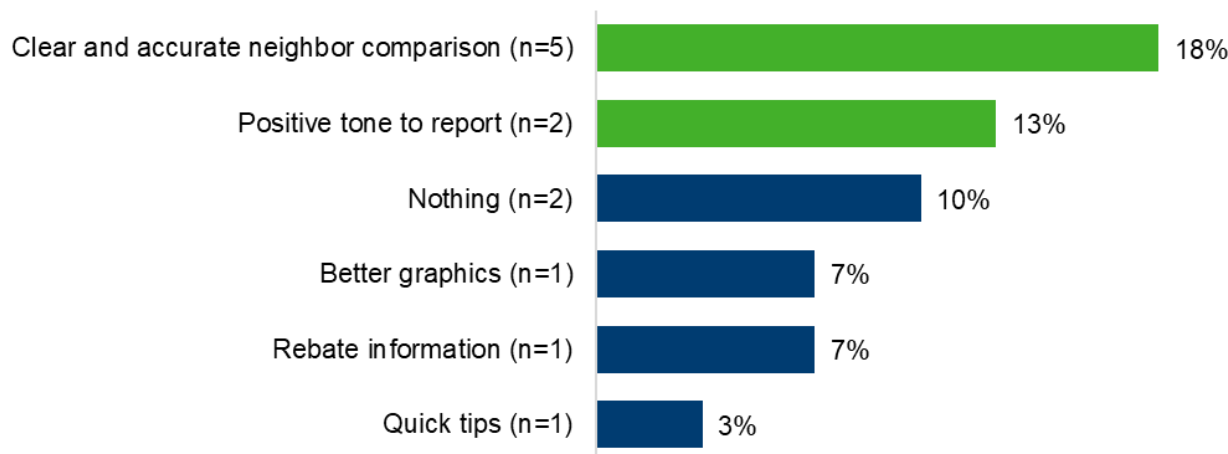
<sup>2</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

When asked what could improve their satisfaction with the Home Energy Report, respondents who rated their satisfaction a 3 or below most often noted the need for a clear and accurate neighbor comparison (18%, n = 5). As shown in Figure 3-10, slightly more than one-tenth of



respondents (13%, n = 2) requested for a more positive tone to the report as well. This indicates there may be an opportunity for improvements to the information provided to customers on the details of the comparison as well as the accuracy of the data used to determine the neighbor comparison.

*Figure 3-10. Respondent Suggestions to Improve Satisfaction with the Home Energy Report (n = 21)<sup>1,2</sup>*



<sup>1</sup>Percentages do not sum to 100% because multiple responses were accepted.

<sup>2</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

### 3.3.4 Peer Utility Benchmarking Findings

Most peer utility managers the evaluation team interviewed acknowledged that customers generally do not like the neighbor comparison feature and have taken steps to either move away from this language in their reports (six out of nine peers) or shift to a self-comparison model (one peer). Three peer utilities also reported they are shifting to a more optimistic tone and use of language. One utility reported incorporating positive tones by using phrases such as “Great job on your savings! You’re on your way, here is how you compare to energy-efficient households” instead of directly talking about neighbor comparisons. Another utility reported moving away from the word “neighbor” in their reports and focusing on how their “home” uses energy so as to not draw the focus away from customers. Other utilities provide a self-comparison option that compares to their own usage, and one is currently testing the self-comparison model on a specific cohort to determine if there is an impact on savings over using the neighbor comparison. Appendix C.2 contains the detailed findings from the Peer Utility Benchmarking interviews.

## 3.4 Motivations & Behaviors

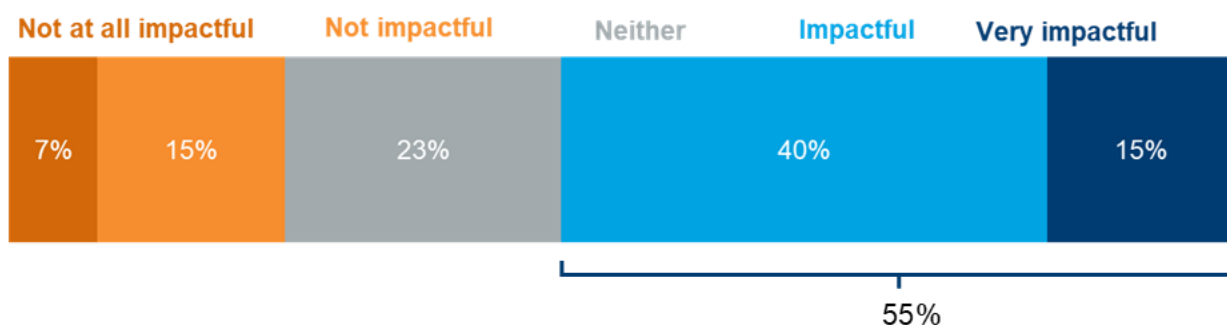
The following subsections summarizes the motivational features of the HEI product, as well as the energy use behaviors customers were motivated to change. Respondents indicated the Home Energy Report had motivated them to change their energy use behavior and make energy efficiency improvements in their home. When asked about the specific report features that motivated them to change their energy use at home, respondents reported energy efficiency tips, information on other programs, and household energy data as their top choices.

Respondents also reported that the information in their Home Energy Report impacted their decision to make energy efficiency upgrades such as installing efficient light bulbs, programmable or smart thermostat, insulation/air sealing/ weatherization, more efficient dishwashers, and more efficient refrigerators. As respondents cited the Home Energy Report as one of the top three ways they learned about Xcel Energy programs and services, there is opportunity to leverage this avenue of communication. Further details on these findings are summarized below.

### 3.4.1 Perceptions & Potential Motivations

The evaluation team asked customers how much the Home Energy Report motivated them to change their energy use behavior in their home. As shown in Figure 3-11, over one-half of respondents (55% rated a 4 or 5, n = 95) indicated the report motivated them to change their energy use behavior. On average customers rated the report a 3.4 out of 5 with 23% of respondents indicating they were impartial to the information in their Home Energy Report. This indicates Xcel Energy has an opportunity to enhance the experience for these and the customers that rated the report as not impactful.

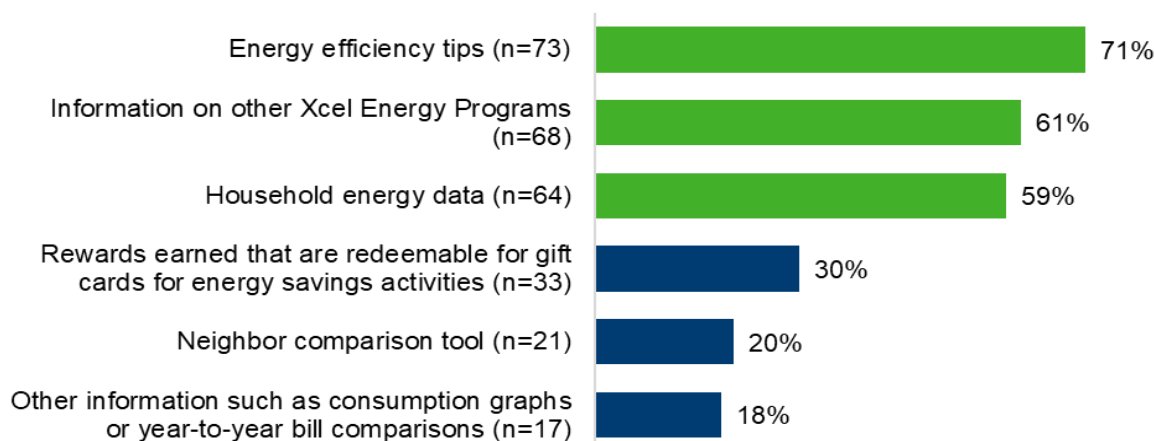
**Figure 3-11. Self-Reported Impact of Home Energy Report on Respondent Behavior (n = 184)<sup>1</sup>**



<sup>1</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

Figure 3-12 below summarizes what features of the Home Energy Report motivated customers to change their energy use. Respondents most often mentioned energy efficiency tips (71%, n = 73), information on other programs (61%, n = 68), and household energy data (59%, n = 64), suggesting that customers are interested in other Xcel Energy programs. Approximately one-third of respondents also found redeemable rewards (30%, n = 33) and/or the neighbor comparison tool (20%, n = 21) to be motivating, suggesting that Xcel Energy has an opportunity to improve customer awareness and understanding of these report components.

**Figure 3-12. Top Motivational Components of the Home Energy Report (n = 106)<sup>1,2</sup>**



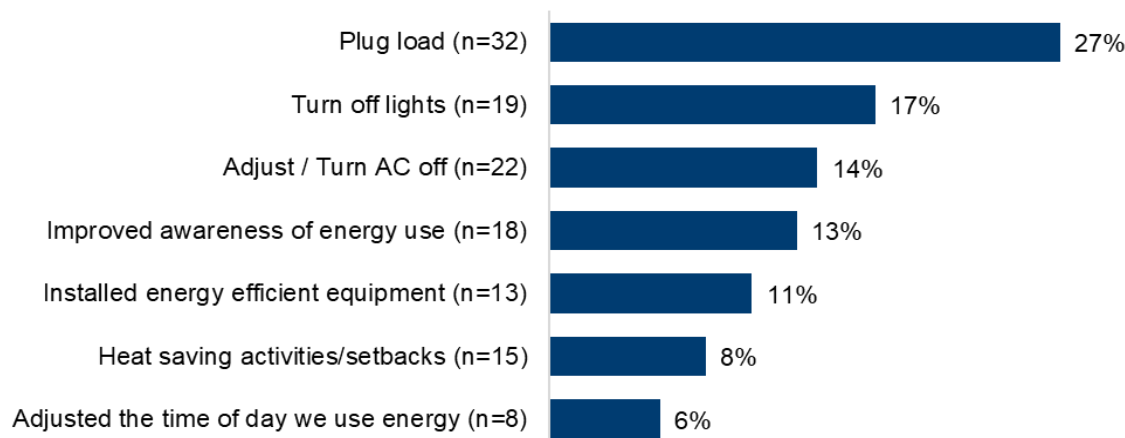
<sup>1</sup>Percentages do not sum to 100% because multiple responses were accepted.

<sup>2</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

### 3.4.2 Changes in Energy Use Behavior

To understand how customers were using the information they received in their Home Energy Reports, the evaluation team asked respondents about what types of behaviors they changed as a result of engaging with their Home Energy Report. Almost one-third of respondents (27%, n = 32) reported they curb their energy use by reducing the plug load, (e.g., turning off appliances). Customers also mentioned turning lights off (17%, n = 19) and adjusting or turning off their air conditioner (14%, n = 22) as other top reduction measures. Figure 3-13 below summarizes all energy use behavior changes respondents reported. This indicates that customers most often use no-cost adjustments to their energy behavior, while only 11% of customers reported installing energy-efficiency equipment.

**Figure 3-13. Energy Use Behavior Changes because of the Home Energy Report (n = 128)<sup>1,2</sup>**



<sup>1</sup>Percentages do not sum to 100% because multiple responses were accepted.

<sup>2</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

To understand how customers are staying informed about energy efficiency opportunities, the evaluation team asked respondents about how they first heard about Xcel Energy programs available to them. Respondents reported most frequently hearing about Xcel Energy programs through their bill (57%, n = 82), email (45%, n = 70), and their Home Energy Report (45%, n = 71), suggesting that Xcel Energy should continue to highlight programs and services through their Home Energy Report to help increase participation in Xcel Energy offerings.

To further understand how to improve the ability of the Home Energy Report to impact behavior, the evaluation team also asked respondents about the impact the report had on any decision to upgrade their existing equipment. Over one-third of respondents (39%, n = 65) reported that the information in their report impacted their decision to make energy efficiency upgrades. Of the respondents who said the report was impactful, most (83%, n = 54) reported having installed efficient light bulbs. Other improvements included programmable or smart thermostats (56%, n = 37), insulation, air sealing, or weatherization (34%, n = 22), more efficient dishwashers (31%, n = 17), and more efficient refrigerators (30%, n = 20). A majority of all respondents (58%, n = 99) reported they are likely to make future energy efficiency improvements in their home in the future.

In addition, nearly one-third of respondents (30%, n = 58) had not made any energy-efficient improvements yet. For customers who said the report was not impactful on their decisions or they did not make any energy efficiency improvements, a majority (87%, n = 13) noted the neighbor comparison was the most confusing component. This supports the previous findings related to the need for improvements to the neighbor comparison as an avenue for increasing ability of the product to impact customer behavior.

## 3.5 Increasing Customer Engagement

A separate objective of this evaluation was to identify opportunities to increase customer engagement with the Home Energy Reports. To address this specific objective, TRC leveraged the open-ended responses from the customer survey as well as the follow-up interviews to probe customers on how Xcel Energy could increase customer engagement with the HEI product. In addition, the evaluation team assessed customers' current awareness of the additional tools and information available on the My Energy portal. As the My Energy portal is seen as an avenue for customers to learn about the energy use in their homes, increasing customers awareness of and use of the portal will enhance their engagement with the information on cost reduction strategies.

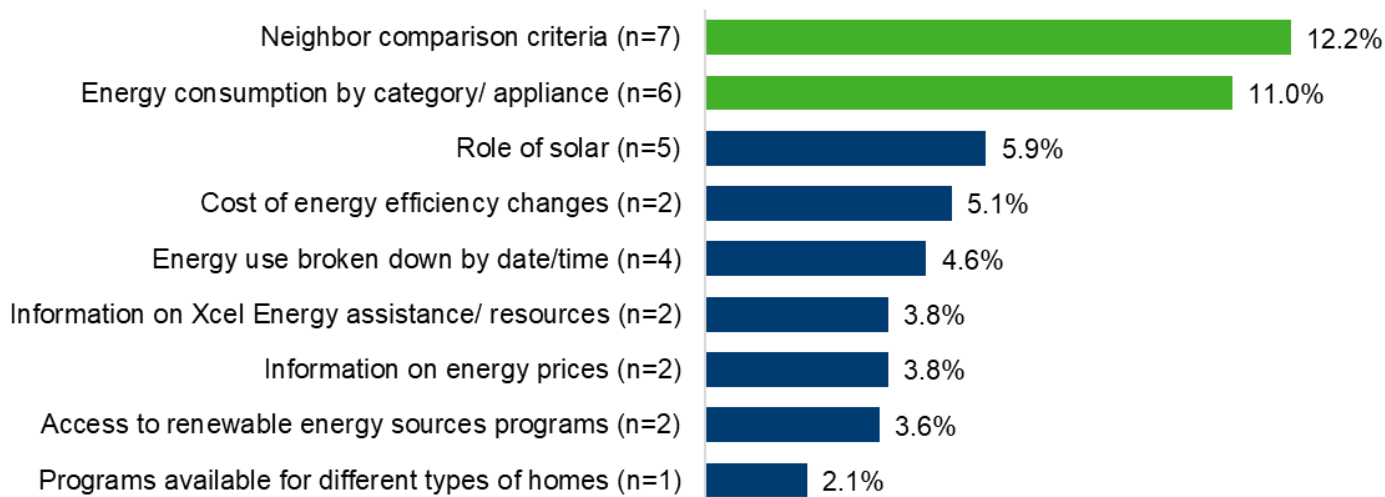
### 3.5.1 Suggestions for Improving the Home Energy Report

As discussed previously opportunities exist for Xcel Energy to increase the language and report communications, particularly regarding the neighbor comparison. To assess additional ways to improve the customer experience, the evaluation team reviewed respondents' open-ended suggestions and reasons for dissatisfaction with the report overall. This section summarizes specifically what types of information would help customers better understand their home's energy use and what cost-savings steps they can take.

Figure 3-14 below summarizes the information customers would like to see included in their Home Energy Report that could help them better understand their household's energy use.

Interest in neighbor comparison criteria had the highest number of mentions (12%, n = 7) followed by energy use consumption disaggregation (11%, n = 6). This indicates an opportunity to improve the report by providing some explanation to customers on who they are being compared to and how they can complete the home energy assessment to improve the data used to determine the comparison. Xcel Energy is also working to increase the granularity of consumption data available to AMI metered customers through the My Energy portal.

Figure 3-14. Information Respondents Felt Would Help Better Understand Household Energy Use (n = 54)<sup>1,2</sup>



<sup>1</sup>Percentages do not sum to 100% because multiple responses were accepted.

<sup>2</sup>Customer survey results were weighted by fuel type (electric, electric or gas) and unit type (single-family, multi-family) to better reflect population distribution.

The evaluation team probed the follow-up interview respondents on their specific reasons for dissatisfaction with their Home Energy Reports and opportunities for improvement. Two respondents shared the need for energy breakdown by appliance to be more proactive with their energy efficiency path.

*"Where did that usage come from? My wish would be that there would be more information from one month to the next... **could break it down by appliance, like your lighting versus your heating and cooling, that would be helpful.**"*

Both survey respondents and follow-up interviewees highlighted interest in connecting solar power and program information in their Home Energy Report. Almost one-tenth of survey respondents (7%, n = 14) and one-third of follow-up interviewees (30%, n = 3) mentioned solar power in their responses. Two follow-up interviewees had signed up for Xcel Energy's community solar program as well. Respondents also desired more customized reports and energy efficiency opportunities for various residence types. Of the 20 renters who participated in the survey, four respondents mentioned frustration with their inability to make energy efficiency upgrades based on their residence type. One follow-up interviewee shared a similar suggestion:

*"I live in a housing unit, an affordable housing multifamily apartment. So, it gets even more restricted with what we can and cannot do. But maybe a report that was more so for homeowners and then for people that are in a situation like mine."*

Together these results indicate there is room for improvements to the delivery of the information in the Home Energy Report. For example, Xcel Energy could consider ways to improve targeted customer messaging for rental customers. There may also be opportunities to cross promote other non-energy efficiency products.

### 3.5.2 Leveraging the My Energy Portal

This section summarizes awareness of the My Energy portal amongst respondents identified in the customer survey. Most respondents reported that they were not aware of the portal or rewards program and expressed polarizing responses on whether the rewards program is motivating to save energy in their household. Further information on the portal and customer experience was collected through usability testing interviews conducted by TRC.<sup>7</sup>

Overall, respondents were unaware of the My Energy portal. Majority of respondents (65%, n=114) reported that they had not heard of the My Energy portal. One-third of the respondents (35%, n=14) do not find the portal to be a priority. There was also some confusion about what is available on the My Energy portal and how to navigate the information. One respondent stated:

*“The portal can be a little easier to use. For example, I tried to walk my wife through obtaining information and it was a little more difficult for her to navigate.”*

Of the customers that were aware of the portal (29%, n=56) or reported “Don’t Know” (6%, n=14), the majority (81%, n=58) had not used the rewards program. Of the 5 customers who reported using the rewards program, less than half (42%, n=2) found it to be motivating to save energy in their household. Additional analysis on customer experience and feedback on the My Energy portal is being assessed by TRC through usability tests with residential customers in late 2022 through early 2023.

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<sup>7</sup> TRC provided specific results from the Usability Tests in a separate presentation.



## 4. Conclusions & Recommendations

This chapter presents the evaluation team's key findings and associated recommendations regarding the Xcel Energy Home Energy Insights (HEI) Product. All recommendations are based on key findings from our evaluation research and are designed to reflect the context of future product years, acknowledging expected changes in the market and planned product changes.

