



Xcel Energy Residential Heating Product 2017 Evaluation

January 22th, 2018

FINAL
REPORT



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Executive Summary

2017 Colorado Residential Heating Product



Introduction

The Xcel Energy Residential Heating product in Colorado offers residential customers rebates to install high-efficiency condensing gas furnaces with an annual fuel use efficiency (AFUE) rating of 95% or higher and/or electronically commutated motors (ECMs) which increase the energy efficiency of furnaces.

Xcel Energy engaged a team of researchers led by EMI Consulting to conduct a process evaluation of high-efficiency gas furnaces offered through the Residential Heating product. As part of the evaluation, EMI Consulting assessed customer satisfaction with the product, Xcel Energy influence on customers' decisions to install high-efficiency gas furnaces, information sources customers rely on when making decisions on heating equipment, and the efficacy of contractors' efforts to provide customers with information on and options for high-efficiency furnaces. Based on the results of this research, the evaluation team developed key findings and recommendations for Xcel Energy.

Methods

Participant telephone survey (n=100)
Trade partner interviews (n=28)
Peer program benchmarking interviews (n=5)
Staff interviews (n=3)
Fielding:
Sept 2017 – Oct 2017

Key Findings



Both customer participants and trade partners are **satisfied with the product**. 94% of participant respondents were somewhat or very satisfied with the product overall and 97% of trade partners were somewhat or very satisfied with the product.



Customers who installed a high-efficiency gas furnace and an ECM through the product had a lower rate of free-ridership relative to participating customers who only installed a high-efficiency gas furnace.



Trade partners that completed the greatest number of high-efficiency furnace installations view the product as an integral part of their business model. Three-quarters of these trade partners stated that a majority of their *total* furnace installations are completed through the product.



Unlike Xcel Energy, **none of the five peer utilities interviewed require NATE certification for contractors** installing high-efficiency gas furnaces through their respective residential heating programs.

Impact Results

0.86 Recommended NTGR for High-Efficiency Gas Furnaces



Drivers of product influence: Xcel Energy trade partners are the most important sources of information for customers to learn about the Residential Heating product. Continuing strong channel management is necessary to maintain and grow the product's strong network of trade partners.



Rebates matter: Of the 28 trade partners interviewed, 27 said that the rebate from Xcel Energy was the most important factor influencing customers to install a high-efficiency furnace through the product. In July 2017, Xcel Energy increased the base rebate paid to customers who install a high-efficiency gas furnace through the product from \$120 to \$300, which the evaluation team believes will further increase participation.



Ways to optimize product influence:

- Consider eliminating NATE certification requirement for trade partners.
- Consider adding "next generation" ECM to the product after 2019 when currently available ECM becomes standard equipment.
- Conduct semi-annual or continuous evaluation of the Residential Heating product, focusing on market testing of customer satisfaction and the impact of rebate levels on free-ridership.

ES-1

Executive Summary

2017 Colorado Residential Heating Product



Process Results

Customers



Participants tended to be older, higher income, and live in smaller households

- 72% live in households of three or fewer persons.
- Median age of a participant head-of-household is 57.
- 61% reported a household income of \$100,000 or more.



Participants tended to move quickly once they decided to replace their existing furnace.

- 74% of participants reported talking with contractors within six months of deciding to replace their existing furnace.
- 92% of participants spoke with three or fewer installation contractors.



Most participants chose a furnace contractor based on an existing relationship (35%) or a recommendation from friends, family, or colleagues (22%). Only 5% did so based on a recommendation from Xcel Energy.



Three-of-four participants said they were not aware that their contractor was an Xcel Energy trade partner.



More than half of participants said they heard about the rebate from their contractor; another 36% heard about the rebate from some form of advertising by Xcel Energy, such as bill inserts, Xcel Energy's website, television or other media.

Trade Partners



Trade partners reported that rebates were the most significant motivator for customers to participate in the Residential Heating product.



Trade partners reported that the product helped them...

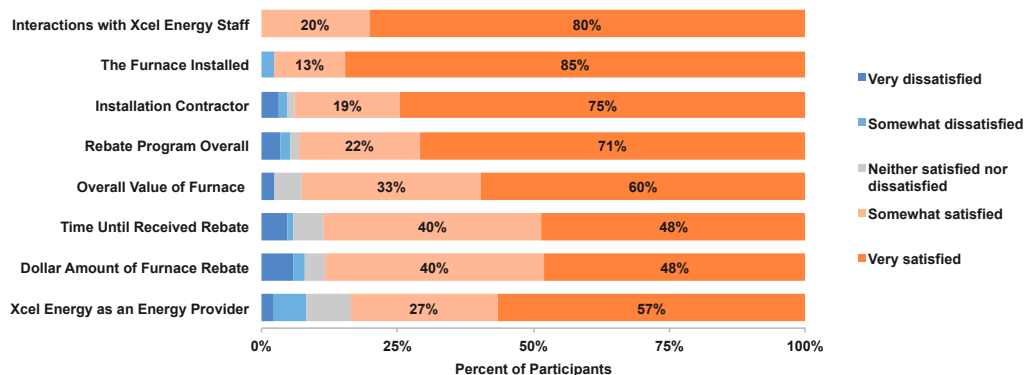
- Differentiate themselves from other contractors;
- Increase their overall number of heating projects.



Trade partners expressed high levels of satisfaction with the product: 97% of contractors were somewhat or very satisfied with the product.



Product Satisfaction by Participants



The Net Promoter score—the proportion of participants who are very or extremely likely to recommend the Residential Heating product (81.7%) minus the proportion who are not at all likely (5.2%)—is 76.5%, which suggests a high level of satisfaction with the Residential Heating product.

ES-2

Executive Summary

2017 Colorado Residential Heating Product



Conclusions & Recommendations

None of the five peer utilities interviewed by the evaluation team require NATE certification for contractors installing high-efficiency gas furnaces through their respective residential heating programs.

Many residential customers do not know what levels of energy efficiency are available in residential gas furnaces or do not necessarily understand some of the specific requirements of installing a high-efficiency gas furnace.

The evaluation team found that its estimate of the NTGR did not statistically significantly differ from the 0.77 NTGR that Xcel Energy assumed for high-efficiency gas furnaces installed through the Residential Heating product.

The trade partners that complete the greatest number of high-efficiency furnace projects through the Residential Heating product view the product as an integral piece of their business model.

Customers who installed a high-efficiency gas furnace and an ECM through the Residential Heating product had a statistically significantly lower rate of free-ridership than those customers who installed only a high-efficiency gas furnace.

The most common challenges for trade partners were the added paperwork and administrative burden associated with the product.

The most frequently cited reason for installing a new furnace was that the existing furnace was old and/or was operating poorly. Only 13% of participants said their furnace failed.

Recommendation 1: Meet internally and with external stakeholders to determine the importance of NATE certification in the success of the Residential Heating product.

Recommendation 2: Determine barriers to greater participation by installation contractors in the Residential Heating product.

Recommendation 3: In bill inserts, print, and/or other forms of advertisement make explicit the difference between standard efficiency and high-efficiency gas furnaces (defined as 95% or greater AFUE).

Recommendation 4: The evaluation team recommends that Xcel Energy increase the NTGR for high-efficiency gas furnaces installed through the Residential Heating product to 0.86 for the 2018 program year.

Recommendation 5: Conduct semi-annual or continuous evaluation of the Residential Heating product focused on market testing of customer satisfaction and the impact of rebate levels on free-ridership and the NTG ratio for high-efficiency furnaces.

Recommendation 6: Continue or even expand resources—such as more extensive online promotion and marketing material to distribute to customers—to these “primary” trade partners.

Recommendation 7: Continue or even expand the practice of promoting on the product website who the “primary” trade partners are so customers can more easily identify contractors with the most experience with the product.

Recommendation 8: Consider an alternative energy efficient measure to take the place of the ECM.

Recommendation 9: Maintain strong channel management to continue to effectively communicate and coordinate with trade partners throughout the rebate process, and ensure trade partners have the most current product information.

Consideration 10: Create an online tracking system that shows a project's stage in the rebate process.

Recommendation 11: Develop an “early-replacement” marketing campaign to promote replacing old and inefficient gas furnaces during the summer.

ES-3

1. INTRODUCTION

Xcel Energy offers a comprehensive array of demand side management (DSM) and other energy services and products to its customers. For the evaluations of its 2016 products, Xcel Energy sought to improve the customer experience, understand the products' roles in changing the marketplace, analyze the product influences on customer choices, and ensure industry-leading product performance. To accomplish this, Xcel Energy contracted with EMI Consulting and its partners: Evergreen Economics, Apex Analytics, and Ridge & Associates (hereafter 'the evaluation team'). This team undertook evaluations of eight products offered in Colorado and Minnesota in 2017, including the Residential Heating product in Colorado discussed in this report.¹ This introduction includes an overview of the product and the evaluation approach, and describes the organization of this report.

1.1 Product Overview

The Colorado Residential Heating product offers residential customers rebates to install a highly efficient (annual fuel use efficiency [AFUE] of 95% or higher) condensing forced-air gas furnace in their home and/or an electronically commutated motor (ECM) which increases the energy efficiency of a furnace. The analysis conducted by the evaluation team and presented in this report covers only the high-efficiency condensing forced-air gas furnace available through the product. In 2014, the Department of Energy (DOE) adopted new energy efficiency standards for furnace motors—including ECMs—which will make ECMs “standard” equipment beginning in 2019 and eliminate the need to incentivize their installation. Initially, Xcel Energy anticipated dropping ECMs from the Residential Heating product after 2019. However, it is the evaluation team's understanding that Xcel Energy is exploring the possibility of adding to the product a higher-efficiency ECM when the currently available ECM becomes standard equipment after 2019.

Currently, the product provides rebates for qualifying equipment and maintains a list of approved contractors. Xcel Energy provides outreach via its website and collateral material, as well as through its qualified contractors (trade partners) who interact with customers during the furnace sales process. Forced air natural gas furnaces account for the majority of residential heating systems used by Xcel Energy residential customers in Colorado. Current DOE energy efficiency standards allow for non-condensing furnaces at 80% efficiency levels; however, condensing furnaces provide efficiency levels of 90% and greater, thereby saving substantial amounts of natural gas.² This matters because the only energy savings realized by the Residential Heating product through the installation of high-efficiency gas furnaces is that which is incremental to the DOE standard. Xcel Energy set the current minimum AFUE standard for furnaces rebated through the product at 95% in 2015 and expects to maintain that minimum standard in 2018. With a minimum AFUE standard of 95%,

¹ The products selected for evaluation in 2017 include Commercial Refrigeration (CO), Cooling Efficiency (CO), Data Center Efficiency (CO), Insulation and Air Sealing (CO), Residential Heating (CO), Data Center Efficiency (MN), Heating Efficiency (MN), and Insulation Rebate (MN). The evaluation team prepared a separate report for each of these evaluations.

² The Department of Energy, Buildings Technologies Office, sets minimum energy efficiency standards for approximately 60 categories of appliances and equipment used in homes and elsewhere.

installation of a high-efficiency gas furnace through the Residential Heating product achieves a minimum savings in natural gas usage of 15 percentage points, relative to the DOE standard (95% - 80% = 15 percentage points).

The evaluation team conducted a survey of customers who installed a high-efficiency natural gas furnace through the Residential Heating product during 2016 (3,424 customers) and the first quarter of 2017 (917 customers). For the 2016 product year, Xcel Energy reported that it budgeted \$725,665 to achieve 35,935 dekatherms (dth) in natural gas savings through the Residential Heating product.³ Total actual expenditures were \$998,609 and actual savings were 38,846 dth (based on a deemed savings calculation approach), which represents 9.4% of Xcel Energy's natural gas savings from its residential portfolio in 2016. On average, each participant saved 11.3 dth, and Xcel Energy reported a modified total resource cost (MTRC) ratio of 1.35.⁴

Table 1-1. Xcel Energy Residential Heating Product Natural Gas Participation, 2016

Product Year	Natural Gas Participants	Budget	Actual Expenditures	Projected Savings (dth)	Actual Savings (dth)
2016	3,424	\$725,665	\$998,609	35,935	38,846

1.2 Evaluation Overview

The evaluation team designed a comprehensive evaluation of the Residential Heating product to provide information on four key research topics:

1. Xcel Energy's influence on the residential customers' decision to install a high-efficiency gas furnace;
2. Information sources that residential customers rely on when making decisions on heating equipment;
3. Customer engagement and satisfaction with Xcel Energy's Residential Heating product; and
4. Efficacy of contractors' efforts to provide residential customers with information and options on high-efficiency furnaces.

³ *Demand-Side Management Annual Status Report*: Electric and Natural Gas Public Service Company of Colorado, March 31 2017 / Proceeding No. 14A-1057EG.

⁴ *ibid*

Table 1-2. Residential Heating Product Evaluation Framework

Evaluation objectives	Estimate net-to-gross ratio	Identify decision factors	Assess awareness and satisfaction	Identify market targeting needs and opportunities	Benchmark performance
Research topics	Product influence on individual customers Product influence on market in the aggregate	Free-ridership Participant spillover Motivations of participants Barriers to participation Potential influence of different incentives	Customer awareness and satisfaction Trade partner awareness and satisfaction	Firmographics of participating customers compared to the eligible market	Savings estimates and estimation methods Net-to-gross ratios Cost of achieved savings Total Resource Test values Program operations and methods used to engage customers and partners
Data sources	Participant customer surveys Participant trade partner interviews Historical data records for the Residential Heating Product Interviews of peer utility program managers	Participant customer surveys Non-participant customer surveys Trade partner interviews	Xcel Energy staff interviews Participant customer surveys Non-participant customer surveys Trade partner interviews	Xcel Energy staff interviews Historical data records for the Residential Heating product	Xcel Energy staff interviews Interviews of peer utility program managers

1.3 Report Organization

The following chapters organize the evaluation findings into two components: impact and process evaluation results. As illustrated in Table 1-2, the data collection activities may have contributed to multiple evaluation objectives. Further detail on the evaluation approach is presented in the following chapters. Chapter 2 reviews the approach and results of the impact evaluation and the attribution of product impacts using a customized net-to-gross ratio (NTGR) analysis. Chapter 3 discusses the process evaluation components, which address customer and trade partner awareness, satisfaction, and motivations. Conclusions and recommendations are presented in Chapter 4. Detailed, descriptive methodology information, evaluation plans, and survey instruments can be accessed in the appendices of the report.

2. IMPACT FINDINGS

A central component of this evaluation was the estimation of the net-to-gross ratio (NTGR) for high-efficiency gas furnaces installed through the Colorado Residential Heating product. For DSM programs, the NTGR is a metric that estimates the influence of the program on the target market. It is used to adjust reported gross energy savings to account for energy efficiency that would occur in absence of a program, and it is also used as a benchmarking indicator of program effectiveness. NTGR results can indicate opportunities for Xcel Energy to adjust the design and implementation of its products to increase the cost-effectiveness of individual products and the entire portfolio. The NTGR includes several factors that create differences between gross and net savings, such as free-ridership and spillover. The evaluation team developed the NTGR based on data provided by customers and trade partners. To assess the plausibility of this NTGR, the evaluation team then compared it to the NTGRs of similar programs sponsored by other peer utilities. Note that while an NTGR of 1.0 is often seen as desirable, it may not be appropriate for all program designs depending on a variety of factors (including the maturity of the program and the technologies it promotes, program intervention strategies, and cross-program coordination strategies). The evaluation team has taken care to present our NTGR results with this context in mind.

The higher the NTGR, the closer net savings is to gross savings and the greater the impact of the product in influencing customers to save energy. NTGR is an important measure of program effectiveness and, therefore, is a key metric to product administrators.

As described above, because ECMs currently available through the product will no longer be in the product after 2019, the NTGR analysis for the Colorado Residential Heating product was conducted only for high-efficiency gas furnaces.

This chapter presents:

- **Key Findings** – The Key Findings section presents the recommended NTGR based on the evaluation team’s synthesis of findings from market actors and peer utilities.
- **Approach** – The Approach section presents an overview of the evaluation team’s methods of calculating the recommended NTGR.
- **Net-to-gross ratio inputs** – This section presents qualitative and quantitative data that support the NTGR calculations.

2.1 Key Findings: Net-to-Gross Ratio

Based on analysis of data from 2016 for the Residential Heating product and data collected from participants and trade allies, the evaluation team recommends increasing the NTGR for high-efficiency gas furnaces to 0.86 in 2018. As described in detail below, the evaluation team estimated free-ridership and spillover based on customer responses to questions regarding the influence that Xcel Energy—through encouragement, rebates, and recommendations from trade partners—had on their decision to participate in the Residential Heating product. The evaluation team found that its estimate of the NTGR did not statistically significantly differ from the 0.77 NTGR that Xcel Energy assumed for high-efficiency gas furnaces installed through the Residential Heating product.

In addition, starting in July 2017, Xcel Energy increased the rebate for installing a high-efficiency gas furnace to \$300 (up from \$120), which the evaluation team believes will lead to greater participation and a lower rate of free-ridership. Analysis of the responses from 2016 product participants showed that those that received a rebate from installing a high-efficiency gas furnace and an electronically commutated motor (ECM) (total rebate of \$220) reported a statistically significantly lower rate of free-ridership than participants that only installed a high-efficiency gas furnace (total rebate of \$120). The evaluation team believes the lower rate of free-ridership for those that had an ECM installed with the high-efficiency gas furnace is most likely due to the larger rebate received for the entire heating replacement project relative to participants that only installed a high-efficiency gas furnace.

2.2 Approach

The evaluation team developed the NTGR for the high-efficiency gas furnace installed through the Colorado Residential Heating product using a self-report approach (SRA) that relied on survey results from participating customers in combination with findings from the interviews with trade partners. The methodological approach was based on the Residential and Low Income Sector Protocols in the *Illinois Statewide Technical Reference Manual for Energy Efficiency Version 6.0* (in *Attachment A: Illinois Statewide Net-to-Gross Methodologies*). The evaluation team customized this approach to better match the questions and algorithms to the Colorado Residential Heating product, and supplemented the approach with additional qualitative and quantitative data characterizing the customer decision process.

The data inputs to the NTGR analysis included:⁵

- Participant surveys – focused on project-level effects;
- Trade partner interviews – focused on overall market effects (project-level effects if relevant); and
- Known product changes in upcoming years – implications of any known future changes in product design.

The evaluation team used self-reported data from participating customers to develop an initial NTGR. Data from the additional sources listed above were then used in constructing a logical narrative of product attribution and in finalizing the NTGR for the product. It is important to note that this estimate is subject to multiple sources of uncertainty, including sampling error and measurement error due to problems of respondent recall, the challenge of answering hypothetical questions about actions they might have taken in the absence of the product, and the assumption that a 0-10 influence score is linear and accurately reflects the impact of the product on the customer's decision. The evaluation team has taken multiple steps to mitigate this uncertainty by adhering to best practices in the design of representative samples, the use of the self-report approach in estimating NTGRs, the use of effective strategies to minimize non-response, and the testing of NTGR questions to ensure construct validity.

⁵ Additional descriptive detail on these research activities appears in Chapter 3 and in the appendices.

Free-ridership

Free-ridership is a measure of the amount of a product's claimed savings that would have occurred in the absence of the product. Free-ridership is assessed on a scale from 0 to 1, where 1 indicates that the product had 100% free-ridership and all product savings would have occurred without any of the product's rebates or assistance.

To determine free-ridership, the evaluation team started with the Residential and Low-Income Sector Protocol from the Illinois TRM and developed specific questions to assess four free-ridership components:

1. A Product Components score, based on the participant's perception of the importance of various product components in their decision to install a high-efficiency gas furnace;
2. A Product Influence score, based on the participant's perception of the product's overall influence on their decision to install a high-efficiency gas furnace;
3. A No-Product score, based on the participant's response to the counterfactual question "what furnace, if any, would you have installed if the Residential Heating product did not exist?"; and
4. A Timing Adjustment score, based on the participant's response to the counterfactual question "if the Residential Heating product did not exist, when would you have installed the new furnace?"

The first two scores assess the influence of the components of the product individually and collectively on a scale of 0 to 10. Free-ridership is computed as one minus the average of the two scores. The third and fourth scores also measure product attribution by asking participants about the energy efficiency of the furnace they would have installed if the Residential Heating product did not exist and when they would have installed it. The responses to these two "counterfactual" questions are used to develop a second estimate of free-ridership. Using information gathered from the trade partner surveys, the evaluation team weighted these two alternative free-ridership scores to create a final free-ridership score.

Detailed description of the development of the NTGR score is presented in Chapter 2, Section 3.

Spillover

Spillover is energy savings that occur when participants of an energy efficiency product are motivated by their participation in the product to install other energy efficiency measures. Such savings are not directly captured in the product's claimed energy savings.

To capture participant spillover, the evaluation team asked participants for information about any additional energy efficient equipment installed outside of the product (for which they did not receive a rebate). The surveys also probed for information on the importance of the Residential Heating product in participant installation decisions and the likelihood that the measures would have been installed if they had not participated in the product. The evaluation team computed savings estimates for all identified spillover equipment and calculated the product's spillover ratio by dividing the total spillover savings by the product's total energy savings.

Determination of Net-to-Gross Ratio

The evaluation team calculated the product's initial net-to-gross ratio using the following formula:

$$\text{Product NTGR} = 1 - (\text{Free-ridership Ratio}) + (\text{Participant Spillover Ratio})$$

Finally, the evaluation team utilized all the information collected about the product—through customer interviews, trade partner interviews, product benchmarking, and known product changes—to construct a logical, internally consistent, and coherent narrative of product attribution that attempted to identify all possible pathways of Xcel Energy influence. Based on these results, a final NTGR value that is consistent with this narrative was recommended. Net-to-Gross Ratio Inputs and Score Development

As described in the Approach section, the recommended NTGR is based on three primary data inputs: free-ridership calculated from the participant survey, spillover calculated from the participant survey, and information on market effects gathered from trade partners. This section explores each of these results in more detail, including qualitative data that support the results.

Customer-reported Free-ridership

One of the goals of the evaluation was to estimate the degree of free-ridership in the Colorado Residential Heating product. To accomplish this, we asked participants how influential different aspects of the product were in their decision to participate (Product Influence), what they would have done if the product did not exist (Counterfactual), and questions related to the timing of when they first considered replacing their furnace to the point when they decided to participate in the Residential Heating product (Customer Journey).

Free-ridership Based on Responses to Product Influence Questions

The first step in developing the NTGR for the high-efficiency gas furnaces was to analyze the data collected from four questions that directly asked about product influence. Those questions, shown in Table 2-1, asked respondents to state, on a scale of 0 to 10, how influential encouragement from Xcel Energy, rebates from Xcel Energy, and recommendations from the furnace contractor were in their decision to participate in the Residential Heating product. Respondents were first asked to consider each of these items separately and then were asked to consider them together as a package. As Table 2-1 shows, the rebate from Xcel Energy and the contractor recommendations strongly influenced their decision to participate, but less than 30% of participants indicated that encouragement from Xcel Energy had a medium or strong influence on their decision to participate.

Table 2-1. Influence of the Product on Participants' Decision to Install a High-Efficiency Gas Furnace

Q	Product Influence Questions	Low Influence	Medium to High Influence	Don't Know
E2	How influential was any encouragement you saw from Xcel Energy to consider a furnace upgrade in your decision to do an upgrade?	11%	28%	62%
E3	How influential was the availability of the rebate from Xcel Energy on your decision to install the high efficiency furnace that you installed?	24%	61%	15%
E3a	How influential was the contractor recommendation on your decision to install the high efficiency furnace that you installed?	19%	79%	1%
E4	Now, please think about all of the items we have talked about together as a package. How influential was this package of customer support on your decision to install the new high efficiency furnace?	15%	84%	1%

Based on the approach described in the Illinois TRM, the evaluation team used the information collected through the four product influence questions to compute an estimate of free-ridership based on product influence. There were three steps in this process. In Step 1, the evaluation team computed each respondent's maximum score to questions E2, E3, and E3a. Since each question relates to a particular component of the Residential Heating product, the purpose of Step 1 is to identify the maximum product attribution for each respondent.

In Step 2, the evaluation team computed the average between the value computed in Step 1 and the level of attribution the respondent indicated for the three components as a package (E4). The purpose of Step 2 is to develop an estimate of product attribution that balances the stated influence of the most important component and the stated influence of the product as a whole.⁶

In Step 3, the evaluation team computed free-ridership by subtracting the average product attribution computed in Step 2 from 1.0. In summary, the three steps are as follows:

Step 1: Max(E2, E3, E3a); Average of 0.77 across respondents
Step 2: Mean(Step 1, E4); Average of 0.74 across respondents
Step 3: Free Ridership = 1.0 – Step 2 = 0.26

Free-ridership Based on Responses to Counterfactual Questions

In addition to computing free-ridership based on customer-reported product influence, the evaluation team also computed free-ridership based on each respondent answering two counterfactual questions regarding what they would have done if the Residential Heating product did not exist. First, respondents were asked if they would have installed the same furnace, a furnace of similar energy efficiency, a less energy efficient furnace, or no furnace at all. The evaluation team then asked respondents if they would have installed the furnace at about the same point, in a year or two, in three or four years, or later than four years from the time of the interview. Table 2-2 shows

⁶ The average attribution from Step 1 was 0.77, the average attribution from question E4 was 0.70, and the average attribution from Step 2 was 0.74.

the distribution of responses from participants. Nearly half (46%) of the responses indicated that they would have installed the same furnace at about the same time even if the Residential Heating product did not exist, and just over 80% responded that they would have installed the new furnace (regardless of efficiency) at about the same time.

Table 2-2. Participant Responses to Counterfactual Questions

If the Residential Heating product had not existed, what would you have done?	When would you have installed the new furnace?				Total
	About the same time	In a year or two	In three or four years	In more than four years	
Installed the same exact furnace	46%	3%	0%	0%	49%
Installed a similarly energy efficient furnace	18%	0%	0%	0%	18%
Installed a less energy efficient furnace	18%	9%	0%	0%	27%
Not installed a new furnace yet	0%	3%	2%	1%	6%
Total	82%	15%	2%	1%	100%

For each respondent, we assigned a product attribution score based on the participant's responses to the two questions (see Table 2-3). Product attribution ranged from zero for respondents who stated that they would have installed the same furnace at about the same time, up to 100% for respondents who said they would have installed a less energy-efficient furnace or no furnace at all if the Residential Heating product did not exist. Respondents who stated that they would have installed the new furnace (regardless of efficiency) in more than four years also received an attribution weight of 100%.

Table 2-3. Product Attribution Weights Assigned to Counterfactual Questions

If the Residential Heating product had not existed, what would you have done?	When would you have installed the new furnace?			
	About the same time	In a year or two	In three or four years	In more than four years
Installed the same exact furnace	0%	30%	70%	100%
Installed a similarly energy efficient furnace	30%	50%	85%	100%
Installed a less energy efficient furnace	100%	100%	100%	100%
Not installed a new furnace yet	100%	100%	100%	100%

The evaluation team found there to be a relatively low level of product attribution based on analysis of the counterfactual questions. Table 2-4 shows the product attribution scores calculated for product participants, and the sum of the individual scores (39%) represents the estimate of total product attribution, which translates into a free-ridership rate of 61%. Comparatively, based on analysis of the product influence questions, we found product attribution to be significantly greater at 74% (free-ridership of 26%). To determine how to weight the results of the two alternative approaches to calculating product attribution and free-ridership, we asked trade partners several questions about the influence that the Residential Heating product has on a customer's decision to purchase a high-efficiency furnace.

Table 2-4. Product Attribution Scores Calculated for Counterfactual Questions

If the Residential Heating product had not existed, what would you have done?	When would you have installed the new furnace?				Total
	About the same time	In a year or two	In three or four years	In more than four years	
Installed the same exact furnace	0%	1%	0%	0%	1%
Installed a similarly energy efficient furnace	5%	0%	0%	0%	5%
Installed a less energy efficient furnace	18%	9%	0%	0%	27%
Not installed a new furnace yet	0%	3%	2%	1%	6%
Total	23%	13%	2%	1%	39%

Assessment of Product Influence Based on Interviews with Trade Partners

The trade partner surveys included four questions that provide insight into the degree to which a residential customer's decision to participate in the Residential Heating product is attributable to the product. While the information provided by the trade partners is informative in its own right, the evaluation team used it to inform the weighting scheme to apply to the two estimates of free-ridership presented above. For example, if the responses from the trade partners suggest that the rebates from Xcel Energy and the recommendations from the trade partners strongly influence customers to install a higher efficiency furnace, then this would suggest the evaluation team apply a greater weight to the free-ridership estimate based on the product influence questions than to the free-ridership estimate based on the counterfactual questions.

Table 2-5 shows the four questions related to product attribution and the evaluation team's compilation of the verbatim responses from trade partners.⁷ Question D2 asked trade partners what aspects of the product they discuss with customers. The two most frequent responses were rebates (79%) and energy efficiency and/or savings (57%). The evaluation team then asked the first of two follow-up questions: What do you think motivates customers to participate in the Residential Heating product? Overwhelmingly, trade partners responded that rebates motivate customers to participate in the product (86%), while only 29% of trade partners felt that energy efficiency/savings drive participation. This result strongly suggests that the product motivates customer participation.

The second follow-up question asked, "How aware are customers of their options regarding the range of AFUE of gas furnaces available to them?" We coded the verbatim responses into a 5-point scale where 1 = unaware and 5 = high level of awareness. The estimated average response was 2.38 and the median was 2.5, suggesting customers do not have a strong sense of the levels of energy efficiency available to them when they first meet with an HVAC contractor. Of course, there was variability in the responses from the trade partners, and some trade partners noted that there are some customers who "did their homework" on the range of energy efficiencies available in residential gas furnaces.

⁷ The trade partner interview guide is included in Appendix B.2.

The fourth question related to product attribution, D5, asked trade partners how large of a factor rebates are when customers are deciding what efficiency of furnace to install. Again, we coded the verbatim responses into a 5-point scale where 1 = not important and 5 = very important. The estimated average score was 3.44 and the median score was 4.0, which strongly suggests that the rebate does influence a customer's decision to participate in the product.

Table 2-5. Trade Partner Responses On Residential Heating Product Influence

Q	Questions to Trade Partners	Responses from Trade Partners
D2	What aspects of the Residential Heating product do you discuss with customers?	22 of 28 trade partners cited rebates (79%). 16 of 28 trade partners cited energy efficiency/savings (57%).
D2.a	What do you think motivates customers to participate?	22 of 28 trade partners cited rebates (86%). 16 of 28 trade partners cited energy efficiency/savings (29%).
D2.b	How aware are customers of their options when it comes to the range of AFUE of gas furnaces available to them?	We coded the verbatim responses from contactors into a 5-point scale (1 = unaware; 5 = high level of awareness). We estimate the average awareness to be 2.38.
D5	How big of a factor are the high-efficiency gas furnace rebates when customers are deciding what efficiency of a furnace to install?	We coded the verbatim responses from contactors into a 5-point scale (1 = not important; 5 = very important). We estimate the average importance of rebates to be 3.44.

The responses by trade partners to the four questions strongly suggest that most residential customers they met with had not predetermined installation of a higher efficiency furnace and that awareness of the range in AFUE of gas furnaces was relatively low. In addition, trade partners overwhelmingly stated that rebates motivated customers to participate in the Residential Heating product. Based on the findings from these four questions, as well as our own concern about the ability of participants to accurately state what they would have done in the absence of the product, the evaluation team determined it was appropriate to apply a 70% weight to the product influence-based free-ridership scores and a 30% weight to the counterfactual-based free-ridership scores. This results in an estimated level of free-ridership of 37% for 2016.

Customer-reported Spillover

The evaluation team estimated spillover based on a comprehensive set of questions asked of product participants regarding other energy efficiency measures customers installed after participating in the Residential Heating product. If a customer did install another energy efficiency measure, the energy savings from that measure was regarded as spillover to the Residential Heating product if the following two conditions were met:

1. The customer did not receive a rebate from Xcel Energy or any other organization; and
2. The customer reported that participation in the Residential Heating product had an influence of 3 or higher on a scale of 1 to 10.

For those participants of the Residential Heating product that met these two conditions, the evaluation team computed spillover as follows:

$$\text{Spillover} = \frac{(\text{Influence score} \times \text{Number installed} \times \text{Deemed Savings})}{\text{Savings from High Efficiency Furnace}}$$

All other participants were assigned a spillover value of zero. The evaluation team then computed the average spillover across all participants for each energy efficiency measure installed after participation in the Residential Heating product. Across all measures, estimated spillover was 0.07 or 7% of total deemed savings from installation of high-efficiency gas furnaces through the Residential Heating product. Table 1-1 shows the distribution of energy savings from spillover. By far the greatest savings came from air sealing improvements (about 62% of spillover savings), followed by installation of energy efficient windows (14.8%) and energy efficient light bulbs (9.2%).

Table 2-6. Percent of Energy Savings from Spillover by Measure

Spillover Measure	Percent of Spillover Savings
Air sealing improvements	61.6%
Energy efficient windows	14.8%
Energy efficient light bulbs	9.2%
More energy efficient cooling system	5.0%
More energy efficient heating system	4.6%
Energy efficient lighting fixtures	2.9%
More energy efficient refrigerator	1.6%
More energy efficient dishwasher	0.3%

Estimated Net-To-Gross Ratio for the 2016 Product Year

Based on the estimates of free-ridership and spillover described above, the evaluation team computed the NTGR for the 2016 product year as follows:

$$NTGR = 1 - \text{Free Ridership} + \text{Spillover} = 1 - 0.37 + 0.07 = 0.70$$

It is important to note that the 0.70 NTGR is an estimate based on a relatively small sample of product participants (100 participants were surveyed and 31 indicated installing additional measures subsequent to participating in the Residential Heating product). In addition, the phenomena the evaluation team was attempting to measure—free-ridership and spillover—are not actually observable and are dependent upon the ability of the participants to understand the questions and to answer them accurately. Because of this, the evaluation team believes it is informative to include an estimate of the uncertainty associated with the estimate of the NTGR.

To do this, the evaluation team computed an approximate 90% confidence interval based on the random error associated with the estimates of free-ridership and spillover. This interval, which ranges from 0.57 to 0.83, includes Xcel Energy's current assumed value of net-to-gross for residential high efficiency gas furnaces, 0.77. Since Xcel Energy's current assumed value of the NTGR falls within this interval, the evaluation team finds no evidence to suggest it should be decreased.

Prospective Net-To-Gross Ratio for the 2018 Product Year

As the starting point for estimating the NTGR for 2018, the evaluation team used the 0.77 NTGR Xcel Energy assumed for high efficiency gas furnaces for the 2016 product year. The evaluation team believes there are reasons to suggest the NTGR should increase for 2018. First, Xcel Energy's

standard rebate for purchasing a high-efficiency gas furnace was \$120 in 2016 and increased to \$300 in July of 2017.⁸ The evaluation team believes the higher rebate offered by Xcel Energy will increase participation in the product in 2018 because the incremental cost of installing a high-efficiency gas furnace will be further reduced. While this is a reasonable assumption from the perspective of economic logic, as we discuss below, the data also support this assumption.

Both product participants and trade partners cited rebates as influencing residential customers to purchase a high-efficiency furnace. Sixty percent of participants stated that the Xcel Energy rebate led them to buy a more energy efficient furnace. When asked what motivates customers to participate in the Residential Heating product, nearly nine out of ten trade partners cited Xcel Energy rebates. Trade partners also provided insights into the importance of the size of the rebate. One trade partner stated that the \$120 rebate is not a big deal, and another stated that the greater rebate available through Xcel Energy for installing a high-efficiency air conditioner is “more appealing.” Several trade partners also stated that the higher the rebate, the greater the likelihood of a customer to choose a high efficiency furnace.

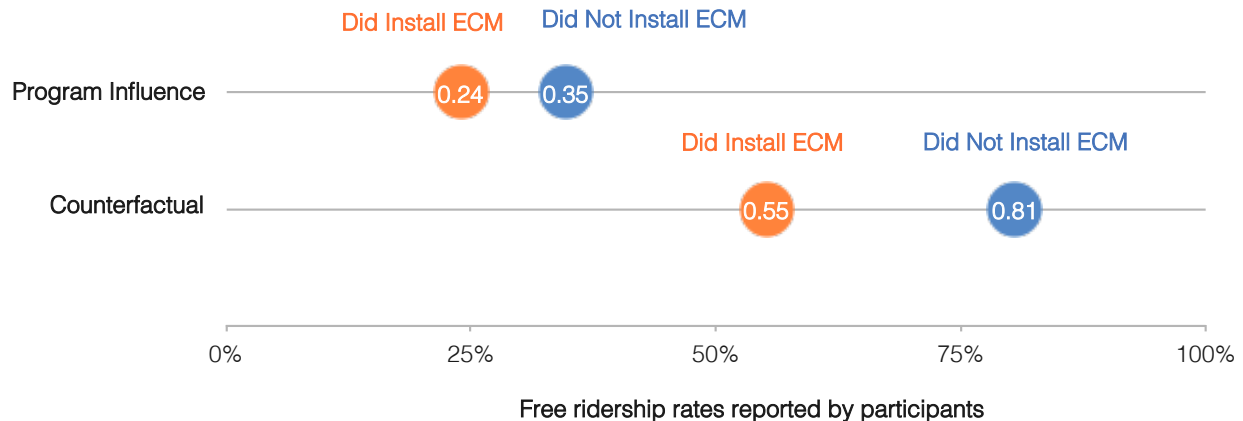
In addition to the anecdotal information provided by contractors, there is statistical evidence that shows the importance of rebates. The evaluation team analyzed the difference in self-reported free-ridership between those participants that also purchased an ECM and those that did not. The rebate from Xcel Energy for installing an ECM is \$100—only modestly lower than the standard \$120 rebate Xcel Energy offers for installation of a high-efficiency gas furnace. While, in theory, installation of an ECM constitutes an additional decision point beyond that of the high-efficiency furnace, the evaluation team speculates that most product participants that installed both a high-efficiency gas furnace and an ECM do not differentiate between the rebate they received for installing a high-efficiency gas furnace and the rebate they received for installing an ECM. Rather, they perceive the two rebates (\$120 for the furnace; \$100 for the ECM) as a total rebate of \$220 for completing the overall project.

If this is true, then our analysis of the difference in self-reported free-ridership between those that installed a high-efficiency gas furnace with an ECM and those that installed just a high-efficiency gas furnace is in effect a comparison between participants that received a \$220 rebate and participants that received a \$120 rebate. Figure 2-1 shows the average self-reported rate of free-ridership between those that installed an ECM and those that did not. Based on responses to the product influence questions, the evaluation team estimates that those participants that installed an ECM with their high-efficiency gas furnace had a free-ridership rate of 24%. Comparatively, those product participants that did not install an ECM with their high-efficiency gas furnace had a free-ridership rate of 35%. The difference in free-ridership between these two groups—11 percentage points—is statistically significant.⁹

⁸ Xcel Energy offered a \$180 bonus (total of \$300 for rebate and bonus) for high-efficiency gas furnace installations in which the application received date and the contractor invoice date both occurred between June 15 and November 30, 2016. Xcel Energy is also currently offering a \$450 bonus (total of \$750 for rebate and bonus) for high-efficiency gas furnace installations in which the application received date and the contractor invoice date occur between October 15, 2017 and March 31, 2018.

⁹ The difference is statistically significant at the 0.05 level of significance or, stated differently, the evaluation team is 95% confident that the rate of free-ridership differs between these two groups.

Figure 2-1. Differences in Free-ridership for ECM Furnace Installations



The evaluation team found a similar difference in the free-ridership rate estimated from the responses to the counterfactual questions.¹⁰ The free-ridership rate estimated for those that installed an ECM with their high-efficiency gas furnace is 55%. Comparatively, the estimated free-ridership rate for participants that did not install an ECM is significantly higher at 81%.¹¹ While the magnitude of the free-ridership rates estimated from the responses to the counterfactual questions are much higher than the rates estimated from the product influence questions, the percent difference in the estimated rate of free-ridership for those that installed an ECM and those that did not is nearly the same (about 30% lower for those that installed an ECM with their high-efficiency furnace).

Based on the difference in the rate of free-ridership for those that installed an ECM with their high-efficiency gas furnace and those that did not, coupled with the evaluation team's assumption that the difference is due (or at least primarily due) to the difference in the rebate received by the product participant, we recommend the assumed NTG ratio for the 2018 product year be increased from the 2016 rate of 0.77 to 0.86. The justification for the increase is based on the following findings from the evaluation:

- The evaluation team found no evidence to suggest the NTG rate for the 2016 product year was lower than the 0.77 rate assumed by Xcel Energy.
- The evaluation team found that customers who received a larger rebate in 2016 (due to installing an ECM along with a high-efficiency furnace) had a statistically significantly lower rate of free-ridership.
- In July 2017, Xcel Energy increased the rebate for installing a high-efficiency gas furnace from \$120 (without bonus) to \$300 (without bonus). It is the evaluation team's understanding that this higher rebate will continue in 2018.

¹⁰ In order to be consistent with the approach outlined in the Illinois TRM, the evaluation team included the questions in the participant survey necessary to estimate free-ridership based on counterfactual questions. The evaluation team believes the estimate of free-ridership based on participant responses to the two counterfactual questions is significantly higher than the actual rate of free-ridership.

¹¹ The difference in free-ridership between these two groups based on the counterfactual questions is statistically significant at the 0.05 level of significance.

The evaluation team believes it is reasonable to assume that the current NTG rate of 0.77 is based on a free-ridership rate of 0.30 and a spillover rate of 0.07 ($1 - 0.30 + 0.07 = 0.77$) and that there is no reason to assume the rate of spillover will change in 2018. Participants that installed an ECM (and got the higher rebate) had a 30% lower rate of free-ridership than those that did not have an ECM installed with their new high-efficiency gas furnace. Applying this percent difference (reduction) to our assumption of a 30% rate of free-ridership for 2016 results in an estimated rate of free-ridership for 2018 of 0.21 (21% free-ridership). Finally, the estimated NTG ratio for 2018 is:

$$2018 \text{ NTG Ratio} = 1 - 0.21 + 0.07 = 0.86$$

3. PROCESS EVALUATION

The evaluation team conducted a process evaluation to understand the sources of information residential customers rely on and Xcel Energy's influence on a customer's decision to install a high-efficiency gas furnace. The evaluation team analyzed customer engagement and satisfaction with Xcel Energy's Residential Heating product and the efficacy of trade partners' efforts to provide residential customers with information on and options for high-efficiency furnaces. Table 3-1 shows which objectives of the process evaluation are discussed in each section of Chapter 3.

Table 3-1. Process Evaluation Objectives by Report Sections

Report Section	Section Title	Evaluation Objective
3.3	Household and Home Characteristics of Participants	<ul style="list-style-type: none"> - To find out who is participating in the Residential Heating product - To determine the characteristics of participants' homes
3.4	Customer Journey	<ul style="list-style-type: none"> - To find out why customers replace their furnace - To find out what sources participants rely on when choosing a contractor - To find out if customers are aware that their contractor is an Xcel Energy trade partner and do they care
3.5	Customer Satisfaction	<ul style="list-style-type: none"> - To find out how satisfied participants are with each component of the Residential Heating product - To find out how likely participants are to recommend the product to family, friends, or colleagues
3.6	Trade Partner Experience	<ul style="list-style-type: none"> - To determine the firm-specific characteristics of the trade allies - To find out what proportion of their furnace installations were through the Residential Heating product - To find out why contractors participate
3.7	Trade Partner Satisfaction, Successes, and Challenges	<ul style="list-style-type: none"> - How satisfied are trade partners with each component of the Residential Heating product - How has their relationship with Xcel Energy benefited their business - What aspects of the product do they find to be challenging
3.8	Peer Utility Program Comparison	<ul style="list-style-type: none"> - What are the key performance indicators - How do the utilities market the program
3.9	Insights from Non-Participant Residential Customers	<ul style="list-style-type: none"> - What are their attitudes toward energy efficiency - What information sources do they rely on to learn about saving energy

To accomplish these objectives, the evaluation team surveyed product participants and interviewed trade partners and managers of similar programs from other utilities. This chapter presents key findings from the process evaluation and specific findings relating to each evaluation objective.

3.1 Key Findings

The process evaluation was a comprehensive examination of the Residential Heating product in which the evaluation team conducted surveys of participants and non-participants, and interviewed Xcel energy staff, trade allies, and representatives of peer utilities. The key findings of the evaluation team's analysis of all of the information and data collected through the evaluation are as follows:

Participants of the Residential Heating product reported a high level of satisfaction with all aspects of the product (e.g. interaction with Xcel Energy staff, installation contractor, dollar value of rebate). Nearly half of participants replaced their existing furnace because it was old and/or they were experiencing problems with the operation of the furnace. Only 13% of participant said they replaced their furnace because it failed. The most frequently cited reason for choosing a furnace contractor was an existing relationship with the contractor (35%), followed by recommendation from family, friend, or colleague (22%). Only 5% of participants said they chose their contractor based on a recommendation from Xcel Energy. Only one-in-four participants said they were aware that their contractor was an Xcel Energy trade partner, but of those that were aware, most said that the relationship was either a reason for choosing the contractor or a bonus in their decision.

Like participants, nearly all trade partners reported being somewhat or very satisfied with the Residential Heating product. Trade allies were also very satisfied with furnaces rebated through the product. Satisfaction was lower with respect to the levels of the rebates paid by Xcel Energy. Only 32% of trade partners said they were very satisfied and 43% said they were somewhat satisfied. During 2016 and from January through June of 2017, Xcel Energy paid a base rebate of \$120 to participants that installed a high-efficiency gas furnace, though there were also periods during these two years in which Xcel Energy paid an additional bonus rebate of \$180 or more. Many contractors reported that their status as a trade partner to Xcel Energy allowed them to differentiate themselves from other installation contractors and that this led to an increased number of furnace installations. Still, the relationship is not without challenges. The most commonly reported challenge was the additional paperwork required by Xcel Energy.

3.2 Approach

To accomplish the evaluation objectives for the Colorado Residential Heating product, the evaluation team completed a suite of intersecting and complementary research activities in 2017, including interviews with Xcel Energy staff, trade partners, and managers of similar utility-operated energy efficiency programs, and surveys of customers who had participated in the Residential Heating product and customers who had not. Detailed information on the sampling approach used for the research can be accessed in Appendix A.2.

The following discussion highlights the research topic coverage contributed by each research activity: the staff interviews, historic data analysis, participant surveys, non-participant surveys, trade partner interviews, and benchmarking interviews.

Staff Interviews

The evaluation team conducted in-depth interviews of Xcel Energy personnel involved with the Colorado Residential Heating product. The staff interviews covered the following topics:

- The equipment currently provided through the product and a summary of changes to the product over the past few years;
- The degree to which product resources are sufficient to conduct product activities with fidelity to the implementation plan;
- Perception of staff on implementation successes and challenges; and
- Aspects of the product that may suggest the need for possible revisions to the evaluation plan.

Appendix B.5 contains the interview guide used for the staff interviews.

Participant Surveys

The evaluation team conducted telephone surveys with both participants and non-participants using customer records from Xcel Energy for the sample frames. The evaluation plan developed for this project can be found in Appendix A.1. The sample size for the participant survey was sufficient to provide a 90% level of confidence and relative precision of approximately 10%.¹²

For the purposes of this evaluation, a participating customer was defined as any customer who installed and received an Xcel Energy rebate for a high efficiency gas furnace in 2016 or the first quarter of 2017. Participants were stratified based on their CAMEO group designation.¹³

The participant survey was designed to address the following process-related issues:

- Characteristics of participants
- Participant experience and satisfaction
- Customer journey: reason for replacing furnace, timing of replacement, reason for choosing contractor
- Awareness of and reason for participating in Residential Heating product
- Likelihood of recommending the product

The participant survey is contained in Appendix B.1.

¹² For the non-participant survey, the sample was segmented into 60 sample points for residential customers who had not participated in an energy efficiency program during the past 10 years (non-participants); 60 sample points for residential customers who received an energy audit by Xcel Energy in 2016, but did not participate in a program (near-participants); and 20 sample points to residential customers who participated in the Residential Heating product, but installed an ECM and not a high efficiency gas furnace (ECM-only). The level of confidence and precision for the non-participants and near-participants is approximately 85/15. For the ECM-only segment, the sample size is too small to allow for meaningful statistical testing.

¹³ CAMEO is a consumer segmentation scheme that characterizes neighborhoods based on the predominant demographic, lifestyle and socio-economic characteristics of the neighborhood. See the CAMEO USA Handbook for detailed information on the CAMEO residential segments. Xcel Energy assigns each residential customer to a CAMEO residential segment based on the customer's address and can then use this information to better understand their customers and to communicate more effectively with them.

Non-participant Surveys

Non-participant surveys were also used to collect process evaluation data. For the purposes of this evaluation, non-participants were defined as any residential gas customers (gas-only or combination gas/electric) who had not participated in the Residential Heating product since 2007 and had not received an energy efficiency audit; near-participants were defined as residential gas customers who had not participated in the Residential Heating product since 2007, but had received an energy efficiency audit in 2016.

The non-participant survey addressed the following topics:

- Characteristics of eligible customers;
- Customer awareness and best communication channels;
- Proportion of customers who installed or considered installing qualifying heating equipment but did not participate in the product; and
- Barriers, and actions Xcel Energy could take that might increase participation.

Appendix B.4 contains the questionnaire used for the non-participating customer research.

Trade Partner Interviews

The evaluation team conducted in-depth interviews with 28 participating trade partners, i.e., HVAC contractors. Recruitment efforts included a combination of telephone and email outreach, with up to four attempts made per trade partner. Participating trade partners were defined as HVAC contractors with high or recent participation in the product. Specifically, the evaluation team characterized the 199 sampled trade partners into four categories based on participation level. Table 3-2 below outlines the sample size, interview targets, and the actual number of completed interviews for each participation tier.

Table 3-2. Trade Partner Interviews

Number of High-Efficiency Furnace Installations	Count of Trade Partners	Target Completes	Actual Completes
Tier 1: more than 50	19	7	8
Tier 2: 21-50	27	7	6
Tier 3: 6-20	50	7	7
Tier 4: 5 or fewer	103	7	7
Total	199	28	28

Data collected in the trade partner research focused on the following research questions:

- What is the role of trade partners in the Residential Heating product?
- What successes and challenges have trade partners faced in implementing projects?
- How can Xcel Energy best support trade partners to implement high-efficiency gas furnace projects?

- What is the trade partner's perception of customer awareness, engagement, and satisfaction with the product?
- How is the application and rebate process working and are there any suggestions for improvement?
- How are product-qualifying projects typically initiated (by the customer or by the contractor)?
- How have product changes affected participation and satisfaction among customers?
- How can Xcel Energy help customers appreciate and demand quality installation via the product vs. non-product furnace installations?
- Has participating in the product changed the trade partner's approach to non-product projects?

Appendix B.2 contains the interview guide used for the trade partner research.

Benchmarking Interviews

The evaluation team examined five peer utilities to benchmark the Xcel Energy Residential Heating product against others in the industry, assessing product design and delivery and key performance indicators (e.g., participation levels, free-ridership). Each of the selected peer utilities is located in the Mountain West and, though the utilities varied greatly with respect to the number of customers served, each utility operates a residential heating rebate program that, like Xcel Energy's Residential Heating product, includes high efficiency condensing gas furnaces. The objective of the benchmarking was to understand the design, delivery, and processes of the residential heating rebate programs operated by the peer utilities and identify potential opportunities to improve the Xcel Energy Residential Heating product. The evaluation team conducted in-depth interviews with program managers to address the following topics:

- Savings impacts estimation methodologies, by measure type
- Participation levels; notable changes over the last year
- 2016 savings goals and results by product and for the product portfolio
- NTG methodology
- NTG ratio values
- Cost per thousand cubic feet (Mcf) saved and Total Resource Cost (TRC) values
- Influence of trade partners on customer participation

To provide important contextual information, additional descriptive program information was collected through online research, including eligible measures and customers, product implementation strategies and engagement practices, participation levels, and natural gas costs. Appendix B.3 contains the interview guide used for the benchmarking interviews.

Results of the evaluation team's analysis of data and information gathered through the suite of research activities are presented below.

3.3 Household and Home Characteristics of Participants

Figure 3-1 shows the distribution of participants by household size, the most common of which is a two-person household (37%). Relatively few participants were one-person households (16%), and only 6% of participants were customers with a household of five or more persons.

Our assumption was that product participants in one-person and two-person households were, on average, older than the participants in the larger households. The participant survey data support this assumption. The median age of participants in a one-person household was 68. For two-person households, the median age of the head-of-household was 69. Comparatively, the average age of the head-of-household for all other participants (those with three or more persons) was 47.

Figure 3-1. Distribution of Participants by Household Size

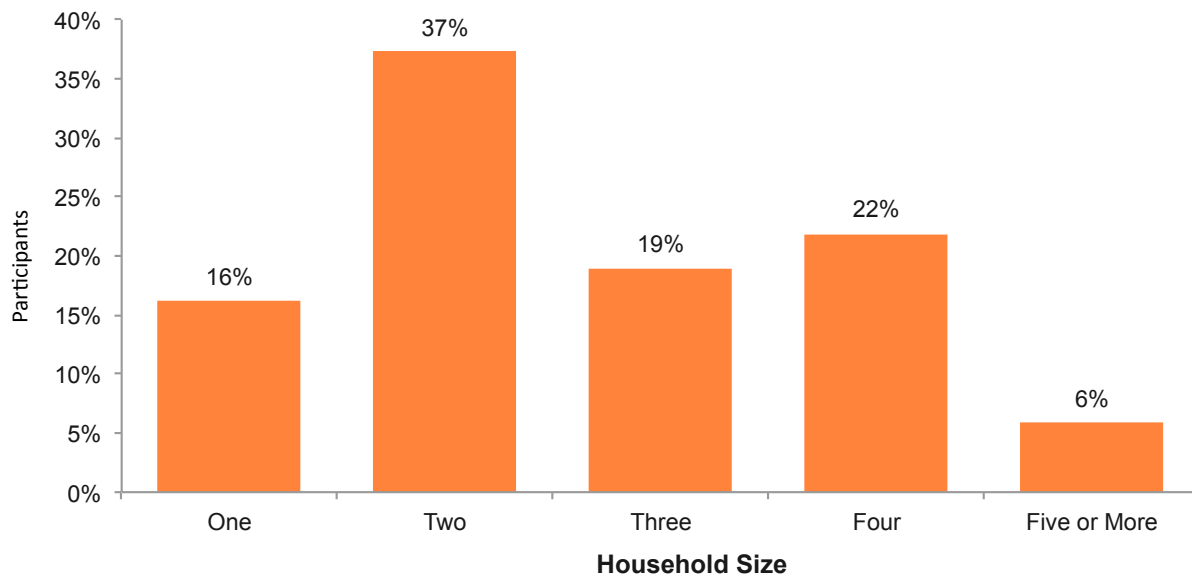
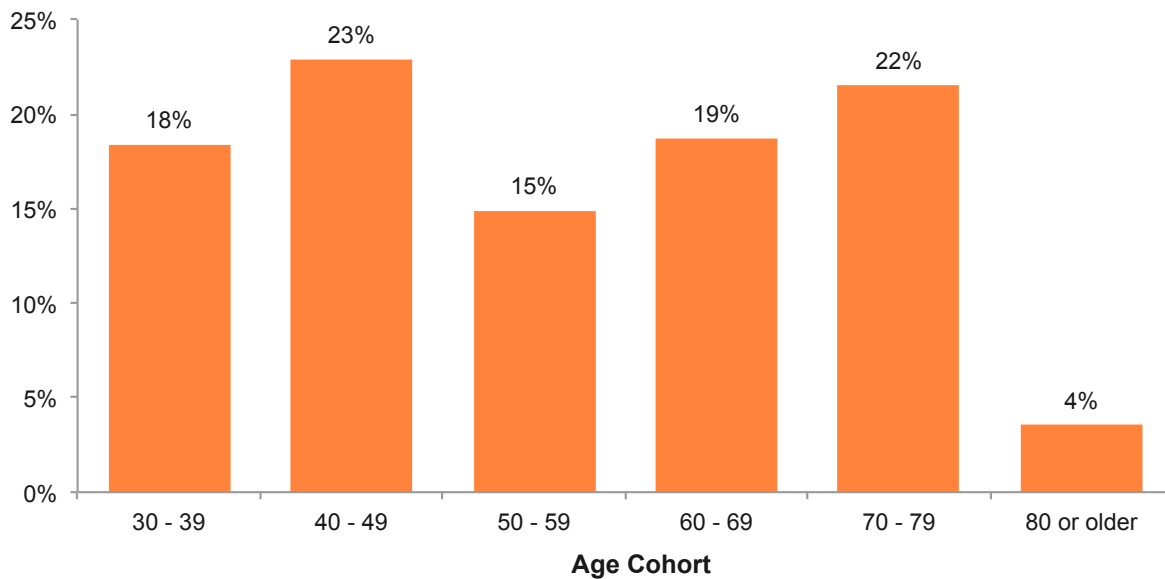


Figure 3-2 shows the distribution of participants by age of the head-of-household. Except for the 80 and older age group, the distribution is relatively uniform. Not surprisingly, there were no participants under the age of 30. Home ownership is low for this age cohort, and many of the houses owned by this cohort would be considered “starter homes,” rendering them unlikely candidates for a high-efficiency replacement furnace. Overall, the average age of a product participant is 56 and the median age is 57.

Figure 3-2. Distribution of Households by Age of Head-of-Household

Most participants of the Residential Heating product are relatively affluent. Nearly half of participants reported their household income to be greater than \$120,000. The distribution of participants with household income below \$120,000 was relatively uniform at between 12% and 15%. For participants with household incomes below \$60,000, the average and median age was 70 and 72, respectively. Thus, while these are low-to-middle income households, many are likely retirees who own their home and may also have sufficient financial assets for investing in home equipment upgrades.

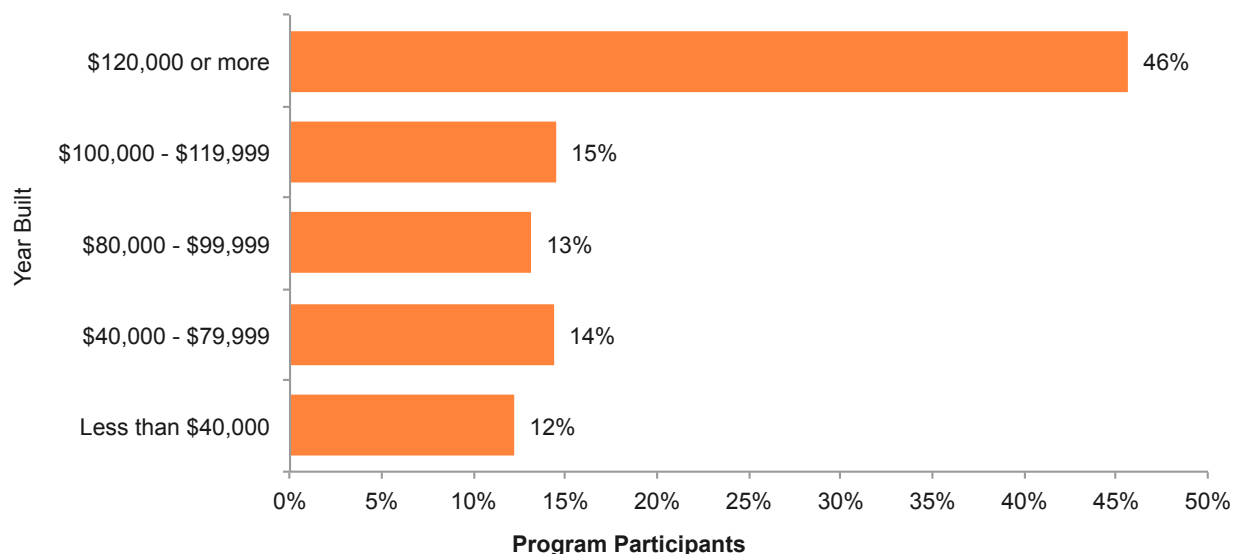
Figure 3-3. Distribution of Participants by Household Income

Figure 3-4 shows the distribution of participants with respect to home size. Near half of homes were between 2,000 and 3,000 square feet and another 30% of homes were smaller. Relatively few homes

(7%) were larger than 4,000 square feet. These larger homes tended to be newer (built after 1990), and the residents of most of these homes had incomes above \$120,000.

Figure 3-4. Distribution of Participants by Size of Home

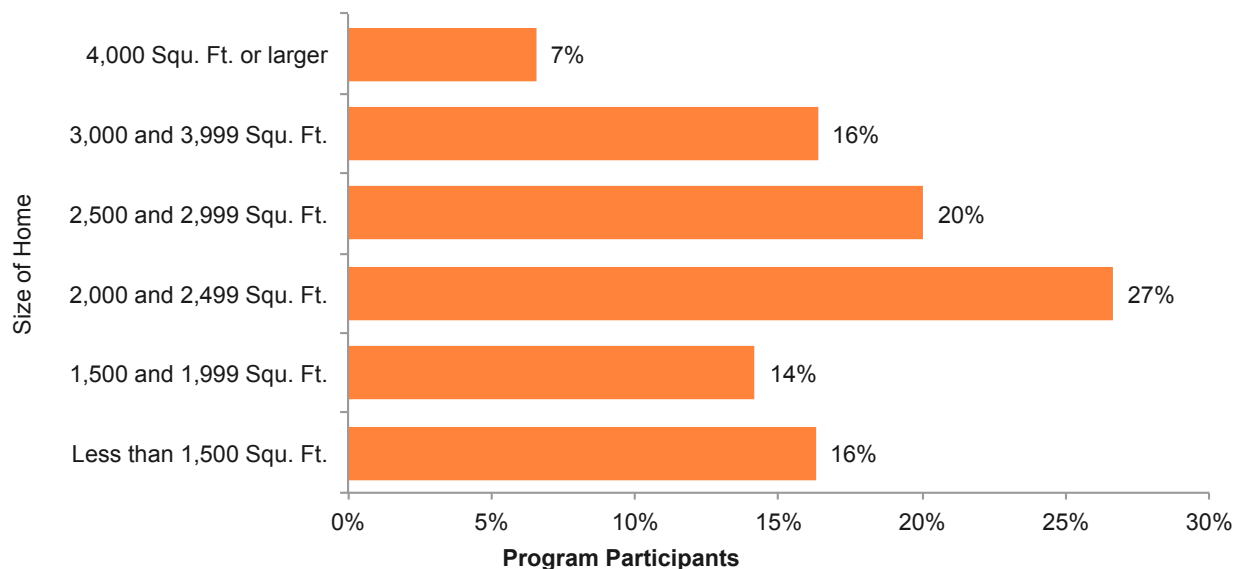
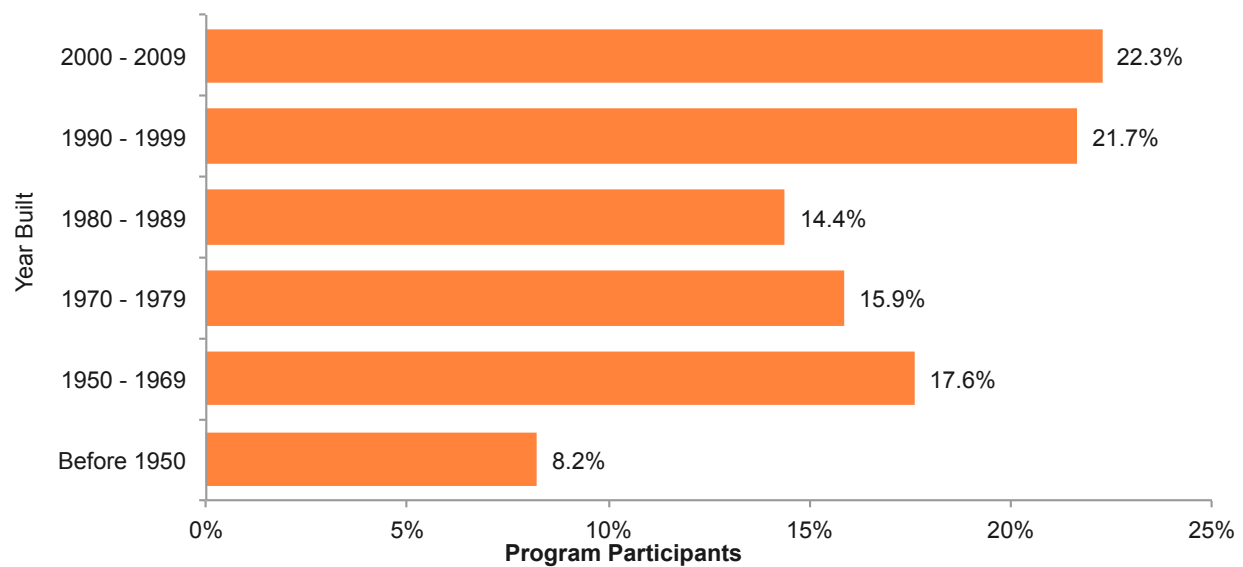


Figure 3-5 shows the distribution of participants by age of home. Since the focus of the Residential Heating product is furnace replacement, there were no participants in homes built in the current decade. However, 44% of participants lived in homes built between 1990 and 2009. This was a period of rapid population growth in Colorado, increasing by 31% between 1990 and 2000 and by 17% between 2000 and 2010, and the evaluation team expects a large proportion of participants in 2018 and beyond will live in homes built during this two-decade period.¹⁴ Relatively few participants (8%) lived in homes built before 1950.

¹⁴ Colorado: 2010, Population and Housing Unit Counts, U.S. Census, <https://www2.census.gov/library/publications/cen2010/cph-2-7.pdf>

Figure 3-5. Distribution of Participants by Age of Home

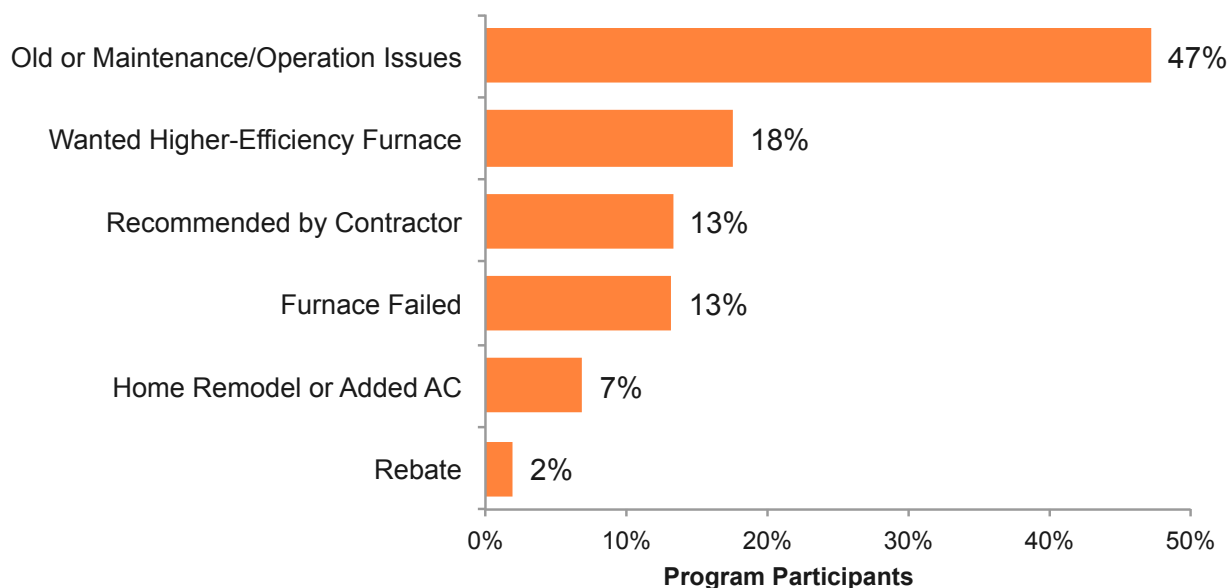
3.4 Customer Journey

The following section provides a detailed description of the typical “customer journey” for residential customers participating in the Residential Heating product. The purpose of this chapter section is to provide information to Xcel Energy on why customers installed a new gas furnace, how long they waited before meeting with a contractor, what sources they relied on in choosing a contractor, whether they were aware that their contractor was an Xcel Energy trade partner, and how they heard about the Residential Heating product.

We found that, while there is not one path to describe all of the customer journeys, some paths are more popular than others. For instance, far more customers said they replaced their furnace because it was an old or poorly performing furnace than cited furnace failure. And once they decided to replace their furnace, most customers did so within six months. Customers relied on many sources of information in choosing which contractor to replace their furnace, but an existing relationship with the contractor and a recommendation from family, friend, or colleague were the most frequently cited reasons.