Overall, the evaluation team found that customers were satisfied with their Home Energy Report. In addition, household energy use and consumption information were the most valuable components of the product. Unsurprisingly, the energy saving tips provided in the report was the top component that customers cited as helpful and motivated them to change their energy use behavior (Figure 3-12). The neighbor comparison received mix reviews from respondents but remains an important component to the Home Energy Report and an opportunity for improvements as roughly one-half of respondents found it valuable. As HEI is well established, we expected to see good satisfaction ratings and, therefore, have taken a closer look at those customers who were less satisfied with their experience to determine areas for improvement and growth for the product. The remainder of this chapter presents key findings and recommendations.

- **Key Finding 1: While the majority of respondents read their Home Energy Report, respondents who either “sometimes” or “never” read their report most often believed the information to be inaccurate or not useful.** In addition, some renters noted challenges with implementing savings tips and, therefore, did not find the report helpful. Respondents found household energy use and consumption information to be the most valuable features of the report. Together, these findings indicate that more work can be done to improve the accuracy of the data and information provided through the key report components.
  - **Recommendation 1a:** More explicitly highlight how customers can complete the home assessment, and how the specific data collected through the assessment on the My Energy portal will help Xcel Energy tailor their Home Energy Report. By completing the home assessment through the My Energy portal, customers update specific information such as the type and vintage of the systems in the home. This information is then incorporated into the algorithm for the neighbor comparison as well as the selection of tips and customer messaging for specific programs.
  - **Recommendation 1b:** Work with the implementation team to update report tips, where possible, for different residence types (e.g., renters) to make them more applicable to the residents, and thus more likely to be acted upon. This should explicitly include consideration of information that customers have provided through the assessment. Xcel Energy may also consider ways to include support for landlord engagement as part of the program or tip information provided in the Home Energy Report.
  - **Recommendation 1c:** Work with the product implementer to improve the accuracy and timing of the data used to populate the report, including looking at ways to improve the timing between when customers receive their energy bill and the Home Energy Report so the information the customer is receiving in the report is timely. This will help to increase trust in the contents of the report.



- **Key Finding 2: Respondents who found their report confusing or not helpful, found the neighbor comparison the most confusing component.** Respondents shared varying assumptions about their own understanding of the definition of the “neighbor” they were being compared to. This most often included an assumption that the neighbor was someone located near their home. When the evaluation team asked what improvements could be made to the report, respondents expressed their interest in more information on the neighbor comparison criteria. This is especially critical, given more than half of all respondents rated the neighbor comparison as valuable; therefore, it will be worthwhile to improve customer clarity on this component of the report.
  - **Recommendation 2a:** Enhance detailed information on the specific criteria used to determine the comparable “neighbor” in the Home Energy Report itself. Other peer utilities offer a short explanation of the specific information used to determine the comparison or offer an option for the customer to switch to a self-comparison report.
  - **Recommendation 2b:** Assess the feasibility of offering customers the option to select a self-comparison version of the Home Energy Report. Two of the interviewed peer utilities reported having shifted specific cohorts to the self-comparison model. During the early summer months, one utility provides a self-comparison to participants with air conditioning that compares to their own usage from the previous summer. Another utility is attempting to assess the self-comparison model’s impact on savings when compared to the neighbor comparison model and have reported that more people opted out of neighbor compare than their self-compare model. Questions regarding report preferences could be included in the home assessment.
- **Key Finding 3: The Home Energy Report was selected by customers as one of the top three ways they learned about other Xcel Energy products.** Customers see the report as a tool to monitor their energy usage and respondents noted that energy efficiency tips, Xcel Energy product information, and home energy use data were especially motivating in changing their behaviors related to energy use. Overall, this indicates the product is successful for those customers who are engaging with the Report. Xcel Energy has the opportunity to leverage these tools to gain higher savings by increasing awareness and access to the information for those customers who are currently less engaged.
  - **Recommendation 3a:** Offer customers more streamlined information on how to access energy use information and information on other products, particularly through leveraging the My Energy portal. This will allow customers to better understand, and more easily access, opportunities they can implement to save energy.
- **Key Finding 4: Customers desired more tailored information on other Xcel Energy offerings beyond energy efficiency, as well as a more positive tone within the report language.** Peer utilities reported that they are working to move away from the harsh language and incorporate more positive tones within their reports to improve customer satisfaction. Follow-up interview respondents were interested in the inclusion of solar programs and information in their reports. Roughly one-third of interviewees mentioned solar power in the interviews.
  - **Recommendation 4a:** Work with the implementation contractor to update the report language to a more positive tone to increase customer satisfaction with the report.

For example, the text could be altered to be more focused on how customers have improved their usage (if that is the case) or could improve in the future.

- **Recommendation 4b:** Work with the implementation team to update the Home Energy Report to include other Xcel Energy offerings besides energy efficiency. Doing so provides next steps for a client and could lead to greater portfolio-wide energy savings.
- **Key Finding 5: Most survey respondents were not familiar with the My Energy portal.** Most customers that had accessed the portal were not aware of the rewards program and did not find the portal to be a priority. The My Energy portal provides a wealth of information on customer usage and will be increasing the aggregation capabilities as Xcel Energy administers AMI meter technology. Therefore, this is an opportunity to improve customers' awareness of the current and upcoming features of the portal.
- **Recommendation 5a:** Conduct further research on how customers are directed to the My Energy portal. As many respondents had not heard of the My Energy portal, more research is needed to be able to improve awareness and use of the portal as well as the connection to My Account.

April 27, 2023



# Xcel Energy

## Colorado & Minnesota Residential Home Energy Insights (HEI) Product Process Evaluation

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# Table of Contents

Appendix A:	Evaluation Plan.....	A-1
Appendix B:	Data Collection Documents .....	B-1
B.1	Staff Interview Guide.....	B-1
B.2	Peer Utility Benchmarking Interview Guide.....	B-9
B.3	Treatment Group Survey Guide .....	B-19
B.4	Participant Survey Weights .....	B-37
Appendix C:	Data Collection Findings.....	C-1
C.1	Staff Interview Findings Memo.....	C-1
C.2	Peer Utility Benchmarking Memo .....	C-6

## Tables

Table 1.	2021 Home Energy Insights Net Energy Savings Goals and Product Budgets .....	A-2
Table 2.	Evaluation Objectives and Research Tasks .....	A-6
Table 3.	Home Energy Insights (HEI) Product Research Summary .....	A-7
Table 4.	Peer Utilities Included in Peer Utility Sample .....	A-9
Table 5.	Stratification of Sample for Participating Customer Web Survey (Jan-Dec 2021) ....	A-12
Table 6.	Online Portal Usability Testing Customer Stratification .....	A-17
Table 7.	2022 HEI Product Evaluation Task Schedule .....	A-18
Table 8.	List of Peer Utilities .....	B-10
Table 9.	Mapping of interview questions to indicators .....	B-11
Table 10.	Mapping of interview questions to contextual themes .....	B-12
Table 11.	2022 HEI Product Evaluation Objectives .....	B-20
Table 12.	2022 HEI Product Evaluation Objective, Survey Research Themes & Survey Question Crosswalk .....	B-21
Table 13.	Sample Population & Target Completes, by Strata .....	B-22
Table 14.	Sample Variables.....	B-22
Table 15.	Sample Variables.....	B-37
Table 16.	2021 Home Energy Insights Net Energy Savings Goals and Product Budgets .....	C-1

Table 17. High-Level Characteristics of HEI Programs <sup>1</sup> .....	C-7
Table 18. Components Offered by Peer Utility and Vendor .....	C-13
Table 19. Percentage of PY2021 Savings Achieved by Peer Utilities <sup>1</sup> .....	C-16

## Appendix A: Evaluation Plan

### Product Overview

The HEI Product, formerly known as Energy Feedback, is offered across Xcel Energy's Colorado (CO), Minnesota (MN), and New Mexico (NM) territories and is fundamentally a behavioral conservation product. The product provides a targeted direct mailing Home Energy Report (HERs, also referred to as "reports" in this memo) to a designated group of residential customers, giving them specific information and recommendations on ways to reduce their energy consumption.<sup>1</sup> Customers receive new energy-use information with each report and are compared to their average "neighbor," as determined by the average use of customers with a similar use profile and select characteristics, primarily the square footage of customers' homes and building type.<sup>2</sup> Savings are quantified by comparing the energy consumption of the recipient group to that of a non-participating control group. A non-participating control customer is defined as a customer who does not receive a report through the HEI Product. The product also leverages an online web portal (My Energy) that features additional ways for customers to learn about energy use in their homes and possibilities for energy savings and cost reductions. The My Energy web portal is available to all customers, with the only qualification being enrollment in the Xcel Energy My Account web portal. In addition to the My Energy information, My Account enables customers to complete account management-related tasks such as locating information about current energy rates, paying bills, and receiving outage alerts.

The HEI Product's main offerings include the individualized reports, the online portal, and high-bill alerts. However, at the time of this memo the high-bill alerts were not a functional component of the product. Additional information about the potential addition of High-Bill alerts to the HEI Product is below.

Table 1 outlines the 2021 HEI Product net energy savings goals and product budgets in CO, MN, and NM. Product goals were developed based on prior years' savings, attrition, and refill data. Product savings are claimed by comparing participating customers' (the treatment group) energy use to non-participating customers' (control group) energy use.

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<sup>1</sup> The HEI product has also been referred to as Energy Feedback (CO and MN) and is currently referred to as the Energy Feedback Product in NM.

<sup>2</sup> It is important to note that the square footage of customers' homes is a current limiting factor in product participation because Xcel Energy does not have data on the square footage for all residential customers.

*Table 1. 2021 Home Energy Insights Net Energy Savings Goals and Product Budgets*

	Net GWh	Net kW	Electric Budget	Electric TRC	Net Dth	Gas Budget	Gas TRC
<b>CO Goals<sup>1</sup></b>	30.17	5,763	\$3,914,898	1.03	106,798	\$692,083	1.31
<b>MN Goals<sup>2</sup></b>	19.95	4,409	\$1,428,667	1.53	43,372	\$170,293	2.22
<b>NM Goals<sup>34</sup></b>	4.29	908	\$143,485	1.07	NA	NA	NA

<sup>1</sup>2021 Goals as reported in the Public Service Company of Colorado 2021-22 Demand Side Management (DSM) Plan, Proceeding No. 20A-XXXEG.

<sup>2</sup>2021 Goals as reported in the Minnesota Electric and Natural Gas 2021-2023 Conservation Improvement Product (CIP) Triennial Plan, Docket No. E, G002/CIP-20-473.

<sup>3</sup>2021 Goals as reported in the New Mexico Southwestern Public Service Company 2020-2022 Energy Efficiency Triennial Plan, Case No. 19-00140-UT.

<sup>4</sup>The New Mexico Product is not within the process evaluation scope but will be considered for inclusion in some of the evaluation tasks, including the optional online portal usability testing and as needed for the process mapping exercise.

The following sections describe the main offerings of the HEI Product including the reports, the online portal, and the potential addition of high-bill alerts to the HEI Product.

### Home Energy Reports

Personalized reports are paper-mailed or emailed, depending on their preferred method, on a cadence prescribed by their tenure in the product. These reports combined with the My Energy web portal give customers easy access to their energy use data, with the aim that being provided with timely information about their energy use will encourage them to change their behaviors and save energy, without having to actively seek this information themselves. On average, paper-mailed reports are distributed quarterly while emailed reports are sent out monthly. In general, reports provide:

1. Customer's energy use compared to other, nearby customers who had similar usage profiles and home characteristics (occupancy, heating fuel, square footage, etc.) prior to product enrollment;
2. Targeted efficiency recommendations based on home profile data available; and
3. Other information such as consumption graphs or year to year bill comparisons.

Recipients are randomly selected from Xcel Energy's residential customers and may "opt out" of the product at any time upon request.



### Online Portal

This feature is available to all residential customers and no additional savings are claimed by Xcel Energy for the online portal. It provides the same information as energy usage reports any time a customer chooses to log into the online portal, along with more detail and other options. When visiting the My Energy web portal, customers can:

- View their neighbor comparison on their most recent report;
- See graphs showing energy consumption;
- Earn rewards redeemable for gift cards for energy savings activities; and
- Complete a Home Energy Assessment which provides insight into how energy is used in the home as well as more accurate and actionable energy saving recommendations;
- See disaggregated energy usage by technology and end use;
  - This product feature is currently under development and is expected to launch in 2023 after the current RFP is awarded. As Advanced Metering Infrastructure (AMI) meters and data become more widespread and as customers complete Home Energy Assessments, the accuracy of this disaggregation will improve. As required by regulators, energy usage data will be available to customers at 15- minute intervals.
- Receive tips and recommendations for a wide array of energy savings measures, from low- and no-cost improvements to major upgrades of building envelope and mechanical systems.

Customers are encouraged to visit My Energy through emails, targeted messaging, and social media channels. My Energy also features even more ways for customers to learn about energy use in their homes and possibilities for energy savings, load management, and cost reductions.

### High Bill Alerts

While this service is not available until after the launch of this evaluation plan in 2022, Xcel Energy and the product vendor are working to develop an alert by which customers are contacted (via email) before the end of a billing cycle when they are trending towards having a high energy bill. This a proposed product addition due to other vendors reporting success in increasing product savings through the use of similar tools. This potential addition may also result in increased product costs which could deteriorate product cost effectiveness and is therefore under review.

## **Evaluation Overview**

The 2022 evaluation will consist of a process evaluation focused both on customer experiences and internal processes, including interactions within Xcel Energy and between Xcel Energy and the implementation vendor that make up the day-to-day functioning of the product. This section presents the objectives of the process evaluation and is followed by a more detailed description of each evaluation activity.

The evaluation team discussed process evaluation priorities during the kickoff meeting and staff interviews. We also conducted early interviews with 9 peer utilities to better understand best

practices, shared challenges, and opportunities for product development. During those conversations, and through this initial research, several themes emerged regarding how the 2022 evaluation could support the product, along with several challenges the product is currently facing.

- **Forecasting savings** has been challenging. The product's ability to achieve energy savings across the three states has been relatively consistent over time; however, Colorado stands as an anomaly in terms of its ability to achieve savings in recent years as claimed savings have fallen more there than in comparison with product energy savings in MN and NM.<sup>3</sup> The implementation team mentioned performing a deep dive analysis into the potential cause for the decline in energy savings and determined there had been issues with a lack of rebalancing the cohorts.
- Product staff see the product as an **opportunity to better engage with customers**, but currently feel it is lacking in this area. Product staff believe that the reward system could be a great way to communicate with customers the ways in which they can save energy, and is a more positive way to engage customers outside of their monthly bill.
- Most product staff would like to shift to a more optimistic tone and use of language than what is currently used within the reports. Staff see this as an **opportunity to improve existing engagement** and potentially increase customer satisfaction with the product.
- In general, there have been **challenges with customer satisfaction** with the HEI Product. Specifically, customers' complaints have been regarding the neighbor comparisons or a lack of understanding about their product participation. Peer utilities have reported **inconsistencies with their HER customer satisfaction**. Neighbor comparison is a program component that multiple peer utilities reported resulted in the most customer dissatisfaction.
- Xcel Energy has **faced internal challenges implementing the HEI product** including Xcel Energy staff turnover, issues with vendor engagement, and inconsistent customer communications channels, lowering its ability to generate energy savings due to lack of vendor and customer engagement. Issues with vendor engagement and customer communications highlight the need for better opportunities for engagement through dedicated and clear communication channels.
- Xcel Energy is currently pursuing a Request for Proposal (RFP) for implementation of the HEI Product and wanted **feedback from peer utilities** to help inform Xcel Energy on how to best rebuild its program.

The process evaluation will investigate improvement opportunities for the online portal and the HER as the product plans to transition to a more digital customer experience. The above topics are mapped to the following **objectives of the process evaluation**.

- Collect feedback on **customers experiences** with the HEI product.
  - Understand customer satisfaction and what leads to customer dissatisfaction with the product.
- Identify opportunities to **increase customer engagement** and **energy saving behavior** through assessing the usability of the HEI.

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<sup>3</sup> Xcel Energy staff reported that the 2021 Colorado HEI Product gas savings fell 20% below its gas savings goal.

- Understand the ability of the HEI Product to motivate customers to better manage, and ideally reduce, their energy use.
- Define the advantages and disadvantages of the neighbor comparison. Understand what specific information may be helpful for customers in understanding the comparison.
- Research what information or new and/or existing tools would help customers better engage with their energy use.
- Explore opportunities to leverage the integration of interval data, through the My Energy portal, to improve the level of information provided to customers.
- Understand how HEI can better integrate with other Xcel Energy products to provide a more comprehensive approach to its customers.
- **Improve product tracking and processes.**
  - Explore opportunities to coordinate with Customer Care, the Xcel Energy customer service team, including more comprehensive tracking of customer calls and coordination of customer communications tracking.
  - Identify opportunities to improve the tracking of data on customer use of the My Energy portal, assessment information, and interaction with the online portal and rewards system.
  - Explore opportunities to align product objectives across internal groups within Xcel Energy, such as Advanced Grid Intelligence and Security (AGIS), Behavioral Demand Response, and Customer Care.
- **Assess peer utilities' product practices.**
  - Research how peer utilities measure customer satisfaction to identify appropriate tracking tools and metrics that can be used to better understand the customers' experience.
  - Understand if peers have experienced challenges with achieving savings, particularly for gas savings and for products that have been running for a long time.
  - Explore peer utilities' experiences with managing customer engagement including monitoring customer complaints and tracking customer use of the tools and information provided through the HERs.
  - Understand the successes and challenges of integration of AMI disaggregation data.

Table 2 maps the high-level objectives of the process evaluation to the evaluation tasks outlined in the next section.

*Table 2. Evaluation Objectives and Research Tasks*

Evaluation Objective	Research Task(s)
<b>Understand peer utilities' product practices</b>	Peer utility benchmarking
<b>Collect feedback on customer experience and satisfaction with the product</b>	Participating customer surveys and usability testing
<b>Identify opportunities to increase customer engagement and energy saving behavior through assessing the usability of the HEI Product.</b>	Participating customer survey and usability testing
<b>Improve product tracking and processes</b>	Internal process mapping

## Data Collection Activities

To meet the above objectives, the evaluation team will conduct a variety of data collection activities. These are listed in Table 3 and are explored more in this section. The evaluation team has already conducted interviews with Xcel Energy staff members (Table 3, Task Reference 1), as well as peer benchmarking interviews (Table 3, Task Reference 2), to help understand specific needs for this evaluation. Results from these two tasks have been used to develop this evaluation plan.

For customer research, the evaluation team will conduct web surveys with participating customers (Table 3, Task Reference 3) to collect some initial feedback on the customer experience and understand customer satisfaction with the current product. The evaluation team will also utilize follow up interviews (Table 3, Task Reference 3a) to identify opportunities to increase customer engagement and energy savings behavior through the HEI Product. The internal process mapping task (Table 3, Task Reference 4) will be used to understand areas of success and potential improvements within the product's internal processes, while the optional usability testing task (Table 3, Task Reference 5) will identify how customers use and interact with the HEI Product and how they use the information it provides when it comes to their energy use behaviors. If a new vendor is selected to implement the product, the usability testing could involve testing of the new HEI Product.

Table 3. Home Energy Insights (HEI) Product Research Summary

Task Ref.	Research Task	Included in Original Scope?	Sample Size	Research Objectives
1	Staff Interviews	✓	9	Inform evaluation plan
2	Peer Utility Benchmarking Interviews	✓	9	Understand peer utilities' product practices; inform evaluation plan
3	Participating Customer Surveys (web)	✓	140 (70 per state)	Feedback on customer experience and satisfaction with the product and identify opportunities to increase customer engagement.
3a	Participating Customer HER Usability Testing (Recommended)		10 (5 per state)	In-depth understanding of customer experience and satisfaction with <i>newly launched HER</i> and identify opportunities to increase customer engagement.
4	Product Process Mapping (Recommended)		N/A	Improve product tracking and processes
5	Online Portal Usability Testing (Optional)		24	Feedback on customer experience and satisfaction with the online portal and identify opportunities to increase customer engagement.

### Staff Interviews

To support the 2022 process evaluation of the Xcel Energy HEI Product, the TRC evaluation team conducted telephone interviews with key staff managing and implementing the product, as well as staff from Xcel Energy Energy's Customer Care and the AGIS teams. The main objectives of the staff interviews were to collect staff feedback on product experiences and evaluation priorities. Members of the TRC evaluation team interviewed the following key staff managing and implementing the Xcel Energy 2022 CO, MN, and NM HEI Products.<sup>4</sup>

### Xcel Energy HEI Staff:

- Current Product Manager
- Xcel Energy Team Lead; Former Manager

<sup>4</sup> The HEI product has also been referred to as Energy Feedback (CO and MN) and is currently referred to as the Energy Feedback Product in NM.

- Two previous Product Managers
- Product Engineer
- Product Support Staff
- Customer Care Manager
- AGIS Manager
- Implementor – Product Manager
- Implementor – Contract Manager
- Implementor – Product Analyst

These meetings, combined with the kickoff meeting, allowed the evaluation team to create this focused evaluation plan with defined data collection activities.

### Peer Utility Benchmarking

The evaluation team developed a peer utility interview guide that was customized to the desired benchmarking components. The peer utility guide was provided to Xcel Energy for approval prior to beginning data collection. The evaluation team has provided high-level findings from our initial analysis and will further summarize the results of the benchmarking analysis in a separate memo and appendix within the final evaluation report.

The peer utility benchmarking task focused on addressing the following research objectives:

- Research peer **program design and tracking** to benchmark the Xcel Energy HEI product against other similar products and understand the possibilities for potential program improvements and expansion. Document the range of program practices (e.g., customer screening and sales funnel processes, cost-effective strategies to serve low usage customers, etc.) to include minimum and best practices.
- Understanding **peer program performance** to investigate the ability for potential improvements to result in expansion of the product and increased savings.
- Explore **customer engagement** strategies to understand if opportunities exist to improve customer satisfaction and increase awareness of and engagement with the tips and tools provided by the program. Learn how implementors identify and deliver customers recommendations, and what resources are available for customers to evaluate and move forward with those recommendations.

To address these objectives, the peer utility benchmarking interviews focused on the following research questions:

- How do peers track customer use of the tools and information provided through their HERs?
- What tips and information to peer utilities utilize when motivating customer behavior?
- What cross promotional strategies are used across residential products by peers?
- How do peer utility products integrate with their other energy-efficiency offerings?

- How can Xcel Energy use similar strategies to integrate the HEI Product with the Marketplace and other Xcel Energy offerings?
- How do peer utilities knowledge share with their vendor to conduct product tracking of processes?
- What strategies are utilized to improve the cost-effectiveness of peer products?

Table 4 outlines the peer utilities that the evaluation team identified to include in the peer utility sample. TRC developed this sample in collaboration with Xcel Energy and included the consideration of program size, fuel type, geographic location, implementation contractor, and program components (such as AMI integration) when determining the appropriate priority level for each utility. Target respondents are managers of HERs programs or behavioral modification programs that contain a HER component. Peer utilities with a “high” priority level were prioritized in the peer utility interviews. Utilities with a “medium” priority level were only contacted if the utilities with a “high” priority level were not available to be interviewed. The HEI product manager reviewed these utilities and identified additional peer utilities for consideration prior to conducting the interviews.

*Table 4. Peer Utilities Included in Peer Utility Sample*

Utility (State)	Program Type	Program Name	Implementor	Number of Participants	AMI Component	Priority Level
<b>BGE (MD)</b>	Electric	BGE Smart Energy Manager – Behavioral	Oracle	927,203	ü	High
<b>Con Edison (NY)</b>	Combo	EE Transition - Residential Home Energy Reports	Oracle	1,298,610	ü	High
<b>Consumers Energy (MI)</b>	Combo	Home Energy Reports	UpLight	235,000		High
<b>Entergy (AK)</b>	Electric	Home Energy Report	Franklin	378,801		High
<b>Eversource (MA)</b>	Electric	Behavior Feedback	-	610,000	ü	High
<b>Idaho Power</b>	Electric	Home Energy Report Pilot	UpLight	127,138		High
<b>PSEG (NJ)</b>	Combo	Residential Behavior	Bidgely	650,000		High
<b>PG&amp;E (CA)</b>	Combo	Residential Energy Advisor: Home Energy Reports and	UpLight	1,800,000	ü	High



Utility (State)	Program Type	Program Name	Implementor	Number of Participants	AMI Component	Priority Level
		Home Energy Checkup				
<b>ComEd (IL)</b>	Electric	Home Energy Reports	Oracle	1,700,000		High Alternate
<b>Dominion</b>	Electric	Home Energy Reports	Franklin	37,335		High Alternate
<b>Pepco - EmPower MD</b>	Electric	Residential Peer Group Comparison Program	Oracle	360,639		High Alternate
<b>AEP Ohio</b>	Electric	Home Energy Report	Oracle	520,133		Medium
<b>Ameren (MO)</b>	Combo	Residential - Behavior Modification	Oracle	40,000		Medium
<b>Southern California Edison (CA)</b>	Electric	Residential Benchmarking Pilot	ICF	344,497		Medium
<b>Georgia Power Co.</b>	Electric	SCE-SW-001A - Home Energy Efficiency Survey Program	-	2,500,000		Low
<b>Indiana Michigan Power</b>	Electric	Residential Behavioral	-	1,195,310	ü	Low
<b>PPL Electric Utilities (PA)</b>	Electric	Residential Home Energy Reporting	-	90,860		Low
<b>Puget Sound Energy (WA)</b>	Electric	Energy Efficiency Behavior & Education Program		126,955		Low

Results from this initial peer benchmarking task were used to develop further research tasks that are outlined in this evaluation plan. For the high-level summary of findings from the peer benchmarking task see Peer Benchmarking High-Level Findings<sup>1</sup>.

1. Peer Benchmarking High-Level Findings can be found in the Xcel Energy 2022 Home Energy Insights (HEI) Product - Peer Utility Benchmarking Interviews Interim Findings

### Participating Customer Surveys

The evaluation team will utilize participant web surveys to meet the following process evaluation objectives. We recommend keeping the web surveys to 10 minutes in length and focusing on collecting good-quality and targeted information. The participant survey task will focus on the following objectives:

- Collect feedback on **customers experiences** with the HEI product.
  - Understand customer satisfaction and what leads to customer dissatisfaction with the product.
  - Understand if customers overall satisfaction with Xcel Energy is different for the HEI treatment group.
- Assess opportunities to **increase customer engagement** and **energy saving behavior**.
  - Define the advantages and disadvantages of the neighbor comparison.
  - Understand what specific information may be helpful for customers in understanding the comparison.
  - Research what information or tools would help customers better engage with their energy use.

To address these objectives, we propose the participating customer surveys focus on the following research questions. Research questions used to develop the participant survey guide will be finalized with the Xcel Energy HEI Product manager prior to the development of the survey guide.

- What aspects of the HEI Product are customers satisfied and/or dissatisfied with?
  - What leads to dissatisfaction with the product?
- How satisfied are customers with Xcel Energy as their utility?
- Do customers consult their utility bill, or the report provided by the HEI product to understand their energy usage?
  - What level of granularity do customers prefer when it comes to their energy usage?
- Do the HEI Product help customers monitor or understand their home energy use?
- Do customers understand the objective of the reports?
  - What information do customers seek as a result of reviewing their HER?
- What is customers' familiarity with other residential Xcel Energy products and offerings?
  - Do customers learn about opportunities for energy-savings through other Xcel Energy products due to receiving their HER?
  - Do customers plan to adopt energy-efficient measures and/or energy-saving behaviors in their homes as a result of their participation in the HEI Product?

For the participating customer survey, the evaluation team will survey customers who were selected as part of the treatment group for the HEI Product in 2021. The evaluation team will

design the sample to be representative of the treatment group participants across the separate states, as shown in Table 5 below. Additional stratification such as income level and customer type (electric and/or gas) within this group will be considered. The final sample design will be determined in collaboration with Xcel Energy and will be dependent upon the data available for treatment group customers. Additionally, the evaluation team will consider leveraging the pool of survey respondents to recruit customers for the usability testing tasks.

*Table 5. Stratification of Sample for Participating Customer Web Survey (Jan-Dec 2021)*

Strata	Sample Size	Population Size
<b>HER Treatment Group Colorado</b>	~70	TBD
<b>HER Treatment Group Minnesota</b>	~70	TBD
<b>Total</b>	~140	<b>~800,000</b>

#### Participating Customer HER Usability Testing

The evaluation team recommends selecting up to 10 customers, 5 customers electric-only and 5 combination gas and electric customers, from the participating customer surveys and conducting HEI Product usability testing with the new HER that will result from the RFP.<sup>5</sup> Usability testing is a type of research that tests the “effectiveness, efficiency and satisfaction with which specified users achieve specified goals in particular environments.”<sup>6</sup> During a usability test, the researcher attempts to replicate a “real world” environment to receive accurate feedback from the user. The researcher guides a user through a series of tasks to determine any barriers and successes of the product.

This usability testing task will support the transition between the old HER and the new HER that will result from the current RFP. The timing of this task is deliberate in order to capture customer reactions in the beta phase of the new HER. Customer feedback will then be analyzed, and improvements will be made to the new HER, if necessary, before the full launch of the new HER. We will watch the customers process from start to finish with our trained usability analysts and identify places of difficulty and confusion. We will report results in the form of a detailed report of small user interface changes to maximize customer understanding and energy savings resulting from customers’ use of the tools. The participating customer usability testing sample pool will include customers who responded to this evaluation’s participant web survey. The evaluation team will include screening questions in the web survey asking if respondents would be willing to participate in a usability testing effort.

<sup>5</sup> Unlike previous evaluations, a separate usability testing guide will be created for this task.

<sup>6</sup> International Organization for Standardization, 1998. ISO9241 Ergonomic, Part 11: Guidance on Usability. Geneva, Switzerland.

The usability testing task will focus on the following objectives:

- Collect feedback on **customers experiences** with the HEI product.
  - Understand how customers interact with the HEI product components.
- Identify opportunities to **increase customer engagement** and **energy saving behavior** through assessing the usability of the HEI.
  - Explore opportunities to increase the ability of the HEI Product to further impact customer energy-saving behavior.
  - Understand the ability of the HEI Product to motivate customers to better manage, and ideally reduce, their energy use.
  - Determine customer understanding of the neighbor compare. Understand what specific information may be helpful for customers in better understanding the comparison.

The evaluation team would utilize usability testing with moderated remote user testing to meet process objectives and address the following research questions:

- Does the HER motivate customers to change their energy use?
  - To what extent does the HER meet customers' needs?
  - What information or tools would help customers better engage with their energy use?
- How easy is the HER for customers to use?
  - What are customers' understanding of the neighbor comparison?
- What are the advantages and disadvantages of the comparison feature?
  - What specific information may be helpful for customers in understanding energy-usage comparisons?
  - Does the comparison feature motivate customers to change their behavior?
  - What are some potential opportunities to move away from comparison strategies?
- What can Xcel Energy do to improve the usability of the HER?
- How can Xcel Energy best follow-up with customers after they access their HER to continue product improvements into the future?
- What changes do customers notice in interacting with the updated HER compared to previous HER?
  - What specific changes, if any, do customers think improve their experience with the HER?

#### Internal Process Mapping – Recommended Task

To provide a more seamless and comprehensive suite of residential behavior-based demand side management offerings the HEI Product delivery is shifting towards a more digitally driven customer experience. This shift will require effective coordination between multiple groups within Xcel including the Demand Response Team, including AGIS, Demand Response

Products, and Customer Care. The evaluation team recommends creating an Internal Process Map to document opportunities for improvement for the HEI Product as well as use it as a tool for engaging staff in the evaluation process and the launch of the new HEI Product that will result from the RFP. The Process Map can also be used to identify specific procedural improvements that will help Xcel Energy move towards a more streamlined administration of its residential behavioral-type offerings. During our interviews, product staff mention several challenges related to product operations including tracking of customer feedback, data processing, and coordination with other Xcel Energy products. The internal process mapping task will focus on the following objectives:

- **Improve product tracking and processes.**
  - Explore opportunities to coordinate with Customer Care, including a more comprehensive tracking of customer calls and coordination of customer communications tracking.
  - Identify opportunities to improve the tracking of data on customer use of the My Energy portal, assessment information, and interaction with the online portal and rewards system.
  - Explore opportunities to align product objectives across internal groups within Xcel Energy, such as AGIS, Demand Response Products, and Customer Care.

To address the evaluation objectives, the evaluation team will work with the HEI Product manager to design and facilitate two half-day workshops (roughly three hours each) to develop an individualized Process Map and Action Plan for implementing workflow improvements. In advance, TRC will work with Xcel Energy to develop the specific structure and key objectives for the workshops to ensure that specific outcomes are defined and that we are being prudent and effective with staff time. The workshops will include product staff, vendor staff, and stakeholders who are directly involved with product operations. The purpose of the workshops is to walk, step-by-step, through the product processes, discussing who and what is involved, the order of events, critical paths to completion, product priorities, and opportunities for process improvements. The Process Map will represent all the functions that support product administration, including coordination with the Vendor and key stakeholders. Our expert facilitators will utilize the Process Map to lead conversations related to product improvements and collaborate with Xcel Energy staff to develop an Action Plan with clear roles and responsibilities. The internal process mapping workshop will focus on answering the following research questions:

- What opportunities exist to increase product efficiency, including improvements to day-to-day operations and product tracking?
- What improvement opportunities exist to increase customer satisfaction by improving internal product processes? This could include better tracking of customer satisfaction including the effect the Product may have on customers' satisfaction with Xcel Energy.
- What opportunities exist to leverage the integration of interval data, through the My Energy portal, to improve the level of information provided to customers?
- How can the AGIS team be better leveraged to inform the HEI Product for customers?
- What marketing efforts could be extended through the My Energy portal?

- How can product processes between Xcel Energy and the product vendor improve to make data sharing, product tracking, and knowledge sharing as efficient and possible?
  - Explore the possibility of creating a process that calculates customer energy savings with integration with the AGIS team.

Process mapping workshops often immediately result in identifying areas for product improvement, resolution of disagreements about how to handle processes, and an overall appreciation for the amount of work others complete to make the product operate. Improvements will focus on streamlining the HEI Product experience and coordinate tasks across product staff and across Xcel Energy staff. After the workshop, the evaluation team recommends the development of digital visual representations of the paper process maps created during the workshop and conducts follow-up calls to clarify any outstanding questions from product staff. HEI Product staff and stakeholders will review the maps for accuracy before distributing to broader audiences and incorporating into HEI Product operations manuals.

### Online Portal Usability Testing – Optional Task

The evaluation team recommends performing usability testing with up to 24 customers in the HER treatment group to test the clarity and usability of the online portal. As stated previously, usability testing is a type of research that tests the “effectiveness, efficiency and satisfaction with which specified users achieve specified goals in particular environments.”<sup>7</sup> During a usability test, the researcher guides a user through a series of tasks to determine any barriers and successes of the product. Since the newly implemented HEI Product will be moving to a more digital customer experience, through a re-designed online portal, it is important to identify potential friction points in the user flow and remove those friction points so that Xcel Energy can achieve more savings through residential customer behavioral change through smooth customer experiences with the online portal. We will watch their process from start to finish with our trained usability analysts and identify places of difficulty and confusion. We will report results in a separate presentation, which will provide Xcel through with visual representation of our findings as well as mockups of our recommended changes. Specifically, the usability testing task will focus on the following objectives:

- Collect feedback on **customers experiences** with the HEI product, particularly with the online portal.
  - Understand customer satisfaction and what leads to customer dissatisfaction with the online portal.
  - Understand how customers interact with the online portal components, specifically on how customers navigate and click through the online portal.
- Identify opportunities to **increase customer engagement** and **energy saving behavior** through assessing the usability of the online portal.
  - Explore opportunities to increase the ability of the online portal to further impact customer energy-saving behavior.
  - Understand the ability of the online portal to motivate customers to better manage, and ideally reduce, their energy use.

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<sup>7</sup> International Organization for Standardization, 1998. ISO9241 Ergonomic, Part 11: Guidance on Usability. Geneva, Switzerland.

- Determine customer understanding of the neighbor compare. Understand what specific information may be helpful for customers in better understanding the comparison.

The evaluation team would utilize usability testing with moderated remote user testing to meet process objectives and address the following research questions:

- Does the online portal motivate customers to change their energy use?
  - To what extent does the online portal meet customer needs?
- How easy is the HEI Product for customers to use?
- What are the advantages and disadvantages of the neighbor compare feature?
  - What specific information may be helpful for customers in understanding the comparison?
  - Does the neighbor comparison motivate customers to change their behavior?
  - What are some potential opportunities to move away from the neighbor compare strategy?
- What can Xcel Energy do to improve the usability of the HEI Product?
- How can Xcel Energy best follow-up with customers after they access their HER to continue product improvements into the future?

For the online portal usability testing, the evaluation team will survey customers who were selected as part of the treatment group for the HEI Product in 2021. The online portal usability testing sample pool may also include customers who responded to this evaluation's web survey by including screening questions in the participating customer web survey asking if respondents would be willing to participate in a usability testing effort for the Online Portal. The evaluation team considered factors that impact a customer's experience with the HEI Product when stratifying customers, such as the type of energy service received by Xcel Energy as well as the differing experiences across states. For example, Xcel Energy customers in CO will be shifting onto a time-of-use rate (TOU) beginning in October 2022. Table 6 below outlines the proposed stratification for the online portal usability testing for customers across the CO, MN, and NM service territories. The primary sample variable will be the type of service, as combination gas and electric customers will receive very different information about their energy use and will be presented with different tips and cross-promotional engagement through the Online Portal. Final sample stratification and target sample sizes will be determined in coordination with Xcel Energy.



*Table 6. Online Portal Usability Testing Customer Stratification*

Service Type	State	TOU Rate	Target Sample
<b>Combination Gas and Electric Customers</b>	Colorado	TOU	6
		Non-TOU	2
	Minnesota	Non-TOU	4
<b>Electric-Only Customers</b>	Colorado	TOU	6
		Non-TOU	2
	New Mexico	Non-TOU	4
<b>Total</b>			<b>24</b>

#### Evaluation Schedule

The proposed evaluation timeline, by task, is outlined below in Table 7. This timeline is based on receiving timely feedback from Xcel Energy on draft deliverables as well as access to customer data for HEI product participants. The participating customer HER usability testing will occur once the beta version of the new HER is available to test with customers, most likely in Q3 of 2022. The recommended internal process mapping will focus on the newly implemented HEI Product, that will result from the RFP, and thus will occur once the implementor for the HEI Product has been selected and is under contract, most likely in Q3-Q4 of 2022. Similarly, the optional online portal usability testing task will occur once the new 2023 HEI Product and Online Portal are ready for testing, most likely in Q4 2022-Q1 2023.