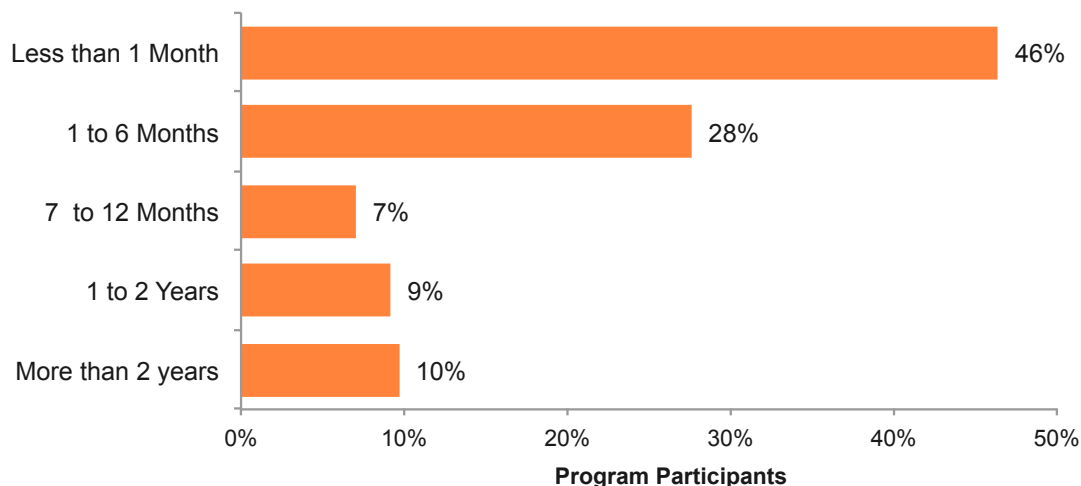
While there are a number of reasons why participants decided to replace their existing furnace, by far the most often-cited reason was that the furnace was old, it required on-going and expensive maintenance, or it was operating poorly (see Figure 3-6). The second most often-cited reason for replacing an existing furnace (at 18%) was the desire to install a higher efficiency furnace. There was not sufficient opportunity to probe these customers on why they wanted a higher efficiency furnace, so we do not know if these customers were acting upon information they received from Xcel Energy or one of its trade partners. Furnace failure was cited by only 13% of respondents. While furnace failure may be one of the most common reasons for replacing a furnace, customers are either not choosing a high-efficiency option or are doing so outside of Xcel Energy’s product.

Figure 3-6. Reasons for Replacing Existing Furnace



Most customers began talking with contractors soon after deciding to replace their existing furnace (see Figure 3-7). Nearly half of participants began talking with contractors within a month and another 28% did so within six months. Nevertheless, a relatively large proportion of customers (19%) waited one or more years. While we do not know the reason these customers waited so long, the fact that there is significant time between the decision to replace and the action of contacting a contractor does suggest a potential opportunity for Xcel Energy to influence some customers toward a high-efficiency furnace before they meet with a contractor.

Figure 3-7. Time Until Participants Began Talking with Contractors About a Replacement Furnace



Just over one-third of participants chose the contractor with whom they had an existing relationship (see Figure 3-8). The next most often-cited source was a friend/family/neighbor at 22% and a major retailer at 16%. Only one-in-twenty participants said they relied on Xcel Energy to choose a

contractor. While this is a low proportion of customers, only 10% of customers stated that they recalled seeing any lists of qualified heating contractors on Xcel Energy's website. Nevertheless, it is important to point out that those participants that cited an existing relationship with a contractor or any other information source still indirectly relied on Xcel Energy due to their contractor's relationship with Xcel Energy as a trade partner.

Figure 3-8. Information Sources Participants Relied On for Choosing a Contractor

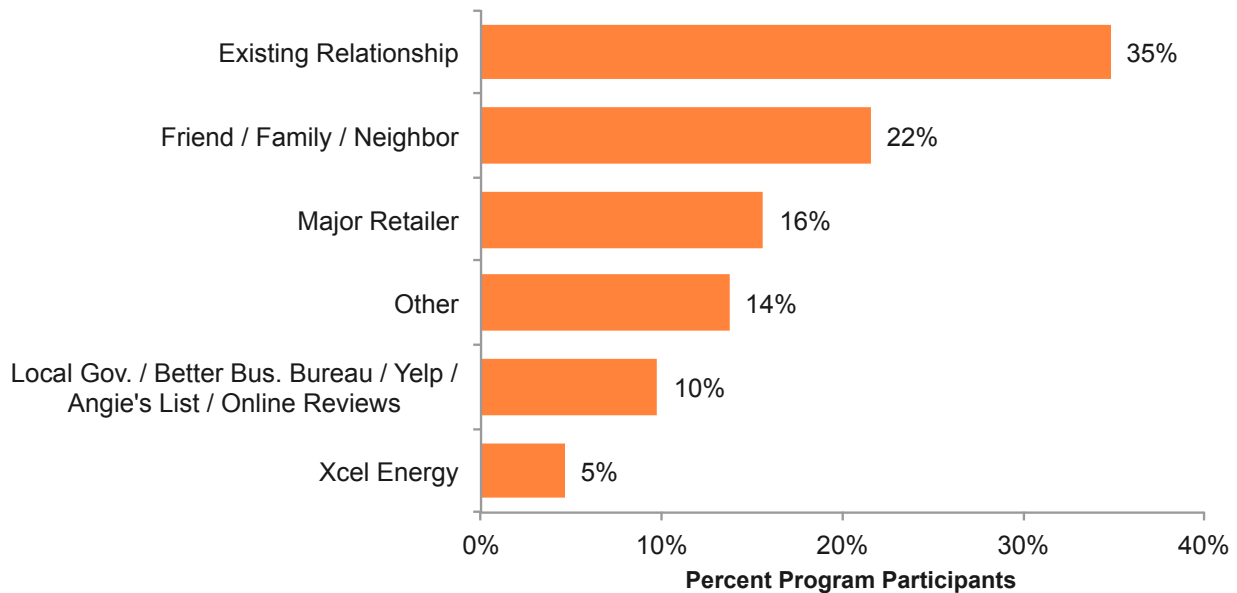
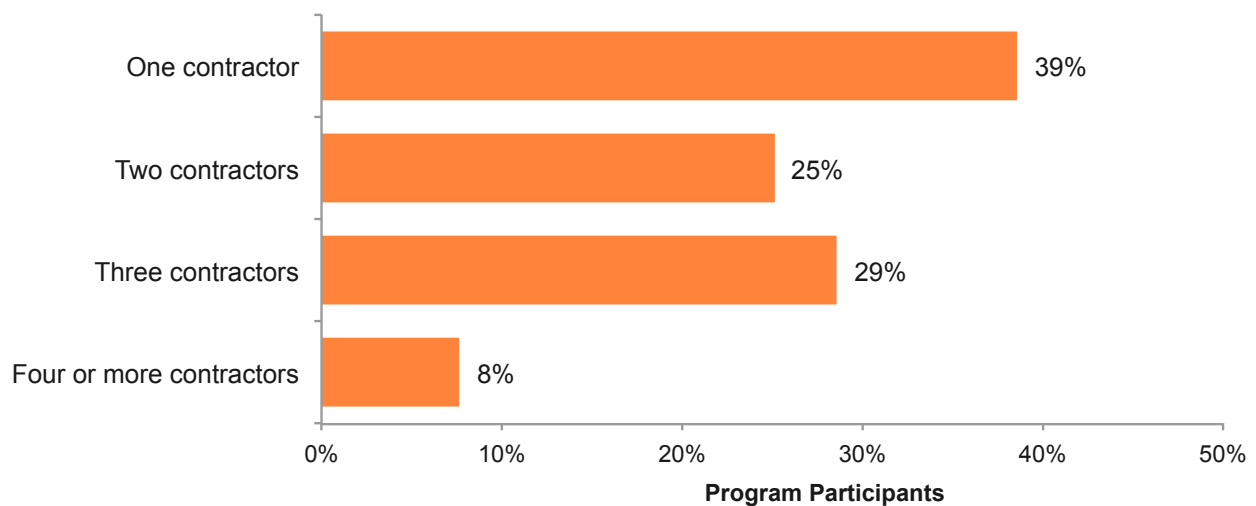


Figure 3-9 shows the distribution in the number of contractors that participants talked with before starting their furnace replacement project. About 40% of participants only talked with one contractor, and only 8% talked with four or more.

Figure 3-9. Number of Contractors That Participants Talked With Before Starting the Furnace Replacement Project

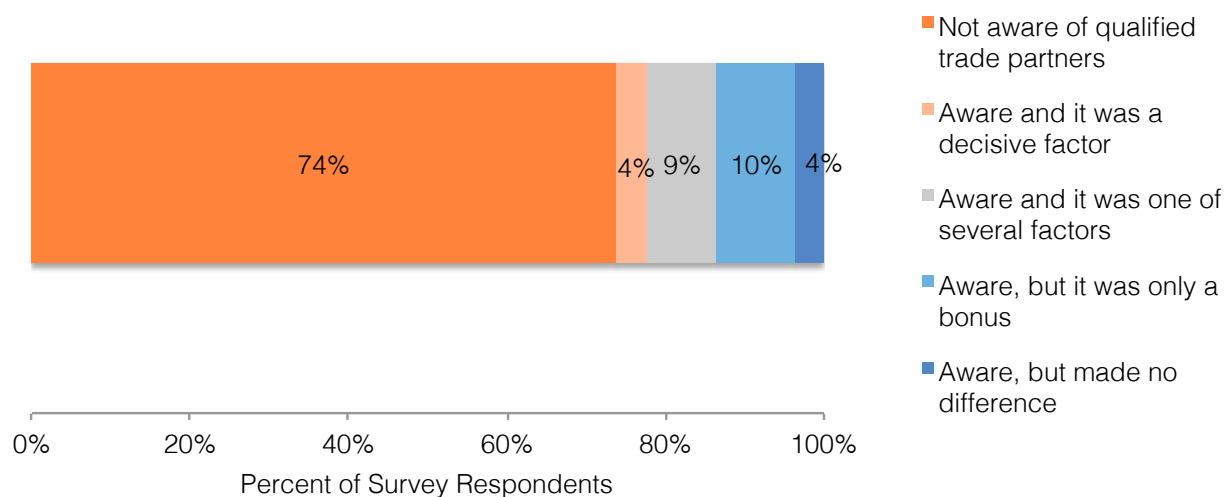


While the evaluation team does not know what the equivalent distribution looks like for Xcel Energy customers who installed a standard efficiency furnace, the evaluation team assumes that it is

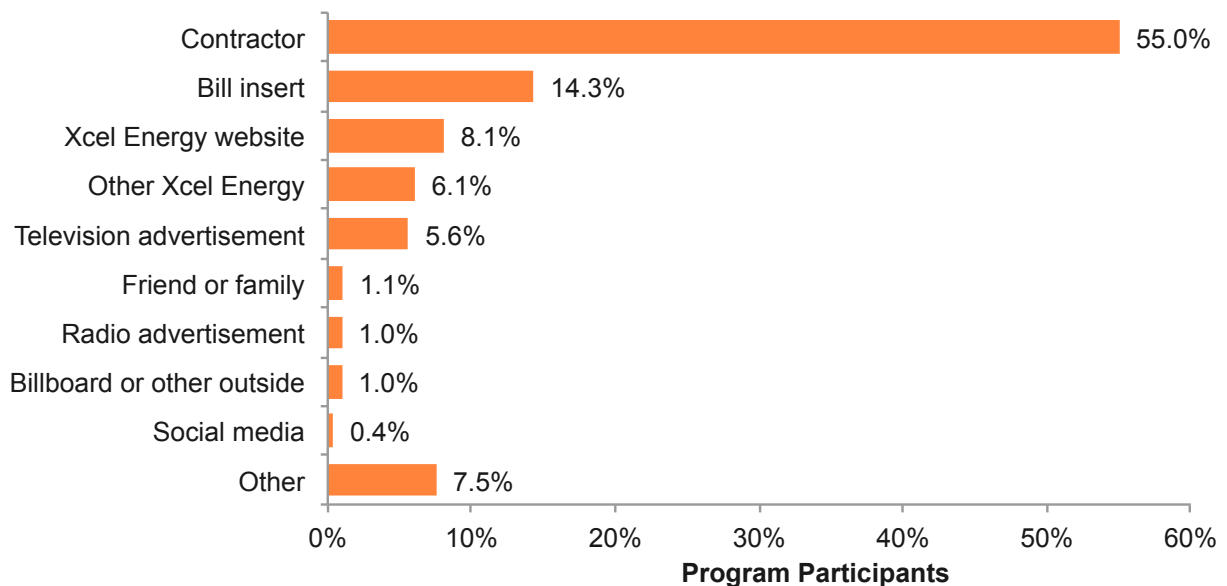
similar to the distribution shown in Figure 3-9. If many of these customers talked only with only one or two furnace installers, and those installers were not Xcel Energy trade partners, then these customers may not have been made aware of the Residential Heating product, or even been presented with high-efficiency furnace options.

Only one-in-four participants were aware that their installation contractor was an Xcel Energy trade partner (see Figure 3-10). In asking participants about their awareness of the relationship between the contractor and Xcel Energy, the question was phrased in the present tense with a brief explanation of what an Xcel Energy trade partner is and how contractors qualify as trade partners, suggesting that even after installation of their high-efficiency furnace was complete, most customers were unaware that their contractor was an Xcel Energy trade partner. Of those that were aware, most stated that the contractor's status as a trade partner was either a factor or a bonus in their decision to participate in the Residential Heating product.

Figure 3-10. Participant Awareness of Contractor Status as an Xcel Energy Trade Partner



Even though participant awareness of the status of contractors as Xcel Energy trade partners was low, most participants first heard about the Residential Heating product through their contractor (see Figure 3-11). The results in Figure 3-10 and Figure 3-11 show that, while many customers were unaware of the trade partner relationship between Xcel Energy and their contractor, it is the contractor—as an Xcel Energy trade partner—that is the primary source of information about Xcel Energy's Residential Heating product and the rebates available to customers.

Figure 3-11. How Customers Heard About Xcel Energy's Residential Heating Product

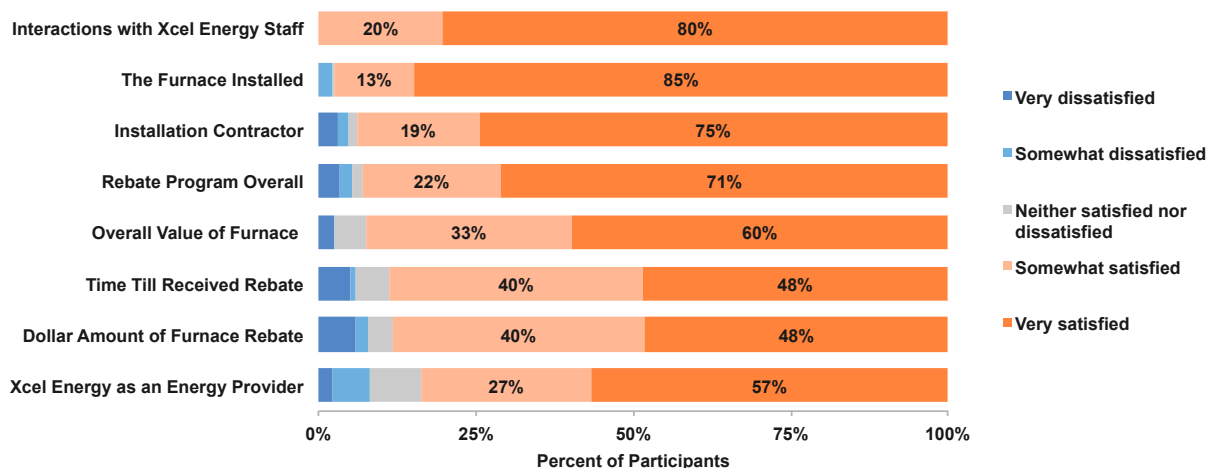
While only 14% of participants said they first heard about Xcel Energy's Residential Heating product through bill inserts, it was still the second most cited information source. Most of the other sources were also direct advertising by Xcel Energy through various media channels (e.g. Xcel Energy website, television advertisement). In response to a separate question, 38% of participants stated that prior to completing their furnace project, they had received some form of encouragement from Xcel Energy to upgrade their furnace. This result is consistent with the results shown in Figure 3-11, where about 36% of customers indicated they heard about the Residential Heating product through direct marketing from Xcel Energy.

3.5 Customer Satisfaction

The evaluation team asked participants about their satisfaction with seven aspects of their experience with the Residential Heating product. Overall, as shown in Figure 3-12 below, customers were generally satisfied. While not all customers dealt directly with Xcel Energy staff, 100% of those that did responded that they were satisfied or very satisfied. Satisfaction was nearly as high for the furnace installed through the product (98%) and with the contractor who installed it (95%). Asked about their overall satisfaction with the Residential Heating product, 71% responded that they were very satisfied and 22% responded that they were satisfied.

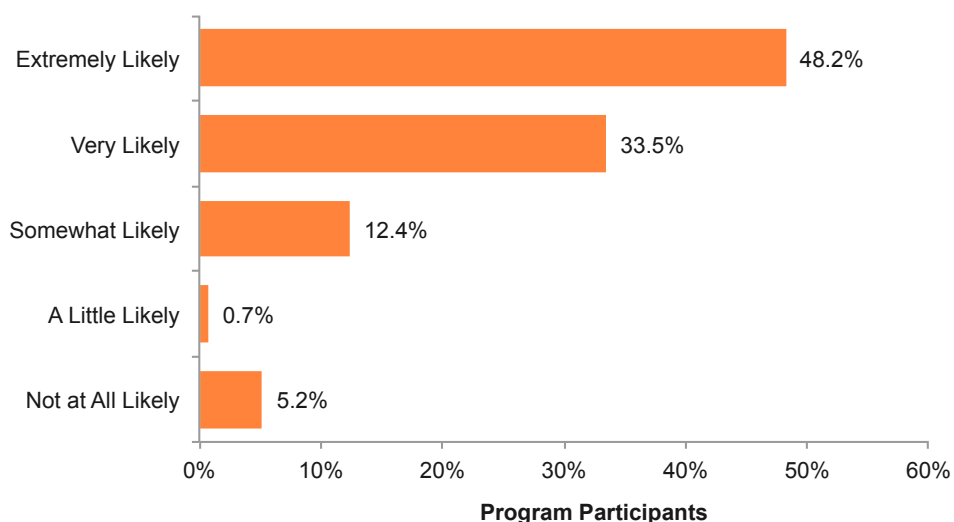
Participants were less likely to report being very satisfied when asked about the dollar amount of the rebate they received and the time it took to receive the rebate. For both of these questions, 48% reported being very satisfied and 40% reported being satisfied.

Figure 3-12. Satisfaction of Participants with Components of the Residential Heating Product and Xcel Energy Overall



While participants overwhelmingly reported being satisfied with the Residential Heating product, there were a few respondents who expressed dissatisfaction with particular aspects of the product and provided an explanation for their dissatisfaction. Two participants said it took a long time to receive their rebate, and another participant reported being unaware that there was a rebate and that the money was not that much. Another participant said the rebate should have been more because the furnace was very expensive. When asked about their likelihood of recommending the Residential Heating product to a friend, family member, or colleague, 81.7% responded that they were very or extremely likely to do so (see Figure 3-13). Only 5% responded that they were not at all likely to recommend the product. Asked why they were not likely to recommend the Residential Heating product, half of this small handful of customers stated either that they do not “advertise for businesses” or they “do not recommend anything.”

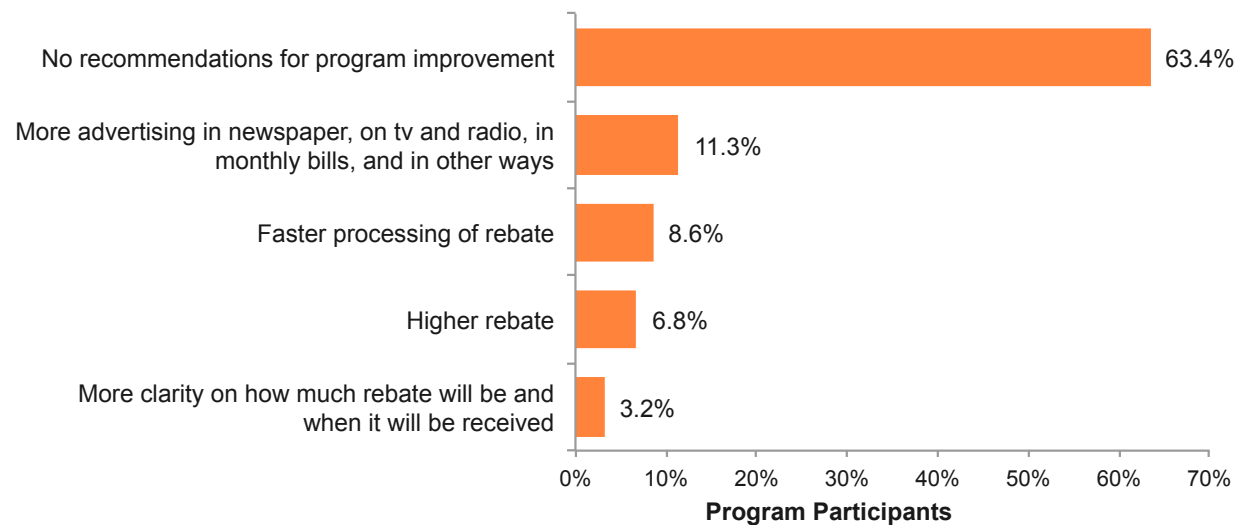
Figure 3-13. Participants’ Likelihood of Recommending the Residential Heating Product to a Friend, Family Member, or Colleague



The Net Promoter score—the proportion of participants who are very or extremely likely to recommend the Residential Heating product (81.7%) minus the proportion who are not at all likely (5.2%)—is 76.5%, which suggests a high level of satisfaction with the Residential Heating product.

Consistent with their expression of satisfaction with the Residential Heating product, most participants (63.4%) said they had no recommendations for improvement (see Figure 3-14). Of those that did have a recommendation, the most often-cited recommendation was more advertising, followed by faster processing of rebates and higher rebates. A small number of customers also recommended greater clarity on the amount and timing of rebates.

Figure 3-14. Recommendations to Improve Residential Heating Product



3.6 Trade Partner Experience

The evaluation team asked interviewed trade partners about their experience with the Residential Heating product to help identify potential disconnects between the customer and trade partner perspectives and highlight possible areas of improvement for the product. The results in this section are outlined in the following topic areas:

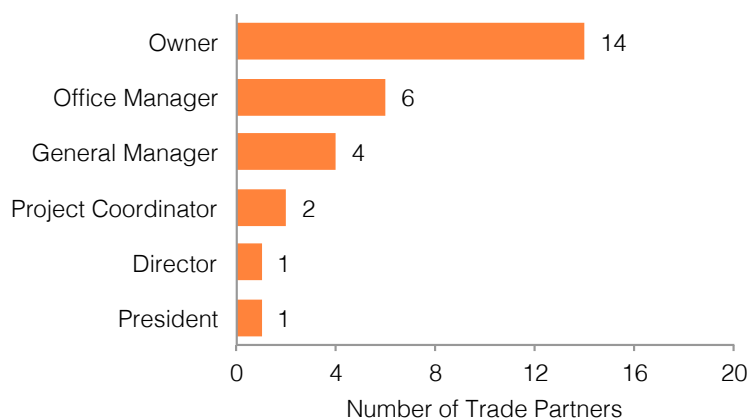
- Trade partner firmographics
- Residential Heating product participation
- Business model and marketing impacts
- Impacts of NATE certification requirement

Trade Partner Firmographics

The evaluation team characterized the interviewed trade partners by collecting company demographic (“firmographic”) information including the role of the company representative, the number of years they have been a registered trade partner, and which customer markets they work with. Understanding the level of involvement, the responsibilities of trade partners and their point of contact, and the target markets of trade partners can help Xcel Energy better understand their trade partners and identify solutions that fit their primary needs.

The evaluation team recruited trade partner representatives that were most familiar with their firm's participation with the Xcel Energy Residential Heating product. These representatives had a variety of roles within their respective firms, providing the evaluation team with unique perspectives of the product based on their unique involvement with the product. Figure 3-18 summarizes the interviewees' roles within each company. Overall, 16 of the interviewees reported they were the owner, president, or director of the company, six were office managers, four were general managers, and two were project coordinators.

Figure 3-15. Roles of Trade Partner Representatives



The interview group contained contractors with varying years of experience with the Xcel Energy Residential Heating product. The following two exhibits summarize the interview groups' activity level by the number of years as a trade partner with the.¹⁵ As Figure 3-16 shows, 11 of the interviewees reported that they have been trade partner for four to seven years, 10 stated that they have been a trade partner for eight to ten years (including three that just stated they were partners since the beginning of the product), and two stated that they are newer to the product and have only been a trade partner for one to three years. Five trade partner representatives reported that they did not know how long their company had been a registered trade partner with the Residential Heating product.

¹⁵ For context, the Residential Heating product began in 2009.

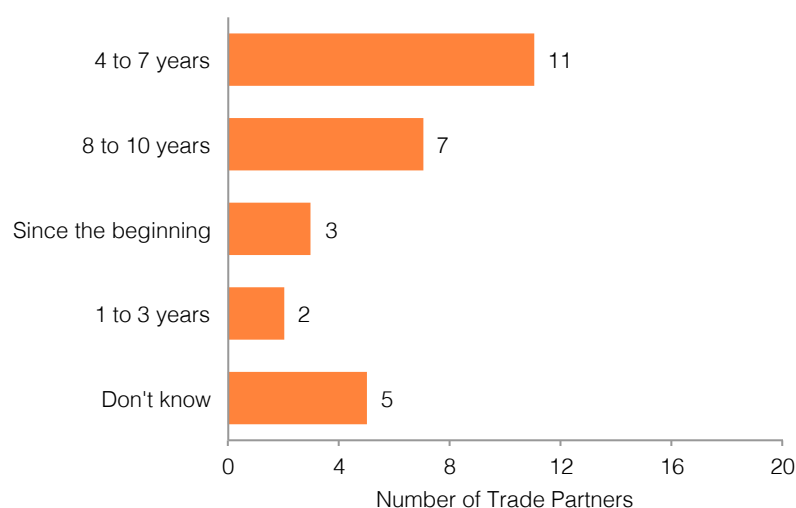
Figure 3-16. Number of Years as Trade Partner

Table 3-3 shows that the number of total projects submitted through the Xcel Energy Residential Heating product appears to be positively related to the total number of years the contractors have been registered trade partners. For example, all of the interviewed trade partners that have completed over 20 projects through the product estimated that they have been trade partners for four or more years (n=14).

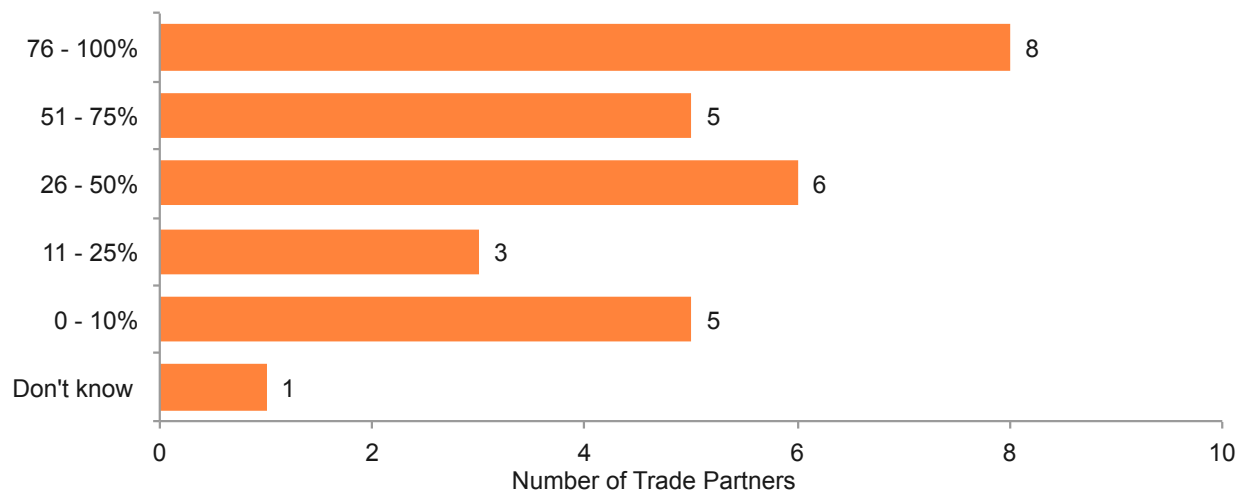
Table 3-3. Trade Partners by Number of Projects in 2016-17 and Years as a Trade Partner

Years as a Trade Partner	5 or Fewer Projects	6 – 20 Projects	21 – 50 Projects	51 – 200 Projects	More than 200 Projects
1 to 3 Years	1	1	0	0	0
4 to 7 Years	1	4	2	3	1
8 to 10 Years	1	1	1	1	1
Since the beginning	0	0	2	1	0
Don't know	2	1	1	1	0

The evaluation team also asked trade partners about their primary target markets to help characterize their customer focus. All 28 trade partners were active in the residential sector, with eight also somewhat active in the commercial sector. However, four of those eight trade partners reported that less than 5% of their projects were in the commercial sector. Although all interviewed trade partners provided services in the residential sectors, some were significantly more active in the Xcel Energy Residential Heating product as outlined above.

Residential Heating Product Participation

As shown in Figure 3-17, eight trade partners—across all different participation categories—reported that 75% to 100% of all of their projects over the last year were through the Xcel Energy Residential Heating product, while six trade partners submitted 26 to 50% of their projects through the product and five submitted 51 to 75% of their projects through the product.

Figure 3-17. Proportion of Total Projects Submitted Through Residential Heating Product

Eight trade partners submitted 25% or less of their projects through the Residential Heating product and one trade partner said they did not know how many projects were submitted through the Residential Heating product.

Table 3-4 shows that trade partners that submitted a higher proportion of their total projects through the Residential Heating product completed more total projects through the product. For example, six of eight trade partners that submitted more than 75% of their furnace installations through the product submitted more than 20 projects, while nine of 14 trade partners less active in the product—those that completed less than 20 projects—estimated those projects accounted for less than 25% of their total heating installations.

Table 3-4. Distribution of Trade Partners by Number of Projects in 2016-17 and Percent of Projects Submitted Through the Residential Heating Product

Percent of Total Projects Through Xcel Energy	5 or Fewer Projects	6 – 20 Projects	21 – 50 Projects	51 – 200 Projects	More than 200 Projects
25% or less	3	3	1	1	0
26% – 50%	1	3	1	1	0
51% – 75%	1	0	1	2	0
76% – 100%	0	2	3	2	2
Don't know	0	1	0	0	0

The evaluation team also asked the participating trade partners if their involvement with the Xcel Energy Residential Heating product had increased, decreased, or stayed the same compared to previous years. Of the 28 interviewees, 17 reported that their involvement had increased compared to previous years, seven mentioned that their involvement had stayed the same, and four reported that they had seen a decrease in their involvement compared to previous years. Of the 17 trade partners that reported an increase in involvement, nine reported the increase was due to their company growing in size and more people demanding high efficiency furnaces. Additionally, five reported that more people are becoming educated about the product and in turn, they have seen an

increase in involvement, while two trade partners credited the rebates as being a reason why more residential customers were participating. Among the trade partners that reported a decrease in involvement, reasons included installing more units that did not qualify for the rebate (n=1), decreasing staff (n=1), more replacements for rental units where landlords wanted the cheapest option (n=1), and shifting focus towards the commercial sector (n=1).

Business Model and Marketing Impacts

To get a sense of the trade partners' perceptions of how the Xcel Energy Residential Heating product compares to comparable utility programs, the evaluation team asked trade partners about their experience and involvement with other energy efficiency programs. Of the 28 trade partners, 16 (57%) reported that they have experience with one or more utility programs outside of Xcel Energy. Of those trade partners, eight had experience with Black Hills Energy, four had experience with Atmos Gas or United Power, and three had experience with Poudre Valley REA.¹⁶ Other programs that trade partners mentioned included Efficiency Works (n=2) and Platt River Power Authority (n=1). Overall, seven interviewed trade partners reported that Xcel Energy was better than other utility rebate programs they had worked with, while two said it was about the same. None of the interviewed trade partners indicated Xcel Energy's product was more difficult to work with than other utility programs.

Of the trade partners that preferred Xcel Energy's Residential Heating product to other residential heating programs, reasons they preferred the Xcel Energy product to other utility programs included an easier application process (n=3), better communication for updating trade partners on changes to the heating product (n=2), more resources to answer trade partner questions (n=1), and higher rebate levels (n=1).

The evaluation team also asked interviewed trade partners about how participating in the Residential Heating product has impacted their approach to non-Xcel Energy customer projects to capture any impacts the product is having for customers who are currently not covered by Xcel Energy. In general, 22 out of 28 interviewed trade partners said being a trade partner has not changed their approach to non-Xcel Energy customers at all. Of the remaining six interviewed trade partners, four noted that being a trade partner has caused them to focus more on high-efficiency options in general, including one that now includes the rebate pricing on their price sheet even if the customer is not eligible for a rebate. Other impacts from the product included additional load calculations for all furnace projects (n=1) and seeking out other utility rebate opportunities (n=1).

The evaluation team asked trade partners about their overall experience with the Residential Heating product, to gather feedback about how the product is working and identify potential ways Xcel Energy can continue to improve the product. Specifically, this feedback was focused on:

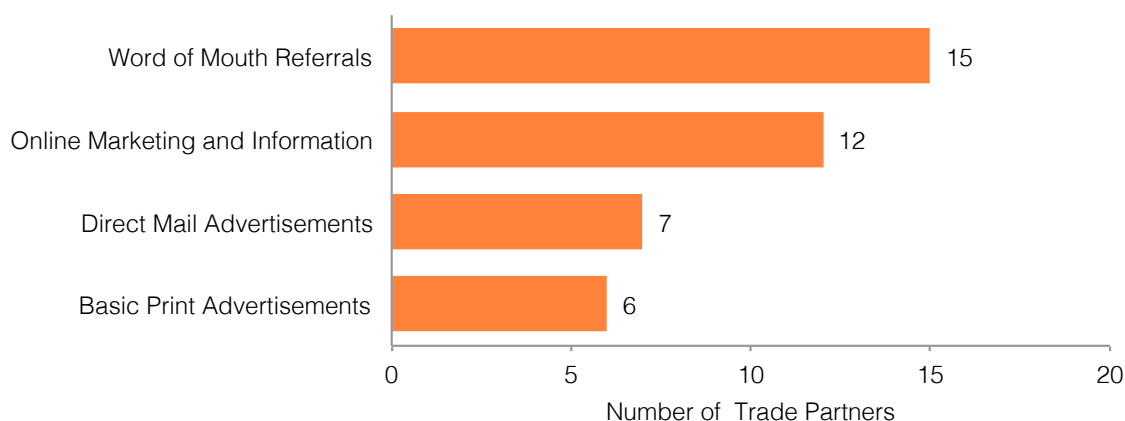
- The effectiveness of sales and marketing techniques;
- The sales process for rebate-eligible projects;
- Interactions with residential customers;
- Customer perceptions of the Residential Heating product; and

¹⁶ There were five trade partners who had experience with more than one energy efficiency program outside of Xcel Energy.