*Table 7. 2022 HEI Product Evaluation Task Schedule*

Task	Q1	Q2	Q3	Q4	Separate Deliverable
<b>Task 2. Peer Utility Benchmarking</b>					
<b>Evaluation Planning</b>					
<b>Task 3. Participating Customer Surveys</b>					
<b>Task 3a. Participating Customer HER Usability Testing</b>					
<b>Task 4. Internal Process Mapping</b>					✓
<b>Task 5. Usability Testing</b>				<i>Into Q1 2023</i>	✓
<b>Final WIM &amp; Reporting (CO &amp; MN)<sup>1</sup></b>					

*Note: Evaluation schedule is subject to change.*

<sup>1</sup>The Final WIM and Report will capture the results of Task 2, Task 3, and Task 4. Results from the two Usability Testing tasks (3a and 5) will be provided in a separate presentation.

## Appendix B: Data Collection Documents

### B.1 Staff Interview Guide

#### Introduction

This guide is to be used to interview staff associated with Xcel Energy's DSM products as part of the TRC Companies 2022 evaluation of the Xcel Energy DSM products. The interviews will be semi-structured, with these questions serving as a basic guide for experienced TRC Companies staff during one-on-one phone interviews.<sup>8</sup> As a guide for semi-structured interviews, these questions will not necessarily be asked verbatim, but will serve as a roadmap during the conversation.

#### Staff Interview Research Questions or Objectives

List the research questions that this research task is designed to address.

- Assess the extent to which the product design supports product objectives and customer service/satisfaction objectives.
- Understand Xcel Energy's current MN & CO C&I Home Energy Insights offerings, while also understanding if there are any differences in the NM offering.
- Assess the degree to which product resources are sufficient to conduct product activities with fidelity to the implementation plan.
- Collect staff feedback on implementation successes and challenges.
- Identify themes and issues for possible revisions to the standard evaluation plan.

#### Interview

##### Section A: Introduction

**[If staff did not attend the kick-off meeting:]** First, we would like to give you some background about who we are and why we want to talk with you today. TRC Companies is an independent consulting firm that works with electric and gas utilities to review and improve product operations and delivery. Xcel Energy contracted with us to perform an evaluation of their portfolio of energy efficiency products, and we're currently in the process of conducting interviews with product managers and key staff involved in designing and delivering the products to improve our understanding of Xcel Energy's DSM products and their influence on customers. We also want to understand how our research can be useful for you as Xcel Energy product staff and incorporate your priorities into our study so that the results are as useful as possible.

**[ALL]** Thank you for taking the time to speak with us today. My objective for this meeting today is to gain a deeper understanding of the Home Energy Insights product, what Xcel Energy hopes to achieve through implementing this product, how it operates, and a bit about your experiences with the Home Energy Insights product. We are interested in asking you some

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<sup>8</sup> Some interviews may be conducted jointly if someone's role recently changed or if more than one person performs the role.

questions about the Home Energy Insights product so we can benefit from your knowledge and experience to improve our understanding. I have a set of questions that should take approximately 45 minutes. We will combine the information you provide with information gathered from other interviews before reporting summarized information back to Xcel Energy.

Before I begin, is it alright if I record the conversation for note taking purposes? **[RECORD IF ALLOWED AND CONFIRM YOU ARE RECORDING ONCE RECORDING BEGINS]**. Thanks, we are recording now.

**A1.** First, can you take a moment and explain your role and scope of responsibilities with respect to the Home Energy Insights product? **[IF ALREADY KNOWN, REWORD TO CONFIRM]**

**[PROBE]**

- Approximately how long have you held this position?
- What previous positions did you hold?
- Whom do you report to in the overall org structure?

### Section B: Product Goals

I'd like to be sure I understand the goals of the Home Energy Insights product, both overall and specific.

**B1.** Can you take me through the key goals for the Home Energy Insights product?

**PROBE:** Are these different for CO, MN or NM?

**[For staff outside of the Customer Solutions team]** Can you take me through the key goals for the Home Energy Insights product, as it relates to your role?

**B1a.** Can you describe the product's savings goals? Do you have specific goals for individual components of the product or customer segments?

**B1b.** Any other, non-energy goals?

**B1b1.** Any more immediate goals? For example, participation goals, customer engagement goals, improving customer satisfaction? Changing customer awareness of or attitudes about energy efficiency measures?

**B1b2.** Any longer-term goals? For example, reducing greenhouse gas emissions? Altering market behaviors?

**B2.** Have any of these goals changed in the last few years?

**B2a.** What was the rationale for changing them?

**B2b.** In your opinion, how have these changes affected the product's operations or its outcomes?

**B2c.** Where these changes a result of internal factors (to Xcel Energy), external factors, or a combination of both?

**B3.** Have any of these goals changed in 2021? Are there changes planned for 2022?

**B3a.** What was the rationale for changing them? Probe: COVID-related changes?

**B3b.** In your opinion, how have these changes affected the product's operations or its outcomes?

**B4.** What are "indicators of success" for the Home Energy Insights product?

**PROBE:** Are there different indicators used in CO, MN or NM?

**B4a.** What are interim indicators that the Home Energy Insights product is or is not meeting its objectives or goals?

**B5.** What influences, if any, do you think the Home Energy Insights product has had on the market?

**PROBE:** Are there different indicators used in CO, MN or NM markets?

### Section C: Product Activities

I would like to make sure I have a solid understanding of how this product operates and talk through the different components of the product. If there are any formal documentation and/or websites that you can refer me to as we walk through these next questions, I'd appreciate getting that information.

### **[TAILOR BASED ON WHAT IS ALREADY KNOWN FROM KICKOFF, ONLINE, AND OTHER RESOURCES]**

**C1.** Can you describe the incentives and/or tools the product uses to achieve its goals, with incentives including both monetary incentives as well as services provided directly by someone on behalf of Xcel Energy: **[PROBE ANY INCONSISTENCIES WITH BACKGROUND INFO AND WHAT THEY OFFER, CONFIRM INCENTIVES]**.

**C2.** Have any of these incentives changed in the last few years?

**C2a.** [If yes] What was the rationale for changing them?

**C2b.** [If no] Do you anticipate any changes in the near future?

**C3.** What activities do product and implementer staff engage in to achieve product goals?

- Marketing?
- Financial Assistance?
- Applications?
- Technical Assistance?
- Education?

**PROBE:** Are the activities prioritized differently in CO, MN and NM?

**C3a.** What tools are used to reach out to customers and/or market partners?

**PROBE:** Is this different in CO, MN or NM?

**C3b.** Are these product activities modeled on another product or set of products?

**C4.** Have any of these activities changed in the last few years?

**PROBE:** CO, MN and NM specifics.

**C4a.** What was the rationale for changing them?

**C4b.** In your opinion, how have these changes affected the product's operations or its outcomes?

**C4c.** Have you measured how these changes impacted savings or participation?

**C5.** How does a customer opt-out of the program?

**C5a.** Does the program explain to customers why they were selected to participate?

#### Section D: Strengths and Challenges

Next, I'd like to get your feedback on how the product is running.

#### **[TAILOR BASED ON WHAT IS ALREADY KNOWN]**

**D1.** In your opinion, what are the strengths of the Home Energy Insights product as it is currently being run?

**PROBE:** Is this different in CO, MN or NM?

**D1a.** What would you say is working well in terms of product design or implementation?

**D2.** What are the most significant challenges for this product at this point?

**PROBE:** As we have already discussed the challenges seen with the CO product, are there any specific challenges related to the MN or NM products?

**D3.** Besides complaints about the Home Energy Report, does Xcel Energy receive any other feedback from customers on the product?

**PROBE:** What feedback, if any, have you received from customers who use the online tool, My Energy?

**D3a.** Do you think there is a better way to track customer feedback on the Home Energy Insights product?



- D4.** What do you believe are the biggest barriers to getting customers to engage with the energy saving tips provided in the Home Energy Reports?
- D4a.** Will the shift to use of digital tools (e.g., the app and website) help to overcome any of the barriers you mentioned? How?
- D5.** Are there any specific opportunities for improvement in the design or implementation of the product? Please describe.
- PROBE:** Any opportunities for improvement in the design of the Home Energy Report? Improvements related to the paper or email version?
- D6.** What would you like to see changed in how the product is designed or run, if anything?
- PROBE:** If you could completely redesign the product, what would you do differently?
- D6a.** Do you think there are any roadblocks preventing these changes from happening?

#### Section E: Resources

[PROBE ON CO, MN and NM DIFFERENCES]

- E1.** What resources do you rely on to implement the product?
- E1a.** Product, implementer, sales staff?
- E1b.** Management and product direction?
- E1c.** IT tools and data tracking tools?
- E1d.** Other resources?
- E2.** Are these resources sufficient to implement the product as designed?

- E2a. [IF NO]** How could the product design/implementation change to be more efficient?
- E2b. [IF NO]** What additional resources, if any, would help you implement the product as designed?
- E2c. [ASK ALL]** Where are there opportunities for improvement, if any, in the coordination between resources to support a more efficient delivery of the product?
- E3.** Have any of these product resources changed in the last few years?
  - E3a.** What was the rationale for changing them? Any COVID related changes, either temporary or permanent?
  - E3b.** In your opinion, how have these changes affected the product's operations or its outcomes?

#### Section F: Product Tracking and Reporting

I understand that you are using Salesforce as your primary product tracking tool. I'd like to understand how product activities are tracked to understand what data might be available to us in our evaluation.

[TAILOR BASED ON WHAT IS ALREADY KNOWN]

[PROBE ON CO, MN and NM DIFFERENCES]

- F1.** What kind of documentation is available for the different product? Implementation plans? Product manuals? Process maps?
- F2.** What kinds of data are collected for the Home Energy Insights product?
- F3.** Are there any data that you would like to collect for the Home Energy Insights product but haven't been able to?
- F4.** Are there any data/documentation not tracked in Salesforce that might be helpful for the evaluation?

**F5.** As part of our evaluation, we may want to speak to “near-participants,” customers/distributors that were eligible to participate in the product, showed some interest in product participation, but didn’t participate for whatever reason. Would these customers/distributors all be tracked in Salesforce?

**F6. [For Implementation Staff]** Can you describe the type of analysis used to estimate energy savings? [**PROBE:** what variables are used to match treatment and control groups?]

### Section G: Closing

**G1.** Based on the kickoff meeting, we are planning to prioritize exploring how to improve the customer experience and enhance the ability of the product to impact customer behavior. Does this align with your understanding?

**G1a.** Do you have anything you would like to add to these priorities, remove from this set of priorities, or change about these priorities?

**G2.** Do you have particular questions that you would like to see answered by the evaluation? Why are these questions important?

**G3.** Do you have any other comments, concerns or suggestions about the product that we didn’t discuss that you would like to make sure I know about?

**G4.** Are there any particular product staff members you would like to make sure we talk with?

**G5.** Do you have any peer utilities that you’d like us to include in the peer utility benchmarking interviews? Peer utilities could either include utilities that have been identified by internal or external parties as exemplary or utilities with a similar climate, customer mix, etc. to understand their practices.

**G5a.** What criteria is most important to you when selecting a peer utility (e.g. similar climate, similar time in market, etc.)?

**G5b.** What performance indicators are you interested in the evaluation benchmarking?

Thank you very much for taking the time in assisting us with this evaluation. If I come up with any additional questions that come from this interview, do you mind if I send you an email or give you a quick call?

## B.2 Peer Utility Benchmarking Interview Guide

### Introduction

To support the process evaluation of the 2022 Xcel Energy Home Energy Insights (HEI) Product, the TRC evaluation team will benchmark the Xcel Energy HEI product against peer utilities residential Home Energy Report (HER) type programs. The objective of the benchmarking is to identify opportunities to improve the Xcel Energy HEI product based on a comparison of peer utility programs' design, delivery, and processes. In addition, benchmarking allows the evaluation team to understand the performance of the product in context with the performance of other utilities. To conduct the benchmarking, the evaluation team will conduct secondary research on the peer utilities identified and perform in-depth interviews with program managers at the peer utilities. The objectives of the interviews with peer program managers include the following:

1. Research peer **program design and tracking** to benchmark the Xcel Energy HEI product against other similar products and understand the possibilities for potential program improvements and expansion. Document the range of program practices (e.g., customer screening and sales funnel processes, cost-effective strategies to serve low usage customers, etc.) to include minimum and best practices.
2. Understanding **peer program performance** to investigate the ability for potential improvements to result in expansion of the product and increased savings.
3. Explore **customer engagement** strategies to understand if opportunities exist to improve customer satisfaction and increase awareness of and engagement with the tips and tools provided by the program. Learn how implementors identify and deliver customers recommendations, and what resources are available for customers to evaluate and move forward with those recommendations.

This document presents the in-depth utility interview guide for the Colorado (CO) and Minnesota (MN) HEI evaluation within the DSM Product.<sup>9</sup> Interviews will be conducted with eight of Xcel Energy's peer utilities detailed in Table 8 below. TRC developed this sample in collaboration with Xcel Energy and included the consideration of program size, fuel type, geographic location, implementation contractor, and program components (such as AMI integration) when determining the appropriate priority level for each utility. Target respondents are managers of HERs programs or behavioral modification programs that contain a HER component. In addition, TRC will include members of the Consortium for Energy Efficiency (CEE) and the Midwest Energy Efficiency Alliance (MEEA) in our sample as industry experts.

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<sup>9</sup> Relevant information gathered through this research effort will be shared with Evergreen to support the 2022 evaluation of the New Mexico (NM) HEI Product.

*Table 8. List of Peer Utilities*

Utility (State)	Program Type	Program Name	Implementor	Number of Participants	AMI Component	Priority Level
<b>BGE (MD)</b>	Electric	BGE Smart Energy Manager – Behavioral	-	927,203	ü	High
<b>Con Edison (NY)</b>	Combo	EE Transition - Residential Home Energy Reports	Opower	1,298,610	ü	High
<b>Consumers Energy (MI)</b>	Combo	Home Energy Reports	UpLight	235,000		High
<b>Entergy (AK)</b>	Electric	Home Energy Report	Franklin	378,801		High
<b>Eversource (MA)</b>	Electric	Behavior Feedback	-	610,000	ü	High
<b>Idaho Power</b>	Electric	Home Energy Report Pilot	UpLight	127,138		High
<b>PSEG (NJ)</b>	Combo	Residential Behavior	Bidgely	650,000		High
<b>PG&amp;E (CA)</b>	Combo	Residential Energy Advisor: Home Energy Reports and Home Energy Checkup	Bidgely	1,800,000	ü	High
<b>ComEd (IL)</b>	Electric	Home Energy Reports	UpLight	1,700,000		High Alternate
<b>Dominion</b>	Electric	Home Energy Reports	Franklin	37,335		High Alternate
<b>Pepco - EmPower MD</b>	Electric	Residential Peer Group Comparison Program	Opower	360,639		High Alternate

<b>AEP Ohio</b>	Electric	Home Energy Report	Opower	520,133		Medium
<b>Ameren (MO)</b>	Combo	Residential - Behavior Modification	Opower	40,000		Medium
<b>Southern California Edison (CA)</b>	Electric	Residential Benchmarking Pilot	Franklin	344,497		Medium
<b>Georgia Power Co.</b>	Electric	SCE-SW-001A - Home Energy Efficiency Survey Program	-	2,500,000		Low
<b>Indiana Michigan Power</b>	Electric	Residential Behavioral	-	1,195,310	ü	Low
<b>PPL Electric Utilities (PA)</b>	Electric	Residential Home Energy Reporting	-	90,860		Low
<b>Puget Sound Energy (WA)</b>	Electric	Energy Efficiency Behavior & Education Program		126,955		Low

Table 9 identifies the interview questions related to each key performance indicator of peer utility programs. This information will be used to benchmark the size and relative success of other programs in the market. TRC will perform secondary research ahead of conducting the peer utility interviews and will only ask these questions of program administrators as confirmation of our understanding or to fill in missing information.

*Table 9. Mapping of interview questions to indicators*

Key Performance Indicator	Data Needed	Interview Question
<b>Program energy savings goals</b>	2021 program energy savings goals (MWh, MW, therms)	B1, B2, B3, B4

	2021 program achieved energy savings (MWh, MW, therms)	
	2021 total residential energy efficiency portfolio goal (MWh)	
<b>Program budget cost of acquisition</b> (e.g., \$/MWh, \$/Mcf)	2021 program budget  2021 total gross energy savings for each peer program	B3, B5
<b>Customer Participation Levels</b>	Number of customers in both the treatment and comparison groups	B8
<b>Cost test values</b>	TRC or UCT values	B6

Table 10 identifies the interview questions related to each contextual theme or research objective.

*Table 10. Mapping of interview questions to contextual themes*

Contextual themes	Data Needed	Interview Question
<b>Program design and tracking</b>	Overall program objectives, both energy and non-energy related  Implementation strategies, opt out process, customer types targeted for participation  Program staffing, the length of program operation, any recent changes to the program, and future outlook  Ability of the program to leverage AMI data	A1, A2, A3, A4, A5, A6, A7, A8, B5
<b>Program performance</b>	Program and overall residential portfolio energy savings goals  Challenges with achieving savings, methods for investigating discrepancies in actual compared to planned savings  Strategies for improving program cost-effectiveness	B1, B2, B3, B4, B5, B6, B7
<b>Customer engagement</b>	Strategies for increasing customer engagement with the HER information  Methods used to increase customer awareness of any energy monitoring tools (e.g., online platforms)	C1, C2, C3, C4, C5



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Process for monitoring customer satisfaction

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### Recruiting Instructions

The research team plans to send advance emails to any program managers with available emails. This email will contain an explanation of the research, as well as both an Xcel Energy and TRC contact person the utility can reach out to if they have additional questions or would like to schedule an interview at their convenience.

Potential respondents will be recruited by consultants on the research team who will be conducting interviews and have been trained on the purpose and goals of the CO and MN HEI evaluation. The research team will be as flexible as possible in scheduling these interviews, including scheduling early morning or evening interviews, when possible, to accommodate busy schedules. The research team will leave a voicemail or receptionist message on the first attempt whenever possible, and then use discretion to determine any additional messages left on subsequent attempts. The research team will strive to attempt to contact each peer utility a minimum of 4 times before giving up on that particular contact, but depending on each unique situation, the research team may need to attempt some contacts more times to ultimately reach the correct person.

## **Interview**

### Introduction and Recruitment

- INTRO 1      Hello, this is INTERVIEWER NAME, calling from TRC on behalf of Xcel Energy. Is CONTACT NAME available?
- INTRO 2      We are working with Xcel Energy on a benchmarking and best practices study of residential behavior-based program offerings. As part of this study, we are reaching out to leaders of residential behavior and home energy reports programs to learn about innovative strategies and best practices in the field.
- We would like to include UTILITY in this study, as your PROGRAM has been identified as an innovative or peer program. In your interview, we will talk about your PROGRAM design and implementation, as well as its successes and challenges. As a thank you for your time, we would be happy to share an anonymized version of our report with you once we've completed our research.
- [IF NEEDED]** We will not be requesting any customer or participant data.
- INTRO 3      Can we include your utility in the study?
- a.      Yes **[RECORD CONTACT INFORMATION; SETUP INTERVIEW TIME; EMAIL INTERVIEW TOPICS]**
- b.      No **[DISCUSS CONCERNS; ANSWER QUESTIONS; ATTEMPT TO CONVERT TO "YES"]**

Section A: Program Design & Tracking

- A1. First, we'd like to talk through the basic design and organization of your program.  
**[ASK/CONFIRM BASED ON HOLES IN BACKGROUND RESEARCH ON PROGRAM]**

Can you describe your program at a high level?

**[IF NEEDED:** Is this program an "opt out" or "opt in" program design?]

- a. What are the program's overall objectives?

**PROBE:** Energy and non-energy objectives.

- b. How long has the program been running?

**PROBE:** Have there been any modification to the treatment and control groups over time?

- c. What is the process for customers to opt out of the program?

**PROBE:** How do you balance the competing objectives for needing to make the process simple for customers without making it too easy to opt out of the program?

- d. Have there been any recent changes to the program?

- e. Will there be any changes to the program in the near future?

- A2. Regarding the Home Energy Report (HER), what information is provided to customers?

**PROBE:** If possible, would we be able to receive a copy of the report?

**[IF YES:** Skip a and b, ask c and d.]

- a. What is the overall tone of the report?

- b. What information does it highlight to drive energy savings?

**PROBE:** Differences in mailed and emailed reports.

**PROBE:** Does the report focus on the normative comparison or something else?

- c. How frequently do customers receive reports?

**PROBE:** Differences in mailed and emailed reports.

- d. Do they receive any other notifications or forms of communication?

**IF YES:** What are they? How frequent are they sent?

- e. How do you help the customer understand their energy savings potential?

- f. Are customers provided information on other programs?

- A3. Does the PROGRAM include an online portal component? This is different from the electronic version of the HER. An online portal would be a dashboard that allows customers to view additional details on their energy usage and learn more about energy saving opportunities.

**[IF NO]** Why not?

**[IF YES]** Is the online portal available to all customers or only program participants (treatment group)?

- a. What information is provided to customers through the portal?
- b. For HER participants, how do you reduce customer confusion when transitioning from providing consumption data in the form of a static report to a dynamic portal?

**PROBE:** What has worked / not worked?

- c. What interactive components are available to customers through the online portal?
- d. Does the online portal incorporate any advanced metering interface (AMI) data?

**[IF YES]** Do you believe this ability has an impact on customers' use of the portal?

- A4. Next, I'd like to talk about any incentives offered to customers through your PROGRAM. **[ASK/CONFIRM BASED ON HOLES IN BACKGROUND RESEARCH. CAN ASK QUESTIONS BELOW OR ASK RESPONDENT IF OK TO FOLLOW UP VIA EMAIL]**

**[IF NO]** Why do you not utilize any rewards program (if available)?

- a. Do you offer any incentives through the HER program, [PROGRAM NAME]?

**[IF YES]** What types of incentives do you offer?

- b. Do you market the availability of these incentives?

**[IF YES]** What tools are used to reach out to customers?

- c. Has any research been performed on the impact of the rewards program?

- A5. How many customers are contained in your treatment(s) and control groups?

**[RECORD NUMBER FOR EACH TREATMENT AND CONTROL]**

**PROBE:** Are there multiple cohorts or treatment groups?

- A6. What resources do you rely on to track program participation?

- a. Do you track customer engagement with the energy savings tips?
  - b. Do you track customer feedback, inquiries, or calls related to the program?
  - c. **[IF APPLICABLE]** Do you track customers' use of the online portal?  
**[IF YES]** What data are tracked?
  - d. Are these data leveraged by the utility in any way? **[IF NEEDED: develop specialized marketing campaigns or track program spillover]**
- A7. Can you describe the implementation strategies used by staff or implementers?
- a. Is the program targeted at specific customer segments?
  - b. What approach is utilized to assess the comparative design?  
**PROBE:** Is it industry standards or are alternative design strategies implemented?
  - c. What factors or variables are utilized in the comparative analysis (For example: square footage, EV, solar, household size)?  
**PROBE** How do you address the issue of gaps in the data?
- A8. How frequently are the structure and framework of the HER report updated or refreshed?
- a. What is the process for refreshing the report information (outing the typical consumption data)?
  - b. How are report tips developed?
- A9. What information on the calculation of savings does your Implementor provide?
- a. What customer characteristics are considered when calculating savings?  
**[IF NEEDED:** For example, EV charger, fuel switching, etc.]

### Section B: Program Performance

Next, I'd like to talk about the participation and energy savings achieved through the PROGRAM in 2021. **[ASK/CONFIRM BASED ON HOLES IN BACKGROUND RESEARCH. CAN ASK QUESTIONS BELOW OR ASK RESPONDENT IF OK TO FOLLOW UP VIA EMAIL]**

- B1. What were the program's energy savings goals in 2021? (MWh, MW, therms)?

- B2. Are these goals based on gross or net savings?
- a. Is the NTG adjustment considered to be included in the calculation of savings?
  - b. **[IF NO]** Did you apply a separate NTG ratio to these savings?
  - c. What NTG ratio do you use?
  - d. What methods are used to calculate NTG ratio?
  - e. Are NTG ratios estimated at the program level?
- B3. How much energy savings did the program report in 2021 (MWh, MW, therms)?
- a. Based on this Information, the program achieved **[X%]** of its goals in 2021? (Interviewer to do a rough calculation to determine X and confirm that it is correct.)
  - b. **[IF OVER-ACHIEVED ON GOALS]** What strategies, or situations, do you feel enabled the program to over-achieve on its savings targets?
  - c. **[IF UNDER-ACHIEVED ON GOALS]** What factors, or situations, do you feel resulted in the program under-achieving on its savings targets?
- PROBE:** What steps, or methods, did the implementor use to investigate the discrepancy in savings?
- B4. What was the total residential energy efficiency portfolio goal in 2021 (MWh, MW, therms)?
- B5. We'd like to know more about the budget or total operating costs of your program to get a sense of the utility cost of energy savings. Ideally, this includes program implementation costs, incentives, staff salaries (including support staff who may not work on the project full-time), marketing, consulting, and other overhead.
- a. What is the program's total operating budget?
  - b. If sub-programs exist, how does this break down between sub-programs?
  - c. How many staff work full-time supporting the program? How many part-time staff?
- B6. What type of cost effectiveness test is applied to the program?
- a. If Total Resource Cost Test (TRC), what was the TRC in 2021?

- b. If Utility Cost Test (UCT), what was the UCT in 2021?
- B7. What strategies, if any, have been used to improve the cost-effectiveness of the program?
- B8. We'd like to understand the approach you take to forecasting program savings.
  - a. What is the frequency of savings forecasts?
  - b. Are there specific reports, such as monthly savings and participation reports, or tracking data that you rely on to build savings forecasts?

### Section C: Customer Engagement

- C1. From a customer perspective, what is the benefit of the program?
  - a. Does the utility educate customers on how they are selected for participation?
  - b. What is the process for a customer to opt out of the program?
  - c. Do you incorporate any marketing strategies to retain customers that opt out, to prevent losing them from the program entirely?
- C2. What tools or information does the program provide to customers to help them better understand their energy use?
  - a. What has been the most effective?
  - b. What has been the least effective?
  - c. Do you target certain types of information, tips, or programs?
- C3. Outside the HER, does the utility make any other efforts to inform participants of the tips or next steps on how to save energy?  
**[IF YES]** How successful was this effort?
- C4. Does the utility make any effort to conduct cross-program marketing through the HER program, such as increasing customer awareness of specific tools, information, **[IF APPROPRIATE]** or the online portal?  
**[IF YES]** How does HER impact the use of the other programs?  
**PROBE:** How do you measure the impact of HER on other programs?

- C5. Has the utility had any success in motivating homeowners to manage their energy use outside of a HER program?

#### Section D: Closing

- D1. Great! Thank you so much for your time. Those are all the questions we have for you today. Before we finish, do you have any questions for me, or anything else you would like to add?

## B.3 Treatment Group Survey Guide

### Introduction

To support the process evaluation of the 2022 Xcel Energy Home Energy Insights (HEI) Product, the TRC evaluation team will conduct web surveys with participating customers.<sup>10</sup> For the purposes of this survey, the evaluation team defined a participating customer as a customer who was selected to participate as part of the treatment group for the HEI Product in 2021. We will conduct this research to enable us to assess key process objectives, including collecting feedback on customers experience with the HEI product, identifying opportunities to increase customer engagement and energy saving behavior through assessing the usability of the HEI, and exploring ways to improve product tracking and processes. The remainder of the introduction provides the evaluation objectives and research questions which the participating customer survey has been designed to address, a description of the sample population and the targeted completes, a description of the sample variables to support programming the survey and fielding instructions for the survey house.

### Evaluation Objectives

The objectives for the 2022 HEI Product process evaluation are as follows:

- Collect feedback on **customers experiences** with the HEI product.
  - Understand customer satisfaction and what leads to customer dissatisfaction with the product.
- Identify opportunities to **increase customer engagement** and **energy saving behavior** through assessing the usability of the HEI.
  - Understand the ability of the HEI Product to motivate customers to better manage, and ideally reduce, their energy use.
  - Research what information or new and/or existing tools would help customers better engage with their energy use.
- **Improve product tracking and processes.**
  - Explore opportunities to coordinate with Customer Care, the Xcel Energy customer service team, including more comprehensive tracking of customer calls and coordination of customer communications tracking.

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<sup>10</sup> The New Mexico Product will not be included in the participating customer survey research task; however, NM participants will be included in subsequent usability testing research.



- Identify opportunities to improve the tracking of data on customer use of the My Energy portal, assessment information, and interaction with the online portal and rewards system.
- Explore opportunities to align product objectives across internal groups within Xcel Energy, such as Advanced Grid Intelligence and Security (AGIS), Behavioral Demand Response, and Customer Care.
- **Assess peer utilities' product practices.**
  - Research how peer utilities measure customer satisfaction to identify appropriate tracking tools and metrics that can be used to better understand the customers' experience.
  - Understand if peers have experienced challenges with achieving savings, particularly for gas savings and for products that have been running for a long time.
  - Explore peer utilities' experiences with managing customer engagement including monitoring customer complaints and tracking customer use of the tools and information provided through the HERs.
  - Understand the successes and challenges of integration of AMI disaggregation data.

The participating customer survey addresses two of the evaluation objectives. For reference, Table 11 provides the evaluation efforts used for each objective.

*Table 11. 2022 HEI Product Evaluation Objectives*

Evaluation Objective	Research Activity	Participating Customer Survey Objective
<b>Collect feedback on customers experiences with the HEI product.</b>	Participating customer surveys and usability testing	ü
<b>Identify opportunities to increase customer engagement and energy saving behavior through assessing the usability of the HEI.</b>	Participating customer survey and usability testing	ü
<b>Improve product tracking and processes</b>	Internal process mapping	
<b>Assess peer utilities' product practices.</b>	Peer utility benchmarking	

Table 12 presents the research questions which this participating customer survey is designed to address, linking each research theme to the associated evaluation objective and survey question.

*Table 12. 2022 HEI Product Evaluation Objective, Survey Research Themes & Survey Question Crosswalk*

Evaluation Objective	Survey Research Theme	Question Number(s)
<b>Collect feedback on customer experience and satisfaction with the product</b>	Analyze what aspects of the HER customers are satisfied and/or dissatisfied with.	B3a, C3-C5
	Explore what leads to dissatisfaction with the HER.	
	Document customers' satisfaction with Xcel Energy as their utility.	C3-C5
	Understand if customers consult their utility bill, or their HER report to understand their energy usage.	B1, B1a, B8
<b>Identify opportunities to increase customer engagement and energy saving behavior through assessing the usability of the HEI Product.</b>	Research what information in the HER is valuable to customers and which is not.	C1, C2, B8a, B8a_1, B8b, B8b_1, B3c
	Understand if the HER helps customers monitor and/or understand their home energy use.	B1, B1a, B2, B3, B8, B8a
	Explore if customers understand why they receive their Home Energy Reports.	A1, A1a, B3b, B3b_1
	Document where customers go for additional information if they have questions about their HER.	
	Research customers' familiarity with other residential Xcel Energy products and offerings.	B7, B7a
	Understand if customers learn about opportunities for energy-savings through other Xcel Energy products from their HER.	
	Understand if customers have or plan to adopt energy-efficient measures and/or energy-saving behaviors in their homes as a result of their receiving their HER.	B4-B6

### Sample & Target Completes

Table 13 summarizes the total sample that will be targeted for the survey, based on an expected 2-5% response rate. The sample is broken out by state: Colorado HER treatment customers and Minnesota HER treatment customers. In addition, the sample has been stratified by the type of fuel service received by each customer to ensure relative representation across fuel type within each state. The number of target completes will achieve results at the 90% confidence level with +/- 10% precision for each state.

*Table 13. Sample Population & Target Completes, by Strata*

Strata	Fuel Type	Sampled Population	Target Completes
<b>Colorado HEI Treatment Group</b>	Electric	28,000	35
	Electric & Gas	12,000	35
<b>Minnesota HEI Treatment Group</b>	Electric	21,000	35
	Electric & Gas	9,000	35
<b>Total</b>		<b>~70,000</b>	<b>140</b>

### Sample Variables

Table 14 includes the sample variables that will be used to conduct this survey, as well as descriptions of these variables and potential codes.

*Table 14. Sample Variables*

Sample Variables	Variable Descriptions	Potential Codes
<b>PRODUCT</b>	Home Energy Insights Product	Home Energy Insights
<b>FIRST_NAME</b>	Homeowner first name	e.g., Jane
<b>LAST_NAME</b>	Homeowner last name	e.g., Doe
<b>EMAIL_ADDRESS</b>	Homeowner's email address	e.g., <a href="mailto:email@email.com">email@email.com</a>
<b>CITY</b>	Homeowner's city	e.g., Seattle
<b>STATE</b>	Homeowner's state	e.g., MN, CO or NM
<b>ZIPCODE</b>	Homeowner's zip code	e.g., 98112
<b>METHOD</b>	How the homeowner receives their HER	e.g., "mail" or "email"
<b>YEAR</b>	Year of HEI Product participation	2021
<b>SERVICE</b>	Service customer receives from Xcel Energy	e.g., "electric" or "electric and gas"

### Fielding Instructions

- Field the survey through the Qualtrics online survey platform.
- Web survey will be fielded in up to three waves and respondents will be tracked to reduce response bias.
- Distribute survey to members of the TRC team for testing and timing prior to survey fielding. Revise survey as needed.
- Perform a pre-test of the survey by sending invitation emails to 50 homeowners in the sample.

- Examine the responses of pre-test survey respondents before fully launching the survey.
- Send three emails to the sampled participants: one initial invitation and two follow-up emails to those who have yet to complete the survey one week after in the field and then again 2 weeks after in the field.
- The survey is considered complete when CLOSE1 is answered.
- The survey will be closed when the target number of completes is reached, but no less than 5 days following the final reminder, while allowing open surveys to be completed. One final reminder will be sent to any open surveys containing a deadline to complete before the study is closed. After completing the survey, it will revert to the following message:

#### Early Termination Message

If a survey respondent is terminated early due to screening-out, we will not distribute an incentive gift card to the customer, and they will receive the following message depending upon their answer to Intro2. If a respondent drops-out of the survey before completing the incentive questions at the end of the survey, they will also not receive an incentive (although we will make an effort to contact customers who complete everything but the incentive questions so we can provide their incentive).

[IF EMAIL PROVIDED IN Intro3] Thank you, we will send the survey to the person you indicated. Thank you for your time. For additional information about Xcel Energy's Residential products, visit [www.xcelenergy.com/programs\\_and\\_rebates](http://www.xcelenergy.com/programs_and_rebates).

[IF NO EMAIL PROVIDED IN Intro3] We appreciate your interest in our survey. However, based on your responses, you do not qualify for the survey. For additional information about Xcel Energy's Residential products, visit [www.xcelenergy.com/programs\\_and\\_rebates](http://www.xcelenergy.com/programs_and_rebates).

#### Initial Survey Invitation Message

**Subject:** Earn \$25 for feedback on your Xcel Energy Home Energy Report!

**Body:**

Hello <FIRST\_NAME>,

Thank you for being a valuable Xcel Energy customer! Today, we are reaching out to invite you to participate in a brief 10-minute survey about your home. According to our records, you were selected by Xcel Energy to receive personalized home energy reports [METHOD] throughout the year. Xcel Energy would like your feedback as a homeowner who receives a personalized home energy report

We know that your time is valuable. In appreciation for your contribution to this important research, we are offering a \$25 Tango gift card, a digital gift card that can be redeemed at a variety of retailers, including Amazon, Apple, and Target, to customers who qualify and complete this 10-minute online survey.

To participate, please visit the following site on your computer or internet-accessible phone.

Follow this link to the survey:

[LINK]

Or copy and paste this into your browser:

[LINK]

Your participation in this study is voluntary and your responses are confidential. If you have questions about this survey, please contact Jenna Bagnall-Reilly at TRC, the national research firm conducting this survey on behalf of Xcel Energy. You can reach Jenna Bagnall-Reilly at (206) 388-0971 or [jbagnallreilly@trccompanies.com](mailto:jbagnallreilly@trccompanies.com). If you would like to contact Xcel Energy to verify the legitimacy of this study, please contact the Customer Service Center at 1-800-895-4999.

Thank you in advance for sharing your experiences and your time.

Sincerely,

Jenna Bagnall-Reilly

Senior Researcher, Advanced Energy, TRC

#### Reminder Survey Invitation Message

**Subject:** Reminder - \$25 gift card for your feedback to Xcel Energy!

**Body:**

Hello <FIRST\_NAME> <LAST\_NAME>,

We recently sent you an email inviting you to take a brief survey regarding your experience with your personalized home energy report you receive from Xcel Energy about your household's energy throughout the year.

We are still looking to hear from a few more customers to reach our goal of 70 completed surveys. Can you be one of the people that get us to that goal? Your feedback is crucial to helping Xcel Energy improve our service offerings for customers like you.

In appreciation for your valuable time and feedback we are offering a \$25 Tango gift card to customers who qualify and complete this 10-minute online survey.

To participate, please visit the following site on your computer or internet-accessible phone.

Follow this link to the survey or copy and paste this into your browser:

[LINK]

Please know that any information you provide will remain strictly confidential and reported only in aggregate to inform future program planning. If you have questions about this survey, please contact Jenna Bagnall-Reilly at TRC, the national research firm conducting this survey on behalf of Xcel Energy. You can reach Jenna Bagnall-Reilly at (206) 388-0971 or [jbagnallreilly@trccompanies.com](mailto:jbagnallreilly@trccompanies.com). If you would like to contact Xcel Energy to verify the legitimacy of this study, please contact the Customer Service Center at 1-800-895-4999.

Thank you in advance for sharing your experiences and your time.

Sincerely,

Jenna Bagnall-Reilly

Senior Researcher, Advanced Energy, TRC

Follow the link to opt out of future emails:

[\\${!://OptOutLink?d=Click here to unsubscribe}](#)

[END]

## Survey Sections

- ◆ **Intro.** Introduction & Screening
- ◆ **A.** Awareness of Home Energy Reports
- ◆ **B.** Motivations and Behavior Change
- ◆ **C.** Feedback & Satisfaction
- ◆ **D.** Demographics
- ◆ **Close.** Closing

## Survey Guide

### Section Intro: Introduction & Screening

**Intro1.** Thank you for your interest in our survey! Today, we're interested in hearing from homeowners like you who receive a personalized home energy report from Xcel Energy about your household's energy use. Here is an example of what your personalized home energy report may look like:

***Insert picture of sample report.***

This survey should take about 10 minutes to complete. Please remember that your answers are strictly confidential and the level of information you provide is up to you.