- The potential need for Spanish language material.

To better understand the influence of the Residential Heating product, the evaluation team asked trade partners a series of questions regarding their sales and marketing approach and how the Residential Heating product impacts various stages of the process. The evaluation team began by asking trade partners what sales techniques are most effective when attracting new customers. As shown in Figure 3-18, the most common marketing techniques included word of mouth referrals from previous customers (n=15), online marketing through advertisements and website information (n=12), direct mail advertisements (n=7), and basic print advertisements (n=6). Additionally, while a majority of trade partners utilized multiple marketing techniques, 53% of interviewed trade partners (n=15) said referrals are the most effective technique, along with 29% that said online marketing was most effective.

Figure 3-18. Effectiveness of Marketing Techniques



The evaluation team also asked trade partners about their interactions with residential customers, focusing specifically on how they bring up their involvement with the Residential Heating product. After the initial contact has been made with residential customers and the sales process has begun, trade partners noted various approaches on how they bring up the Residential Heating product with prospective customers and what parts of the product to discuss. When asked, 27 of the 28 trade partners reported that they discuss the Residential Heating product with all of their customers in the Xcel Energy service territory. Specifically, 27 of the interviewed trade partners said they tell customers that there is a rebate available for qualifying high-efficiency equipment. 14 of those 27 trade partners also mentioned that customers are typically already aware that the rebates are available, although they may not know the specifics on how to receive the rebate.

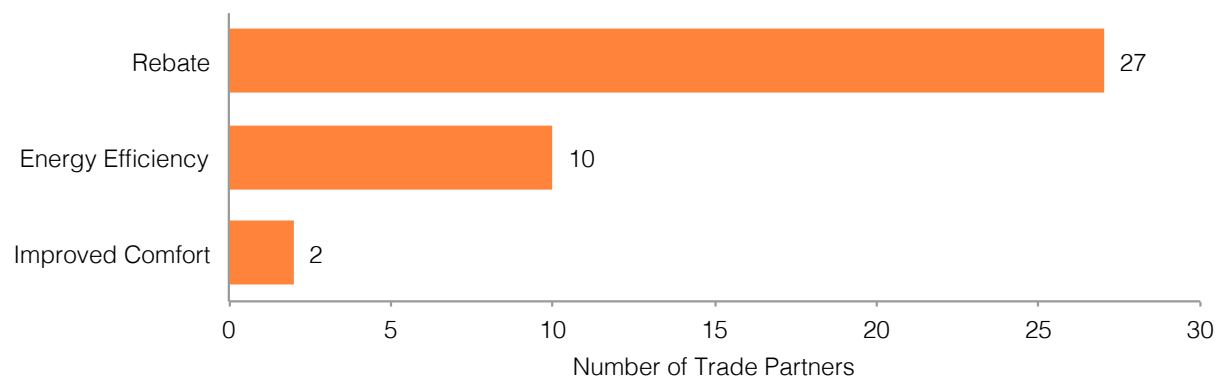
The majority (n=17) of interviewed trade partners reported that the discussions of the product and available rebates happen at the beginning of the contact with customers, noting that this helps with the final sales price discussions later on. However, eight trade partners mentioned that they typically bring up the rebates to customers when they are discussing the available equipment options, with two of these trade partners noting that this helps them gauge what the price range for the customers is. Two trade partners said they wait until after they have completed a comprehensive analysis of the customer's home and learning what the customer is trying to accomplish with the new furnace. The trade partners will then discuss the Residential Heating product if it is feasible and reasonable to

install a condensing gas furnace in the customer's home and the customer is potentially interested in a high-efficiency furnace.

Interviewed trade partners also noted that they frequently educate residential customers on the efficiency levels of available furnace options given their lack of awareness of AFUE ranges. Most interviewed trade partners (n=16) reported that some or all of their customers do have a general knowledge regarding the efficiency levels of gas furnaces—including the availability of low and high efficiency options—but typically do not have a thorough understanding of what the specific AFUE differences are. Eight interviewed trade partners added that some residential customers are aware of AFUE because they conducted research prior to the trade partner visit. One contractor said that the Xcel Energy rebates are making consumers more aware of efficiency levels, stating the rebates provide an added motivation for customers to learn about energy efficient equipment and how they can qualify for the Xcel Energy rebate.

Once the Residential Heating product rebate and qualifying equipment is discussed with customers, interviewed trade partners noted the rebate offering becomes a primary factor in customers' decisions to purchase energy efficient equipment and participate in the product. Specifically, as shown in Figure 3-19, 27 out of 28 interviewed trade partners said that the Xcel Energy rebates were the most significant motivator for customers to participate in the Residential Heating product. Only one interviewed trade partner said that the payback period can be too long for most residential customers, citing that customers are commonly calling when their furnace breaks and need a quick, affordable replacement. Besides the available rebate, 10 of the 28 interviewed trade partners reported energy efficiency was the second largest motivator for customers to participate in the Residential Heating product. Two trade partners added that the increased comfort provided by the energy efficient equipment was a motivator for customer participation in the Residential Heating product.

Figure 3-19. Customer Motivations for Participation



Once the furnace installations are completed, 27 out of 28 trade partners complete the rebate forms for the customer. Once rebates are processed, 24 of the 28 interviewed trade partners (86%) have the rebate go directly to the customers, while the other four trade partners apply a point-of-sale rebate and take the rebate amount off of the final price of the sale. The trade partners then receive the actual rebate directly from Xcel Energy. One trade partner that completed five or fewer projects noted they apply a point-of-sale rebate as a sales tactic because they feel providing the rebate instantly helps encourage the customer to purchase the energy efficient equipment.

To get a sense of what proportion of customers would have preferred receiving information on Xcel Energy's rebates in Spanish, the evaluation team asked a series of questions regarding the languages that trade partners have observed their customers speaking at home. Among the interviewed trade partners, 18 out of 28 reported that they do have Spanish-speaking customers within their service territory, while one trade partner also mentioned having German and French-speaking customers. Ten of the 18 trade partners with Spanish-speaking customers noted this population accounts for less than 10 percent of their customer base. Despite the low reported percentage of Spanish-speaking customers, the majority of interviewed trade partners (n=18) had one or more Spanish-speaking employees either in their office or in the field, although five of those trade partners noted the employees were not fluent.

Impacts of NATE Certification Requirement

Beginning in 2014, the Residential Heating product required trade partners to complete NATE certification; NATE is a national certification organization that provides real-world testing applications for HVAC contractors. To assess the impact the NATE certification requirement had on participating trade partners, the evaluation team asked the interviewed trade partners a series of questions focused on when they became certified, their overall perceptions of the NATE certification process, and how the certification requirement has impacted their sales approach.

Among the interviewed trade partners, 13 out of 28 said they and their staff were already NATE certified prior to the Residential Heating product requirement, while six became certified as a direct result of the product requirement. Eight interviewed trade partners added that some of their staff was NATE certified prior to the requirement but additional staff went through the certification process as a result of the requirement. Overall, 24 out of 28 interviewed trade partners said they perceive the NATE certification process to be important in the residential HVAC market, primarily because it helps differentiate qualified contractors and provides the necessary educational tools for heating installations. However, 5 out of 28 trade partners noted that they believe the NATE certification process is overly time-consuming and expensive given the level of detail they provide. For example, two trade partners said the annual update requirement that is part of the NATE certification program is simply used as a "money maker" for the NATE program, as there are generally not significant changes within the HVAC market over the course of one year. Additionally, seven trade partners added that keeping up with the educational and training requirements of the NATE certification creates some administrative burdens for their firm.

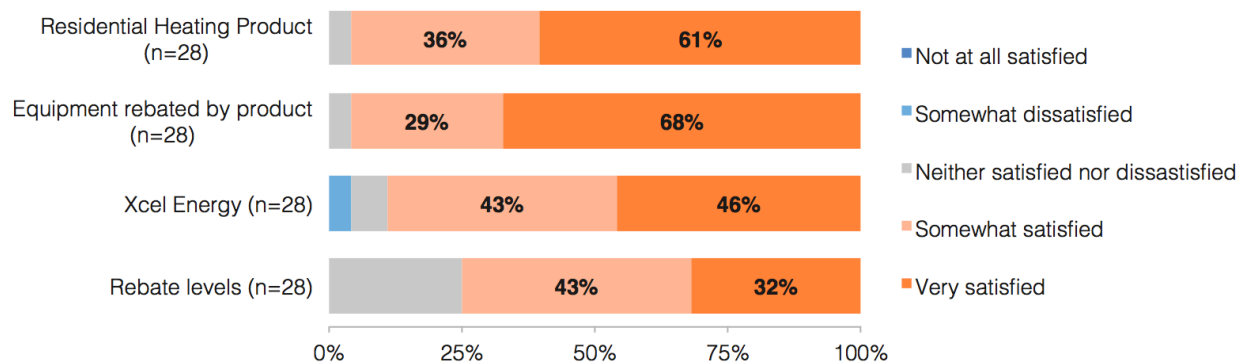
3.7 Trade Partner Satisfaction, Successes, and Challenges

Overall, interviewed trade partners expressed high levels of satisfaction with the Residential Heating product. In addition to asking trade partners about their satisfaction with the Residential Heating product, the evaluation team also probed on trade partner satisfaction with regards to their overall experience with Xcel Energy, the rebate-eligible equipment, the rebate levels, and the rebate processing. When asked how they measured success associated with being a registered trade partner, the most frequent responses were the ability to differentiate their business from other contractors and that being an Xcel Energy trade partner has led to more furnace installations. Being a trade partner, however, does not come without challenges. The two most frequently cited challenges cited by contractors were increased paperwork and difficulty tracking changes in the rebate amount paid for installing a high-efficiency furnace.

Trade Partner Satisfaction

The evaluation team asked trade partners to evaluate their satisfaction levels on a 1 to 5 scale where 1 is not at all satisfied and 5 is very satisfied. Figure 3-20 summarizes the satisfaction levels across each area of interest. Interviewed trade partners had an average satisfaction score of 4.5 with regards to the Residential Heating product itself, including 26 out of 28 that indicated they were somewhat or very satisfied.

Figure 3-20. Trade Partner Satisfaction



Additionally, but not shown in Figure 3-20, 23 out of 28 trade partners said they would recommend the Residential Heating product to another contractor, while two said they were only somewhat likely to recommend the product, and three said they were very unlikely to recommend the product solely because they do not want added competition.

Some of the justifications the trade partners provided for their high levels of satisfaction included the receptiveness of Xcel Energy's Residential Heating product staff (n=5), the range of rebate-eligible equipment (n=3) and the ease of the electronic application process (n=1). Conversely, three interviewed trade partners mentioned their satisfaction would increase even further if the rebate levels were increased, while one trade partner added that they would like the utility/trade partner relationship to function more like a true partnership where the trade partner has increased access to the rebate processing and their past project rebates.¹⁷

Trade Partner Successes

The evaluation team also asked the trade partners more directly about their greatest successes and challenges resulting from being a registered trade partner with Xcel Energy. The notable successes described by interviewed trade partners included:

- **Ability to differentiate from non-participating contractors (n=9).** Trade partners noted that participating in the Residential Heating product has allowed them to differentiate themselves from non-participating contractors because they come across as qualified and

¹⁷ The four trade partners that provided suggestions for improvements in response to this set of questions provided average satisfaction scores of 4 or higher.

knowledgeable of available rebate and equipment options. Some trade partners also noted that appearing as a “top” trade partner on the Xcel Energy website gives them additional credibility to potential residential customers and can be leveraged as a sales tactic.

- **Increased number of overall heating projects (n=7).** Seven contractors said that being registered as an Xcel Energy trade partner had increased their customer base and overall heating sales. Being able to provide the rebates—in addition to being accredited as outlined above—was a major reason trade partners suggested their sales had increased.
- **Increasing the amount of energy efficient furnaces in the residential market (n=6).** Trade partners noted that the Xcel Energy rebates directly impact the number of energy efficient installations that end up being installed in the residential market. While some customers may be primarily interested in the rebate itself, the product allows contractors to promote energy efficient solutions that are also higher quality and can save residential customers energy and money over time.

Other successes that interviewed trade partners shared included their appreciation of the product’s easy rebate process (n=2), the interactions with Xcel Energy regarding rebate questions (n=1), and their perceptions that the Residential Heating product has caused residential customers to better educate themselves regarding energy efficiency (n=1).

Trade Partner Challenges

Despite the high level of satisfaction and notable successes, 16 out of 28 interviewed trade partners noted specific challenges with the Residential Heating product. These challenges included:

- **The perceived burden the paperwork puts on participating trade partners (n=8).** The most common challenges reported by interviewed trade partners revolved around the paperwork requirements for the customer rebates. Specific issues included the amount of paperwork, the added burden of having to mail in the rebate forms (prior to the roll-out of the online portal) on behalf of the customer, and the difficulty trade partners had in tracking customer information if any issues or errors were found on the rebate application paperwork.
- **Difficulty tracking any changes to the rebate amounts (n=4).** Some trade partners said that because the rebate amounts have changed periodically over time, they have encountered issues with uncertainty from field staff who are unsure of how much of a rebate they are able to offer residential customers. While the trade partners noted the rebate information is generally accessible online, they would prefer a more direct communication process from Xcel Energy when rebate amounts increase or decrease.
- **Added burden the NATE certification requirement adds for trade partners (n=2).** Two trade partners suggested that while the NATE certification is an important standard that helps trade partners differentiate themselves, it does require a significant amount of additional resources—including time and funding—from the trade partners. Bringing new staff up to speed on the requirements of the Residential Heating product can shift resources away from actually completing heating projects to added training time.

Beyond the successes and challenges associated with the Residential Heating product itself, 19 out of 28 interviewed trade partners added that there are minor challenges in selling high-efficiency gas furnaces in general. The two primary challenges trade partners noted were the installation

requirements—including having venting issues and space constraints in some homes—of high-efficiency units (n=13) and the higher initial costs of the high-efficiency units (n=9).

Despite the high level of overall satisfaction with the Residential Heating product, 16 out of 28 interviewed trade partners had suggestions for the product to help increase their participation even further. The most common suggestion was to increase the rebate amount even further (n=14). While trade partners were generally satisfied with the rebate amounts (see satisfaction scores above), they said that increasing the rebate amounts directly impacts the number of high-efficiency furnace installations they complete. Other suggested improvements included streamlining the application and rebate process to ease the burden on trade partners (n=6), improving the Residential Heating product website and application portal (n=3), and increasing the promotional and educational efforts from Xcel Energy (n=3).

3.8 Peer Utility Program Comparison

The evaluation team reviewed comparable residential heating programs at five peer utilities across Colorado, New Mexico, Utah, and Wyoming—through online research and program staff interviews—to assess Xcel Energy’s Residential Heating product in context with other similar programs in the region. Overall, the peer utilities examined by the evaluation team had offerings similar to the Residential Heating product with regards to eligible measures, rebate quantities, and overall program structure. The following subsections outline the specific comparison metrics used by the evaluation team, focusing both on the design and the performance of the peer utility programs:

- Program design
- Key performance indicators (KPIs)
- Program marketing and contractor trade partnerships

Program Design

The peer utilities that the evaluation team reviewed all offer residential heating rebates as part of their larger residential energy efficiency portfolios. All five of the peer utilities market their residential heating programs to their customers as an available way to use less energy, save money, and provide increased comfort in their homes. Two of the five utilities noted their residential heating programs are administered by a third party, while an additional two administer their programs in-house but rely on third-party administrators to help with certain aspects of the program such as rebate processing and engineering support.

As shown in Table 3-5 below, the peer utility programs included rebates for high-efficiency furnaces ranging from 92-98% or greater AFUE, and commonly were part of larger heating programs that included other measures such as high-efficiency boilers, smart thermostats, and heat pumps. Rebates ranged from \$100 up to \$600 depending on the type of high-efficiency upgrade. For example, installing an ECM on an existing furnace or installing a 92% AFUE furnace may include a \$100-200 rebate, while a 96-98% AFUE high-efficiency furnace installation with an ECM may include a \$400-600 rebate. While efficiency level and the inclusion of an ECM were the primary factors in rebate amounts across the peer utilities, one peer utility adjusts their rebate quantities based on the inclusion of an installation audit, while another adjusts their rebates based on whether the

installation is done in an existing home or a newly constructed home. Two of the peer utilities also noted that their rebate levels will decrease by approximately \$50-100 or more over the next year as a result of the standard efficiency levels increasing in the market. Two of the utilities are also phasing out boilers in their residential heating programs, while one utility is increasing the minimum eligibility standard of their high-efficiency furnace rebates from 94% to 96% AFUE.

Table 3-5. Peer Utility Residential Heating Program Structure

Utility	Eligible Heating Products	AFUE ranges	ECM Rebate Offered	Rebate Amount
1	Furnace, boiler, fireplace	92% – 98%	Yes	\$200 – \$450
2	Furnace, boiler, smart thermostat	95%	No	\$300 – \$400
3	Furnace, heat pump	95%	Yes	\$100 – \$200
4	Furnace, boiler	94% – 96%	No	\$400 – \$600
5	Furnace, boiler	92% – 97%	No*	\$275 – \$375

*Partner with a local electric utility that does provide rebates for ECMs

Key Performance Indicators – Participation, Savings, Net-to-gross

In addition to understanding the structures of other peer utility residential heating programs, the evaluation team also sought to identify KPIs from the participating peer utilities to better evaluate the effectiveness of Xcel Energy's Residential Heating product. While the evaluation team collected all available information across the peer utilities, comparing each residential heating program proved challenging given the variety and inconsistency of program designs and available data. For example, while Xcel Energy's Residential Heating product focuses directly on gas furnace and ECM installations, some utilities structure their furnace rebates as part of a larger heating program that includes other measures or even a broader package that includes appliances and all residential rebate offerings. As a result, the key findings presented below are meant to highlight the inconsistent performance tracking between peer utilities and showcase the different savings and cost effectiveness methods used by peer utilities and third-party evaluators.

Inconsistencies in Savings Tracking

The evaluation team was unable to find comparable budget or savings information across the peer utilities given the variety of program structures. While all of the peer utilities offered similar high-efficiency gas furnace rebates, they did not administer the rebates in a consistent manner, as some were part of larger heating, appliance, or residential programs that aggregated results at a larger program or portfolio level. As a result, it was not possible to extract savings estimates for gas furnace installations among the participating peer utilities.

Net-to-gross Calculations

Similar to the savings and cost estimates, the NTG calculations varied across the interviewed peer utilities as outlined below:

- **Two of the five peer utilities said they did not include an NTGR calculation** in their most recent high-efficiency gas furnace evaluation but will be implementing one for their next evaluation cycle. The NTGR will be calculated by a third-party evaluator.
- One peer utility uses a **deemed NTG value of 0.80** for all residential measures included in their efficiency rebates program. The interviewed program manager did not know if this ratio originated from an old evaluation report or if it was administered by the state's energy commission.
- One peer utility reported a **calculated NTG value of 0.90** for all heating measures in their most recent evaluation. The method adjusted the gross savings by estimating free-ridership based on when the customer learned about the rebate program, their ability to purchase the high-efficiency equipment without the available rebate, any previous plans for high-efficiency equipment upgrades, stated importance of the rebate, and the likelihood of selecting an alternative standard efficiency measure.
- One peer utility noted that they calculate the NTG ratios as part of their program evaluations; however, their most recent evaluation did not include high-efficiency furnaces because the rebate was introduced recently. The ratio presumably will be calculated during the next program evaluation cycle.

Cost-effectiveness of High-efficiency Furnaces

Three of the five peer utilities reported utilizing a modified Total Resource Cost (TRC) method to estimate the cost-effectiveness of their residential heating program, one reported employing a Utility Total Cost (UTC) method, and one did not disclose their cost-effectiveness method. Three of the peer utilities reported that their residential heating program met or exceeded their respective cost effectiveness test (ratio greater than 1.0) and that high-efficiency gas furnaces were an important measure in achieving the program's level of cost effectiveness.

Range in Program Participation

Given the size discrepancies between the peer utilities, the participation levels varied dramatically between interviewed utilities. Two of the utilities reported approximately 90 completed heating projects in 2016, while the remaining utilities estimated 620, 1,352, and 8,391 completed heating projects respectively.

Program Marketing and Contractor Trade Partnerships

To help increase program participation, the five participating peer utilities utilized multiple marketing strategies including direct-to-consumer advertisements (bill inserts, email blasts, consumer events, television, radio) and trade partnership outreach. While the peer utilities noted that the consumer advertisements help raise awareness of the high-efficiency furnace rebates, three out of five peer utilities suggested that partnering with qualified contractors through a trade ally or trade partner program is the primary driver for program participation given that the customers generally coordinate their high-efficiency upgrades directly through the contractors. These partnerships generally include providing the contractors with information regarding the program to distribute to potential residential customers and including contact information on the program website that directs customers to qualified trade partner contractors.

As shown in Table 3-6, four out of five peer utilities implemented a direct trade partner program with contractors, while one peer utility simply allowed any contractor installing a high-efficiency furnace to complete a rebate application on the customer's behalf. The number of participating trade partners varied across the interviewed peer utilities, primarily because some peer utilities had significantly larger service territories than others. Additionally, only two out of the five peer utilities offered direct incentives for the participating trade partners, while three out of five offer annual technical support trainings for their trade partners. While the four peer utilities with contractor trade partners all have provisions that the contractors must be properly licensed and insured, none of them include additional NATE certification requirements for contractors to participate. However, two of the peer utilities do have optional NATE certification provisions that allow contractors to complete the certification if they choose, although it is not a requirement for participation.

Table 3-6. Peer Utility Trade Partner Participation

Utility	Number of Trade Partners	Payment Offered to Trade Partners	Training Offered	Additional Certification Requirement
1	n/a	n/a	n/a	n/a
2	55 Partners 7 Primary	No	None	None
3	14 Partners 9 Primary	Yes (\$50)	On-site technical training, webinars	
4	120 Partners 4 Primary	Yes	Annual quality installation training	
5	300-400 Partners 30-40 Primary	No	Annual technical training	

3.9 Insights from Potential Future Participants

The evaluation team conducted a survey of residential customers who had not yet participated in any of Xcel Energy's energy efficiency products to obtain insights about customer perceptions, information sources, and influencers that would inform product design and outreach. Insights about non-participating customers are valuable because these households represent the pool of potential future participants. The pool of non-participants comprised two groups:

- 60 randomly selected "non-participants," who are residential customers who have not participated in the Insulation and Air sealing or Residential Heating products or had home energy audits completed through Xcel Energy; and
- 60 randomly selected "near-participants," who are residential customers who have not participated in the Insulation and Air sealing or Residential Heating products, but have received an energy audit through Xcel Energy.

Key findings below focus on responses from the pool of non-participants, with selected insights from near-participants included when their responses differed markedly or suggest a unique opportunity.

Key Findings Summary

Households that have not participated in Xcel Energy's Residential Heating product are nevertheless open to energy efficiency, cognizant of messaging by Xcel Energy and the mass media, and largely aware of the presence of rebates for energy efficiency upgrades. Customers who have received energy audits ("near-participants") and those who have not ("non-participants") differ in their sense of the best energy-saving opportunities for their households. Non-participants think first of behavioral opportunities, while near-participants are relatively more aware of energy efficient equipment or insulation and air sealing upgrades. This difference signals potential educational opportunities for non-participants—either through energy audits or through informational campaigns that help customers identify potential energy savings opportunities.

Disposition Toward Energy Efficiency Upgrades

Most non-participants indicated that they are able and motivated to take actions to save energy. For instance, 65% of non-participants think they could reduce their spending from current levels easily (7%), with minor adjustments (31%), or with major adjustments (27%). In addition, 54% of non-participants said that they would make a substantial effort to save energy if it means saving some money as well. Another 26% would take action only if convenient or if the energy savings are very high.

Among non-participants who think there is an opportunity to save energy in their homes, the vast majority of households think first of low- and no-cost behavioral opportunities. Specifically, 59% of non-participants who think they can take action to reduce in-home energy use mentioned thermostat adjustments or reducing their use of lights and appliances as the *first thing* they would do. Comparatively, only 8% mentioned HVAC upgrade as a top-of-mind action to save energy. Likewise, 51% of non-participants mentioned these same behavioral opportunities as the *most impactful realistic step* they could take, while just 3% cited HVAC upgrades.

The emphasis on behavioral energy savings suggests opportunities for Xcel Energy to promote in-home energy-efficiency practices as a public service. In addition, the relatively low share of customers who *think* HVAC upgrades are the most impactful realistic energy saving step they might take points to a potential educational opportunity. It is likely that the *actual* share of residential customers whose most impactful (and cost-effective) energy efficiency opportunity is an HVAC upgrade is higher than the 3% of non-participants who *think* an HVAC upgrade is the most impactful realistic step.

There may be opportunities to increase awareness of the general population on the prevalence of these opportunities and to give customers some common indicators that would suggest they should explore HVAC upgrades. For instance, high winter energy bills could point to an opportunity for a furnace upgrade.

Audit Participants

Customers who had participated in an Xcel Energy audit (near-participants) indicated a greater willingness to take energy-saving actions. Thirty-five percent said they would go out of their way to save energy (compared with 14% of non-participants). However, near-participants were no more likely to cite HVAC upgrades as a top-of-mind action to save energy. Behavioral opportunities were

cited less frequently as well, suggesting that the audit sensitizes customers to structural and appliance-oriented opportunities.

Information Sources

General messages and encouragement to save energy is prevalent in Colorado, and messaging from Xcel Energy plays an important role alongside coverage of energy efficiency in the media and discussions with acquaintances. Specifically:

- 63% of non-participants recalled hearing or seeing suggestions for ways to save energy in the past year or two. As is common in geographies served by utility-based energy efficiency programs, two sources stand out as the main information providers on energy efficiency or savings: the local utility (Xcel Energy, in this case) and mass media.
- People find Xcel Energy to be the most useful information source about ways to save energy at home. Among respondents who recalled such information, 41% cited Xcel Energy as the most useful information source, far ahead of the second-most commonly mentioned source, personal acquaintances, which was cited by 16% of respondents.
- Bill inserts are the most common way customers receive information from Xcel Energy about ways to save energy, cited by over 90% of customers who had recalled energy-saving information from Xcel Energy. (The utility's website placed second, with citations by 31% of respondents.)

Furthermore, the non-participant survey found that:

- 69% had selected an appliance or made a home improvement in the past five years specifically because it was energy efficient. (Interestingly, a third of these customers received a rebate associated with that product—most from a source other than Xcel Energy.)
- Awareness of rebates for energy efficient products and services is high; 79% of respondents recalled seeing or hearing about rebates for energy efficient equipment or home improvements in the past year or two. Slightly more than half of these specifically cited Xcel Energy rebates.

These results suggest that Xcel Energy's general messaging—particularly current efforts through bill stuffers—are noticed, and energy efficiency is a topic of which customers are aware.

Audit Participants

As might be expected, audit participants are substantially more likely to recall information about ways to save energy (cited by 95% versus 63% of non-participants). Perhaps somewhat surprisingly, they are somewhat less likely to cite Xcel Energy as the source of information about ways to save energy or to be the most useful information source. Given that energy audits received numerous mentions, it is possible that audit participants give credit first to the home energy auditor and only secondarily (if at all) to Xcel Energy.

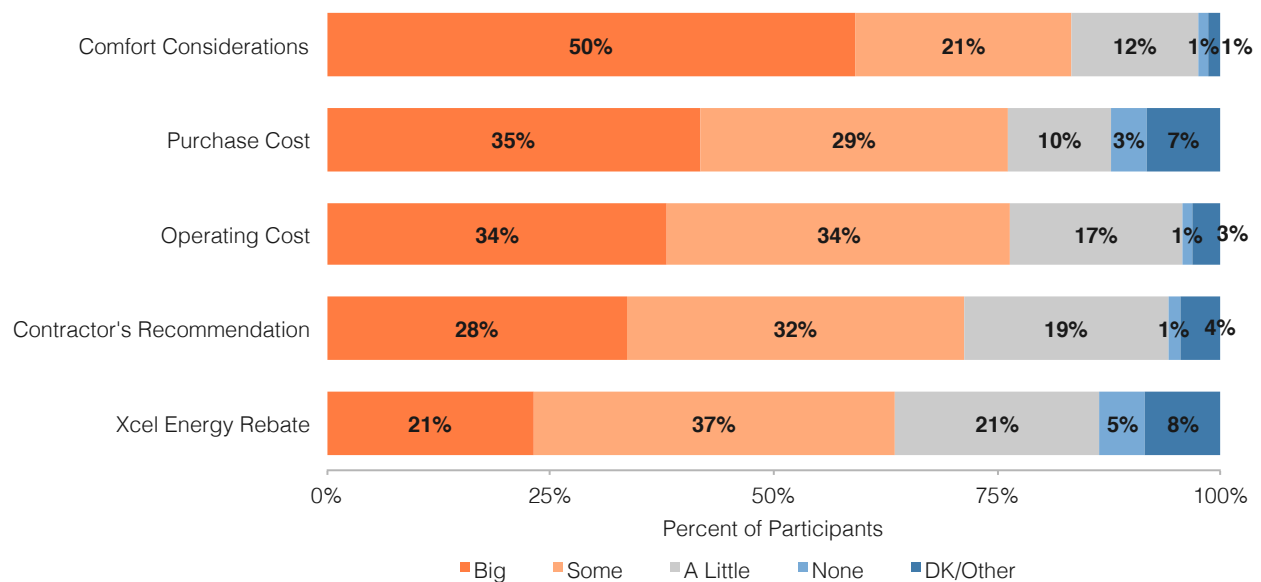
Furnace-Specific Perceptions and Potential Decision Drivers

The evaluation team asked non-participants specifically about their heating systems to inform Xcel Energy about general perceptions. Customer perceptions can indicate opportunities and barriers to engage residential customers and encourage them to explore their specific options further.

Eighty percent of non-participants reported that they currently have a forced air furnace, and 12% think they will replace their heating system within the next three years. While actual heating system replacement is often triggered by a failure of the current furnace, the fact that one in eight respondents anticipate a replacement within the next three years indicates an opportunity for messaging about heating system upgrades.

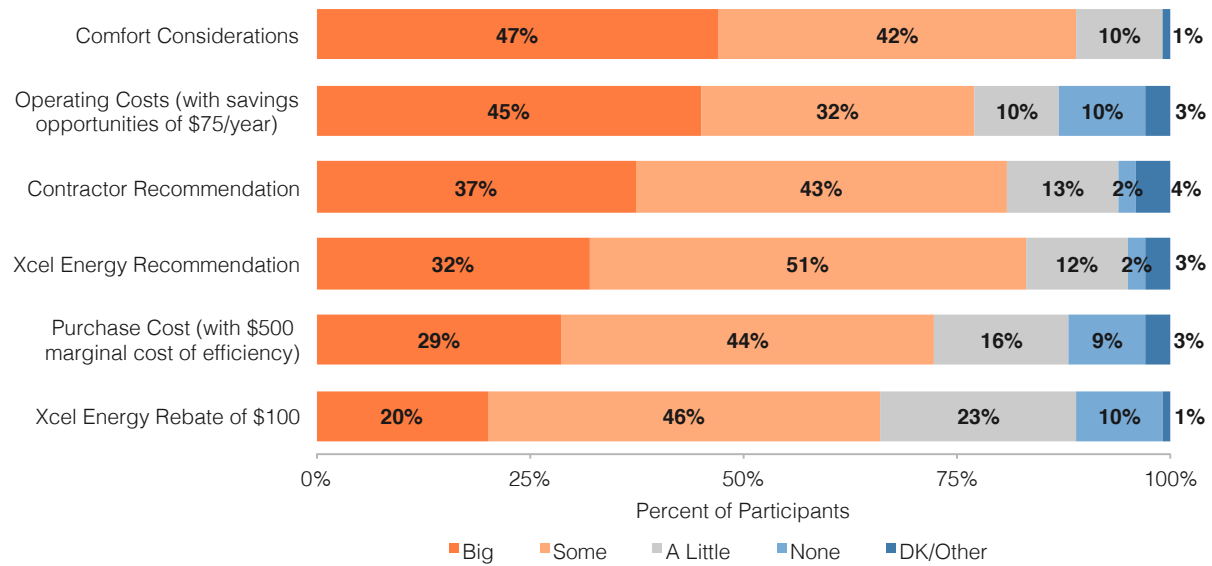
When asked what factors would most influence their decision on the efficiency level of their next heating system, non-participants clearly gave great weight to comfort followed by roughly equal consideration of purchase and operating cost (Figure 3-21). Actual decision-making during replacement may differ, but these self-reported drivers provide some direction for Xcel Energy messaging about the benefits of upgrading to a high-efficiency furnace at replacement.

Figure 3-21. Anticipated Influences for Next Heating System (Non-participants)



Self-reported decision-drivers for audit participants gave comparatively more weight to operating costs and less to purchase price, as shown in Figure 3-22.

Figure 3-22. Anticipated Influences for Next Heating System's Efficiency Level (Near-participants)



4. CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the evaluation team's key findings and associated recommendations regarding the Xcel Energy Residential Heating product in Colorado. Based on what we learned from the participant surveys, the interviews with trade partners, and benchmarking interviews with peer utilities, the evaluation team developed these recommendations for Xcel Energy to further improve the design and delivery of the Residential Heating product to its customers. 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.