To participate in the survey, please answer some questions to ensure that you qualify. Please click "Next" to continue.

### **[Page Break]**

**Intro2.** Our records indicate that you received a personalized home energy report via **[METHOD]**-from Xcel Energy in 2021.

Is that correct?

1. Yes, that is correct.
2. No, that is not correct. **[TERMINATE]**
3. No, someone else is enrolled in this household.

98. Don't know **[TERMINATE]**

**[ASK IF INTRO2=3]**

**Intro3.** What is this person's name and email address?

1. **OPEN-END W/ EMAIL VALIDATION [TERMINATE]**

2. **Name [OPEN END]**

98. Don't know **[TERMINATE]**

99. Prefer not to answer **[TERMINATE]**

#### Section A: Awareness of Home Energy Reports

Thank you! You qualify to take this survey. Once the survey is completed, you will be provided with more information on your \$25 gift card. This first section includes questions related to your understanding of your home energy report and awareness of Xcel Energy programs overall.

**[ASK ALL]**

**A1.** Do you read the personalized home energy report that you receive via **[METHOD]**?

1. Yes
2. No
3. Sometimes
4. Other, please specify: **[OPEN END]**
98. Don't know

**[IF A1 = NO or SOMETIMES]**

**c3.** Why don't you read your personalized home energy report? Please select all that apply. **[RANDOMIZE 1-5, MULTI-RESPONSE]**

1. I don't find the information in the report useful
2. I don't have time to read the report
3. I never signed up to receive a report
4. The report is too negative in tone
5. I don't think the report gives accurate information
6. Other, please specify: **[OPEN END]**
98. Don't know **[EXCLUSIVE]**

#### Section B: Motivations and Behavior Change

**B1.** Do you monitor your household's energy use?

1. Yes



- 2. No
- 98. Don't know

**[IF B1 = YES or 98]**

**B1a.** What resources do you use, if any, to monitor your household's energy use?

**[RANDOMIZE 1-5, MULTI-RESPONSE]**

- 1. My Home Energy Report
- 2. My Xcel Energy bill
- 3. I contact Xcel Energy
- 4. Home energy use app
- 5. Through my smart thermostat
- 6. Other, please specify: **[OPEN END]**
- 7. I don't use any resources **[EXCLUSIVE]**
- 98. Don't know **[EXCLUSIVE]**

**[ASK ALL]**

**B2.** Please rate how much you agree or disagree with the following statements. **[RANDOMIZE ORDER, MATRIX W/ 1-5, 1 – “Strongly disagree”, 5 = “Strongly agree”, 98 = Don't know]**

- 1. I am very concerned about how my energy use affects the environment.
- 2. I often worry that the cost of energy for my home will increase.
- 3. I feel in control of how much energy I use in my home.
- 4. I am already doing everything I can to save energy in my home.
- 5. I understand how actions taken by me and others in my household result in higher or lower energy use.
- 6. I would like to understand if my home is more energy-efficient than my friends and neighbors.

**B3.** Please rate how much you agree or disagree with the following statements. **[RANDOMIZE ORDER, MATRIX W/ 1-5, 1 – “Strongly disagree”, 5 = “Strongly agree”, 98 = Don't know]**

- 1. The Home Energy Report helps me understand how my household uses energy.
- 2. The Home Energy Report has changed the way I and/or my family use energy in my home.
- 3. The Home Energy Report has helpful information about my home's energy use.
- 4. I find the information in my Home Energy Report confusing.

5. I pay closer attention to my energy costs now than I did before I received my Home Energy Reports.
6. The information in my Home Energy Report helps me realize that my utility wants me to improve.

**[IF B3\_4 = 4 or 5 OR IF B3\_3 = 1 OR 2]**

**B3a.** What do you find confusing about your Home Energy Report?

**[OPEN-END]**

98. Don't know

**[IF B3\_4 = 4 or 5]**

**B3b.** Did you try to find more information about your Home Energy Report?

1. Yes
2. No
98. Don't know

**[IF B3b = YES]**

**B3b\_1.** What did you do to find more information about your Home Energy Report? **[MULTI-RESPONSE]**

1. Called Xcel Energy
2. Email Xcel Energy
3. Visited the Xcel Energy Website
4. Asked a family member or friend
5. Other, please specify: **[OPEN END]**
98. Don't know

**[IF B3\_3 = 4 or 5 OR B3\_4 = 1 or 2]**

**B3c.** What do you find helpful about your Home Energy Report?

**[OPEN-END]**

98. Don't know

**[ASK ALL]**

**B4.** How much has the Home Energy Report motivated you to change your energy use behavior in your home?

**[MATRIX, 1 - 5, 1 = "not at all impactful" & 5 = "very impactful", 98 = Don't know]**

**[IF B4 > 2]**

**B4a.** How have you changed your energy use behavior as a result of the Home Energy Report?

**[OPEN-END]**

98. Don't know

**[IF B4 > 2]**

**B4b.** What features of the Home Energy Report motivated you to change your energy use in your home? Select all that apply. Click the image to select your responses. Leave blank if none. **[MULTIPLE RESPONSE]**

**[INSERT IMAGE OF REPORT WITH EACH FEATURE LABELED]**

1. Household energy data
2. Energy efficiency tips
3. Other information such as consumption graphs or year-to-year bill comparisons
4. Neighbor comparison tool
5. Rewards earned that are redeemable for gift cards for energy savings activities
6. Information on other Xcel Energy Programs

**[ASK ALL]**

**B5.** Has the information in your personalized Home Energy Report impacted your decision to make any energy efficiency upgrades in your household?

1. Yes
2. No, my home energy report did not impact my decision
3. No, I have not made any energy efficient improvements
98. Don't know

**[IF B5 = 1]**

**B5a.** What energy efficiency improvement(s) have you made as a result of receiving your home energy reports? **[MULTIPLE RESPONSE]**

1. Efficient light bulbs (CFLs or LEDs)
2. Efficient lighting fixtures
3. More efficient primary heating system
4. More efficient primary cooling system
5. Programmable or smart thermostat
6. More efficient refrigerator
7. More efficient dishwasher
8. More efficient clothes washer
9. More efficient clothes dryer

- 10. Efficient windows
- 11. Efficient doors
- 12. Insulation / air sealing / weatherization
- 13. Other, please specify: **[OPEN END]**
- 98. Don't know **[EXCLUSIVE]**

**[ASK ALL]**

**B6.** How likely are you to make additional **[SERVICE]** energy efficiency improvements to your home in the future?

- 1. 1 – Not at all likely
- 2. 2
- 3. 3
- 4. 4
- 5. 5 – Extremely likely
- 98. Don't know

**[IF B6 = 4 or 5]**

**B6a.** What additional energy efficiency improvements are you likely to make in your home in the future? Select all that apply. **[MULTIPLE RESPONSE]**

- 1. Efficient light bulbs (CFLs or LEDs)
- 2. Efficient lighting fixtures
- 3. More efficient primary heating system
- 4. More efficient primary cooling system
- 5. Programmable or smart thermostat
- 6. More efficient refrigerator
- 7. More efficient dishwasher
- 8. More efficient clothes washer
- 9. More efficient clothes dryer
- 10. Efficient windows
- 11. Efficient doors
- 12. Insulation / air sealing / weatherization
- 13. Other, please specify: **[OPEN END]**
- 98. Don't know **[EXCLUSIVE]**

**[ASK ALL]**

**B7.** What Xcel Energy programs have you heard of that could help your household save energy, if any? Select all that apply.

**[RANDOMIZE, MULTI-RESPONSE]**

1. Energy Efficient Showerheads *Free or discounted energy efficient showerheads sent directly to customers*
2. Home Energy Squad *Offers free or discounted installation of energy efficient equipment at your home by Xcel Energy representatives*
3. Home Lighting *Discounted prices for LED lighting at stores*
4. Insulation Rebate *Rebates for customers who upgrade insulation and air-sealing in their homes*
5. Refrigerator Recycling *Free pick-up and prescriptive rebates of old refrigerators*
6. Residential Heating and Cooling *Rebates for highly efficient heating and cooling equipment*
7. Consumer Education *Provides residential customers with information and resources to reduce their energy use*
8. Home Energy Audit *Free in-home or virtual audit of homes*
9. Residential Lamp Recycling *Free compact fluorescent light bulb recycling at local hardware stores and coupons for 50¢ off the recycling fee*
10. Home Energy Savings *Free home energy education and improvement services*
11. Whole Home Efficiency *Rebates for customers who take a whole-house approach to improving the energy efficiency of their existing, single-family homes*
12. Multi-Family Energy Savings *Free education and services to qualifying multi-family buildings*
13. HomeSmart Appliance Repair & Replacement *Offers replacement and repair assistance*
14. Solar\*Rewards Community *Offers subscription to a nearby, third-party community solar garden*
15. Windsource *Offers flexible enrollment to wind energy*
16. Solar\*Rewards *Compensates solar customers for the energy they produce, and allows credits for any excess energy produced*
17. Renewable\*Connect *Offers wind and solar energy delivered to customers with no equipment necessary*
18. Other, please specify: **[OPEN END]**
19. I am not aware of any of these offerings **[EXCLUSIVE]**
98. Don't know **[EXCLUSIVE]**

**[IF B7 != 98 or 19]**

**B7a.** How did you hear about these Xcel Energy programs and services available to you? Select all that apply.

**[RANDOMIZE, MULTI-RESPONSE]**

1. My personalized home energy report
2. The Xcel Energy website
3. An Xcel Energy bill
4. An Xcel Energy email **[SHOW IF METHOD = EMAIL]** other than your emailed Home Energy Report
5. An Xcel Energy email

6. Word-of-mouth (family, friend, neighbor, etc.)
7. Social media
8. Online search results
9. Other, please specify: **[OPEN END]**
98. Don't know **[EXCLUSIVE]**

**[ASK ALL]**

**B8.** As part of this program, Xcel Energy provides an online portal that is called the “My Energy” portal. This portal allows you to access more detailed information about your household’s energy use.

Have you heard of the “My Energy” portal?

- Yes
- No
- 98. Don't know

**[IF B8 = YES]**

**B8a.** How useful was the “My Energy” portal?

- 1. 1- Not at all useful
- 2. 2
- 3. 3- Somewhat useful
- 4. 4
- 5. 5- Very useful
- 6. I have not used the “My Energy” portal
- 98. Don't know

**[IF B8 = YES]**

**B8a\_1.** Why did you rate the “My Energy” portal a **<PIPE FROM B8a>?**

**[OPEN END]**

- 98. Don't know

**[ASK if B8!=2]**

**B8b.** The “My Energy” portal has a rewards program offering. Have you ever used the rewards program that is part of the portal?

- 1. Yes
- 2. No
- 98. Don't know

**[IF B8b = YES]**

**B8b\_1.** Do you find the rewards program motivating to save energy in your household?

1. Yes
2. No
3. Somewhat
98. Don't know

Section C: Feedback & Satisfaction

**C1.** Please rate how valuable the following information is to you. **[MATRIX with 1-5, 1 = “Not at all valuable”, 5 = “Very valuable”, 98 = “Don’t know”, INSERT IMAGE OF REPORT WITH EACH FEATURE LABELED]**

1. Household energy use data
2. Energy efficiency tips
3. Other information such as consumption graphs or year-to-year bill comparisons.
4. Neighbor comparison tool
5. Rewards that are redeemable for gift cards for energy savings activities
6. Information on other Xcel Energy programs

**C2.** Is there any information that is *not* included in your Home Energy Report that could help you better understand your household's energy use?

1. Yes, please include: **[OPEN END]**
2. None – the information provided is sufficient.
98. Don't know

**[ASK ALL]**

**C3.** Please rate your satisfaction with the following aspects of your Home Energy Report: **[INSERT IMAGE OF REPORT WITH EACH FEATURE LABELED, RANDOMIZE, MATRIX 1-5, 1 = “Very dissatisfied”, 5 = “Very satisfied”, 98 = “Don’t know”]**

1. Household energy use data
2. Energy efficiency tips
3. Other information such as consumption graphs or year-to-year bill comparisons.
4. Neighbor comparison tool
5. Rewards that are redeemable for gift cards for energy savings activities
6. Information on other Xcel Energy programs



**[FOR ALL C3 < 3]**

**C3a.** Why are you dissatisfied with the **[INSERT PROGRAM COMPONENT FROM ABOVE QUESTION]**?

1. **[OPEN-END]**

98. Don't know

**[ASK ALL]**

**C4.** How would you rate your satisfaction with your Home Energy Report as a whole?

1. 1 - Very dissatisfied

2. 2

3. 3

4. 4

5. 5 – Very satisfied

98. Don't know

**[ASK IF C4 < 4]**

**C4a.** What could be changed to improve your satisfaction with your Home Energy Report?

1. **[OPEN END]**

98. Don't know

**C5.** How would you rate your satisfaction with Xcel Energy as an energy provider?

1. 1 - Very dissatisfied

2. 2

3. 3

4. 4

5. 5 – Very satisfied

98. Don't know

**[IF C5 =1 OR 2]**

**C5a.** Why are you dissatisfied with Xcel Energy as an energy provider?

1. **[OPEN-END]**

98. Don't know

**C6.** Please provide any additional comments or feedback on the Home Energy Report here.  
**[OPEN END]**

Section D: Demographics

Thank you for your patience; there are only a few questions left.

**D1.** Do you rent or own your home?

1. Rent
2. Own
3. Other, please specify: **[OPEN END]**
99. Prefer not to answer

**D2.** Which of the following best describes your home?

1. Single-family home
2. Single-family attached home, such as a duplex or townhome
3. Apartment building or condo with 2-4 units
4. Apartment building or condo with 5+ units
5. Mobile home
6. Other, please specify: **[OPEN END]**
99. Prefer not to answer

**D3.** Approximately how many people live in your home full-time? **[DROP DOWN]**

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10
11. More than 10
99. Prefer not to answer

**D4.** Approximately what is your annual household income before taxes?

1. < \$25,000
2. \$25,000 to \$34,999
3. \$35,000 to \$49,999
4. \$50,000 to \$74,999
5. \$75,000 to \$99,999
6. \$100,000 to \$149,999
7. \$150,000 to \$199,999
8. \$200,000 or more
99. Prefer not to answer

Closing

**CLOSE1.** You've reached the end of the survey. As a thank you for your input, we'd like to send you a \$25 Tango gift card, a digital gift card that can be redeemed at a variety of retailers, including Amazon, Apple, Target, or Instacart. Please enter the email address that should be used to receive the Tango gift card.

**[OPEN END W/ EMAIL VALIDATION]**

Please contact Jenna Bagnall-Reilly (jbagnallreilly@trccompanies.com) if you have not received your gift card within 10 business days.

**CLOSE2.** Thank you for your time today! As part of this research, we are conducting follow up telephone interviews with a select group of customers to further investigate how Xcel Energy can improve the information provided through the Home Energy Report. **For this additional interview, we are offering a \$100 gift card to those who participate.**

Would you like to be contacted to see if you qualify for an interview?

Yes. **[ALLOW NAME, PHONE NUMBER, & EMAIL CONTACT ENTRY]**

No.

## B.4 Participant Survey Weights

Overall, respondent demographic characteristics were not comparable to the sampled population distribution. As a result, the evaluation team developed state-specific weights for the Colorado and Minnesota samples to better align results with the population of treatment group participants. In addition to fuel type, we also considered incorporating housing type and report mode (mail or emailed) into the weighting scheme. We determined that a survey sample weight based on the distribution of fuel type, unit type, by state matched the population distribution the closest and was the most appropriate scenario. Table 15 below outlines the weights used in TRC's analysis of the participant data.

*Table 15. Sample Variables*

Variable	Colorado			Minnesota		
	Population %	Sample %	Pweight	Population %	Sample %	Pweight
Single-Family, Electric	60%	32%	1.84	78%	59%	1.33
Multifamily, Electric	20%	19%	1.09	5%	4%	1.32
Single-Family, Electric or Gas	18%	28%	0.64	17%	16%	1.05
Multifamily, Electric or Gas	2%	21%	0.08	1%	22%	0.04
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>3.66</b>	<b>100%</b>	<b>100%</b>	<b>3.73</b>

## Appendix C: Data Collection Findings

### C.1 Staff Interview Findings Memo

#### Product Goals, Activities, and Resources

The following sections present the evaluation team's understanding of the Product based on staff interviews and review of available product documentation.

#### Goals and Objectives

The Xcel Energy HEI Product develops personalized HERs for a select group of residential customers<sup>11</sup>, providing them with specific information and recommendations on ways to reduce their energy consumption. The Product also offers an online web portal (My Energy) that is available to all customers and enables access to the Rewards Program and a detailed view of energy usage. The main objective of the Product is to achieve energy savings through influencing the energy-use behaviors of the occupants. Additionally, product staff identified a secondary, non-energy objective of using the Product to enhance customer engagement with both their energy use and the utility. The following sections provide an overview of these two objectives.

#### Energy Savings

Table 16 summarizes the 2021 savings goals achieved by the CO, MN, and NM HEI products. While there are no differences between the program geographically, product staff reported that MN and NM were on track to have almost met, if not exceeded their 2021 goals. However, product staff reported the CO HEI product will likely meet approximately two-thirds of its gas goals and may only achieve about one-half of the current electric goals. The information on 2021 goals and budgets was referenced from the most recent energy-efficiency plan filings for the respective states.

*Table 16. 2021 Home Energy Insights Net Energy Savings Goals and Product Budgets*

	Net GWh	Net kW	Electric Budget	Electric TRC	Net Dth	Gas Budget	Gas TRC
<b>CO Goals<sup>2</sup></b>	30.17	5,763	\$3,914,898	1.03	106,798	\$692,083	1.31
<b>MN Goals<sup>3</sup></b>	19.95	4,409	\$1,428,667	1.53	43,372	\$170,293	2.22
<b>NM Goals<sup>4</sup></b>	4.29	908	\$143,485	1.07	NA	NA	NA

<sup>1</sup>The HEI product has also been referred to as Energy Feedback (CO and MN) and is currently referred to as the Energy Feedback Program in NM.

<sup>2</sup>2021 Goals as reported in the Public Service Company of Colorado 2021-22 Demand Side Management (DSM) Plan, Proceeding No. 20A-XXXEG.

<sup>11</sup> Residential products are available to residential customers based on the type of service they receive from Xcel Energy.

<sup>3</sup>2021 Goals as reported in the Minnesota Electric and Natural Gas 2021-2023 Conservation Improvement Program (CIP) Triennial Plan, Docket No. E, G002/CIP-20-473.

<sup>4</sup>2021 Goals as reported in the New Mexico Southwestern Public Service Company 2020-2022 Energy Efficiency Triennial Plan, Case No. 19-00140-UT.

## Non-Energy Objectives

The HEI products' main non-energy objective is to provide customers with resources to understand and engage with their energy use. The HERs (both email and mailed), combined with the My Energy portal provides the tools for customers to "establish a relationship" with their energy use. This greater customer engagement is intended to lead to opportunities for Xcel Energy to work with customers to keep their energy use and costs down.

Customer engagement priorities for HEI include:

- Increase energy use awareness within the residential market customer base.
- Cross-promote other products such as demand response to tap into the general market audience and drive recognition of existing opportunities.
- Increase awareness of energy-efficiency and DSM offerings.
- Ability to develop targeted marketing for all products through tracking customers' use of the My Energy portal.
- Continue to engage participants in control and treatment groups to maintain customer interaction and drive product success.
- Leverage the use of Advanced Metering Infrastructure (AMI) meter deployment to enhance the ability of customers to understand their energy use.