Key conclusions and recommendations are as follows:

- **None of the five peer utilities interviewed by the evaluation team requires NATE certification for contractors installing high-efficiency gas furnaces through their residential heating program.** Of the four peer utilities that have a trade partner program (the fifth utility allows any licensed installation contractor to participate in their residential heating program), two have optional NATE certification provisions that allow contractors to complete the certification if they choose.
 - **Recommendation 1: Meet internally and with external stakeholders to determine the importance of NATE certification in the success of the Residential Heating product.** The five peer utilities interviewed by the evaluation team do not consider NATE certification necessary for the success of their program and, therefore, do not require it for their trade partners. The evaluation team recommends Xcel Energy and its external stakeholders clearly articulate why NATE certification is important for Xcel Energy's Residential Heating product.
 - **Recommendation 2: Determine barriers to greater participation by installation contractors in the Residential Heating product.** The evaluation team recommends Xcel Energy meet with (or engage a third party to meet with) a representative sample of installation contractors that are not trade partners to explore why they are not participating. Are there barriers to participation that some contractors feel are too onerous relative to the benefits of participation?
- **Many residential customers do not know what levels of energy efficiency are available in residential gas furnaces or do not necessarily understand some of the specific requirements of installing a high-efficiency gas furnace.** Based on responses from trade partners and the evaluation team's experience with other projects, many customers perceive a standard, 80% AFUE gas furnace to be a high-efficiency furnace. It is likely that many HVAC contractors that are not Xcel Energy trade partners do not educate customers on the actual range of choices available to them. In addition, trade partners noted that while some customers are aware of the product prior to the trade partners discussing it, few customers know about the rebate or understand the installation and incremental cost associated with a high-efficiency furnace.
 - **Recommendation 3: Advertise in bill inserts, print, and/or other forms of advertisement the difference between standard efficiency and high-efficiency gas furnaces (defined as 95% or greater AFUE).** The evaluation team recommends the messaging (briefly) describe how the efficiency levels, installation

requirements, and ongoing energy savings compare between standard and high-efficiency furnaces. The evaluation team believes that making customers aware of their energy efficiency options (and that there are rebates available to them) before they contact an installation contractor will lead to increased participation in the Residential Heating product. Trade partners suggested that the more informed residential customers are about high-efficiency furnaces and the product, the more likely they will be to install the high-efficiency equipment.

- **The evaluation team found that its estimate of the NTGR did not statistically significantly differ from the 0.77 NTGR that Xcel Energy assumed for high-efficient gas furnaces installed through the Residential Heating product.** The evaluation team estimated free-ridership and spillover based on customer responses to questions regarding the influence that Xcel Energy—through encouragement, rebates, and recommendations from trade partners—had on their decision to participate in the Residential Heating product.
 - **Recommendation 4: The evaluation team recommends that Xcel Energy increase the NTGR for high-efficiency gas furnaces installed through the Residential Heating product to 0.86 for the 2018 product year.** For the second half of 2017 into 2018, Xcel Energy increased the basic rebate from \$120 to \$300 (as well as provided an additional bonus at the beginning of 2018). The evaluation team believes that the higher base rebate amount clearly communicated to trade partners will result in a 9 percentage point or even greater increase in the NTGR over the rate assumed for 2016.
 - **Recommendation 5: Conduct semi-annual or continuous evaluation of the Residential Heating product focused on market testing of customer satisfaction and the impact of rebate levels on free-ridership.** While the evaluation team is confident with its recommendation to increase the NTGR for high-efficiency gas furnaces from 0.77 to 0.86 for 2018, it also believes the NTGR could be even higher, especially through the first quarter of 2018 when the base plus bonus rebate totals \$750.
- **The trade partners that complete the most number of high-efficiency furnace projects through the Residential Heating product view the product as an integral piece of their business model.** Of those interviewed trade partners that completed 50 or more projects through the product, 75% estimated that a majority of their *total* furnace projects are submitted through the product, indicating that their company focus has shifted toward high-efficiency equipment installations.
 - **Recommendation 6: Continue providing or even expanding provision of resources—such as more extensive online promotion and marketing material to distribute to customers—for these “primary” trade partners.** While providing resources to all accredited trade partners is important for product success, it is essential to continue to work with the most active trade partners that are highly motivated and focused on installing high-efficiency furnaces.
 - **Recommendation 7: On the product webpage, continue—or even expand—the practice of promoting on the product website who the “primary” trade partners are so customers can more easily identify contractors with the most experience with the product.** The research team found that contractors have a significant influence on the furnace purchasing decision of residential customers. As

a result, promoting trade partners that are heavily invested in the product may increase the likelihood of more high-efficiency upgrades in the future.

- **Customers who installed a high-efficiency gas furnace and an ECM through the Residential Heating product had a statistically significantly lower rate of free-ridership than those customers who installed only a high-efficiency gas furnace.** The evaluation team estimates that rate of free-ridership was approximately 9 percentage points lower for those customers who installed both measures. The ECM currently available through the Residential Heating product will become standard equipment after 2019 and, therefore, will no longer be included in the product.
 - **Recommendation 8: Consider an alternative energy efficiency measure to take the place of the ECM.** It is the evaluation team's understanding that Xcel Energy has looked into a "next generation" ECM. Examining new measures for inclusion into the Residential Heating product was not part of the process evaluation, nor is the evaluation team prepared to recommend any emerging technologies. Nevertheless, the evaluation team recommends that Xcel Energy be proactive in researching this new technology in order to maintain and grow energy savings that meet or exceed Xcel Energy's modified TRC requirements.
- **The most common challenge for trade partners was the added paperwork and administrative burden currently put on the trade partners.** While the interviewed trade partners were generally very satisfied with the product, 12 out of 28 did note that they had at least minor challenges involving the administrative requirements of the product. These challenges included the amount of paperwork, the added burden of having to mail in the rebate forms (prior to the availability of the online portal) on behalf of the customer, the changing rebate quantities, and the difficulty they had in tracking information if any issues or errors were found on the rebate application paperwork.
 - **Recommendation 9: Maintain strong channel management that continues to communicate and coordination with trade partners throughout the rebate process and ensure that trade partners have the most current product information.** The evaluation team believes that the continued success of the Residential Heating product requires Xcel Energy to maintain and continue to build its relationship with its trade partners.
 - **Consideration 10: Develop an online tracking system that shows a project's stage in the rebate process.** Trade partners said it would be helpful if they had the ability to see where in the process each one of their projects was because they could ensure they submitted the application paperwork correctly and could provide an accurate estimate to customers as to when their rebate should be processed and delivered.
- **The most frequently cited reason for installing a new furnace was that the existing furnace was old and/or was operating poorly. Only 13% of participants said their furnace failed.** In addition, many participants reported that they replaced their furnace based on a recommendation from an HVAC contractor.
 - **Recommendation 11: Develop an "early-replacement" marketing campaign to promote replacing old and inefficient gas furnaces during the summer.** Such a promotion would seemingly be popular with and would be most effective if it

involves Xcel Energy trade partners. A potential added benefit of such a promotion may be that the product achieves sufficient savings by the end of summer to preclude the need for significant bonus rebates to achieve savings by end-of-year.

5. APPENDICES (SEPARATE DOCUMENT)

Appendix A: Evaluation Planning Documents

Appendix A.1: Evaluation Plan

Appendix A.2: Sampling Plan

Appendix A.3: Benchmark Scoping Memorandum

Appendix A.4: NTGR Approach

Appendix B: Data Collection Documents

Appendix B.1: Participant Survey Guide

Appendix B.2: Trade Partner Interview Guide

Appendix B.3: Utility Benchmarking Interview Guide

Appendix B.4: Non-Participant Survey Guide

Appendix B.5: Staff Interview Guide

Appendix C: Participant Survey Frequency Tables

Appendix D: Trade Partner Interview Information



Xcel Energy Residential Heating Product 2017 Evaluation

January 22th, 2018

FINAL
REPORT



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APPENDIX A: EVALUATION PLANNING DOCUMENTS

A.1 Evaluation Plan

To support the process and impact evaluation of the 2016 Xcel Energy efficiency programs, members of the EMI Consulting evaluation team from Evergreen Economics will be conducting a process and impact evaluation of the Xcel Energy Colorado Residential Heating product. This memo provides an updated plan for the 2016 Xcel Energy Colorado Residential Heating evaluation based on the original scope of work, staff feedback during the evaluation kick-off meetings, and staff interview findings.¹ This evaluation plan includes the following sections:

- Product overview
- Study objectives
- Approach
- Next steps

Product Overview

The Residential Heating product in Colorado encourages the purchase of highly efficient condensing forced air furnaces (with AFUEs of 95% or higher) and the use of electronically commutated motors (ECMs) by homeowners. The product provides rebates for qualifying equipment and maintains a list of approved contractors. Outreach is provided by Xcel Energy on its website and collateral material and by qualified contractors (trade partners) with direct interaction with customers during the furnace sales process. Forced air natural gas furnaces account for the majority of residential heating systems used by Xcel Energy residential customers in Colorado. Current standards allow for non-condensing furnaces at 80% efficiency levels, although condensing furnaces provide efficiency levels of 90% and greater, thereby saving substantial amounts of natural gas. Xcel Energy's rebate requirement is a minimum 95% AFUE furnace.

Electronically commutated [fan] motors (ECM) reduce the electricity required by furnaces to distribute air through ducts. However, ECMs are scheduled to become standard equipment in mid-2019, so ECMs will not be an area of focus in the evaluation. Xcel Energy rebates both condensing furnaces and ECMs (installed with new furnaces or as retrofits). There are currently 242 participating contractors listed on the Xcel Energy website. The participation requirement is for a trade partner to have at least one technician with NATE (North American Technician Excellence) certification in gas heating.

Study Objectives

For the Colorado Residential Heating product, the key objective of the **process evaluation** is to understand the decision-making of customers replacing furnaces. Specifically, this includes:

- Identify measures Xcel Energy can take so that customers think specifically about high efficiency and rebates when an event occurs requiring new energy consuming equipment;

¹ The original scope of work is included in the evaluation team's contract with Xcel Energy for the 2017-2018 DSM evaluations.

- What information sources do they rely on to make purchasing decisions;
- Are customers satisfied with the program and how are they engaged;
- How do customers view the trade-offs between higher and lower efficiency furnaces;
- How do participating contractors present the options to customers?

This information – from past studies and primary research conducted as part of this evaluation – will provide insights on how well the rebate application process and offers are influencing contractors and customers and whether additional adjustments in rebates, messaging, or support of qualified contractors are warranted. The process evaluation will also identify product participation rates among eligible contractors and any key barriers for customers or contractors to participate in the product. The process evaluation will provide additional value to Xcel Energy and its customers by exploring the effectiveness of cross-promotion among the heating and building envelope-oriented products and customer information dissemination to help customers maximize comfort and efficiency.

The key objectives of the **impact evaluation** will be to understand the effect that Xcel Energy is having on energy efficiency purchases and to estimate the free-ridership and market effects attributable to the product. Condensing furnaces have penetration rates nationally around 50%, while some markets are already transformed with penetration rates of condensing furnaces (but not yet highly efficient condensing furnaces) above 90%. These statistics suggest that both free-ridership and market transformation are plausible in this market. Understanding customer decision-making for individual furnace purchases and supply chain trends is key to determining both free-ridership and market effects.

Approach

To address the objectives discussed above, the evaluation team will conduct surveys with both participating and non-participating customers who purchased furnaces recently. The key components of the customer surveys will explore:

- The customer decision-making process;
- Awareness and influence of the Residential Heating product rebates;
- Home comfort;
- Information sources used by customers during the purchasing process

In addition, the evaluation team will conduct in-depth interviews with both participating and non-participating contractors, as well as distributors active in the Colorado market. This research will explore the influence of the rebates on the sales practices of trade partners, including when and how they discuss the rebates with customers and any information they provide to customers about the optimal operation of furnace fans. In addition, the evaluation team will use these interviews to obtain a second perspective on the influence Xcel Energy may have on the decision-making process and to assess the potential for market transformation effects not indicated by customer surveys. Table 1 below summarizes the data collection and research associated with the Colorado Residential Heating product evaluation. It also identifies an additional task to conduct in-depth interviews with participants. This task was not included in the original scope of work but the evaluation team identified this need based on staff interview results.

Table 1: Colorado Residential Heating Research Summary

Research Task	Sample Size ^a	Objectives
Staff Interviews	3 Xcel Energy	Understand the key components of the product and identify the strengths and barriers from staff perspective; Determine evidence of free ridership and spillover.
Participant Surveys	70 telephone surveys with participating customers	Understand the customer decision-making process when purchasing and replacing heating equipment; Determine evidence of free ridership and spillover.
Non-participant Surveys	70 non-participant surveys	Understand the customer decision-making process when purchasing and replacing heating equipment
Trade Partner Research	28 interviews with stratified across qualified contractors, distributors, and non-qualified contractors	Gauge trade partner participation and activity, provide insights on product influence within contractor and distributor market, understand contractor influence on high-efficiency furnace purchases, and identify barriers for non-participation from market actors. Trade partners will be segmented by “high engagement”, low-moderate engagement”, and “non-participant”. Determine evidence of free ridership and spillover.
Utility Benchmarking	6 peer utilities	Compare product to peer utility programs.
Additional Task 1: In-depth Interviews	15 follow-up interviews with selected customers	Supplement findings from customer surveys with in-depth follow-up on customer decision-making process

a. Final sample sizes will be determined following an analysis of product data and relevant peer utilities.

Next Steps

The evaluation team plans to conduct the following next steps:

- Finalize this evaluation plan by reviewing the additional task, shown in Table 1, with the Xcel Energy evaluation lead to determine feasibility of completing it.
- Develop the NTG approach, including a flow chart that shows how the evaluation team will calculate the NTG ratio.
- Develop customer and trade partner data collection instruments, sampling plans, and analysis plan. These documents will present the evaluation team’s methods to conducting the tasks identified in Table 1.
- Finalize peer utility interviewees and develop the benchmarking KPIs.

Following approval of all data collection instruments, the evaluation team will conduct all approved research and provide Xcel Energy with interim findings from each data collection effort. The evaluation team will synthesize findings from each data collection effort and present all findings within a summative report. The evaluation team expects to present the draft report to Xcel Energy on November 1st, 2017.

A.2 Sampling Plan

To support the evaluation of Xcel Energy's 2016 energy efficiency programs, the EMI Consulting evaluation team is conducting a process and impact evaluation of the Colorado Residential Heating program. The objectives of the evaluation are to:

- Identify tactics Xcel Energy can employ to influence customers to consider high efficiency options when making purchasing decisions for new home appliances.
- Identify tactics Xcel Energy can employ to influence customers to seek information from Xcel Energy when replacing home appliances.
- Identify and document what information sources customers rely on to make purchasing decisions.
- Measure customer satisfaction and engagement with the Residential Heating program.
- Understand and document how customers view the trade-offs between higher and lower efficiency furnaces.
- Identify and document how participating contractors present options for high-efficiency gas furnaces to customers.
- Understand differences in customer purchasing decisions across customer segmentations.

The evaluation team will conduct separate surveys for each of the following three market actors:

1. Residential customers who participated in the Colorado Residential Heating program in 2016
2. Residential customers who did not participate in the program
3. HVAC installers who are trade partners with Xcel Energy in the Residential Heating program

This memorandum presents our proposed sampling approach to conducting the three surveys.

Participating Customer Characteristics and Sample Design

The evaluation team defines a participating customer as any Xcel Energy customer who purchased a high-efficiency gas furnace through the Colorado Residential Heating Products program in 2016 and Xcel Energy completed processing the customer's rebate application by the end of the first quarter 2017. Using an abstract from the Xcel Energy program database, the evaluation team identified 4,250 participating customers during this timeframe. Table 2 shows the distribution of participating customers by CAMEO residential segment, which was included in the data extract.² CAMEO is a consumer segmentation scheme that characterizes neighborhoods based on the predominant demographic, lifestyle and socio-economic characteristics of the neighborhood.³ Xcel Energy assigns each residential customer to a CAMEO residential segment based on the customer's address and can then use this information to better understand their customers and to communicate more effectively with them. The use of consumer segmentation based on demographic, income, and lifestyle characteristics, though growing in popularity, is still relatively uncommon among electric and gas utilities.

² Psychographic segmentation was included in the data set provided by Xcel Energy.

³ See the CAMEO USA Handbook for detailed information on the CAMEO residential segments.

As Table 2 shows, there is substantial variability in the proportion of participants from each of the respective segments. For many of the segments, there is substantial variation between the rate of customer participation in the Residential Heating program and the proportion of Xcel Energy customers within that segment. For example, 27.4 percent of program participants are in the “American Aristocracy” CAMEO residential segment, while this segment comprises about 9.0 percent of the residential customer base. Comparatively, only 1.1 percent of participants are in the “Stretched Tenants” segment, which comprises about 7.2 percent of Xcel Energy’s residential customers.⁴

Table 2: Colorado Residential Heating Participant Segmentation

CAMEO Residential Segment	Participants	Proportion of Participants	Proportion of Xcel Energy Residential Customers
01 - American Aristocracy	1,165	27.4%	8.97%
02 - Exclusive Society	654	15.4%	8.22%
03 - Prosperous Families	991	23.3%	17.19%
04 – Enterprising Households	540	12.7%	14.59%
05 - Comfortable Communities	322	7.6%	12.19%
06 - Aspiring Consumers	181	4.3%	9.07%
07 – Dynamic Neighborhoods	174	4.1%	9.18%
08 - Diverse Communities	54	1.3%	4.64%
09 – Stretched Tenants	48	1.1%	7.17%
10 - Strained Society	60	1.4%	4.16%
Missing or Refused (N/A)	61	1.4%	N/A
Total	4,250	100%	100%

We intend to use the CAMEO residential segments to stratify participants for sampling. We believe that the CAMEO residential segmentation is the best variable for stratifying participants for the process evaluation because each segment consists of customers with similar lifestyle and socio-economic characteristics that Xcel Energy is familiar with. Table 3 shows our proposed sample design. The evaluation team expects to sample 70 participants, which will provide a 90% level of confidence with a minimum of +/- 10% relative precision on key questions related to the Residential Gas program.⁵ We propose to interview seven participants in each stratum. As a proportion of participants, this approach means that the evaluation team will interview a far higher proportion of participants in the *Diverse Communities*, *Stretched Tenants*, and *Strained Society* segments. The evaluation team believes this is justified because this approach allows us to obtain a sufficiently large number of sample points from participants in all 10 of the CAMEO customer segments, not just those with the greatest (current) representation in the Residential Heating program.

⁴ It may be that many customers in the “Stretched Tenants” CAMEO residential segment do not have a residential gas account with Xcel Energy. Many customers in this segment may be eligible for Xcel Energy’s Low Income Home Energy Assistance Program (LIHEAP).

⁵ Assumes an ex ante proportion of approximately 50%.

Table 3: Participant Sample Design

CAMEO Residential Segment	Participants	Percent of Participants	Participants With Phone Number*	Sample Quota	Percent of Segment
01 - American Aristocracy	1,165	27.4%	1,164	7	0.6%
02 - Exclusive Society	654	15.4%	654	7	1.1%
03 - Prosperous Families	991	23.3%	987	7	0.7%
04 – Enterprising Households	540	12.7%	537	7	1.3%
05 - Comfortable Communities	322	7.6%	321	7	2.2%
06 - Aspiring Consumers	181	4.3%	181	7	3.9%
07 – Dynamic Neighborhoods	174	4.1%	173	7	4.0%
08 - Diverse Communities	54	1.3%	54	7	13.0%
09 – Stretched Tenants	48	1.1%	47	7	14.6%
10 - Strained Society	60	1.4%	60	7	11.7%
Missing or Refused (N/A)	61	1.4%	61	0	0.0%
Total	4,250	100%	4,239	70	1.6%

Note: we will coordinate with the Colorado *Insulation and Air Sealing Program* evaluation to ensure that customers that participated in both programs are not contacted to complete more than one survey.

Non-Participant Characteristics and Survey Sample Design

The evaluation team proposes to conduct a single residential non-participant survey for Colorado to support the process evaluation of the Residential Heating Products and the Insulation and Air Sealing programs. Based on conversations within the EMI team and with substantial input from Xcel program staff, the non-participant sample will focus on the following three groups of customers:

1. **“Near Participants”** are residential customers that received an energy audit, but did not participate in either the Residential Heating Products or the Insulation and Air Sealing programs. By having an energy audit conducted, these customers indicated an interest in energy efficiency, but their interest stopped short of participating in either the Residential Heating Products or the Insulation and Air Sealing programs. Through the non-participant survey, we will try to gain insight into why these customers, often referred to as “near-participants,” did not ultimately participate in the Residential Heating Products or the Insulation and Air Sealing programs. We will allocate 60 sample points to this group in order to develop estimates that have a level of statistical confidence and precision of 90/10.
2. **“General Population”** consists of residential customers that did not receive an energy audit and did not participate in either the Residential Heating Products or the Insulation and Air Sealing programs. These customers have not expressed interest in energy efficiency or Xcel Energy’s energy efficiency programs. Through the non-participant survey, we will try to gain insight into these customers’ perception of energy efficiency, their awareness of the energy audit and energy efficiency programs operated by Xcel Energy, and their interest in

participation in the Residential Heating Products or the Insulation and Air Sealing programs. We will allocate 60 sample points to this group in order to develop estimates that have a level of statistical confidence and precision of 90/10.

3. **“ECM-Only Customers”** Residential customers that receive both electricity and natural gas from Xcel Energy, participated in the Residential Heating Products program during the 2016 program year, but chose to install a minimally efficient furnace with a variable speed (ECM). We will allocate 20 sample points to this group in order to obtain qualitative insight about this group.

For the General Population group, we will follow a similar approach as the participant survey, by stratifying the sampling universe by CAMEO residential segment and completing six surveys for each of the 10 CAMEO residential segments. Table 4 shows the approximate distribution of non-participants by CAMEO residential segment

Table 4: Non-Participant Sample Design – Count of Residential Customers With Phone Number

CAMEO Residential Segment	Customers w/Phone #	Percent of Customers
01 - American Aristocracy	22,703	6.8%
02 - Exclusive Society	18,782	5.7%
03 - Prosperous Families	37,211	11.2%
04 – Enterprising Households	32,562	9.8%
05 - Comfortable Communities	32,185	9.7%
06 - Aspiring Consumers	24,632	7.4%
07 – Dynamic Neighborhoods	29,713	8.9%
08 - Diverse Communities	17,833	5.4%
09 – Stretched Tenants	34,379	10.4%
10 - Strained Society	16,482	5.0%
Missing or Refused (N/A)	65,680	19.8%
Total	332,162	100.0%

For the Near-Participant group, we will also, to the extent practicable, stratify the sampling universe by CAMEO residential segment and complete six surveys for each of the 10 CAMEO residential segments. For the ECM-Only group, we will attempt to stratify by contractor.

In drawing the sample of residential customers for the non-participant survey, we will select only records from the customer database that meet the following criteria:

- Had a “Do Not Contact” flag of 0 in the Xcel Energy residential customer database
- Had a “Do Not Call” flag of 0 in the Xcel Energy residential customer database
- Had a “Do Not Mail” flag of 0 in the Xcel Energy residential customer database
- Had a “Email Opt Out” flag of 0 in the Xcel Energy residential customer database
- Had a complete home telephone number in the Xcel Energy residential customer database

We do not intend to use information from the non-participant survey in developing our estimates of net-to-gross for the Residential Heating Products program.

Trade Partner Sampling Plan

The evaluation team proposes to stratify trade partners into four tiers based on the number of high efficiency gas furnace projects the trade partner completed during 2016 and first three months of 2017 (see Table 5). Tier 1, trade partners that completed more than 50 high-efficiency gas projects during the 15-month period, is comprised of 19 contractors (52% of all Residential Heating trade partners). While comprising only 10 percent of all of the trade partners, Tier 1 is responsible for 59% of high efficiency gas furnace projects (2,526) completed over the evaluation period.

Tier 2 is comprised of trade partners that completed between 21 and 50 gas furnace projects (27 contractors), accounting for a total of 918 projects. Tier 3 is comprised of contractors that completed between 6 and 20 projects (50 contractors), accounting for 563 projects. Finally, Tier 4 is comprised of trade partners that completed five or fewer high efficiency gas furnace projects (103 contractors). Tier 4 accounted for only 6% of all high-efficiency gas furnace projects completed during the 15-month evaluation period.

We propose to interview 28 trade partners, with a target of seven interviews per tier. Given the small number of trade partners within Tier 1 (19 contractors), it is possible that we will not fulfill our quota goal for that tier. If this is the case, we will move those sample points into one or more other tiers.

Table 5: Distribution of Trade Partners by Tier

Number of Projects	Trade Partners	Percent of Trade Partners	Projects Completed*	Percent of Projects	Sample Quota
Tier 1: More than 50	19	10%	2,526	59%	7
Tier 2: 21 – 50	27	14%	918	22%	7
Tier 3: 6 – 20	50	25%	563	13%	7
Tier 4: 5 or Fewer	103	52%	243	6%	7
Total	199	100%	4,250	100%	28

*Note: If a customer completed two or more high-efficiency gas projects during the 15-month evaluation period at the same premise, it is counted as only one project within this table.

We are currently working within the evaluation team to determine if information gathered through the trade partner interviews will be used in the development of estimates of net-to-gross.

Risks to Sample Plan

The results of any sample, interview, or survey are subject to the risk of biases, some of which may be proactively addressed. For those that cannot be addressed, EMI Consulting will exercise caution in correctly interpreting the results with these potential sources of bias in mind.

Respondents that choose to participate in the interviews or surveys may be systematically different than those that do not participate. We may miss gathering information due to these “unknown” differences in experiences between participants in the study and those who decline. If there is a high response rate, the likelihood of non-response bias is smaller. To mitigate non-response bias, the

evaluation team will provide a \$25 incentive for participant respondents, a \$25 incentive for non-participant respondents, and a \$50 incentive for trade partner respondents.

A.3 Benchmark Scoping Memorandum

To support the process and impact evaluation of the 2016 Xcel Energy energy efficiency programs, the EMI Consulting evaluation team will benchmark the Xcel Energy programs against peer utilities. The objective of the benchmarking is to identify opportunities to improve the Xcel Energy programs 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 program 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.

These interviews are being conducted with a set of six of Xcel Energy's peer utilities for the Colorado Residential Heating rebate program. Target respondents are managers of residential heating energy efficiency programs with similar rebate offerings. Table 1 below lists the targeted utilities and their corresponding programs, along with two additional utility programs that will serve as alternates in the event we are unable to obtain the necessary information from any of the first six utilities.

Table 6: Peer utilities and programs

Utility	Program Name	Reason for Inclusion
New Mexico Gas Company	Energy Star® Space Heating Program	Product Manager Recommendation
Rocky Mountain Power (Utah)	Wattsmart Heating & Cooling (ECM & Furn)	Product manager recommendation
NorthWestern Energy (Montana)	Efficiency Plus	Geographic proximity w/res furnace rebate
Rocky Mountain Power (Wyoming)	Wattsmart Heating & Cooling (ECM & Furn)	Geographic proximity w/res furnace rebate
Atmos Energy	Colorado SmartChoice Energy Eff. Rebates	Geographic proximity w/res furnace rebate
Dominion Energy / Questar Gas (Utah)	ThermWise Appliance Program	Geographic proximity w/res furnace rebate
Questar Gas Company (Utah) <i>[alternate]</i>	ThermWise Appliance Rebates program	Geographic proximity w/res furnace rebate
Black Hills Energy (Colorado) <i>[alternate]</i>	2017 CO Gas High-Eff. Furnaces Rebates	Geographic proximity w/res furnace rebate

This document presents the in-depth interview guide for peer utility heating rebate products. Table 7 identifies the interview questions related to each key performance indicator. Table 8 identifies the interview questions related to each contextual theme.

Table 7: Mapping of interview questions to indicators

Key Performance Indicator	Data Needed	Interview Question
Program energy savings goals	<ul style="list-style-type: none"> 2016 program energy savings goals (MWh and Mcf) 2016 program's savings (MWh and Mcf) 2016 total energy efficiency portfolio goal (MWh and Mcf) 	B3, B5, B6
Program budget cost of acquisition (e.g. \$/MWh, \$/Mcf)	<ul style="list-style-type: none"> 2016 program budget 2016 total gross energy savings for each peer program 	B7
Trade Ally Participation Levels	<ul style="list-style-type: none"> Number of active trade allies Number of trade allies that complete the majority of program projects 	C2b
Savings per project	<ul style="list-style-type: none"> Average kWh and/or therm savings per heating project 	B2
Net-to-gross ratios (NTGRs)	<ul style="list-style-type: none"> Method for developing NTG ratios NTG values estimated at program level, measure level, or both. 	B4
Cost effectiveness of program measures	<ul style="list-style-type: none"> Method used to calculate cost effectiveness Which measures are most cost effective 	B8

Table 8: Mapping of interview questions to contextual themes

Contextual themes	Data Needed	Interview Question
Program description	<ul style="list-style-type: none"> Overall program objectives, implementation approach, role of trade allies Overall scale/size of program (number of projects completed in 2016) 	A1, B1
Net-to-gross (NTG) savings approach	<ul style="list-style-type: none"> NTG approach, ratio applied, and calculation details. 	B4
Customer engagement practices	<ul style="list-style-type: none"> Methods used to engage customers 	C1
Trade partner engagement practices	<ul style="list-style-type: none"> Methods to engage trade partners 	C2
Measure types and incentives	<ul style="list-style-type: none"> List of measures and their efficiency levels, incentive levels, and (if available) incremental costs 	A2a, A2c, A2d
Method for establishing energy savings	<ul style="list-style-type: none"> Savings method – estimated, deemed, or combination 	A2b

Recruiting Instructions

The research team plans to send advance emails to any program managers with available emails. The email will contain an explanation of the research, as well as both an Xcel Energy and EMI Consulting 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 Residential Heating product qualitative research. 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 utility 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.

A.4 NTGR Approach

To support the process and impact evaluations of the 2016 Xcel Energy energy efficiency programs, the EMI Consulting evaluation team will be calculating a net-to-gross ratio (NTGR) for the CO Residential Heating Program. The objective for calculating a NTGR is to document the product's influence on the customer's decision to purchase energy efficiency equipment. Condensing furnaces have penetration rates nationally around 50%, while some markets are already transformed with penetration rates of condensing furnaces (but not yet highly efficient condensing furnaces) above 90%. These statistics suggest that both free-ridership and market transformation are plausible in this market.

To estimate the NTGR⁶ for the CO Residential Heating Program, the evaluation team will use a self-report approach (SRA) based on survey results with program participants. The remainder of this document presents a short description of the program to help frame the context of the NTGR discussion. It then presents an overview of the SRA, followed by the specific NTGR method for the CO Residential Heating Program.

Program Description

The Residential Heating product in Colorado encourages the purchase of highly efficient condensing forced air furnaces (with AFUEs of 95% or higher) and the use of electronically commutated motors (ECMs) by homeowners. The product provides rebates for qualifying equipment and maintains a list of approved contractors. Outreach is provided by Xcel Energy on its website and collateral material and by qualified contractors (trade partners) with direct interaction with customers during the furnace sales process. Forced air natural gas furnaces account for the majority of residential heating systems used by Xcel Energy residential customers in Colorado. Current standards allow for non-condensing furnaces at 80% efficiency levels, although condensing furnaces provide efficiency levels of 90% and greater, thereby saving substantial amounts of natural gas. Xcel Energy's rebate requirement is a minimum 95% AFUE furnace.

⁶ The NTGR is a factor representing the portion of gross savings that are attributable to the program. The product of the gross savings and the NTGR equal the net savings of the program. The NTGR may be composed of a variety of factors that create differences between gross and net savings, commonly including free riders, participant spillover and nonparticipant spillover (NTGR = (1-Free Ridership) + Participant Spillover + Nonparticipant Spillover)). The factor can be estimated and applied separately to either gross energy or demand savings.

Electronically commutated [fan] motors (ECM) reduce the electricity required by furnaces to distribute air through ducts. However, ECMs are scheduled to become standard equipment in mid-2019, so ECMs will not be an area of focus in the evaluation. Xcel Energy rebates both condensing furnaces and ECMs (installed with new furnaces or as retrofits). There are currently 242 participating contractors listed on the Xcel Energy website. The participation requirement is for a trade partner to have at least one technician with NATE (North American Technician Excellence) certification in gas heating.

Rationale and Overall Approach

In DSM evaluation studies, the objective of Net-to-Gross Ratio (NTGR) research is to assess the impact that various program intervention strategies are having on the program participants, non-participants, and the larger market.

For Xcel Energy, program intervention strategies take a variety of forms across products – financial incentives to customers, financial incentives to market actors, contractor training, program marketing, and technical assistance (e.g., audits). Any one of these efforts can influence a customer to install high efficiency equipment and our research is designed to uncover and document that influence (in the forms of free-ridership and spillover), ultimately resulting in an estimate of program attribution (in the form of a NTGR). Our approach includes primary data collected from a variety of sources: program participants, Xcel Energy trade partners, program benchmarking data, interviews with vendors when necessary, and sales or historical data where applicable and available. While we will rely primarily on data collected from program participants to estimate the NTGR, we will also take these other data into account to qualitatively assess the accuracy of the NTGR and make any necessary adjustments. Finally, we will consider any known program changes when recommending NTGRs that will be applied to future program years.

Initial Algorithm-Based NTGR Calculation

The total NTGR will be calculated using the formula below:

$$\text{NTGR} = (1 - \text{free ridership rate} + \text{participant spillover rate})$$

We will calculate an initial NTGR estimate using an algorithm that draws from responses by program participants to a battery of self-report questions designed to determine program-related free ridership and spillover. These questions will inquire about the influence of Xcel Energy or the registered trade partner in installing the high-efficiency furnace, as well as identify spillover from the program to other efficiency measures. (Because trade partners are a core component of the program, we will treat the influence of trade partners as a “program factor,” which results in full credit to the program for the influence of the trade partners on customer choices.)

The initial NTGR is based on the self-report approach (SRA) specified in the 2016 Illinois Statewide Technical Reference Manual for Energy Efficiency⁷ and draws on recommended survey questions specified therein. The SRA involves contacting a sample of participant decision-makers and asking them a series of closed- and open-ended questions about their motivations for installing the

⁷ Specifically, we will be drawing from Version 6.0: Volume 4: Cross-Cutting Measures and Attachments: Attachment A.

efficiency equipment, about whether they would have installed the same energy efficient equipment in the absence of the program, and questions that attempt to rule out rival explanations for the installation.

We have adapted the recommended questions from the Illinois TRM to match the Residential Heating product's program theory and implementation approach. Tables 1 and 2 attached to this memo list the questions and logic behind them. Below each of these tables, are the formulas for the initial NTGR calculation.

Qualitative Data to Be Considered

In addition to the NTGR algorithm described above, we will consider the overall narrative of the program's influence from a broader set of survey questions (from the participant survey) and interview questions (from trade partner interviews). Specifically, we will consider the insights gained from a module in the customer survey that explores the customer journey, which should provide further insight on how the Xcel Energy program fits into the customer's overall decision-making. Further, we will ask participating trade partners qualitatively oriented questions about any market effects from the products, such as: changes in their sales of energy efficient equipment, their business practices and sales strategies, or the equipment availability due to the influence of the product.

The following questions from the participating customer survey will provide qualitative input and insight that we will compare to the NTGR score:

- What prompted you to think that you might benefit from a high-efficiency furnace?
- With how many different contractors did you ultimately discuss the project or get bids?
- Xcel Energy Trade Partners are required to follow industry best practices for furnace installations and go through specific training to ensure customers receive a quality project. How important was the contractor's participation with this program when you selected them?
- Did the contractor mention the availability of Xcel Energy rebates before you selected them, after you selected them, or do you not recall them mentioning the rebate directly?
- Did the availability of an Xcel Energy rebate lead you to purchase a more energy efficient furnace as part of the part of this project?
- In your own words, please tell me the influence the package of customer support from Xcel Energy had on your decision to install the high-efficiency furnace.

The following questions from the trade partner interviews will provide qualitative input and insight that we will compare to the NTG score:

Change in Market Conditions

- What trends do you see in the market place for heating equipment?

Change in Trade partner Practices

- What prompted you to register as an Xcel Energy trade partner?

- Has participating in the program changed your approach to heating projects? All projects or just those that will qualify for a rebate? In what way?

Effect of NATE Certification Requirement

- What is your perception regarding the importance of NATE certification?
- Has the addition of the NATE requirement changed your approach to program projects?
- Were you already NATE certified or did you decide to become NATE certified to enroll as a trade partner with the program?

Interaction with Customers about Xcel Energy Program

- How and when do you discuss rebates or your company's participation as a registered Xcel Energy trade partner with customers?
- Who typically brings up the rebates?
- About how often are your customers already aware of the Residential Heating rebate program before you tell them about it?
- How big of a factor are the high-efficiency gas furnace rebates when customers are deciding what efficiency of a furnace to install?

Corroboration of spillover results will be lighter than similar efforts to double-check free ridership results. Mostly, we will draw on responses to the following questions (as a consistency check for responses to the question about influence of the Residential Heating product):

In a sentence or two, can you describe how the installation of the high-efficiency furnace affected your choice to install or acquire (a) [efficiency measure]? [RECORD VERBATIM]

What is the main reason you installed or acquired (a) [INSERT efficiency measure]? [RECORD VERBATIM]

Combining the Data to Determine Net-to-Gross Ratio

By design, our final NTGR estimate recommendation includes data from mixed methods research – both quantitative data and qualitative data. As noted, the initial NTGR estimate will be calculated through an algorithm that draws from responses to participant self-report questions. After the initial NTGR estimate is calculated, we will then utilize the quantitative and qualitative data to construct a logical, internally consistent, and coherent narrative of program attribution that attempts to identify all possible pathways of Xcel Energy influence. We will rely on the following data sources to construct the NTGR:

- Participant surveys – focuses on project-level effects
- Trade-partner interviews - focuses on overall market effects
- Program benchmarking data – provides point of comparison
- Known program changes in upcoming years – factors any known implications for future changes in program design

Based on these results, we then may adjust the NTGR to create a final recommended NTGR that is consistent with this narrative.

When we incorporate other, non-participant data, we will rely on the following principles:

- 1 The method chosen should be balanced. That is, the method should allow for the possibility that other influences can either increase or decrease the initial NTGR calculated from the participant survey responses.
- 2 The plan for capturing other influences should be based on a well-conceived causal framework. As evaluators, we will need to build a compelling case using a variety of quantitative and/or qualitative data for estimating a customer's NTGR. In these more complex situations, in order to maximize the reliability of the NTGR estimate, at least two members of our team will be involved in analyzing the data. Each person will analyze the data separately and then compare and discuss the results.

The final NTGR recommendation is based on the professional judgment of our team after considering all available quantitative and qualitative data. When data provides a conflicting or unclear causal narrative, our team will favor the program, giving Xcel Energy the benefit of the doubt.

Free Ridership Scoring

The quantitative scoring for the free ridership index associated with any one sampled project will draw on the customer survey questions listed in

Table 9: Free Ridership Scoring

Question code	Question	Scale	Logic
RCVD_REB	Did you receive a rebate check directly from Xcel Energy, a reduced project cost because of incentives from Xcel Energy, or neither one?	binary	Used to skip program influence questions below that do not apply to the respondent.
EXP_XCEL_INFO	Do you recall seeing any encouragement from Xcel Energy to install a high efficiency furnace prior to installing your furnace, such as information in bill stuffers or other messaging from the utility?	binary or categorical	Used to skip program influence questions below that do not apply to the respondent.
PROJ_INFL_INFO	How influential was any encouragement you saw from Xcel Energy to consider installing a high-efficiency furnace in your decision to install the furnace?	0 = not at all influential ... 10 = very influential	<p>This question tests whether general Xcel Energy information led the customer to choose a high-efficiency furnace.</p> <p>We assume that customers will respond with a 0 if they would have conducted the project anyway, a 10 if they would not have done the project without the prompting from Xcel Energy, or various scores in-between that roughly correlate with the probability that they would have conducted the project.</p>

Question code	Question	Scale	Logic
PROJ_DET_REB	How influential was the availability of the rebate from Xcel Energy on your decision to install the high efficiency furnace that you installed?	0 = not at all influential ... 10 = very influential	<p>This question tests whether the customer would have installed the same high efficiency furnace even without the Xcel Energy rebate.</p> <p>Similar to PROJ_INFL_INFO, we assume that customers will respond with a 0 if they would have conducted the same high efficiency furnace installation, a 10 if they would have not installed the high-efficiency furnace, or a value in-between that roughly correlates with the extent to which the rebate lifted the thoroughness of the project from what they would have done to the project they did. Mathematically, a response of a 5 will translate to giving Xcel Energy rebates credit for half of the project savings, so a score of 5 assumes that the respondent would have conducted a project half-way between the rebated project they completed and no project at all if the rebate had not existed.</p>
PROJ_DET_CONT	How influential was the contractor recommendation on your decision to install the high efficiency furnace that you installed?	0 = not at all influential ... 10 = very influential	<p>This question tests whether the customer would have installed the same high efficiency furnace even without marketing and proactive outreach by the participating contractor they used. We assume that all contractor influence is the result of the program, so that contractors would have had no effect on customers on their own.</p> <p>We assume that the respondent's score can be interpreted similarly as described above for PROJ_DET_REB.</p> <p>PROJ_INFL_INFO, PROJ_DET_REB, and PROJ_DET_CONT work together so that the one with the highest score reflects the credit the program receives for having influenced the customer. We recognize that this may undervalue the program influence from multiple program attributes working together. We address this with a consistency check in the next question.</p>
PROJ_DET_COMB	Now, please think about all of the items we have talked about – information from Xcel Energy, rebates from Xcel Energy, and the Xcel Energy registered contractor you used—together as a package. How influential was this package of customer support on your decision	0 = not at all influential ... 10 = very influential	<p>This question serves as a second way of testing the program's overall influence on the detailed scope of the project completed. We assume the respondent's score can be interpreted in the same way as PROJ_INFL_INFO, PROJ_DET_REB and PROJ_DET_CONT.</p> <p>We will compare this score to the maximum of</p>

Question code	Question	Scale	Logic
	to install the new high efficiency furnace?		<p>the individual program influencers (PROJ_INFL_INFO, PROJ_DET_REB, and PROJ_DET_CONT) and use the average of these two values for scoring. Separately, we will compare how often these two scores differed substantially and note any clear, consistent tendencies (such as consistently higher scores for the combined assessment) in our qualitative discussion of net-to-gross scores.</p> <p>(This combined project influence score comprises one half of the free ridership score and is averaged with the hypothetical “no program” metric we describe below.)</p>
NO_PROG_DET	Still thinking about this same package of customer support and rebate, if this package had not existed, do you think you would have...	<p>0 = installed the same exact furnace</p> <p>3 = installed a similarly energy-efficient furnace</p> <p>7 = installed a less energy-efficient furnace</p> <p>10 = not installed a new furnace yet</p>	<p>This question looks at what would have happened in the absence of the program. It seeks to combine whether the customer would have installed a new furnace and how energy efficient that furnace would have been (as best as the customer can assess for this hypothetical project). Scores are intended to align roughly with the program influencer scores above, so a 0 implies the program should get no credit and a 10 implies the program should get full credit.</p> <p>For free rider scoring, this metric (adjusted for timing delays described below) serves as counterbalance to the program’s influence computed using the variables above. Those two ways of looking at the program’s influence are combined (averaged) to assess the degree of free ridership.</p>
NO_PROG_TIMING	If this same package of customer support and rebate had not existed, do you think you would have installed this furnace...?	<p>0 = about the same time</p> <p>3 = in a year to two</p> <p>7 = three or four years from now</p> <p>10 = longer than four years from now</p>	<p>This question assesses when the customer would have installed the high-efficiency furnace in the absence of the program. If there would have been a delay in the project, we increase the NO_PROG_DET score above closer toward 10 (full program credit) to account for the program’s ability to get the high-efficiency furnace installed earlier (and thus achieve those savings). We use an arbitrary threshold of four years, so that a project completed more than four years later would result in full program credit.</p> <p>Mathematically, that works out to the following: $\text{adjusted NO_PROG_DET} = \text{NO_PROG_DET} + (10 - \text{NO_PROG_DET}) *$</p>

Question code	Question	Scale	Logic
			(NO_PROG_TIMING / 10) The result of this ADJ_NO_PROG_DET is averaged with the results of the program influencer metric for the final score.

Combining these variables, the computation of the free ridership score entails the following process:

AVG {AVG [MAX (PROJ_INFL_INFO, PROJ_DET_REB, PROJ_DET_CONT), PROJ_DET_COMB], ADJ_NO_PROG_DET}

Spillover Scoring

The quantitative scoring for the spillover index associated with any one sampled project will draw on the customer survey questions listed in Table 10.

Table 10. Spillover Scoring

Question code	Question	Scale	Logic
OTH_UPGR	Since installing your new furnace, have you made any other energy efficiency upgrades to your heating or cooling system, other home appliances, windows or doors, light bulbs or lighting fixtures, or any other aspect of your home's energy efficiency?	binary	Screening question used to skip out of spillover module if not relevant.
(eff_meas)	What did you do?	binary	Screening used to identify the individual products for which the respondent contributes to a spillover factor and that require additional survey questions
(eff_meas)_REB	Did you receive a utility rebate for the [efficiency measure]?	binary	This question identifies whether another program would take credit for the savings associated with this measure (subject to NTG adjustments). If a rebate was offered by another utility program, no credit should be offered by the Residential Heating product.
(eff_meas)_INFL	How influential was installing the furnace in your consideration of a(n) [INSERT efficiency measure]?	0 = not at all important ... 10 = very important	This question seeks to measure the influence of the Residential Heating product on prompting the efficiency upgrade. We assume that customers will respond with a 0 if they would have conducted the other efficiency measure anyway, a 10 if they would not have done the efficiency measure without having done the

			installing the high-efficiency furnace, or various scores in-between that roughly correlate with the probability that they would have implemented the efficiency measure in question.
(eff_meas)_EFF	How do you know that the [efficiency measure] you installed or acquired was energy efficient?	verbatim response, but coded into a binary variable	This question seeks to verify that the measure installed was more efficient than basic practice. During analysis, we will look for mentions of ENERGY STAR, equivalency with program requirements (if installed without a rebate), and efficiency levels beyond regulatory standards. If the respondent identifies one of these, the measure will be coded as efficient. If not, it will not count as an efficiency upgrade. For the analysis, we will assign a value to variable (eff_meas)_SAV that corresponds to the savings associated with one unit/item.
(eff_meas)_QUANT	How many [INSERT efficiency_measure] did you install?	number	The number of units or items will be multiplied by the savings associated with the measure for a gross savings estimate.

Computation of spillover involves a four-step process comprising:

1. screening out of self-reported efficiency actions that should not be counted toward spillover (exclude if (eff_meas)_REB = 1 or (eff_meas)_EFF = 0)
2. computation of energy savings associated with remaining efficiency measures
 $[(\text{eff_meas})_TOTAL = (\text{eff_meas})_SAV * (\text{eff_meas})_QUANT]$ – computed separately for each measure at the respondent level
3. adjustment for influence of the Residential Heating product $[(\text{eff_meas})_ADJ = (\text{eff_meas})_TOTAL * (\text{eff_meas})_INFL]$ – computed separately for each measure at the respondent level
4. incorporation into the overall NTG factor by summing (eff_meas)_ADJ across all respondents and dividing into total gross savings

APPENDIX B: DATA COLLECTION DOCUMENTS

B.1 Participant Survey Guide

Introduction

Intro: Hello, this is <INTERVIEWER NAME> calling from [SURVEY FIRM] on behalf of Xcel Energy. May I please speak with [PROGRAM CONTACT]?

[When connected with correct respondent]: Hello. This is <INTERVIEWER NAME> calling from [SURVEY FIRM] on behalf of Xcel Energy. I'm calling because our records show that you recently completed a furnace project at your home and received a rebate through Xcel Energy's Residential Heating rebate program and I'd like to do ask a short set of questions about your experience with the rebate program. Your few minutes will help us improve this program for other customers like you. As a token of our appreciation, we will send you a \$25 gift card. Are you the best person to talk to about these energy efficiency upgrades and energy use at your home?

1. Yes (CONTINUE)
2. No (SAY:) Who would be the best person to talk to about the [MEASURE] installed and energy use at your house? (REPEAT INTRO WHEN CORRECT PERSON COMES ON LINE; ARRANGE CALLBACK IF NECESSARY)

[IF NEEDED] Xcel Energy would like to better understand how households like yours think about and manage their energy use. The Residential Heating rebate program is designed to help households with energy saving efforts. Your input is very important to help Xcel Energy improve its energy rebate programs.

Section A: Project Initiation, Customer Journey, and Role of Contractor

As I go through these questions, please remember that while you may have completed other projects at the same time as your furnace project such as an air conditioner, for today we are only focused on your furnace installation specifically.

A1. To start, about how long have you lived in this home? [DO NOT READ]

1. less than a year
2. 1-2 years
3. 3-5 years
4. 6-10 years
5. 11-20 years
6. more than 20 years
7. NOT PRIMARY HOME
88. DON'T KNOW
99. Prefer not to answer

A2. Approximately how long ago would you estimate you first started thinking that you might want to upgrade your furnace? [PROBE IF NEEDED: About how many months or years ago?]
[RECORD: # of months]

_____ months

A3. What do you remember made you start thinking about it? [INTERVIEWER NOTE: Record response. Okay to summarize, but listen for and record any mention of Xcel Energy or the trade partner influence without prompting.]

A4. Do you recall seeing any encouragement from Xcel Energy to upgrade your furnace prior to completing your upgrade, such as information in bill stuffers or other messaging from the utility?

- 1. yes
- 2. no
- 88. DON'T KNOW
- 99. Prefer not to answer

A5. Do you recall seeing any lists of qualified heating contractors on Xcel Energy's website prior to completing your upgrade?

- 1. yes
- 2. no
- 88. DON'T KNOW
- 99. Prefer not to answer

A6. About how long was it from when you first thought about doing a furnace upgrade until you first started talking with a contractor? Was it...

- 1. Less than a month?
- 2. Between 1 and 6 months?
- 3. Between 7 months and 1 year?
- 4. A year or two?
- 5. More than two years?
- 88. DON'T KNOW
- 99. Prefer not to answer

A7. Did you initiate the first contact with a contractor, or did a contractor first reach out to you and suggest a heating upgrade? [INTERVIEWER NOTE: This could be any contractor with whom the household discussed the heating project they did; not just the one who did the work.]

- 1. I contacted a contractor about this project
- 2. A contractor contacted me [skip A9]
- 3. OTHER – DESCRIBE: [skip A9]
- 88. DO NOT RECALL / DON'T KNOW [skip A9]
- 99. Prefer not to answer [skip A9]

[If A7 = 1 ("I contacted a contractor about this project")]

A8 How did you decide which contractor or contractors to contact? [RECORD VERBATIM]

A9. With how many different contractors did you ultimately discuss the project or get bids?

- 1. 1
- 2. 2
- 3. 3

- 4. 4
- 5. 5
- 6. more than 5
- 88. DON'T KNOW
- 99. Prefer not to answer

A10a. Xcel Energy identifies certain insulation contractors as qualified trade partners. This requires the contractor to follow industry best practices and go through specific training to ensure customers receive a quality project. Were you aware of this part of Xcel Energy's program when you selected your contractor?.

- 1. Yes
- 2. No [skp A11]
- 88. DON'T KNOW [skp A11]
- 99. Prefer not to answer [skp A11]

A10b. How important was your insulation contractor's participation with this program when you selected them?

- 1. Made no difference
- 2. Was a bonus for a contractor you would have selected anyway
- 3. Was one of several factors you considered
- 4. Was a decisive factor in your choice of contractors
- 88. DON'T KNOW
- 99. Prefer not to answer

A11. Do you recall your contractor mentioning the availability of Xcel Energy rebates?

- 1. Yes
- 2. No [skp A12]
- 8. DON'T KNOW [skp A12]
- 99. Prefer not to answer [sk pA12]

[IF A11=1]

A11a Did the contractor mention the rebates before you had decided to work with them for this project, or after you had decided to work with them?

- 1. Before
- 2. After
- 88. DON'T KNOW
- 99. Prefer not to answer

A12. Did you receive a rebate check directly from Xcel Energy, a reduced project cost because of incentives from Xcel Energy, or neither one?

- 1. Rebate directly from Xcel Energy
- 2. Reduced project cost from the contractor
- 3. Neither one
- 4. BOTH
- 88. DON'T KNOW

99. Prefer not to answer

[PROGRAMMING NOTE: CREATE VARIABLE RCVD_REB. SET TO 1 IF A12 = 1 OR 2 OR 4. SET TO 0 IF A12 = 3. SET TO 8 IF A12 = 88 or 99.]

A13. Did the availability of an Xcel Energy rebate lead you to buy a *more* energy efficient furnace as part of this project?

1. Yes ==> In what way? [Record verbatim]
2. No
88. DON'T KNOW
99. Prefer not to answer

A14. How helpful was the contractor in helping you fill out the rebate form, would you say extremely helpful, very helpful, somewhat helpful, a little bit helpful, or not at all helpful?

1. Extremely helpful
2. Very helpful
3. Somewhat helpful
4. A little bit helpful
5. Not at all helpful
77. Not applicable
88. Don't know
99. Prefer not to answer

Section B: Program Implementation, Delivery, and Market Response

[PROGRAMMING INSTRUCTIONS: SKIP TO C1 IF A12= 2 OR 3 OR 88m or 99]

B1. This next group of questions is about the rebate you received from Xcel Energy. How do you first remember hearing about Xcel Energy's residential heating rebate program? [DO NOT READ, MULTI-RESPONSE]?

1. Bill insert
2. Xcel Energy Website
3. Billboard or other outdoor advertisement
4. Digital / web advertisement (not on the Xcel Energy Website.
5. Television advertisement
6. Radio advertisement
7. Contractor
8. Friend or family
9. Social media
10. Other Xcel Rep (calls etc.)
11. Other _____
88. Don't know
99. Prefer not to answer

B2. During any phase of your furnace project did you have any questions for your contractor about the rebate program or about the rebate itself?

- 1. Yes [record follow up if given]
- 2. No [skip B3]
- 88. Don't know [skip B3]
- 99. Prefer not to answer [skip B3]

B2a. Was your contractor able to answer your questions to your satisfaction?

- 1. Yes
- 2. No
- 88. DON'T KNOW
- 99. Prefer not to answer

B3. About how long did it take to receive your rebate after your project was completed?

- 1. 1 week or less
- 2. More than a week, but less than 1 month
- 3. 1 or 2 months
- 4. More than 2 months
- 5. HAVE NOT RECEIVED REBATE YET
- 88. DON'T KNOW
- 99. Prefer not to answer

B4. Did an Xcel Energy representative attempt to contact you concerning your furnace project or your rebate?

- 1. Yes
- 2. No [skip C1]
- 88. DONT KNOW [skip C1]
- 99. Prefer not to answer [skip C1]

B4a. How did the Xcel Energy representative attempt to contact you? ? [READ ONLY IF NEEDED. MULTI-RESPONSE]

- 1. Email
- 2. Phone
- 3. In-person
- 4. Mail
- 5. Web (chat or help form submission?)
- 88. Don't know
- 99. Prefer not to answer

B4b. Why did the Xcel Energy representative contact you? READ ONLY IF NEEDED. MULTI-RESPONSE]

- 1. Incomplete application form
- 2. Missing invoice information
- 3. Inspection to verify installation of furnace
- 4. Other – specify
- 88. DON'T KNOW
- 99. Prefer not to answer

B5. If an Xcel Energy representative needed to contact you, how would you prefer to be reached?
[READ ONLY IF NEEDED. MULTI-RESPONSE]

1. Email
2. Phone
3. In-person
4. Mail
5. Web (chat or help form submission?)
77. Prefer not to be contacted
88. Don't know
99. Prefer not to answer

Section C: Awareness and Satisfaction (Programs and Components)

C1. For each of the following, please tell me if you were very dissatisfied, somewhat dissatisfied, neither satisfied nor dissatisfied, somewhat satisfied or very satisfied.

- C1a. The rebate program overall
- C1b. The furnace installed through the program
- C1c. The contractor who installed the furnace
- C1d [A12 = 1 OR 4]. Xcel Energy as an energy provider
- C1e [A12 = 1, 2, OR 4]. The amount of time it took to receive your rebate for your high efficiency furnace
- C1f. [A12 = 1, 2, OR 4]. The dollar amount of the rebate for the high efficiency furnace_
- C1g. [If B4=yes] Interactions with Xcel Energy
- C1h. The overall value of the furnace you received for the price you paid

- 1) Very Dissatisfied
- 2) Somewhat Dissatisfied
- 3) Neither Satisfied Nor Dissatisfied
- 4) Somewhat Satisfied
- 5) Very Satisfied
77. Not applicable
88. Don't know
99. Prefer not to answer

[FOR ANY RESPONSES IN C1 WITH A RATING OF 1-3, FOLLOW UP WITH]
C1x_detail. Can you tell me why you gave that rating? [RECORD VERBATIM]

C2. Do you have any recommendations for improving the heating rebate program?

1. Yes, what are they:
2. No
88. DON'T KNOW
99. Prefer not to answer

Section D: Motivations for Participation

D1. Was the furnace you installed replacing an existing furnace?

1. Yes
2. No [skip E1]
- 88. DON'T KNOW [skip E1]
99. Prefer not to answer [skip E1]

[IF D1 > 1, SKIP TO E1]

D2. Was the replaced furnace

1. Fully functional and not in need of repair?
2. Functional, but needed minor repairs?
3. Functional, but needed major repairs? [skip E1]
4. Not functional? [skip E1]
88. DON'T KNOW [skip E1]
99. Prefer not to answer [skip E1]

[IF D2 > 2, SKIP TO E1]

D3. About how old (in years) was the furnace prior to replacement?

(Probe if necessary: Your best guess is fine.)

[RECORD AGE]

88. DON'T KNOW
99. Prefer not to answer

D4. How much longer (in years) do you think your old furnace would have lasted if you had not replaced it?

(Probe if necessary: Your best guess is fine.)

[RECORD YEARS]

88. DON'T KNOW
99. Prefer not to answer

D5. Next I will read a list of reasons you may have considered when you decided to replace your furnace. For each, please tell me if it was Not at all important, a little important, somewhat important, very important or extremely important. How important was...

- a. Reducing environmental impact of your home
- b. Upgrading out-of-date equipment
- c. Improving home comfort
- d. Improving air quality
- e. Receiving financial incentive
- f. Reducing energy bill amounts
- g. The contractor recommendation

...on your decision to upgrade your furnace?

- 1) Not at all important
- 2) A little important

- 3) Somewhat important
- 4) Very important
- 5) Extremely important
- 77) NOT APPLICABLE
- 88) DON'T KNOW
- 99. Prefer not to answer

D6. What impacts or effects have you experienced as a result of the furnace installation you had done?

- [RECORD VERBATIM]
- 88. DON'T KNOW
- 99. Prefer not to answer

Section E: Free-ridership

E1. Before participating in the heating rebate program, do you recall receiving any other rebates from Xcel Energy for making energy efficiency upgrades at your home?

- 1.. Yes
- 2.. No
- 88.. DON'T KNOW
- 99. Prefer not to answer

[IF A4 = 1]

E2. Thinking of the furnace project, how influential was any encouragement you saw from Xcel Energy to consider a high-efficiency furnace in your decision to upgrade to a high-efficiency furnace? Please use a scale from 0 to 10 where 0 means “not at all influential and 10 means “very influential.”

- 0) not at all influential
- ...
- 10) very influential
- 88) DON'T KNOW
- 99. Prefer not to answer

[IF RCVD_REB = 1]

E3. How influential was the availability of the rebate form Xcel Energy on your decision to install **the high efficiency furnace** that you installed? Please use a scale from 0 to 10 where 0 means “not at all influential” and 10 means “very influential.”]

- 0) not at all influential
- ...
- 10) very influential
- 88) DON'T KNOW
- 99. Prefer not to answer

E3a. And how influential was the contractor recommendation on your decision to install **the high efficiency furnace** that you installed? Please use a scale from 0 to 10 where 0 means “not at all influential” and 10 means “very influential.”]

- 0) not at all influential
- ...
- 10) very influential
- 88) DON'T KNOW
- 99. Prefer not to answer

E4. Now, please think about all of the items we have talked about – information from Xcel Energy, rebates from Xcel Energy, and information from the contractor you used—together as a package. How influential was this package of customer support on your decision to install the new high-efficiency furnace? Again, please use a scale from 0 to 10 where 0 means “not at all influential” and 10 means “very influential.”

- 0) not at all influential
- ...
- 10) very influential
- 88) DON'T KNOW
- 99. Prefer not to answer

E5. Still thinking about this same package of customer support and rebate, if this package had not existed, do you think you would have... [AS NEEDED, REMIND RESPONDENT THAT WE ARE TALKING ABOUT ANY ENCOURAGEMENT FROM XCEL ENERGY THAT THE CUSTOMER MIGHT HAVE SEEN TO UPGRADE A FURNACE, THE XCEL ENERGY REBATE, AND THE XCEL ENERGY REGISTERED CONTRACTOR.] [REVIEWER NOTE: FOR ANALYSIS, WE WILL APPLY VALUES OF 0, 3, 7, AND 10 TO ITEMS 1, 2, 3, AND 4 BELOW]

- 1. installed the same exact furnace
- 2. installed a similarly energy-efficient furnace
- 3. installed a less energy efficient furnace
- 4. not installed a new furnace yet
- 88. DON'T KNOW
- 99. Prefer not to answer

E6. Now I would like you to think about timing of the project. If this Xcel Energy consumer support and rebate package did not exist, do you think you would have installed this furnace...? [REVIEWER NOTE: FOR ANALYSIS, WE WILL APPLY VALUES OF 0, 3, 7, AND 10 TO ITEMS 1, 2, 3, AND 4 BELOW]

- 1. about the same time as the furnace project you did
- 2. in a year or two
- 3. three or four years from now
- 4. longer than four years from now
- 88. DON'T KNOW
- 99. Prefer not to answer

E7. In your own words, how would you describe the influence the package of customer support from Xcel Energy had on your decision to install the new high-efficiency furnace. [RECORD VERBATIM]

Section F: Spillover and market effects

F1. Since installing your new furnace, have you made any other energy efficiency upgrades to your heating or cooling system, other home appliances, windows or doors, light bulbs or lighting fixtures, or any other aspect of your home's energy efficiency?

1. Yes
2. No [skip G1]
88. DON'T KNOW [skip G1]
99. Prefer not to answer

[If F1=1

F2. What did you do? [DO NOT READ. MULTI-RESPONSE. PROMPT LIGHTLY WITH "ANYTHING ELSE?" SELECT EQUIPMENT THAT WAS INSTALLED OFF LIST BELOW OR SPECIFY IN OTHER]

1. efficient **light bulbs** (CFLs or LEDs.
2. efficient **lighting fixtures**
3. more efficient **primary heating system** (heat pump, furnace, boiler)
4. more efficient **primary cooling system** (heat pump, air conditioning, evaporative cooler)
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. **other** (specify) _____
88. Don't know
99. Prefer not to answer

[PROGRAMMING NOTE: F3 THROUGH F8 FORM A LOOP THAT WE GO THROUGH FOR EACH OF THE FIRST THREE MENTIONS IN F2. (MOST RESPONDENTS WILL HAVE FEWER THAN THREE.) PIPE IN RELEVANT RESPONSE FROM F2 AS efficiency_measure FOR EACH ROUND THROUGH THE LOOP.]

F3_x. Did you receive a utility rebate for the [INSERT efficiency_measure]?

1. Yes
2. No
88. DON'T KNOW
99. Prefer not to answer

[If F3_x=1]

F4_x. How influential was installing the furnace in your consideration of a(n) [efficiency_measure]? Please answer using a scale from 0, meaning not at all influential, to 10, meaning very influential.

0) not at all influential

...

10) very influential

88) DON'T KNOW

99. Prefer not to answer

[IF F3_x = 1 AND (F4_x > 6 AND < 88)]

F5_x. In a sentence or two, can you describe how the installation of the high-efficiency furnace affected your choice to install or acquire (a) [efficiency_measure]?

_____ [RECORD VERBATIM]

[IF F3_x = 1 AND (F4_x > 6 AND < 88)]

F6_x. How do you know that the [efficiency_measure] you installed or acquired was energy efficient?

_____ [RECORD VERBATIM]

[IF F3_x = 1 AND (F4_x > 6 AND < 88)]

F7_x. How many [efficiency_measure] did you install? [INTERVIEWER NOTE: WORD IN THE PLURAL. IF RESPONDENT OFFERS A RANGE, INSERT THE MIDPOINT.]

_____ [RECORD NUMBER]

98 DON'T KNOW

[IF F3_x = 1 AND (F4_x > 6 AND < 88)]

F8a_x. What is the main reason you installed or acquired (a) [efficiency_measure]?

_____ [RECORD VERBATIM]

[PROGRAMMING NOTE: RETURN TO F3 FOR A SECOND AND THIRD ROUND THROUGH F3-F8 FOR OTHER MENTIONS IN F2, IF NEEDED. MAXIMUM OF THREE TOTAL LOOPS THROUGH F3-F8.]

Section G: Net Promoter

G1. How likely are you to recommend the residential heating rebate program to a friend or family member, or colleague? Would you say...

1) Extremely likely

2. Very likely

3. Somewhat likely

- 4. A little likely
- 5. Not at all likely
- 88. DON'T KNOW
- 99. Prefer not to answer

[If G1 < 88]

G1a. Please provide a sentence or two explaining your rating. [RECORD VERBATIM]

Section Gen: Household Characteristics and Demographics

Gen1. Finally, we have a few demographic questions for classification purposes only. Do you own or rent your home where the furnace was installed?

- 1. Own
- 2. Lease / Rent
- 3. Other _____
- 88. DON'T KNOW
- 99. Prefer not to answer

[If Gen1 > 1]

Gen1a. Do you pay your Xcel energy bill, or does someone else (e.g., a landlord)?

- 1. Pay own
- 2. Other pays
- 88. DON'T KNOW
- 99. Prefer not to answer

Gen2. Is your home a single-family home or a structure with more than one housing unit, such as a duplex, triplex, or quad?

- 1. single family home [skp Gen3]
- 2. more than one unit
- 88. DON'T KNOW [skp Gen3]
- 99. Prefer not to answer [skp Gen3]

Gen2a. How many units are in the structure? [RECORD #]

- _____
- 8888. DON'T KNOW
- 9999. Prefer not to answer

Gen3. Approximately what is the total square footage of your home? [CODE RESPONSE. READ ONLY IF NEEDED]

- 1. Less than 500 square feet
- 2. Between 500 and 749 square feet
- 3. Between 750 and 999 square feet
- 4. Between 1,000 and 1,499 square feet
- 5. Between 1,500 and 1,999 square feet
- 6. Between 2,000 and 2,499 square feet
- 7. Between 2,500 and 2,999 square feet
- 8. Between 3,000 and 3,999 square feet

- 9. 4,000 or more square feet
- 88. DON'T KNOW
- 99. Prefer not to answer

Gen4. Approximately what year was your home built? [CODE RESPONSE. READ ONLY IF NEEDED]

- 1. 1939 or earlier
- 2. 1940 to 1949
- 3. 1950 to 1959
- 4. 1960 to 1969
- 5. 1970 to 1979
- 6. 1980 to 1989
- 7. 1990 to 1999
- 8. 2000 to 2009
- 9. 2010 to 2013
- 10. 2014 and later
- 88. Don't know
- 99. Prefer not to answer

Gen5. How many people live in your household? [RECORD] _____

Gen6. What is your current age? [RECORD – IF NEEDED, ACCEPT THE DECADE THE RESPONDENT IS IN: 20s, 30s, 40s, ETC. AND RECORD AS SUCH]

Gen7. And this is my last question. Please indicate which of the following ranges best reflects your household's total income before taxes last year. Feel free to stop me when I get to the appropriate range. Was it...? [READ RANGES]

- 1. Under \$20,000
- 2. \$20,000 to \$39,000
- 3. \$40,000 to \$59,000
- 4. \$60,000 to \$79,000
- 5. \$80,000 to \$99,000
- 6. \$100,000 to \$119,000
- 7. \$120,000 or over
- 88. Don't know
- 99. Prefer not to answer
- 88. Don't know
- 99. Prefer not to answer

Section Closing: Closing

Closing1. These are all the questions I have. As a thank you for your input, we'd like to send you a \$25 Amazon gift card. Let me ask the information we need to email your gift card instructions to the intended recipient—this could be you, personally, or anyone else of your choosing.

[IF RESPONDENT REFUSES OR DECLINES GIFT CARD, PLEASE WRITE "REFUSED"
IN

NAME BOX AND CLICK NEXT]

T: 10 5

Name of recipient:

Email address of recipient:

B.2 Trade Partner Interview Guide

Section A: Screener/Introduction

- A1. Our records show you are a registered Trade Partner with Xcel Energy Residential Heating rebate program, is this correct?

[IF NO, MARK AS NON-PARTICIPANT AND END CALL]

- A2. What is your title or role at COMPANY NAME **[PROBE:** Designer, Developer, Engineer, Contractor, Project Manager, etc.]

- A3. What are your primary responsibilities at COMPANY NAME?

- A4. Can you briefly describe your company's work? **[PROBE:** Specific specialties such as installation of heating & cooling equipment, etc.]

- A5. What types of customers does COMPANY NAME typically serve? **[PROBE:** In general, do you serve residential, commercial, multifamily?]

1. Has this changed over time?

2. **[IF YES:]** Did the Residential Heating rebate program have anything to do with this change?