## **Activities, Tracking, and Reporting**

The HEI initiative is a behavioral conservation program that offers personalized energy usage reports to a designated group of residential customers, giving them specific information and recommendations on ways to reduce their energy consumption. The design of the program itself is experimental, in that customers are randomly selected by the third-party implementer to receive reports unless they opt out upon request. Customers receive quarterly reports that quantify savings by comparing the energy consumption of the recipient "treatment" group to that of a non-participating "control" group comparison. Control group customers are identified by the third-party implementer and enable isolation of effects attributable to each treatment group. The HEI Product also coordinates the offering with an online web portal (My Energy) that is identical across all locations and is available to all customers, with the only qualification being enrollment in My Account.

- Customers who are selected to participate (treatment group) can engage with the Product through multiple channels of information:
  - **HERs are sent monthly** to customers via email including "tips," on how customers can save energy. Customers who do not provide an email address receive a quarterly mailed report.

- A **reward point system** allows customers to accrue points by completing specific actions (for example: completing tips, assessments, applying for energy-efficiency rebates). These points can then be redeemed at local stores such as Home Depot and Target.
- Customers can set up an **energy savings plan** through the portal. A series of queries are presented to the user, allowing them to choose their own energy or financial savings goal with recommendations that are catered according to those specific goals.
- Additionally, the Product provides a dashboard which tracks customers' use of the My Energy portal and engagement with the rewards system. The dashboard allows Xcel Energy product staff to view up-to-date information on engagement rates, number of customers that have completed an assessment, etc.

## Resources

Product staff rely on the following resources to implement the Product.

- Product staff use Salesforce to track aggregated customer savings.
- All program information is managed by the Xcel Product team that oversees operations for HEI, this includes a product manager and two support staff.
- Implementation of the Product is carried out by the Vendor, which includes a dedicated program manager and support analyst.
- Implementation of the My Energy portal is also managed by the Vendor, with oversight from the larger Xcel Products team.
- AMI meter buildout and data integration into the My Energy is coordinated with Product staff and members of AGIS team, as well as other internal stakeholders.

## **Product Strengths and Challenges**

During interviews, staff identified the following strengths and challenges related to implementing the HEI product in 2022. Overarching strengths include factors that product staff identified as supporting the success of the Product; challenges include factors that product staff identified as preventing the Product from reaching its goals.

### Strengths

- In general, the Product has been successful in achieving its energy savings goals across the three states. However, the CO Product has been an anomaly, achieving only 80% of its gas goal in 2021.
- The Vendor strives to provide personal and dedicated attention to any query that Xcel Energy has regarding the Product. The addition of a new implementation product manager in 2021 onto the Product staff has worked well in helping identify a path forward regarding any requests from Xcel Energy on updates to the HERs, Product tracking questions, and other general questions on Product performance. However, Xcel staff continue to report challenges with the responsiveness of the Vendor's staff and consistently reported frustrations with the lack of collaboration on potential solutions.

- Xcel staff believe the Reward Points system, through gift cards and incentives, could provide a great mechanism to engage with the customer and encourage them to be more proactive about their energy use. However, to date this portion of the Product is not fully functional and Xcel staff have reported challenges with resolving the issues with functionality.
- Xcel staff believe the neighbor compare can help customers better understand their energy use profile and creates visibility into how their home uses energy.
- Xcel Energy is working to revise the HER in 2022 to move away from red as the predominant color, as well as make subtle shifts away from language that shames the customer (e.g., a sad face representing poor performance on energy savings). These modifications will allow brand messaging to be represented in a more positive light and improve alignment with Xcel Energy's intention for the Product.

### Challenges

- The CO HEI Product fell short of achieving its savings goals for the 2021 program year. The implementation team mentioned performing a deep dive into the potential cause for the decline in savings but, despite these efforts, had not produced a clear answer to-date.
- Customers have expressed dissatisfaction with the HERs, particularly regarding the neighbor comparisons, the negative tone of the report, and the continual receipt of emails even after opting out of the Product. Product staff also felt the inaccuracy of some neighbor comparisons was resulting in an overall lack of customer engagement with the mailed HERs, as well as customer frustrations with the different representation of usage presented across the various forms of delivery (mail, email, and the online portal).
- The opt out process could potentially be confusing for customers, as customers who receive an emailed report have access to a link for opting out and customers who receive a direct mail HER are required to call the Customer Care phone line. Customers have also complained about continuing to receive emails, even though they have opted out of the program.
- Customer Care calls are tracked at a high level and includes only the average duration of the call and the percentage of calls that are related to HEI. Details about the reason for the calls or timeline for resolving the issues are not tracked by the Customer Care team. This level of detail would be beneficial to the Product staff in helping them to understand Product performance.
- Under the current structure, Xcel's ability to respond to customer complaints is decentralized and the Customer Care team does not have dedicated staff to respond to customer questions and complaints related to HEI. A portion of the Customer Care team is designated to respond to customer calls regarding residential energy-efficiency offerings, but the HEI Product is not included within this effort. This decentralized process of tracking customer feedback has resulted in a lack of consistent tracking of customer satisfaction related to the Product.
- There exists a lag in processing the energy use data needed for the delivery of a timely report. This causes reports to be delivered long after the energy use period they capture has passed, rendering the information irrelevant to the customer. Product staff cited this as another reason they felt that customers were not engaging with the mailed HERs.



- Xcel Product managers have had a limited understanding of potential options, and considerations, related to Product development with the current Vendor. There has been improvement with the addition of the new implementation Product Manager in 2021, but there remains an opportunity for establishing a clearer path for Product tracking and future development.
- A high level of turnover in the Xcel Product manager has resulted in a lack of consistency in the management of the Product which has impacted its development.
- There seems to be limited technical understanding and ability of the Vendor to customize the tips and “widgets” on the virtual report or My Energy website. This limits the ability of the Product to implement new information, which may lead to a lack of customer engagement over time.

## Feedback on Evaluation Priorities

During our interviews, staff identified research topics they would like the evaluation to address. This section summarizes these topics along with additional topics that the evaluation team identified based on staff interview findings. The evaluation team will consider these research topics when prioritizing portfolio-wide evaluation needs and as we are able, incorporate them into the final evaluation plan for the HEI product.

- Improve the Customer Experience.
  - Understand the ability of the Product to motivate customers’ to better manage, and ideally reduce, their energy use.
    - Define the advantages and disadvantages of the neighbor compare. Understand what specific information may be helpful for customers in understanding the comparison.
  - Research what information or tools would help customers better engage with their energy use.
    - Explore opportunities to leverage the integration of interval data, through the My Energy portal, to improve the level of information provided to customers.
    - Understand the ability of peer programs to integrate with other energy-efficiency offerings including, Marketplace and other Xcel product offerings.
  - Understand customers’ experiences with the HERs and identify opportunities to increase customer engagement through assessing the usability of the HER.
- Understand Program Best Practices.
  - Explore peer utilities’ experiences with managing customer engagement including monitoring customer complaints and tracking customer use of the tools and information provided through the HERs.
  - Understand if peers have experienced challenges with achieving savings, particularly for programs that have been running for a long time.
  - Determine what tips & information have worked well for peer programs when motivating customer behavior.
  - Identify strategies for improving the cost-effectiveness of the program including strategies to reduce pricing.

- Understand the successes and challenges of integration of AMI disaggregation data.
- Research how peer utilities measure customer satisfaction to identify appropriate tracking tools and metrics and understand how they view the customer experience with the program.
- Improve Product Tracking.
  - Improve the measurement of customer satisfaction, by supporting Xcel Energy in the development of processes to better track customer satisfaction including the effect the Product may have on customers' satisfaction with Xcel Energy.
  - Explore opportunities to coordinate with Customer Care, including a more comprehensive tracking of customer calls.
  - Identify opportunities to improve the tracking of data on customer use of the My Energy portal, assessment information, and interaction with the rewards system.
- Enhance Product Effectiveness.
  - Explore specific program processes and delivery improvement opportunities.
  - Explore opportunities to streamline Xcel Energy's behavioral offerings, including the potential for future coordination with other Xcel Energy products.
  - Identify ways to expand marketing efforts for the Product, specifically related to the My Energy portal.

## **C.2 Peer Utility Benchmarking Memo**

### **Peer Program Design and Tracking**

The first objective of the peer research was to explore the range of peer program designs, to better understand if the Xcel Energy HEI product could improve or expand in any way. Our results indicate there are multiple opportunities to improve their program offering including strategies to streamline the customer experience with the information and tools provided and ways to improve customer satisfaction. This section first presents high-level characteristics of the peer programs. It then presents more detailed results related to program objectives, design, as well as additional components that peers are using to either supplement or leverage with their HER offering.

### **High-Level Characteristics of Peer Programs**

The nine interviewed peers represented a range of utilities from across the country. As shown in Table 17, some HER programs focused only on electric use, while others focused on both electric and gas energy savings. All peer utilities interviewed relied on a third-party implementer to implement their program. In total, four different implementation companies were captured through this research effort.

*Table 17. High-Level Characteristics of HEI Programs<sup>1</sup>*

Utility	Program Type	Treatment Group Participants	Location	Implementor
<b>Xcel Energy</b>	Electric & Gas	812,000	West	<i>Out for RFP</i>
<b>Peer Utility A</b>	Electric	927,200	South	Implementer 1
<b>Peer Utility B</b>	Electric & Gas	650,000	Northeast	Implementer 2
<b>Peer Utility C</b>	Electric	1,700,000	Midwest	Implementer 1
<b>Peer Utility D</b>	Electric & Gas	1,800,000	West	Implementer 1
<b>Peer Utility E*</b>	Electric & Gas	8,018,200*	Northeast	Implementer 1
<b>Peer Utility F</b>	Electric	115,200	West	Implementer 2
<b>Peer Utility G</b>	Electric & Gas	429,900*	Midwest	Implementer 2
<b>Peer Utility H</b>	Electric	2,500,000	West	Implementer 3
<b>Peer Utility I</b>	Electric	37,335	South	Implementer 4

<sup>1</sup>TRC pulled the most recent publicly available report, which was 2019, 2020 or 2021 at the time of this research.

\*Note: Utility E has 3,074,917 gas participants and 4,943,269 electric participants. Utility G has 85,428 gas customers, 237,168 combo customers and 107,297 electric customers.

## Peer Program Design

This section provides detailed information on peer utilities' HER program objectives, overall program design, and additional HER components outside of the standard report with energy savings tips. Most of the peer utility programs are designed as an opt-out model, randomly selecting participating customers from their pool of eligible residential customers. There were two exceptions to this model, whereby peers auto enrolled all its eligible customers with which they had the necessary information into its HER program (typically square footage, consumptions, and housing type). For this program customers can still opt-out of receiving their HERs.

### Program Objectives

Peer utilities reported two types of program objectives as their key focus areas: energy savings and customer engagement. Overall, utilities primary focus is on energy savings, but many utilities also have a strong focus on customer satisfaction or engagement with their energy use and the broader suite of residential energy efficiency offerings.

- Five out of the nine interviewed utilities explicitly mentioned using HERs as a cross marketing tool as one of their objectives to cross-promote other offerings such as online stores, ENERGY STAR appliance rebates, lighting, smart thermostat programs, and EV programs.
- Three utilities reported personalized outbound energy education and customer engagement as one of their major objectives of the HER program.
  - Utility A provides online usage information to customers, as well as proactive usage reports and notifications. The primary purpose of this information is to educate customers about their energy usage and help them understand what is driving energy usage in their home.
- Three utilities identified the major drivers for offering this program type to be maintaining and improving customer relations. Peer utilities leveraged the use of energy saving tips and enhanced disaggregation of usage data to enhance the customer experience.

### Program Design

Peer utility HER programs have a similar design to Xcel Energy. They deliver reports to a treatment and control group, which allows them to accurately estimate energy savings derived from the HERs by comparing the use of the treatment to control group customers. Peers tend to automatically enroll customers and provide an opportunity for customers to opt-out of receiving their HER. Most peer programs provide both paper and electronic Emailed reports (eHERs), and all have a defined cadence for delivering reports to customers. Detailed findings related to all of these design components, including details on targeted cohorts or qualification criteria (when available) are included below.

### *Treatment Group Cohorts*

- All but one peer program establishes a series of initial treatment group cohorts to participate in their HER program. These cohorts are then refilled, as needed, with subsequent waves of new customers depending upon the attrition rate (or rate at which customers opt-out) for that cohort. Utilities have varied practices when it comes to targeting specific customers and cohorts. Some peer utilities identified targeted customer types beyond high-users, but most peers (other than the one that blanket enrolled all their residential customers) focused on high-user cohorts for maximum savings.
  - Utility B uses several segmentation strategies for their customers based on the type of energy fuel received (gas versus electric), income level (income qualified or not), and housing type (singly family versus multi-family).
  - Utility G began their HER program pilot in 2017 with multiple different groupings including low and high users, variations on report language, and modified report

schedules for targeting heating customers. For the expanded 2020 program the utility now targets high users, then selects which type of usage comparison a customer receives based on both an air conditioning (AC) and electric space heating flag. For example, reports sent to AC participants in May provide a self-comparison to their own usage last summer. All customers receive quarterly reports whether they are emailed or mailed.

- Utility I program has two types of cohorts. One cohort is based on the neighbor compare strategy. The other cohort is based on a self-compare strategy, whereby customers are compared to their own energy use from a previous year (if available). This utility is currently testing the effectiveness of the self-compare in its ability to achieve similar savings as the neighbor comparison model.

### *Enrollment and Opt-Out Practices*

- All utilities practice automatic enrollment, whereby customers are selected for program participation and can request to opt-out of the program. Overall, peer utilities acknowledge the need to make the opt-out process simple for their customers; however, some are also cautious of implementing a one-click opt-out option as it means the utility loses the ability to engage with their customer. Seven of the peer utilities provide customers with an option to call the customer call center to opt-out of the program and four of these utilities provide specific training to call center staff for handling calls from HER customers. Four utilities provide an email option for opting out and one utility offers a single-click button in the eHER to unsubscribe. To meet participation targets, most utilities opt-in subsequent waves of qualified customers to make up for the attrition of customers opting out. Two peers that managed smaller programs reported not having the ability to rebalance the treatment cohorts due to already capturing all eligible customers.
- Utility A and G auto enroll all residential customers. However, customers can opt-out of receiving reports or notifications or select to receive only emailed reports. Utility G began their HER program pilot in 2017 and due to its success with customer satisfaction expanded in 2020 to all customers that have been identified as high users.
- Utility B has a dedicated toll-free program phone number and email address that are available in the HER for opt-out purposes.
- Customers at Utility C and Utility H can opt-out by calling into the utilities' call center, logging into their online portal component, or responding to an email.
- Utility D provides a single-click opt-out button to unsubscribe email customers and a call-in option for paper customers.
- Utility E automatically enrolls high consumption customers to their HER program, and it provides contact information for their energy efficiency hotline if customers want to opt-out.
- Utility F is also an opt-out program; however customers must talk to someone in the call center. A customer could opt-out by calling the customer center directly. Alternatively, a customer can choose to opt-out via email, in which case a notification is sent to the customer care center to initiate call to the customer instead.

- Utility I initially implemented an opt-in program design, however it switched to an opt-out program design instead due to the downward trend in savings under the opt-in model. Currently customers must call in to opt-out, but they will be transitioning to allowing customers to opt-out online.

### *Report Contents, Mode, and Cadence*

- Customers receive updated, and personalized, energy-use information with each report and most peer utilities provide a comparison to the customers' average "neighbor," which is meant to be the stimulant that incentivizes the customer to change something about their behavior to save energy.<sup>12</sup> In addition, all peer utilities provide a set of energy savings tips, as well as cross promotional information on other residential utility programs. One utility provides an extensive Frequently Asked Questions (FAQ) section on the back portion of the paper report.
- Most peer utilities acknowledge that customers do not like the **neighbor comparison** and have taken steps to either move away from this language in the reports (six peers) or shift to a self-comparison model (one peer). Two of the peer utilities that utilize a neighbor comparison component reported receiving numerous complaints, with customers' using a "frowny face" for their feedback on the neighbor comparison tool. Peer utilities are also testing changes in the language used in their neighbor comparison tool. The implementer for Utility H performed a study between different utilities where they assessed customer satisfaction and participation levels as a response to different types of neighbor comparison. They found "your neighbors" is more effective than "efficient neighbors" in their HERs neighbor comparison tool. Similarly, Utility C is moving to a new version of their HERs where the neighbor comparison feature will no longer be referred to as a "neighbor comparison" in the HERs. Additional, information on neighbor comparison tools can be found under the Peer Program Performance section below.
- The standard HER program design included sending paper reports, as they were determined more impactful on customers behavior. Most peer HER programs included both **paper and E-mailed reports**, with the exception of one peer program that sends out only paper reports. Three utilities reported seeing higher savings from paper than email reports, of which one utility also reported high electric savings from combo customers.
  - However, some peers are exploring different strategies with paper and emailed reports. Utility B has seen considerable savings amongst customers that receive a combination of paper and emailed reports and high electric savings from customers that receive only emailed reports.
- Utilities have different strategies when it comes to the **frequency of delivering the reports**. Overall, frequency varies from two to six times annually for paper reports and is typically monthly for eHERs. Some utilities vary the frequency of the reports based on certain characteristics such as the type of energy service they receive, their level of usage (high versus low), and the customers tenure in the program.

<sup>12</sup> A "neighbor" is determined by the average use of customers with a similar use profile and select characteristics, including the square footage of customers' homes and building type. The inputs to the algorithm vary for peer utilities and is dependent on the ability of the implementor to leverage this type of data.



- In 2021, Utility B adjusted the number of paper reports distributed to customers in the interest of program cost effectiveness. For example, because low-income households have less opportunities for energy savings, they received less HERs than non-low-income households. Meanwhile, dual-fuel single-family households often have multiple opportunities for energy savings, therefore, they received several HERs throughout the year. In 2022, Utility B continued to evolve their HERs delivery strategy to improve program cost effectiveness. They also began to send monthly eHERs to all customers whose email addresses they have on file.
- Utility F sends quarterly HERs in February, May, August, and November.
- Two utilities reported **refreshing their HER template** every quarter and reported this appeared to help with customer engagement. While one peer reported having a fairly static report template, having changed it last year.
  - Utility A has quarterly strategy sessions with their implementor wherein they discuss customizing the marketing module section within the HER. This section allows them to put specific messaging for customer segments that they are trying to target each month.
  - Utility H reported that changing up the HER theme every quarter improved customer satisfaction. They also have an FAQ section that is changed every quarter to accommodate commonly asked questions, resulting in less calls to the customer call center.