- A6. How long has COMPANY NAME been a registered Trade Partner for residential heating?

- A7. Do you have experience with other utility energy efficiency programs? **[PROBE:** what about Black Hills Energy or Atmos Gas?]

A7a. **[If they mention participation with another utility or municipality]:** How does your experience with their high-efficiency gas furnace programs compare to your experience with Xcel Energy's high-efficiency gas furnace program?

A7b. Are any of these programs easier to work with than the others? **[IF YES]** Why is that?

- A8. Is your company a registered Trade Partner for other energy efficiency programs at Xcel Energy?

- A9. Approximately what percent of your jobs are for projects through the Xcel Energy Residential Heating Products program?

Section B: Awareness

- B1. How did you initially learn about becoming a Trade Partner for Residential Heating rebate program?
1. Is this your preferred method for hearing about opportunities?
 2. What are other ways that you like to hear about Xcel Energy Trade Partner opportunities?
 3. What program information was most useful for you when deciding to participate?
[**PROBE:** incentive levels, materials, application process, program requirements]
- B2. What are the reasons why your firm decided to register as a Trade Partner?
- B3. Do you feel you have all the information you needed to be a successful Partner?
- a. [**IF NO:**] What additional information about being a registered Trade Partner would be useful for you to know?
- B4. What information was particularly useful to you when you were registering to become a Trade Partner?

Section C: Motivations/Barriers Registered Trade Partner

- C1. Over the years, what have been your greatest successes as a result of being a registered trade partner with the Residential Heating rebate program?
- C2. And what have been the greatest difficulties or challenges of being a registered trade partner with the Residential Heating rebate program?
- C4. What is your perception regarding the importance of NATE certification?
- C5. Were you already NATE certified or did you decide to become NATE certified to enroll as a trade partner with the program?
- C6. Has the addition of the NATE requirement changed your approach to program projects?
- C7. Does the NATE requirement create any benefits for your business?
- C8. Does the NATE requirement create any challenges for your business?

Section D: Trade Partner Marketing/Program Interaction

- D1. What sales techniques do you use to attract new customers? [**PROBE:** brochures, cold calls, ads, door to door]
1. Which sales techniques are most effective?
- D2. What aspects of the Residential Heating Products program do you discuss with customers?

1. What do you think motivates customers to participate?
 2. How aware are customers of their options when it comes to the range of AFUE of gas furnaces available to them?
 3. What do you think Xcel Energy can do to help customers recognize and demand high-efficiency gas furnaces?
- D3. At what point in the project do you and your customers talk about the Residential Heating rebate program? [**PROBE:** introduction, discussion of costs, etc.]?
1. Who typically brings up rebates/incentives [**PROBE:** customer or contractor]?
 2. About how often are your customers already aware of the Residential Heating rebate program before you tell them about it?
- D4. Please provide an example of how you typically approach rebates/incentives discussions for Residential Heating Products program?
1. What questions or concerns do customers have during initial discussions about rebates, if any?
- D5. How big of a factor are the high-efficiency gas furnace rebates when customers are deciding what efficiency of a furnace to install?
1. To what extent does discussing rebates help or hurt the sale?
- D7. How often are there instances when you don't mention rebates during furnace replacement discussions with customers?
1. When?
 2. What are the reasons why?
- D8. Do you sell any eligible projects without applying rebates?
1. What are the reasons why?
- D9. Has participating in the Residential Heating rebate program changed your approach to non-Xcel Energy customer projects?
- D10. Now I have a few questions about how much interaction you have with the program.
1. Do you fill out the application for the Residential Heating rebate program on behalf of the customer?
 2. Are you the main point of contact for the Xcel Energy Staff?
 3. Do the rebates go directly to customers or are they sent to you?
- D11. What languages, other than English, do your customers speak at home?

- D12. What percent of your customers in 2016 and 2017 do you believe would have preferred receiving information on Xcel's rebates in Spanish?
- D13 Do you have Spanish-speaking employees in your office or in the field?
1. Do you have employees in your office or in the field that speak languages other than English or Spanish? [Probe on what languages]

Section E: Motivations/Barriers Install EE through Xcel Energy

[IF TRADE PARTNER MORE THAN ONE YEAR:]

- E1. About how many projects do you submit for a rebate per year?
1. Thinking back to 2016, would you say your involvement increased, decreased, or stayed the same compared with previous years?
- a. **[PROBE:** Would you say the number of projects you have completed through the product increased, decreased or stayed the same?]
- b. **[PROBE:** Would you say the size/scope of projects you have completed through the product increased, decreased or stayed the same?]
2. **[IF INCREASE/ DECREASE:]**, what are the reasons why your involvement has increased/decreased?
3. What, if anything, about the program keeps you from participating more?
4. What can Xcel Energy do to increase your participation?
- E2. Are there other challenges related to selling high-efficiency gas furnaces?
1. Is there anything Xcel can do to help resolve these challenges?

Section F: Evolving Market Place

- F1. Have you noticed any change in demand from customers for high-efficiency gas furnaces?
- F2. What do you see as new/emerging energy efficiency opportunities for residential heating customers?
- F3. Who do you think are some of the successful distributors, contractors or firms in the residential heating market?
1. What are the reasons why you think they are successful?
- F4. What do you see as trends in the market place for heating equipment? **[PROBE:** trends for measures]
- F5. What energy codes or regulatory changes do you see coming into the future that may affect code baselines?

Section G: Satisfaction

- G1. Thinking about the projects you have submitted to the Residential Heating Products program in the past, please rate your **overall satisfaction** with the program on a 1 to 5 scale where 1 is not satisfied and 5 is extremely satisfied?
1. [IF G1<5] What could Xcel Energy do to increase your satisfaction with the Residential Heating rebate program?
 2. How many more furnace rebates would you do per year, if your satisfaction were higher?
- G2. Please rate your experience with **Xcel Energy** on a 1 to 5 scale where 1 is poor experience and 5 is great experience?
- G3. Please rate your satisfaction with the **equipment rebated by** Residential Heating rebate program on a 1 to 5 scale where 1 is not satisfied and 5 is extremely satisfied?
- G4. Please rate your satisfaction with the Residential Heating program **rebate levels** on a 1 to 5 scale where 1 is not satisfied and 5 is extremely satisfied?
- G5. Please rate your experience with the Residential Heating program **rebate processing** on a 1 to 5 scale where 1 is poor experience and 5 is great experience?
- G5a. In your opinion, are there any opportunities to improve the rebate process?
- G6. [ALL] Do you have a positive experience with the Residential Heating Products program that stands out to you?
- G7. [ALL] Do you have a negative experience with the Residential Heating Products program that stands out to you?
- G8. Is there anything else that if changed or improved would likely increase your engagement with the Residential Heating Products program? [PROBE: bigger rebates, better communication, updated application process, services, etc.]
1. If so, what and why?
- G9. Is there anything the Residential Heating rebate program is doing well and that they should keep doing?
1. If so, what and why?
- G10. Have you had any feedback from your customers about their experiences with the Residential Heating Products program that you think Xcel Energy should know?
- G10a. In your experience, how satisfied are customers with the Residential Heating Products program in general?
- G11. How likely would you be to recommend the Trade Partner program to another contractor where 1 is very unlikely and 5 is extremely likely?

1. What are the reasons why?

Section H: Closing

- H1. Is there anything we didn't cover that you'd like to mention or any recommendations you have based on your experiences as a registered Trade Partner for Residential Heating Products program?
- H2. Thank you. Those are all the questions I have today.
- [THANK AND TERMINATE]

B.3 Utility Benchmarking Interview Guide

Section A: KPIs/Program Design

- 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?
- a. What are the program's overall objectives?
 - b. Is your program run by utility staff or a third-party implementer?
 - c. How many PROGRAM STAFF OR IMPLEMENTER STAFF members support the program?
 - d. [IF NOT ALREADY MENTIONED] Do trade allies play a major role in the program delivery?
- A2. Next, I'd like to talk about your program's efficiency incentives. **[ASK/CONFIRM BASED ON HOLES IN BACKGROUND RESEARCH ON PROGRAM]**
- a. What specific measures are offered? [**PROBE:** types of furnaces, ECMs, etc.?]
 - b. Are the measure savings estimated, deemed or some combination?
 - a. What measures have deemed vs. calculated savings?
 - b. Do you have measures for both electric & gas or just one fuel type?
 - c. What are the incentive levels for each measure?
 - d. What are the incremental costs for each measure?

- e. Do you do measurement and verification on your program? Is this information reported to your state PUC?

Section B: Savings goals/cost

Next, I'd like to talk about the participation and energy savings achieved through the program in 2016.

[ASK/CONFIRM BASED ON HOLES IN BACKGROUND RESEARCH ON PROGRAM]

- B1. How many projects were completed in 2016?
 - a. How many of these were for furnace only projects versus furnace plus other measures together?
- B2. What was the average savings per heating project in 2016?
- B3. What were the program's energy savings goals in 2016? (MWh and Mcf)?
- B4. Are these goals based on gross or net savings?
 - a. Did/will you apply a NTG ratio to these savings?
 - b. What NTG ratio do you use?
 - c. What methods are used to calculate NTG ratio?
 - d. Are NTG ratios estimated at the program level, measure level, or both?
- B5. How much net/gross energy savings did the program report in 2016?
- B6. What was the total energy efficiency portfolio goal in 2016?
- B7. 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 incentives, salaries of program staff (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 residential heating is one part of a larger home upgrade program] How does this break down specifically for residential heating?
- B8. What type of cost effectiveness test is applied to the program?
 - a. If TRC, what was the TRC in 2016?
 - b. Which measures have you found to be the most cost effective?

Section C: Program Participation

Next, I'd like to talk about program outreach and marketing. **[ASK/CONFIRM BASED ON HOLES IN BACKGROUND RESEARCH ON PROGRAM]**

- C1. What kind of outreach and marketing does the utility conduct to increase awareness and engage potential program participants?
- a. What has been the most effective?
- C2. Next, I'd like to talk about the program's trade allies.
- a. What activities do program staff conduct to engage trade allies?
 - b. Do you pay your trade allies an incentive for participating in your program? If yes what or how is the incentive plan structured?
 - c. Approximately how many trade allies are active in the program?
 - a. How many trade allies conduct the majority of program projects?
 - d. What roles do trade allies play in driving participation in the program?
 - e. What requirements or certifications, if any, do you have for trade allies to be eligible to participate in the program?
 - f. What support do provide trade allies in terms of training? What do you provide in terms of marketing/outreach support?
 - g. What have you found to be the most effective ways of engaging trade allies to drive participation in the 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.4 Non-Participant Survey Guide

Introduction

Intro: Hello, this is <INTERVIEWER NAME> calling from [SURVEY FIRM] on behalf of Xcel Energy. May I please speak with [CUSTOMER CONTACT]?

[When connected with correct respondent]: Hello. This is <INTERVIEWER NAME> calling from [SURVEY FIRM] on behalf of Xcel Energy. Xcel Energy would like to better understand how households like yours think about and manage their energy use. If you qualify for this survey and participate, we will send you a \$25 gift card as a token of our appreciation for your time. Are you the best person to talk to about energy use at your home?

3. Yes (CONTINUE)
4. No (SAY:) Who would be the best person to talk to about energy use at your home? (REPEAT INTRO WHEN CORRECT PERSON COMES ON LINE; ARRANGE CALLBACK IF NECESSARY)

[IF NEEDED] Xcel Energy would like to better understand how households like yours think about and manage their energy use. Xcel Energy provides programs designed to help households with energy saving efforts. Your input is very important to help Xcel Energy improve its energy programs and rebates.

Screening

Screen1. First we have a few qualifying questions. Do you own this property at [ADDRESS] and live there most of the year?

- 1) Yes
- 2) No ==> [Thank and Terminate survey]
- 88) DON'T KNOW ==> [Thank and Terminate]
- 99. Prefer not to answer [TERM]

Screen2. Is this home a single-family home, a townhouse, a duplex, a triplex, a fourplex, or part of a building with more than four units?

- 1) Single-family home
- 2) Townhouse
- 3) Duplex
- 4) Triplex
- 5) Fourplex
- 6) Home in a building with more than four units ==> [Thank and Terminate]
- 88) DON'T KNOW ==> [Thank and Terminate]
- 99. Prefer not to answer [TERM]

Screen3. Is it correct that you receive [FUELSRECEIVED] service at this home from Xcel Energy?

- 1. Yes, that is correct [skp A1b]
- 2. No, not correct
- 88. DON'T KNOW
- 99. Prefer not to answer

[If Screen3 > 1

Screen3a. Which service do you receive from Xcel Energy?

- 1. Electricity
- 2. Gas
- 3. Both
- 4. NEITHER ==> [Thank and Terminate survey]
- 88. DON'T KNOW ==> [Thank and Terminate survey]
- 99. Prefer not to answer [TERM]

[Programming Note: If respondent provides a different answer in Screen3a than the sample variable FuelsReceived, please replace piped content in NEWFuelsReceived with the response from Screen3a.]

A. Overall Disposition toward Energy Efficiency

A1a) Great. You qualify for the survey. This should only take about [15] minutes. About how much do you think you spend on [NEW FUELS RECEIVED] for your home in an average month? We are most interested in your experience over the past year, including all four seasons. A top-of-mind estimate is fine. [Note to reviewers: XX to be determined in pre-test.]

[RECORD WHOLE NUMBERS ONLY. ENTER DON'T KNOW AND MOVE ON IF RESPONDENT DOESN'T KNOW OFFHAND]

8888. DON'T KNOW

9999. PREFER NOT TO ANSWER

A1b) Great. You qualify for the survey. This should only take about [15] minutes. About how much do you think you spend on [FUELS RECEIVED] for your home in an average month? We are most interested in your experience over the past year, including all four seasons. A top-of-mind estimate is fine. [Note to reviewers: XX to be determined in pre-test.]

[RECORD WHOLE NUMBERS ONLY. ENTER DON'T KNOW AND MOVE ON IF RESPONDENT DOESN'T KNOW OFFHAND]

8888. DON'T KNOW

9999. PREFER NOT TO ANSWER

A2. Do you think you could reduce your spending on home energy use from current levels...? [READ RESPONSE OPTIONS BELOW]

1. easily
2. with minor adjustments
3. with major adjustments
4. not at all

88. DON'T KNOW

99. PREFER NOT TO ANSWER

A3) Which of the following best describes how far your household is willing to go to save energy if it means saving some money too? Would you...?

1. reduce consumption only if the cost savings are very high
 2. reduce consumption only when it is convenient
 3. put up with a little inconvenience to reduce your consumption
 4. go out of your way to cut down your electric and/or natural gas consumption
 5. Not do anything differently to reduce your electricity and/or natural gas consumption [skp B1]
 6. OTHER – PLEASE SPECIFY: _____ [skp B1]
88. DON'T KNOW [Skp B1]
99. PREFER NOT TO ANSWER [skp B1]

[PROGRAMMER NOTE: IF A3 > 4, SKIP TO B1]

A4) If you made a deliberate choice to reduce your home's energy usage or your energy utility bills, what would be the **first thing** you would do? [RECORD VERBATIM]

88. DON'T KNOW

99. PREFER NOT TO ANSWER

A5) What would be the step you could realistically take that would save you **the most energy** if you tried to reduce your home's energy usage or utility bills? [RECORD VERBATIM]

88. DON'T KNOW

99. PREFER NOT TO ANSWER

B. Program Awareness

B1) Do you remember seeing or hearing any suggestions for things you can do to save energy in the past year or two?

1. yes
2. no [skip B3]
8. DON'T KNOW [skip B3]
9. PREFER NOT TO ANSWER [skip B3]

B2) From whom have you heard about things you can do to save energy? [READ LIST. ALLOW MULTIPLE RESPONSES]

1. the local utility / Xcel Energy
- b.2. the news media
- c. 3. articles in magazines / periodicals
- d.4. contractors or retailers
- e.5. local / state government
- f. 6. friends / family
- g. 7. other – please describe: _____
88. Don't know
99. Prefer not to answer

[IF MULTIPLE RESPONSES TO B2 OR IF B1 > 1]

B3) Which of these do you consider to be the most useful source of information about how to save energy at home overall? [REREAD, IF NEEDED. ONE RESPONSE ONLY]

1. the local utility
2. the news media
3. articles in magazines / periodicals
4. contractors or retailers
5. local / state government
6. friends / family
7. OTHER – SPECIFY: _____
88. DON'T KNOW
99. PREFER NOT TO ANSWER

B4) Do you remember seeing or hearing about any rebates for energy efficient appliances or home upgrades in the past year or two?

1. yes
2. no ==> SKIP TO B6
88. DON'T KNOW ==> SKIP TO B6
99. PREFER NOT TO ANSWER ==> SKIP TO B6

B5) Please list what organizations or types of companies offer such rebates, as best as you know or can remember. These companies don't have to be a utility. [DO NOT READ. ALLOW MULTIPLE RESPONSES]

- a. 1. product manufacturers
- b. 2. retail stores
- c. 3. contractors
- d. 4. utility companies – general reference
- e. 5. utility company – Xcel Energy specifically mentioned
- f. 6. utility companies – other than Xcel Energy
- g. 7. other – please describe: _____
88. Don't know

99. Prefer not to answer

[IF Xcel Energy NOT chosen in B5 or B2 (i.e., B5E <> 1 AND B2A <> 1)]

B6) Prior to today, have you had seen any information from Xcel Energy on services they provide to customers to help them save energy?

- 1. yes
- 2. no ==> SKIP TO C1
- 88. DON'T KNOW ==> SKIP TO C1
- 98. PREFER NOT TO ANSWER ==> SKIP TO C1

B7. About how often would you say you see tips or information from Xcel Energy on ways to save on energy or rebate offers the company provides? Is it generally...

- 1) daily
- 2. weekly
- 3. monthly
- 4. a few times a year
- 5. yearly
- 6. less than yearly [skp C1]
- 7. NOT AT ALL [skp C1]
- 88. DON'T KNOW [skp C1]
- 99. PREFER NOT TO ANSWER [skp C1]

[If B7 < 6]

B8. Where do you see information from Xcel Energy about saving energy?

[DO NOT READ. Select all that apply]

- a) 1. Bill insert
- b) 2. Home energy report
- c. 3. Xcel Energy Website
- d. 4. Billboard or other outdoor advertisement
- e. 5. Digital / web advertisement (not on the Xcel Energy Website.
- f. 6. Television advertisement
- g. 7. Radio advertisement
- h. 8. Contractor
- i. 9. Colleague
- j. 10. Social media
- k. 11. Xcel Energy representative
- l. 12. Other _____
- 88. Don't know
- 99. Prefer not to answer

Section C: Prior Participation and Efficiency Upgrades

The next questions are about energy efficiency improvements or upgrades you may have made in the past five years, if any.

C1. Have you bought any appliances or made any home improvements in the past five years specifically because they were energy efficient? (IF NEEDED: Examples would include buying an energy-efficient refrigerator, selecting a high-

efficiency furnace, upgrading your home's insulation, or similar upgrades in the efficiency of your home's energy-using equipment and your home's structural efficiency.)

- 1. Yes
- 2. No [skip C3]
- 88. DON'T KNOW [skip C3]
- 99. Prefer not to answer [skip C3]

[If C1=1]

C2. Did you receive a rebate for any of these appliances or upgrades?

- 1. Yes
- 2. No [skip C3]
- 88. DON'T KNOW [skip C3]
- 99. Prefer not to answer [skip C3]

[If C2=1]

C2a. Was the rebate from Xcel Energy, or someone else?

- 1. Xcel Energy [skip C2a2]
- 2. Someone else
- 3. Both Xcel Energy and someone else
- 88. DON'T KNOW [skip C3]
- 99. Prefer not to answer [skip C3]

[If C2a = 2 or 3 (someone else or both)]

C2a1. Who other than Xcel Energy provided the rebate? [RECORD VERBATIM]

[C2a = 2] skip C3

[If C2a = 1 or 3]

C2a2. For what did you receive an Xcel Energy rebate? [RECORD VERBATIM]

-
- 88. Don't know
 - 99. Prefer not to answer

[If Audit=1]

C3. Our records show that you received a home energy audit from Xcel Energy in [AUDIT_YEAR], is that correct?

- 1. Yes
- 2. No [skip C7]
- 88. DON'T KNOW [skip C7]
- 99. Prefer not to answer [skip C7]

[If Audit=1]

C4. Do you recall any of the specific recommendations that were made during the audit?

- 1. Yes
- 2. No [skip C6]
- 88. DON'T KNOW [skip C6]
- 99. Prefer not to answer [skip C6]

[If C4 = 1]

C4a. What recommendations do you recall? [MULTI-SELECT, DO NOT READ]

- 1. insulation
- 2. air sealing
- 3. heating system upgrade / replacement

- 4. air conditioning / evaporative cooling
- 5. water heating
- 6. other appliance upgrades / appliance recycling
- 7. other
- 88. Don't know
- 99. Prefer not to answer

C4b. [a SKP IF C4a = 1] Did the auditor recommend any insulation or air sealing for your home?

- 1. Yes
- 2. No
- 88. DON'T KNOW
- 99. Prefer not to answer

C4c. [SKP if C4a = 3] Did the auditor recommend any upgrades to the heating equipment in your home?

- 1. Yes
- 2. No
- 88. DON'T KNOW
- 99. Prefer not to answer

[If Audit=1]

C5. Did you implement any of the recommendations?

- 1. Yes [skp C5b]
- 2. No
- 88. DON'T KNOW [skp C6]
- 99. Prefer not to answer [skp C6]

[If C5 = 2]

C5a. Why did you decide not to implement any of the recommendations? [RECORD VERBATIM]

C5ai. What, if anything, would encourage you to implement some or all of the recommendations from your energy audit? [RECORD VERBATIM]

[Skp C6]

[If C5 = 1]

C5b. Which recommendations did you implement? [RECORD VERBATIM]

[If Audit=1]

C6. During your audit or in the audit report, did your auditor explain the benefits of making energy upgrades to your home?

- 1. Yes
- 2. No
- 88. DON'T KNOW
- 99. Prefer not to answer

[If ECM=1]

C7. Our records show that you received a rebate from Xcel Energy for installing an electronically commutated motor, or ECM, on your heating equipment in [ECM_YEAR], is that correct?

- 1. Yes
- 2. No [skp D1]
- 88.. DON'T KNOW [skp D1]
- 99. Prefer not to answer

[If ECM=1]

C8. How many different contractors did you meet with in the process of shopping for that furnace?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. More than 5
- 88. Don't know
- 99. Prefer not to answer

[If ECM=1]

C9. Why did you select the contractor you chose? [RECORD VERBATIM]

[If ECM=1]

C10. How many different furnaces did this contractor present to you when you first hired them?

- 1. 1 [skp C12]
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. More than 5
- 88. Don't know [skp C12]
- 99. Prefer not to answer[skp C12]

[If ECM=1 & C10 != 1, 88 or 99]

C11. What were the primary differences between the furnaces the contractor presented to you? [RECORD VERBATIM]

[If ECM=1]

C12. Why did you select the furnace you chose? [RECORD VERBATIM]

[If ECM=1]

C13. Which of the following best describes the extent to which the contractor discussed the energy efficiency of the various furnace options?

- 1. The contractor mentioned the energy efficiency of the furnace options
- 2. The contractor emphasized energy efficiency as the main difference between furnaces
- 3. The contractor encouraged me to purchase the highest efficiency available
- 4. I do not recall the contractor discussing the energy efficiency of the furnace options
- 88. Don't know
- 99. Prefer not to answer

[If ECM=1]

C14. Do you recall whether you chose a standard efficiency or a high-efficiency furnace?

- 1. I chose a Standard-efficiency furnace
- 2. I chose a high-efficiency furnace
- 3. I do not recall the energy efficiency of the furnace I chose
- 88. Don't know
- 99. Prefer not to answer

D. Opportunities and Barriers to Participation

Now, I'd like to ask specifically about the heating system and insulation in your home.

D1. About how long do you think it will be before you next replace your current heating system? [DO NOT READ.]

1. less than a year
2. 2-3 years
3. 4-5 years
4. more than 5 years
88. DON'T KNOW
99. PREFER NOT TO ANSWER

D2. What kind of heating system do you currently have? Is it...

1. a forced air furnace
2. a gas boiler
3. a propane furnace
4. an electric baseboard heater
5. something else – please describe: _____
88. DON'T KNOW
99. PREFER NOT TO ANSWER

D3. Most heating systems come in a variety of efficiency levels. Please tell me how influential each of the following would be in influencing your decision about what efficiency level to get for your next heating system? Would ... have a big influence, some influence, a little bit of influence, or no influence on your choice of your next heating system's efficiency level?

- a. the cost of purchasing the system (assuming cost differences between systems of, say, \$500)
- b. the availability of a rebate of, say \$100, from Xcel Energy for a more efficient system
- c. the operating costs (assuming that more efficient systems cost, say \$75 less per year to operate)
- d. your chosen contractor's recommendation
- e. Xcel Energy's recommendation
- f. increases in comfort from such things as better air distribution and quieter operation

- 1) a big influence
- 2) some influence
- 3) a little bit of influence
- 4) no influence
- 5) OTHER –SPECIFY: _____
- 88) DON'T KNOW
- 99) PREFER NOT TO ANSWER

D4. Which of the following best describes the insulation and air tightness of your home?

1. Our home is pretty well insulated and tight. There is just a bit of improvement possible.
2. Our home is insulated, but I know it could be improved.
3. Our home really needs insulation and/or air sealing.
4. Our home is very well insulated and tight. There is no improvement needed. [skip E1]
88. Don't know [skip E1]
99. PREFER NOT TO ANSWER [skip E1]

[IF D4 = 1 OR D4 = 2 OR D4 = 3]

D5. How much difference would the following make in encouraging you to get a cost estimate and proceeding with an insulation upgrade? For each one, please indicate whether that item would make a big difference, some difference, a little bit of difference, or no difference at all.

- a. the availability of an Xcel Energy approved home audit that tells you whether you need more insulation and how much
- b. having an Xcel Energy certified list of contractors that adhere to industry best practices
- c. knowing you could save on your heating and cooling costs throughout the year.
- d. the availability of a rebate from Xcel Energy that reimburses up to \$1,650 of the cost of your insulation project when you install insulation through a certified contractor
- e. being able to maintain better comfort and even temperatures in your home than you currently have

- 1) a big difference
- 2) some difference
- 3) a little bit of difference
- 4) no difference
- 5) OTHER –SPECIFY: _____
- 88) DON'T KNOW
- 99) PREFER NOT TO ANSWER

Section E: Customer Satisfaction

E1. Which of the following statements best captures how you feel about Xcel Energy's support of energy efficiency for residential customers like you?

- 1. I like what they do and they should keep on doing the same thing
- 2. They should do more of it or do it better.
- 3. They should do less and focus on other things with their time and resources. [skip E3]
- 4. I don't know enough to have an opinion.
- 5. Something else – please specify: _____ [RECORD VERBATIM]
- 88. Don't know
- 99. Prefer not to answer

[IF E1 <> 3]

E2. What else, if anything, could Xcel Energy do to help customers like you make energy efficiency upgrades?
[RECORD VERBATIM]

E3. How would you rate your overall satisfaction with Xcel Energy as an energy provider?

- 1 - Very dissatisfied
- 2 – Somewhat dissatisfied
- 3 - Neither dissatisfied nor satisfied
- 4 – Somewhat satisfied
- 5 - Very satisfied
- 88. Don't know
- 99. Prefer not to answer

E4. How likely are you to recommend Xcel Energy's rebate programs to a friend, relative, or colleague? Please answer using a scale of 0 to 10, where 0 is not at all likely and 10 is extremely likely.

- 0) not at all likely

...

10) extremely likely

88. DON'T KNOW

99. Prefer not to answer

Section Gen: Household Characteristics and Demographics

Gen1. Approximately what is the total square footage of your home? [CODE RESPONSE. READ ONLY IF NEEDED]

1. Less than 500 square feet

2. Between 500 and 749 square feet

3. Between 750 and 999 square feet

4. Between 1,000 and 1,499 square feet

5. Between 1,500 and 1,999 square feet

6. Between 2,000 and 2,499 square feet

7. Between 2,500 and 2,999 square feet

8. Between 3,000 and 3,999 square feet

9. 4,000 or more square feet

88. DONT' KNOW

99. Prefer not to answer

Gen2. Approximately what year was your home built? [CODE RESPONSE. READ ONLY IF NEEDED]

11. 1939 or earlier

12. 1940 to 1949

13. 1950 to 1959

14. 1960 to 1969

15. 1970 to 1979

16. 1980 to 1989

17. 1990 to 1999

18. 2000 to 2009

19. 2010 to 2013

20. 2014 and later

88. Don't know

99. Prefer not to answer

Gen3. How many people live in your household? [RECORD]

Gen4. What is your current age? [RECORD – IF NEEDED, ACCEPT THE DECADE THE RESPONDENT IS IN: 20s, 30s, 40s, ETC. AND RECORD AS SUCH]

Gen5. And this is my last question. Please indicate which of the following ranges best reflects your household's total income before taxes last year. Feel free to stop me when I get to the appropriate range. Was it...? [READ RANGES]

1. Less than \$20,000

2. \$20,000 to \$39,000

3. \$40,000 to \$59,000

4. \$60,000 to \$79,000
5. \$80,000 to \$99,000
6. \$100,000 to \$119,000
7. \$120,000 or over
88. Don't know
99. Prefer not to answer

Closing

Closing1. These are all the questions I have. As a thank you for your input, we'd like to send you a \$25 Amazon gift card. Let me ask the information we need to email your gift card instructions to the intended recipient—this could be you, personally, or anyone else of your choosing.

[IF RESPONDENT REFUSES OR DECLINES GIFT CARD, WRITE "REFUSED" IN NAME BOX AND CLICK NEXT]

T: 10 5

Name of recipient:

Email address of recipient:

[READ BACK ONE LETTER AT A TIME]

B.5 Residential Heating Product Staff Survey Guide

Introduction

This guide is to be used to interview staff associated with Xcel Energy's DSM programs as part of the EMI Consulting 2017 evaluation of the Xcel Energy DSM programs. The interviews will be semi-structured, with these questions serving as a basic guide for experienced EMI Consulting staff during one-on-one phone interviews. As a guide for semi-structured interviews, these questions will not necessarily be asked verbatim, but will serve as a roadmap during the conversation.

Section A: Introduction

First we would like to give you some background about who we are and why we want to talk with you today.

I am working with EMI Consulting, an independent consulting firm, engaged by Xcel, to perform an evaluation of Xcel's portfolio of energy efficiency products

We're currently in the process of conducting interviews with product managers and key staff involved in the portfolio of EE products in order to improve our understanding of Xcel Energy's DSM products.

We want to understand what information will be important to you and to incorporate your priorities into our study so that the results are as useful as possible.

Thank you for taking the time to speak with me today. The purpose for our meeting today is to discuss your experiences with the Residential Heating product. We are interested in asking you some questions about the program so we can benefit from your knowledge and experience to improve our understanding of the product.

I have a set of questions that should take 30 to 60 minutes. All information you provide is anonymous.

Before I begin, is it alright if I record the conversation for note taking purposes?

A1. [] To begin, could you take a moment and explain your role as Product Manager & Channel Manager and the scope of your responsibilities.

[] To begin, could you take a moment and explain your role as Team Lead and the scope of your responsibilities.

[] To begin, could you take a moment and explain your role as Engineer and the scope of your responsibilities.

A1a. [How long have you held this position?

A2. Who are the staff/third parties that you work with on this product?

Section B: Product Goals

[Highly efficient condensing forced air furnaces (AFUE of 95% or higher);
Electronically commutated motors (ECMs)]

B1. Can you briefly explain the design of the product and take me through the key goals for Residential Heating?

B1a. What are your gas electric savings goals for 2017 and 2018 (upstream? downstream?)

B1b. Are there any other, non-energy goals, for the product?

B1b1. Any more immediate goals? For example, 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. What are the indicators of success?

B2a. Do you have “interim” indicators that you monitor?

B3. Have any of these goals changed in the last few years?

B3a. What was the rationale for changing them?

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

- B4.** Do you think the product might have any unanticipated consequences outside of the formal goals? What kinds of consequences?

Section C: Product Activities

- C1.** What does the product do to achieve these goals?
- C1a.** What incentives and market signals does the product use?
- C1b.** What activities do product and implementer staff engage in?
- C1c.** What tools are used to reach out to customers and/or market partners?
- C2.** Are these product activities and incentives specific to the Residential Heating product or are they similar to other products?
- C3.** Have any of these incentives changed in the last few years?
- C4a.** What was the rationale for changing them?
- C4.** Have any of these activities changed in the last few years?
- C4a.** What was the rationale for changing them?
- C4b.** In your opinion, how have these changes affected the product's operations or its outcomes?

Section D: Resources

- D1.** Now I'd like to ask you a few questions about the resources you rely on to implement the product
- D1a.** Financial resources?
- D1b.** Product, implementer, sales staff?
- D1c.** Management and product direction?
- D1d.** IT tools and data tracking tools?
- D1e.** Other resources?
- D2.** Have any of these product resources changed in the last few years?
- D2a.** What was the rationale for changing them?

- D2b.** In your opinion, how have these changes affected the product's operations or its outcomes?

Section E: Product Tracking and Reporting

- E1.** What data are collected for Residential Heating product?
- E2.** Are there any data you would like to collect for the product but haven't been able to?
- E3.** Are there any data or documentation not available in Salesforce that might be helpful for the evaluation?

Section F: Issues and Concerns

- F1.** In your opinion, what are the strengths of the Residential Heating product as it currently operates?
- F1a.** What is working well in terms of product design or implementation?
- F2.** What are the most significant challenges for this product at this point?
- F3.** What feedback, if any, do you receive from customers and/or market partners on the product?
- F4.** What do you believe are the biggest barriers to getting customers and/or market partners to participate in this product?
- F5.** Are there any specific opportunities for improvement in the design or implementation of the product?
- F6.** What would you like to see changed in how the product is designed or run, if anything?
- F6a.** Do you think there are any roadblocks preventing these changes from happening?

Section G: Utility Benchmarking

- G1.** As part of this evaluation, we are going to be doing benchmarking analyses against other utilities. Are there utilities that you think would be good comparisons for a benchmarking analysis based on the following criteria?
- G1a.** Utilities that are very similar to Xcel Energy?
- G2a.** Utilities that would make for an interesting comparison to Xcel Energy?
- G3a.** Utilities that you would consider to be at the cutting-edge of what Xcel Energy is trying to achieve?

- G4a.** Utilities that are underperforming compared to Xcel Energy?
- G2.** What are some of the key indicators that you think would be important to look at when comparing Xcel Energy to other utilities?