### *Tracking and Customer Satisfaction*

- Six of the interviewed utilities track customer satisfaction and engagement. Four of these utilities receive monthly engagement reports from their vendors that include information on customer click rates, open rates etc. Two utilities do not track engagement and are not planning to do so in the near future.
  - Utility B has an online program manager dashboard that is maintained by the implementer wherein the program manager can login and see certain customer activities. Utility B sends information about all residential customers to the implementer, following which they receive monthly reports that comprise information on click rates, open rates etc. Currently, the system is not robust, since the utility cannot see everything that customers have done in the portal, i.e., there is information about click rates but what they actually do within the portal is not available.
  - Utility I has not tracked customer engagement so far. They do a monthly closeout through which they track final bills and opt-out responses to see if they need to repopulate their cohorts. The only tracking that is performed is internally. If a customer contacts the customer care representatives and they cannot solve it, the issue gets added as a task in their system- a spreadsheet. So far, this is the only mechanism used to track engagement.
  - Utility H does not track customer engagement. They mostly track participation i.e., people that opt-out, any calls to the customer center, complaints, number of reports that go out every quarter etc.
  - Utility A has monthly meetings with their vendor to go over savings information. They have established an internal call center that is specifically focused on outbound

- notifications to customers to get more contact information, verify phone number and obtaining email addresses etc. to increase engagement with the customer.
- Utility C receives files by wave, by month. Their vendor provides data on who opens what type of communications from the utility, as well as web and widget data.
  - Peer utilities have **varying structures for the call centers** that handle incoming customer communications related to their HER programs. Some call centers are decentralized and other peer utilities have a dedicated group of specialists. Peers also have varying practices for tracking customers satisfaction.
    - Utility B has two call centers with a dedicated group of experts who are trained for HER program related complaints. These centers also have access to the vendor's tools, so they can directly opt customers out.
    - Utility I reported that in-person training for the customer call center staff would have been helpful to improve the customer representatives' ability to address customer complaints. From their previous opt-in program, they learned that the customers that they originally targeted were the highest saving and most engaged group of customers, with each succeeding group saving less than the previous group.
  - Peer utilities reported challenges with their HER customer satisfaction. Customers from four utilities expressed dissatisfaction around neighbor comparisons. Two of these utilities reported receiving numerous complaints with using frowny faces for their neighbor compare. In addition, Utility F reported having learned through research that frowny faces exhibited large negative reactions as well.
    - Utility C reported high customer dissatisfaction with their HER and is considering performing market research to change the language around the visualizations and descriptions in their report.
      - A small percentage of customers from Utility I have complained about not understanding how to redeem rewards. A general challenge for the program is the AMI rollout and making sure there are no overlaps with other programs and that customers are not being directed to different channels to see their usage. They also expressed dissatisfaction with the neighbor compare. More people opted out of neighbor compare than the self-compare. The biggest feedback was regarding the 3 different types of faces- smiley, neutral and frowny face. Customers complained about the frowny face, following which they changed it out to a straight smile, small smile, and big smile. Other customers complained about receiving paper when they opted for paperless reports. Hence, messaging about paper reports driving savings were added.
    - Utility G reported high customer dissatisfaction and is now focusing on bringing a positive tone to the report. This peer utility is also planning on using gamification, a marketing technique in the form of a virtual rewards program where customers earn points by completing their online profiles, surveys, etc., and a dollar comparison in their report to soften the report language.



### Additional HERs Components

The peer utilities' HERs include a variety of additional components outside of reporting energy use and savings tips. Table 18 summarizes these findings by peer utility and vendor and the following bullets present additional findings related to HER components specifically mentioned by peer utilities in their interviews. Interviewees reported that the disaggregated view of home energy usage and the online portal component were key to customer engagement. Although interviewees expressed interest in moving into the EV space, only two utilities provided dedicated EV reports.

*Table 18. Components Offered by Peer Utility and Vendor*

Utility	Implement or	Bill Forecast	High Bill Alert	Enhanced Disaggregation	Rewards Program	Online Portal	EV Reports	Solar Reports
<b>Xcel Energy</b>	<i>Out for RFP</i>				✓	✓		
<b>Peer Utility A</b>	1	✓	✓	✓		✓		
<b>Peer Utility B</b>	2		✓	✓		✓		
<b>Peer Utility C</b>	1	✓		✓		✓	✓	✓
<b>Peer Utility D</b>	1	✓		✓		✓		
<b>Peer Utility E</b>	1	✓		✓				
<b>Peer Utility F</b>	2			✓		✓		
<b>Peer Utility G</b>	2			✓		✓		
<b>Peer Utility H</b>	3			✓		✓	✓	
<b>Peer Utility I</b>	4	✓		✓	✓	✓		

- Six of the nine utilities interviewed offer **bill forecast alerts** and two **offer high bill alerts**. However, no peer utility interviewed specifically highlighted these program components as key drivers of program savings.

- All peer utilities interviewed mentioned **enhanced disaggregation** as a key component in their program design. None of the peer utilities that are currently implementing disaggregation features mentioned any challenges related to customer understanding of the energy use information.
  - One peer indicated that some customers have called about this, but that it was not a large issue.
- One peer utility reported that they have the capability to offer enhanced disaggregation data to customers but will not be using this strategy moving forward, since their online portal, where this data would normally be displayed for customers, is being shut down due to lack of customer interest.
  - Utility A vendor uses the disaggregated data to provide customers insights on the top three highest energy using measures within their home, along with cost information about how each measure contributes to their energy costs.
- Only one out of the nine interviewed peer utilities was interested in offering incentives in the form of gift cards. None of the remaining peer utilities incorporated any type of rewards or gift card incentives into their current HER program.
  - Utility A has considered virtual rewards but does not have any plans of implementing it soon. However, points and a loyalty program in the EV space is a component the utility is considering for the near future. The current implementor can identify level I versus level II chargers via the AMI meter data and consequently, which customers to target for this marketing. Accrued points would go towards using chargers at certain locations.
  - Utility C had offered a rewards program previously but decided to drop this component since they found no traction with incentives among customers.
  - Utility H tested a rewards pilot called "points and rewards" for a year and half wherein people would log in to the online portal and accrue points through different activities such as clicking on the tips, participating in the online survey, etc. The participation was low which did not allow the utility to gather enough information about the use of the portal to be able to make any statistically significant conclusions about the possibility of additional energy savings.
  - Utility I is the only utility to offer incentives and coordinates with 8 different vendors on gift cards. They have had about \$1,500 worth of rewards redeemed since their recent launch in October 2021. One challenge the utility has identified is that a small percentage of customers have misunderstood how to redeem rewards. Some customers thought that points were accrued when they saved energy, when in fact, rewards were based on actions in the portal and not on energy savings.
- The online portal component and HERs information varies from high level energy saving tips to more disaggregated data such as bill forecasts and AMI metering.
  - Utility C displays nine different widgets within their My Account and a widget gallery for each customer. These widgets include bill forecasts, bill comparisons compared to previous energy bills, and neighbor comparisons, among other information. The utility also enabled their customer representatives to access the portal. This enables customer representatives to see what the customers are viewing and help customers through any issues they are finding.

- Utility F has an electric space heating flag and an AC flag for all customers to help customize messaging for these customers throughout the year. For example, the reports differ in May because while everybody else receives information on how they did the last quarter, participants with the AC flag in May get a comparison to last summer.
- Utility I displays an action plan on its online portal, which is created in part by customers defining their motivating factors, such as cost savings or improving their carbon footprint. It also includes customized energy-savings tips for customers who completed their home assessment on the online portal. AML customers can also view an estimated bill for the next month on the online portal.
- Many peer utilities reported general interest in tapping into the EV customer market in the present and near future.
  - Six out of the nine utilities are interested in engaging with the EV space, while the other three peer utilities did not explicitly mention engaging the EV space as a program goal.
  - Five peer utilities currently cross promote EV charging programs through their HERs program by using customized messaging, of which, one peer wants to push for dedicated EV reports in the future.
  - Currently, only two peer utilities have a dedicated EV report. These reports are different from the regular HERs, as EV customers receive specific information on how much time they spent charging their car and how it translates to their energy consumption, tips based on EV driving, information on maximizing savings through rebates etc.
- There is little interest in customizing HERs for homes with solar due to the difficulty in tracking net energy usage. Only one utility is currently catering to solar customers through dedicated solar reports and one has expressed interest in doing so. Another utility targets non-solar customers through customized messaging in their existing HERs. Three utilities prescreen solar customers out of their HER programs.
  - Utility A provides personalized information for non-solar customers that shows them what their energy usage and saving would look like if they were to transition to solar for their home.
  - Utility C is the only peer utility that has dedicated solar reports as part of their HER program, i.e., reports that focus on solar energy usage and tips for customers that are confirmed users.

## Peer Program Performance and Challenges

This section summarizes information on peer utility performance and challenges. Overall, peer utilities have expressed challenges with achieving savings and meeting customer satisfaction goals. Peer utilities reported that they are working to move away from the harsh language and incorporate more positive tones within their HERs to improve customer relations and satisfaction. Some peer utilities are required to perform an ex-post impact evaluation, whereby a realization rate is calculated by a third-party evaluation contractor based on a billing analysis to verify actual savings. Two utilities reported overachieving savings, whereas one utility reported a realization rate in the 60th percentile range. Another utility reported under achieving net

savings but did not wish to comment on the realization rate specifically. Table 19 summarizes the planned and reported savings data for interviewed utilities. Utility A had the highest report savings for the 2021 program year, despite the fact they apply a realization rate to their HERs program.

*Table 19. Percentage of PY2021 Savings Achieved by Peer Utilities<sup>1</sup>*

Utility	Planned Savings (MWh)	Reported Savings (MWh)	Percent Achieved	Realization Rate Applied to HERs
Peer Utility A	138,305	193,188	140%	
Peer Utility C	97,750	62,409	64%	✓
Peer Utility E	40,000	45,512 <sup>a</sup>	114%	✓
Peer Utility G	14,000	10,000	71%	
Peer Utility I	2,676	2,394	90%	

*Note: PY2021 savings goals and actual verified savings were not publicly available for peer utilities B, D, F, or H.*

*<sup>a</sup> Reported 2020 direct gross annual electricity savings (MWh) acquired to date. Due to the use of a realization rate for HER program savings, Utility E did not achieve their targeted net savings in PY2020.*

- Two utilities expressed challenges surrounding achieving savings when the number of eligible customers had already been maximized. One utility responded by introducing a less stringent eligibility criteria, however, significant attrition rate (12%) still exists. Initially, the eligibility criteria for this program included 13 months of consecutive billing history. However, the utility later dropped the criteria to 11 months of consecutive billing history to incorporate more customers in the program.
- Two utilities expressed concern over the upcoming transition from paper to eHERs and what the savings and opt-out responses will look like.

### Implementation Challenges

Peer utilities express various challenges in implementing their HERs programs. These challenges focused on the tone of their HERs, program cost effectiveness, meeting customer participation goals, forecasting customer savings, and vendor performance and relationships.

- Multiple peer utilities reported challenges with customer satisfaction regarding the tone of their HERs and are now focusing on making the language in their HERs more positive in general.
  - Utility F does not use the word “neighbor” in their reports so as not to divert the customers’ focus. The language instead focuses on how their “home” uses energy.
  - Utility H’s vendor performed a study between different utilities, assessing customer satisfaction and participation levels of people responding to different types of

- neighbor comparison. They found “your neighbors” is more effective than “efficient neighbors”.
- Utility G focuses on the positives using phrases such as “great job on your savings! You’re on your way, here is how you compare to energy efficient households” instead of directly talking about neighbor comparisons.
  - Utility A faces challenges on how to make their HERs more cost effective. As it currently exists, paper reports are not cost effective. To overcome this challenge, the utility is looking at strategies to rely more on digital products and notifications to slowly decrease the number of paper reports distributed.
  - Utility B and Utility G both expressed concerns about meeting customer participation goals. Utility G mentioned that they have exhausted their potential customer pool and therefore may face participation challenges in the future.
    - Utility H tried numerous ways to engage customers with their online portal but found little success. They tried social media, marketing the link in the HER, Google search ads, and email blasts, among other strategies, but did not see an improvement in customer participation. The factor that finally achieved some traction was adding a QR code to the HER that linked the customer to their online portal.
  - Two utilities expressed concern over their existing vendor. Utility I reported that although their vendor is good to work with, the monthly updates have taken longer than they would’ve liked. The vendor for Utility H assumed that they would take over the participation waves from the previous vendor, although it was clearly stated in the RFP that the new implementer would start from scratch with recruiting participants for the HER program. Therefore, this has been a cause for friction between the utility and the vendor.
  - Another challenge for Utility H comes with the new mandate that requires the utility to outsource its HERs program to a third party. With this new design, the HERs will be 100% designed and delivered by the implementor. There is no guideline on the design provided by the utility and it will solely be based on what the vendor chooses to do. Utility H expects this will hinder cross-program promotions since cross-program marketing will have to be initiated by the vendor and not by the utility itself.

## Peer Program Customer Engagement Strategies

This section discusses peer utility customer engagement strategies. Customer engagement is critical to achieving energy-savings goals as customers not only have to willingly read their HERs but act on the energy-saving behavior that is recommended. Four of the main areas of focus relating to customer engagement reported by peer utilities are: providing disaggregation data to improve customer energy-saving behavior, improving the design of the HERs, engaging in different marketing strategies, and including energy-saving tips in the HERs. Below are details relating to each of these engagement strategy efforts reported by peer utilities.

- Eight of the nine interviewed utilities use, or plan to use, improved disaggregation reporting as a tool to encourage customer energy-saving behavior and to encourage customers to go online to view their energy use more often. Six utilities have already applied this mechanism whereas two are expected to implement it in the near future.

- Utility A recently updated their mobile app to show a disaggregated view of home energy usage to let customers know what measures are using the most energy in their homes.
- Utility C recently provided enhanced disaggregation to the existing widgets in its HERs to give a more detailed understanding of energy usage through a dollar understanding of the distribution. In addition, changes were made to the online survey in the My Account portal. Customers can now insert a question and their response is captured securely.
- Utility G recently launched improved disaggregation data for gas measures.
- Peer utilities reported improved customer engagement with their HERs through a new look and feel to their HER designs.
  - Utility A launched a new format for their HER and will be moving from the neighbor comparison to a benchmark analysis. The new HER will also provide tips to reduce usage within each appliance area.
  - Utility G recently launched a new design for their HERs. The new HERs focus on a positive tone, gamification, and a dollar understanding of the contribution of each measure in a customer's home.
  - Utility H introduced a new report design that has reengaged customers with the HER. The report content is also updated every quarter, which has received positive feedback from participants.
    - A dedicated phone line was also added exclusively for HER program customers with a voice message that provides answers to frequently asked questions while customers are on hold. Utility H reported that this voice message reduced customer complaints.
- Peer utilities use various marketing strategies to retain customers, such as Google ads, trying to be more playful with the neighbor comparison, using trial and error with what customers like about the report design, and offering promotions to understand what type of messaging will resonate with customers.
- Eight out of the nine interviewed utilities use energy-saving tips as a strategy to engage with the customer and cross-promote other energy-efficient programs and measures such as EVs and ENERGY STAR appliances.
  - Utility B established a hierarchy of energy savings tips, with the top tip shown first since it has had the most energy-saving impacts.
  - Customers at Utility C expressed positive feedback on the low/no cost energy-saving tips provided during COVID.
  - Utility F provides three energy savings tips, with the top two tips detailing heating and cooling tips and the third tip relating to a program cross-promotion.
  - Utility H trains their call center representatives in a two-hour refresher course every six months that focuses on customer engagement. In addition, the most common complaints made to call center representatives are reported to the HER program staff.
- Two peer utilities offer tip libraries to their customers through their online portals.

- Utility A introduced a full tip library that is updated based on the season and by what specific data customers want to see.
- Utility H offers a tip library to their customers that received positive feedback through their customer care center. Customers like the tip library because it's a one-stop-shop for all the information that they need about energy saving tips, appliances, and other resources.

## Home Energy Insights Evaluation

### 2022 Program Evaluation: Recommendations and Responses

The Xcel Energy Home Energy Insights product in Colorado focuses on influencing the everyday actions of residential customers in a manner that will help them save energy and money. The product engages customers through a report which compares a customer's energy consumption to similar nearby households for benchmarking an individual household's performance. The report is sent to eligible customers that are enrolled in the product. HEI provides personalized tips to demonstrate how much customers can save by changing their behavior. Participants receive free monthly emails or quarterly printed reports. All Xcel Energy customers also can log on to the My Energy website where they can take a home audit, customize an action plan, and get energy efficiency tips.

Xcel Energy ("the Company") engaged a team of researchers led by TRC to conduct a process evaluation of the Home Energy Insights product. The evaluation team was asked to assess the following:

- Customer feedback on product experiences
- Product awareness and marketing
- Ways to enhance product effectiveness
- Customer barriers to participation

Based on the results of this research, the evaluation team developed key findings and recommendations for Xcel Energy.

Recommendation	Response
1) More explicitly highlight how customers can complete the home assessment and how the specific data collected through the assessment on the My Energy portal will help Xcel Energy tailor their Home Energy Report. By completing the home assessment through the My Energy portal, customers update specific information such as the type and vintage of the systems in the home. This information is then incorporated into the algorithm for the neighbor comparison as well as the selection of tips and customer messaging for specific programs.	The Company agrees to research ways for increasing customer engagement with My Energy Portal and the features associated with the portal.
2) Work with the implementation team to update report tips, where possible, for different residence types (e.g., renters) to make them more applicable to the residents, and thus more likely to be acted upon. Xcel Energy may also consider ways	The Company agrees to update the tips that are featured within the reports with the potential to incorporate segmentation based on the type of residence.



to include support for landlord engagement as part of the program or tip information provided in the Home Energy Report.	
3) Work with the product implementer to improve the accuracy and timing of the data used to populate the report, including looking at ways to improve the timing between when customers receive their energy bill and the Home Energy Report so the information the customer is receiving in the report is timely. This will help to increase trust in the contents of the report.	The Company will assess if there is the possibility of improving the timing of the reports. Customer billing data is necessary to create the reports. Variability on when the data is available is an influencing factor on when the reports can be generated.
4) Enhance detailed information on the specific criteria used to determine the comparable “neighbor” in the Home Energy Report itself. Other peer utilities offer a short explanation of the specific information used to determine the comparison or offer an option for the customer to switch to a self-comparison report.	The Company agrees to enhance information and presentment of the specific criteria for the “neighbor” comparison.
5) Assess the feasibility of offering customers the option to select a self-comparison version of the Home Energy Report. Two of the interviewed peer utilities reported having shifted specific cohorts to the self-comparison model. During the early summer months, one utility provides a self-comparison to participants with air conditioning that compares to their own usage from the previous summer. Another utility is attempting to assess the self-comparison model’s impact on savings when compared to the neighbor comparison model and have reported that more people opted out of neighbor compare than their self-compared model.	The Company will assess the feasibility of offering customers the option to select a self-comparison version of the Home Energy Report. If feasible, the Company may pursue this option in future Colorado DSM filings.

Questions regarding report preferences could be included in the home assessment.	
6) Offer customers more streamlined information on how to access energy use information and information on other products, particularly through leveraging the My Energy portal. This will allow customers to better understand, and more easily access, opportunities they can implement to save energy.	The Company will assess ways to streamline information on energy use and other products within the reports and My Energy Portal.
7) Work with the implementation contractor to update the report language to a more positive tone to increase customer satisfaction with the report. For example, the text could be altered to be more focused on how customers have improved their usage (if that is the case) or could improve in the future.	The Company agrees to work with the implementation contractor to assess the current language and tone used within the reports.
8) Work with the implementation team to update the Home Energy Report to include other Xcel Energy offerings besides energy efficiency. Doing so provides next steps for a client and could lead to greater portfolio-wide energy savings.	The Company agrees to work with the implementation team to include Xcel Energy offerings outside of energy efficiency.
9) Conduct further research on how customers are directed to the My Energy portal. As many respondents had not heard of the My Energy portal, more research is needed to be able to improve awareness and use of the My Energy portal as well as the connection to My Account.	The Company agrees to conduct further research on how to increase customer awareness of the My Energy Portal.