Section H: Closing

- H1.** Based on the kickoff meeting, we are planning to prioritize <RESEARCH PRIORITIES>, does this align with your understanding? Do you have anything you would like to add to these priorities, remove from this set of priorities, or change about these priorities?
- H2.** Do you have particular questions that you would like to see answered by the evaluation?
- H3.** 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?

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?

APPENDIX C: PARTICIPANT SURVEY FREQUENCY TABLES

Section A: Project Initiation, Customer Journey, and Role of Contractor

A-1: About how long have you lived in this home?

Value	Percent
Less than a year	1.5%
1-2 years	11.6%
3-5 years	20.7%
6-10 years	13.3%
11-20 years	31.8%
More than 20 years	19.0%
Not Primary Home	2.2%
Don't know	0.0%
Prefer not to answer	0.0%

A-2: How long ago did you first started thinking you might want to upgrade your furnace?

Months	Percent
0	1.5%
1	3.7%
2	0.7%
3	8.5%
4	3.9%
5	8.3%
6	4.1%
9	23.7%
10	1.2%
11	0.7%
12	3.7%
14	2.2%
15	0.3%
18	5.6%
20	2.2%
21	0.7%
36	22.7%
Don't know	0.7%
Prefer not to answer	0.0%

System Missing	5.2%
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A3: What do you remember made you begin to start thinking about it?

Response	Percent
All of the utilities are 40 years old	0.7%
Basically the furnace that was installed with the home was the builder's cheapest choice, not very efficient. So I went with 1 that was 98.5% efficient, and that way I got to pay less to the utility company.	0.7%
Because we got air conditioning and told we needed new furnace because it was old	0.7%
Catastrophic failure of the furnace	0.7%
efficacy and it was 20 years old and I had concerns	2.2%
energy savings	1.6%
finishing the basement	0.6%
Furnace didn't work	1.5%
Furnace died.	0.6%
furnace stopped working	1.6%
Furnace was over 50 years old	1.6%
got an inspection that said the old furnace had a crack in the manifold	0.3%
had been there for over 20 years	1.5%
had issues of it not coming on and the technician so its time to replace	0.7%
had it in the budget an bills are high	0.2%
had to replace my swamp cooler	0.7%
Hole in the furnace and we needed a new one.	0.2%
Home inspection pointed out that furnace was 30 years old	0.7%
Home inspection recommendation	1.5%
How old the furnace is.	0.3%
I am a green builder and wanted to have an energy efficient home	0.7%
I had an old furnace and the furnace box was cracked.	0.6%
I rent out houses for a living, so knew I had inefficient furnace, and needed a new furnace	0.7%
I wanted to install both an a/c and furnace so the furnace was old	0.3%
I was doing a renovation of the basement	0.7%
I was having trouble with the other furnace.	0.2%
I'm in the industry so I wanted to put high efficiency equipment in an lower my bills	0.7%
Improving the energy efficiency of it	2.2%
In the winter we had to crank it up to about 90, in order to get it warm enough.	0.6%
It all started with taking down all our towers. I started with the solar install and then the furnace and air conditioner.	2.2%
It broke down	0.7%
It definitely needed to be changed because of the CO2 that is was omitting	2.2%

Response	Percent
it didn't work anymore	0.2%
it died on me in the middle of winter the previous owners never maintained it	0.2%
It just stopped working (computer board blew up)	1.5%
it needed alot repairs everytime we got it checked it costs us money	1.6%
it stopped working	0.7%
It stopped working	0.7%
It stopped working, it wasn't efficient anymore.	0.7%
It was 20 years old and very loud and inefficient	0.7%
It was an old furnace	0.7%
It was getting too cold and the rebate from Xcel was a big help	1.5%
It was leaking carbon monoxide	0.8%
It was making bearing noises, loud noises, it would boom and go out on us, and we couldn't it back on. We'd have to wait to turn it back on.	1.6%
it was making noise\s	0.7%
it was mostly the maintenance company they told us and trusted them they said it won't last much longer and talked about efficiency of different furnaces	0.7%
it was not very efficient it was the original for the house and the house is 12 years old	0.7%
it was very old and made alot of noise and had to relight the pilot light	1.6%
it wasn't efficient and it needed work done on it	2.2%
it went completely gone it stopped working	0.7%
its old and not as efficient	2.2%
Made noise , was worried about the efficiency was also very old .	2.2%
maintenance man there was a crack and had the carbon monoxide in the main heat exchanger	0.7%
my a/c wasn't working so I wanted to replace the furnace	0.6%
my a/c went out	0.8%
my maintenance guys said I needed a new furnace	0.7%
needed repairs and had to be replaced	0.7%
not functioning properly and costs too much for repairs	0.7%
noticed rust and they said the thermostat wasn't working well so we decided to change it	0.7%
our furnace had minor issues and I wanted to upgrade to a high efficiency one	1.6%
our old one went out	1.6%
Price of electricity	2.2%
quit working during a cold spell here	0.7%
rebate from the company that offered them	0.7%
Speed of heating and cooling	1.6%
That was easy: The other furnace had 2 service calls, and I wasn't about to put another penny into it.	2.2%

Response	Percent
the a/c went out and had to change the furnace	0.2%
The age of current furnace	0.3%
The age of the house and it was the original furnace	0.8%
The age of the house.	0.7%
The age of the original furnace	2.2%
The current furnace was failing.	0.7%
the efficiency and the cost of gas and energy	0.6%
the fan motor went out twice	0.8%
the furnace is failing and its old	0.7%
The furnace needed a certain amount of service and high energy bills	0.2%
The furnace rattled, and it was loud, and we had a service guy out there saying we needed a new one, as well.	2.2%
The furnace stopped working	2.2%
The furnace was inferior quality	1.6%
the furnace was old	0.2%
the house was disaster	0.7%
The number of repairs I had to make, and something about the air coming in and out, a box needing to be replaced, and it was getting to be too much.	1.6%
The old furnace was serviced and something was cracked and he said I needed a new furnace	0.2%
The old furnace was the original and I was fearful it wouldn't make through winter.	0.7%
The old one was about to die	0.2%
The old one was defective	1.6%
the original furnace was 50 years old	0.2%
there was a horrible noise and I didn't what was wrong so they said there was a leak	0.8%
very hot summer 2 or 3 years ago wanted to get a combined ac and furnace	0.2%
wanted to get central air	0.3%
We had a contract to check the furnace and they said it wouldn't be safe to turn on	0.7%
We had maintenance work done on it and found it was cracked	0.7%
We had problems with the original furnace. wanted more energy efficiency.	1.6%
We knew the existing furnace when we bought the home was old, and we wanted a more efficient furnace. Before that, we did other work on the home, like the windows.	2.2%
we were having problems with it	0.7%
We were told we needed to after someone checked it	0.6%
When the house was inspected after purchase	1.6%
When the old furnace started failing	1.6%
When you start looking at the heating bill, it's like "yow!" You need something a little more efficient, plus, it was about 30 years old.	0.2%
Don't know	0.7%

A4: Do you recall seeing any encouragement from Xcel Energy to upgrade your furnace prior to completing your upgrade?

Value	Percent
Yes	38.5%
No	57.4%
Don't know	4.1%
Prefer not to answer	0.0%

A5: Do you recall seeing any lists of qualified heating contractors on Xcel Energy's website prior to completing your upgrade?

Value	Percent
Yes	9.7%
No	88.9%
Don't know	1.4%
Prefer not to answer	0.0%

A6: About how long was it from when you first thought about doing a furnace upgrade until you first started talking with a contractor??

Value	Percent
Less than a month?	46.1%
Between 1 and 6 months?	27.4%
Between 7 months and 1 year?	7.0%
A year or two?	9.1%
More than two years?	9.6%
Don't know	0.7%
Prefer not to answer	0.0%

A7: Did you initiate the first contact with a contractor, or did a contractor first reach out to you and suggest a furnace upgrade?

Value	Percent
I contacted a contractor about this project	96.9%
A contractor contacted me	0.7%
Other	0.2%
Do not recall or Do not know	1.6%
Prefer not to answer	0.6%

A8: How did you decide which contractor or contractors to contact?

Response	Percent
a friends company	0.8%
a neighbor and then one through costco	0.7%
asked friends and went to Costco for vendors	0.7%
asked our friends	0.2%
based on a neighborhood app and they referred this company	0.8%
Basically I reached out to receive a couple of quotes, and ended up going with a business that partners with my brother in law's business and they offered us a better price than other contractor for the same equipment.	0.7%
been doing business with them for many years	0.7%
Did it through Loew's	1.5%
done research best furnace best maintenance and picked a brand and picked out licensed to install that brand	2.2%
Experience	2.2%
family member	0.7%
Friend recommendations and carrier website	1.6%
From references from friends, and because it was a family owned business in our community for 30 or 40 years.	0.3%
From the Boulder County approved list, which were also on Xcel's list.	2.2%
Google	0.7%
had a bidding war	0.7%
Had a preexisting relationship	1.6%
Her son did it	0.7%
I actually went to Costco and found a contractor there.	0.7%
I am a retailer and know that One Hour Heating and did the furnace work	2.2%
I called xcel first	0.2%
I checked a few of them on the phone asked prices, and my neighbor had theirs done a year before and I decided to use their contractor	0.2%
I did research thru the YELP and Better Business Bureau	0.6%
I got two estimates, one from the insurance company and another from google.	0.7%
I have been using same vendor for years	0.7%
I kind of have some clients in construction, and so they're mostly referrals from friends and businesses.	0.7%
I looked at different contractors to see the pricing and Costco had the most affordable and most efficient one.	0.6%
I made sure they were qualified met the xcel standard to get the rebate	0.8%
I narrowed it down to 3, and had them come out so I could interview them. I asked about their training of their technicians, warranties on their products, and follow-up service.	0.2%
I read several and someone recommended the one I went with	0.7%
I replaced one for my moms condo and we called 3 or 4 other ones and their package was the best one	0.7%
I saw some from the xcel website	0.6%

Response	Percent
I started to speak with a company called " LENNUX " the name of furnace brand through "Costco " during a trip to the store .	2.2%
I took four estimates	0.6%
I took the first one and went down the list	0.2%
I went on Angie's List and looked there, and then I spoke with people at my kids' karate class, and asked people there, who they had used.	2.2%
I went through Home Depot.	0.7%
If they used the company, the price of the call would come off the price of the furnace	0.7%
Initially I found the first contractor on yelp and then got the home energy audit and through that got a recommendation for an energy consultant in boulder who recommended contractors.	0.7%
is used bell before and they are reliable	0.6%
It was the one that Costco had, because they were giving rebates, rebate cards, and I just happened to talk to the gentleman who was standing in front of the Cooper AC display.	2.2%
It was word of mouth, recommendations from people in the area.	2.2%
looked at the xcel list and went online to check the reviews	0.7%
member of Costco so we had good luck with them	0.7%
Neighbor recommended the contractor	2.2%
northern Colorado air they do the maintenance gave us prices so they were reasonable and a person came out to talk to us	0.7%
Online reviews	1.6%
only contacted one had good reviews	0.7%
previous experience with the contractor	1.6%
Previous history with one and reading write ups on the internet about the other.	1.6%
Previously used them	1.6%
Pricing-wise.	0.7%
Reached out to the first three on Xcel website	0.3%
Recommended through the city program (Denver)	0.2%
reference	1.6%
References from neighbors	1.6%
researched what type of furnace I wanted and found a dealer who lived closest	0.2%
Reviews online, web searches and Costco	0.7%
social media	2.2%
Son had used the contractor.	0.8%
The same ones they've always used	1.5%
The way I decided was that Costco was the front end contact for the project.	0.7%
they did original installation 18 years ago when I bought my house.	1.5%
Through flyers got names and then looked them up on the internet	1.6%

Response	Percent
Through his work with the municipality	0.7%
Through home depot	2.2%
used the website	0.7%
used them to change my air conditioner 10 years ago and I liked their work and Costco had a list and cooper was on the list of contractors	0.7%
was the contractor who serviced my old heater he said I needed a new one and I used him	0.2%
we already had home smart which is xcel energy contractors for about 2 years for maintenance and repairs	1.6%
we called 3 and got quotes went with the one with the best price	2.2%
We had a contractor we had used, reliable, here in town, to fix our furnace and they had replaced the motor previously, and then later we had to replace the whole thing entirely.	1.6%
we looked from recommendations from friends and had a ballpark figure on what it would cost.	0.2%
we the people who installed our a/c and they also serviced the furnace and I also went to Costco and got one more quote	0.7%
We used a contractor in the Denver area for a different project, and were happy with his work, so decided to stick with him again, instead of contacting multiple.	2.2%
we used our furnace company so we went with them	1.6%
we used them before for furnace problems	0.7%
we worked with contractor before	1.6%
went on xcel's website and talked with neighbors	0.2%
went online and researched on them and talked to friends and referrals	0.7%
Went through Costco because they offered a package deal	0.7%
word of mouth from friends	0.3%
xcel highest ratings and yelp	0.3%
Yelp and contacts he had	0.7%
Don't know	2.5%
System Missing	10.4%
family member	0.7%
Friend recommendations and carrier website	1.6%
From references from friends, and because it was a family owned business in our community for 30 or 40 years.	0.3%
From the Boulder County approved list, which were also on Xcel's list.	2.2%

A9: With how many different contractors did you ultimately discuss the project or get bids?

Value	Percent
1	37.8%
2	24.6%
3	28.0%
4	4.3%
5	2.4%
More than 5	0.7%
Don't know	2.2%
Prefer not to answer	0.0%

A10A: Xcel Energy identifies certain furnace contractors as qualified trade partners. Were you aware of this part of Xcel Energy's program when you selected your contractor?

Value	Percent
Yes	26.0%
No	73.0%
Do not know	0.9%
Prefer not to answer	0.0%

A10b: How important was your furnace contractor's participation with this program when you selected them?

Value	Percent
Made no difference	3.3%
Was a bonus for a contractor you would have selected anyway	9.2%
Was one of several factors you considered	8.1%
Was a decisive factor in your choice of contractors	3.8%
Do not know	1.6%
Prefer not to answer	0.0%
Not aware contractor was a qualified Xcel Energy trade partner	74.0%

A11: Do you recall your contractor mentioning the availability of Xcel Energy rebates?

Value	Percent
Yes	90.7%
No	4.8%
Do not know	4.5%
Prefer not to answer	0.0%

A11A: Did the contractor mention the rebates before or after you had decided to work with them for this project?

Value	Percent
Before	61.3%
After	22.1%
Do not know	7.3%
Prefer not to answer	0.0%
System Missing	9.3%

A12: Did you receive a rebate check directly from Xcel Energy, a reduced project cost because of incentives from Xcel Energy, or neither one?

Value	Percent
Rebate directly from Xcel Energy	74.4%
Reduced project cost from the contractor	9.3%
Neither one	3.8%
Both	1.6%
Do not know	10.9%
Prefer not to answer	0.0%

A13: Did the availability of an Xcel Energy rebate lead you to buy a more energy efficient furnace as part of this project?

Value	Percent
Yes	60.5%
No	39.5%
Do not know	0.0%
Prefer not to answer	0.0%

A14: How helpful was the contractor in helping you fill out the rebate form, would you say extremely helpful, very helpful, somewhat helpful, a little bit helpful, or not at all helpful??

Value	Percent
Extremely helpful	51.4%
Very helpful	18.0%
Somewhat helpful	9.6%
A little bit helpful	5.3%
Not at all helpful	7.0%
Not applicable	7.1%
Do not know	1.6%
Prefer not to answer	0.0%

Section B: Product Implementation, Delivery, and Market Response

B1: How do you first remember hearing about Xcel Energy's residential heating rebate program?

Value	Percent Response 1	Percent Response 1	Percent Response 1
Bill insert	11.1%	0.0%	0.0%
Xcel Energy Website	5.5%	0.7%	0.0%
Billboard or other outdoor advertisement	0.7%	0.0%	0.0%
Digital / web advertisement (not on the Xcel Energy Website)	0.0%	0.0%	0.0%
Television advertisement	3.6%	0.7%	0.0%
Radio advertisement	0.7%	0.0%	0.0%
Contractor	39.4%	0.0%	0.7%
Friend or family	0.2%	0.6%	0.0%
Social media	0.3%	0.0%	0.0%
Other Xcel Rep (calls etc.)	0.9%	0.0%	0.0%
Other	11.2%	0.7%	0.0%
Do not know	2.3%	0.0%	0.0%
Prefer not to answer	0.0%	0.0%	0.0%
System Missing	24.0%	97.1%	99.3%

B2: During any phase of your furnace project did you have any questions for your contractor about the rebate program or about the rebate itself?

Value	Percent
Yes	17.1%
No	58.7%
Do not know	0.2%
Prefer not to answer	0.0%
System Missing	24.0%

B2a: Was your contractor able to answer your questions to your satisfaction?

Value	Percent
Yes	16.3%
No	0.7%
Do not know	0.0%
Prefer not to answer	0.0%
System Missing	82.9%

B3: About how long did it take to receive your rebate after your project was completed?

Value	Percent
One week or less	0.0%
More than a week, but less than 1 month	30.2%
One or two months	24.5%
More than 2 months	13.6%
Not applicable - HAVE NOT RECEIVED REBATE YET	0.0%
Do not know	7.7%
Prefer not to answer	0.0%
System Missing	24.0%

B4: Did an Xcel Energy representative attempt to contact you concerning your furnace project or your rebate?

Value	Percent
Yes	4.5%
No	68.4%
Do not know	3.1%
Prefer not to answer	0.0%
System Missing	24.0%

B4a: How did the Xcel Energy representative attempt to contact you?

Value	Percent
Email	2.2%
Phone	1.6%
In-person	0.0%
Mail	0.7%
Web (chat or help form submission)	0.0%
Do not know	0.0%
Prefer not to answer	0.0%
System Missing	95.5%

B4b: Why did the Xcel Energy representative contact you?

Value	Percent
Incomplete application form	0.0%
Missing invoice information	0.0%
Inspection to verify installation of furnace	2.1%
Other – specify	2.4%
Do Not Know	0.0%
Prefer not to answer	0.0%
System Missing	95.5%

B5: How would you prefer to be contacted by an Xcel Energy representative?

Contact Method	First Choice Percent	Second Choice Percent
Email	32.4%	1.7%
Phone	33.4%	9.9%
In-person	0.3%	0.0%
Mail	6.1%	3.1%
Web (chat or help form submission)	0.0%	0.0%
Don't know	0.0%	0.0%
Prefer not to answer	0.0%	0.0%
System Missing	27.8%	85.4%

Section C: Product Awareness and Satisfaction

C1a: The rebate program overall

Satisfaction	Percent
Very Dissatisfied	3.2%
Somewhat Dissatisfied	2.0%
Neither Satisfied Nor Dissatisfied	1.5%
Somewhat Satisfied	21.3%
Very Satisfied	68.2%
Not applicable	1.5%
Don't know	2.3%
Prefer not to answer	0.0%
System Missing	14.7%

C1b: The furnace installed through the program

Satisfaction	Percent
Very Dissatisfied	0.0%
Somewhat Dissatisfied	2.2%
Neither Satisfied Nor Dissatisfied	0.2%
Somewhat Satisfied	12.6%
Very Satisfied	83.5%
Not applicable	0.7%
Don't know	0.7%
Prefer not to answer	0.0%
Prefer not to answer	0.0%

C1c: The contractor who installed the furnace

Satisfaction	Percent
Very Dissatisfied	3.0%
Somewhat Dissatisfied	1.6%
Neither Satisfied Nor Dissatisfied	1.5%
Somewhat Satisfied	19.1%
Very Satisfied	73.9%
Not applicable	0.0%
Don't know	0.2%
Prefer not to answer	0.7%
Prefer not to answer	0.7%

C1d: Xcel Energy as an energy provider

Satisfaction	Percent
Very Dissatisfied	1.6%
Somewhat Dissatisfied	4.5%
Neither Satisfied Nor Dissatisfied	6.1%
Somewhat Satisfied	20.1%
Very Satisfied	42.1%
Not applicable	0.0%
Don't know	0.0%
Prefer not to answer	1.6%
System Missing	24.0%

C1e: The amount of time it took to receive your rebate for your high efficiency furnace

Satisfaction	Percent
Very Dissatisfied	3.9%
Somewhat Dissatisfied	0.8%
Neither Satisfied Nor Dissatisfied	4.3%
Somewhat Satisfied	32.3%
Very Satisfied	38.9%
Not applicable	2.9%
Don't know	2.2%
Prefer not to answer	0.0%
System Missing	14.7%

C1f: The dollar amount of the furnace rebate

Satisfaction	Percent
Very Dissatisfied	4.7%
Somewhat Dissatisfied	1.7%
Neither Satisfied Nor Dissatisfied	3.0%
Somewhat Satisfied	32.3%
Very Satisfied	38.6%
Not applicable	0.7%
Don't know	4.3%
Prefer not to answer	0.0%
System Missing	14.7%

C1g: Interactions with Xcel staff

Satisfaction	Percent
Very Dissatisfied	0.0%
Somewhat Dissatisfied	0.0%
Neither Satisfied Nor Dissatisfied	0.0%
Somewhat Satisfied	0.7%
Very Satisfied	3.0%
Not applicable	0.7%
Don't know	0.0%
Prefer not to answer	0.0%
System Missing	95.5%

C1h: The overall value of the furnace you received for the price you paid

Satisfaction	Percent
Very Dissatisfied	2.3%
Somewhat Dissatisfied	0.0%
Neither Satisfied Nor Dissatisfied	5.1%
Somewhat Satisfied	32.5%
Very Satisfied	59.3%
Not applicable	0.0%
Don't know	0.7%
Prefer not to answer	0.0%
System Missing	2.3%

C2: Do you have any recommendations for improving the heating program?

Satisfaction	Percent
Yes	36.6%
No	61.9%
Don't know	1.6%
Prefer not to answer	0.0%

Section D: Motivation for Participation

D1: Was the furnace you installed replacing an existing furnace?

Satisfaction	Percent
Yes	97.8%
No	2.2%
Don't know	0.0%
Prefer not to answer	0.0%

D2: What was the functionality of the replaced furnace?

Functionality of Furnace	Percent
Fully functional and not in need of repair?	25.5%
Functional, but needed minor repairs?	18.1%
Functional, but needed major repairs?	37.4%
Not functional?	16.8%
Do not know	0.0%
Prefer not to answer	0.0%
System Missing	2.2%

D3: About how old (in years) was the furnace prior to replacement?

Years	Percent
3	0.7%
8	5.1%
9	2.3%
10	3.8%
13	2.2%
14	2.3%
15	2.2%
16	1.6%
17	2.3%
18	0.7%
19	1.0%
20	11.8%
23	0.7%
24	1.5%
25	0.8%
26	0.2%

Years	Percent
30	1.7%
35	0.3%
40	0.7%
49	0.7%
50	0.2%
55	0.3%
Do not know	0.2%
Prefer not to answer	0.0%
System Missing	56.4%

D4: How much longer (in years) do you think your old furnace would have lasted if you had not replaced it?

Years	Percent
0	0.6%
1	7.4%
2	9.2%
3	4.8%
4	2.5%
5	10.3%
10	3.0%
15	2.2%
20	1.5%
36	0.7%
Do not know	1.4%
Prefer not to answer	0.0%
System Missing	56.4%

D5a: How important was reducing environmental impact of your home?

Importance	Percent
Not at all important	6.0%
A little important	8.8%
Somewhat important	10.1%
Very important	12.0%
Extremely important	6.6%
Not applicable	0.0%
Do not know	0.0%

Importance	Percent
Prefer not to answer	0.0%
System Missing	56.4%

D5b: How important was upgrading out-of-date equipment?

Importance	Percent
Not at all important	2.2%
A little important	0.7%
Somewhat important	9.3%
Very important	22.0%
Extremely important	9.3%
Not applicable	0.0%
Do not know	0.0%
Prefer not to answer	0.0%
System Missing	56.4%

D5c: How important was improving home comfort?

Importance	Percent
Not at all important	0.7%
A little important	0.0%
Somewhat important	7.3%
Very important	19.3%
Extremely important	16.2%
Not applicable	0.0%
Do not know	0.0%
Prefer not to answer	0.0%
System Missing	56.4%

D5d: How important was improving air quality?

Importance	Percent
Not at all important	2.5%
A little important	3.1%
Somewhat important	8.7%
Very important	19.2%
Extremely important	10.1%
Not applicable	0.0%
Do not know	0.0%

Importance	Percent
Prefer not to answer	0.0%
System Missing	56.4%

D5e: How important was receiving financial incentive?

Importance	Percent
Not at all important	1.2%
A little important	9.7%
Somewhat important	15.3%
Very important	7.8%
Extremely important	9.6%
Not applicable	0.0%
Do not know	0.0%
Prefer not to answer	0.0%
System Missing	56.4%

D5f: How important was reducing energy bill amounts?

Importance	Percent
Not at all important	0.7%
A little important	0.0%
Somewhat important	7.1%
Very important	18.9%
Extremely important	16.8%
Not applicable	0.0%
Do not know	0.0%
Prefer not to answer	0.0%
System Missing	56.4%

D5g: How important was the contractor recommendation?

Importance	Percent
Not at all important	6.7%
A little important	4.5%
Somewhat important	8.9%
Very important	13.2%
Extremely important	6.4%
Not applicable	3.8%
Do not know	0.0%

Importance	Percent
Prefer not to answer	0.0%
System Missing	56.4%

Section E: Free-Ridership

E1: Before the heating program, do you recall receiving any other rebates from Xcel Energy for home energy efficiency?

Satisfaction	Percent
Yes	31.7%
No	62.8%
Don't know	5.5%
Prefer not to answer	0.0%

E2: How influential was any encouragement from Xcel Energy to consider a high-efficiency furnace in your decision to upgrade your furnace?

Influence Score	Percent
0	7.5%
3	3.2%
5	2.5%
6	2.2%
7	6.4%
8	8.7%
9	1.0%
10	7.0%
Don't know	0.0%
Prefer not to answer	0.0%
System Missing	61.5%

E3: How influential was the availability of the rebate form Xcel Energy on your decision to install high efficiency?

Influence Score	Percent
0	12.4%
2	0.7%
3	4.8%
4	6.0%
5	11.3%
6	5.4%

Influence Score	Percent
7	7.9%
8	14.6%
9	5.4%
10	14.5%
Not applicable	2.2%
Don't know	0.0%
Prefer not to answer	0.0%
System Missing	14.7%

E3a: How influential was the contractor recommendation on your decision to install the high efficiency furnace?

Influence Score	Percent
0	9.6%
3	9.2%
5	10.5%
6	3.2%
7	8.5%
8	23.5%
9	8.5%
10	23.7%
Not applicable	1.8%
Don't know	1.4%
Prefer not to answer	0.0%

E4: How influential was this package of customer support on your decision to install the high-efficiency furnace?

Influence Score	Percent
0	10.3%
2	1.5%
3	1.0%
4	2.3%
5	7.7%
6	4.4%
7	11.7%
8	25.1%
9	17.3%

Influence Score	Percent
10	15.7%
Not applicable	2.2%
Don't know	0.7%
Prefer not to answer	0.0%

E5: Still thinking about this package of customer support and rebate, if this package had not existed, do you think you would have...?

Response	Percent
Installed the same exact furnace	48.8%
Installed a similarly energy-efficient furnace	17.8%
Installed a less energy-efficient furnace	26.4%
Not installed a new furnace yet	6.1%
Don't know	0.9%
Prefer not to answer	0.0%

E6: If this Xcel Energy consumer support and rebate package did not exist, do you think you would have installed this furnace...?

Response	Percent
About the same time as the furnace project you did	81.5%
In a year or two	15.1%
Three or four years from now	1.8%
Longer than four years from now	1.4%
Don't know	0.2%
Prefer not to answer	0.0%

E7: How did the package of customer support from Xcel Energy influence your decision to install the high-efficiency furnace?

Response	Percent
Carbon monoxide would leak so we had to replace it right away we used Xcel because we used them for years for maintenance repairs	1.6%
Don't believe it was influenced it was in need and time to replace so we selected the best one and the price and the highest efficiency	0.7%
Effective, that's it	0.2%
Extremely important. I think understanding just how a high efficiency furnace would help heat the home but also help the environment was very important, and something that we just hadn't understood before.	2.2%
From the start we were trying to save money and Xcel offered us some great perks but I feel like I was given false information.	1.6%

Response	Percent
Gave me an incentive to get a efficiency furnace	0.7%
I didn't hear from Xcel energy at all.	1.6%
I didn't know about it till the project was complete	0.2%
I didn't think it was much customer support.	0.6%
I don't think it had a major influence	1.5%
I don't think it had any influence	0.7%
I had to install a new furnace and the rebate was a big rebate	0.6%
I think having the information on the website was very useful; it was very clear for me. It is pretty well done.	0.7%
I think it had a lot to do with it.	0.6%
I think it is important and it made me get a high efficiency furnace	0.7%
I think it was important; encouraged me to do it sooner rather than later	1.6%
I think the impact of the Xcel rebate customer support was less compelling than the contractor's presentation.	0.8%
I think Xcel's input did have an impact on our ability to make a decision in getting the higher efficiency unit. All the different brochures they had been sending out, I think that did help.	1.6%
I wanted the value the money from the rebate was valuable	0.8%
I was probably going to install one anyway, but it was an extra boost towards doing so.	0.7%
I wasn't aware of the customer support, so none.	2.2%
I would have done it one way or another, but because you had a list of approved contractors and support and the rebate, that made the decision for me.	0.2%
Information was helpful in my research and the rebate made me go ahead	0.7%
It actually did not have much influence at all. If hadn't needed an energy audit, would not have purchased a furnace at that time.	0.7%
it contributed 25 to 30 percent to go ahead and do it	0.7%
It definitely played a role in making me purchase a more efficient furnace.	0.7%
it did both things efficiency and rebate so a really good combination	1.6%
It didn't	2.2%
It didn't apply to us.	1.5%
It didn't have any as I did not know about it and I would have gotten a new furnace anyway	2.2%
It didn't make a difference we were going to do it anyway we got rebate from Costco as well	0.7%
It got us to do the efficiency furnace at that time	2.2%
It had influence as far as the rebate helped with the timing of the project.	2.2%
It had no impact I would have done it anyway	0.2%
It had some influence. My analysis of the amount of money I would save versus the cost of the higher efficiency furnace was more influential. I'm pretty energy conscious, so the overall environmental effect was also very influential.	0.7%
It helped pushed me a rung on efficiency	0.3%
It influenced it greatly	1.6%
It made me very happy about the rebate, but did not influence my overall choice or timing because the old furnace	0.3%

Response	Percent
clearly needed replacement	
It was a factor.	0.7%
It was a moderate influence. We would have installed the same furnace without the rebate from Xcel.	2.2%
It was a nice thing to have but its not the major thing needed to replace the furnace	0.2%
It was an excellent to the package	0.6%
It was effective.	0.2%
It was good to do high efficient and we had to do it at that time.	0.7%
It was good to have that and be able to get a higher efficiency furnace.	1.5%
It was instrumental in us doing it; very instrumental.	0.3%
It was just a bonus. I was going to put in a high efficiency furnace anyway.	0.6%
It was just an added bonus. But I would have put in the same exact furnace whether I had received the rebate or not	2.2%
It was moderately influential for the particular unit I chose.	0.7%
It was more of a positive impact after the fact	2.2%
It was significantly important in making the jump to high efficiency	1.6%
It was useful.	2.2%
It was very influential	0.7%
It was very influential in the fact that it led me to purchase and install a more efficient furnace than I would have without it.	0.7%
It was very influential. The rebate based on the furnace made it worth getting.	0.7%
It wasn't very influential; we didn't even know about it until after we paid	1.5%
It's a great idea it influenced me to get and efficient furnace	0.7%
It's a great way to help to get new efficient equipment	0.7%
Marginal	0.7%
Minimal influence we don't know that much about it we just did so much in the house we just trusted the contractor	0.7%
Minimal the furnace was a safety risk I was going to do it anyway	0.7%
Needed new furnace	1.6%
No difference	0.7%
No effect at all	1.6%
No influence at all	3.6%
No influence on my decision	1.6%
Not a lot and I already had good incentives from my utility and because of my job I had to do it (professional obligation).	0.7%
Not influence at all	0.7%
Not much it's just a win-win get money back and more energy efficient	0.2%
Not much.	0.2%
Nothing. Zero. I had already made up my mind.	2.2%

Response	Percent
Old furnace died so I had no choice but to do it.	1.5%
On the rebate side it had made go up one more seer than I was thinking of	0.7%
The contractor had a bigger impact	0.7%
The motivation was we wanted to finish the basement and the other the furnace was 25 years so it maybe expensive later on so since we got rebates from Xcel and Costco we thought now is the time	0.7%
The rebate	0.2%
The rebate amount was attractive and made us go higher and energy efficient	1.6%
The rebate and energy efficiency of the new furnace	0.7%
The rebate helps reduce the cost	0.8%
The rebate reduced the cost	0.3%
The sales rep pointed out we can have a more energy efficient furnace and the rebate countered that	0.2%
This is ridiculous. The redundancy of the questions . . . I can't answer that question.	1.6%
Very influential making my decision I would have gone with a lesser furnace without this package	0.2%
We had to install immediately because we were replacing the AC.	0.2%
We knew we needed to do the work and the rebate encouraged us to do it and softened the blow of a huge expense.	0.7%
We were already motivated to do it so they should target people who are thinking about doing it	0.2%
We were going to get a furnace but getting on their website made us get a high efficiency furnace	0.3%
Welcomed but not essential to my decision	0.6%
Went to high efficiency to low efficiency	2.2%
Xcel has been great and the rebate also	0.7%
Xcel is very helpful	0.7%
You much made the decision myself	0.8%
Zero	1.5%
Don't know	3.2%
Prefer not to answer	1.6%

Section F: Spillover

F1: Since installing your new furnace, have you made any other energy efficiency upgrades?

Response	Percent
Yes	81.5%
No	1.4%
Don't know	0.2%
Prefer not to answer	0.0%

F2. What did you do?

Value	Percent Select 2	Percent Select 3	Percent Select 4	Percent Select 5	Percent Select 6
Efficient light bulbs (CFLs or LEDs)	20.3%	2.6%	0.0%	2.2%	0.7%
Efficient lighting fixtures	1.0%	0.0%	0.7%	0.0%	0.0%
More efficient primary heating system	1.1%	2.3%	0.0%	0.0%	0.0%
More efficient primary cooling system	24.0%	4.1%	2.5%	0.0%	0.7%
Programmable or smart thermostat	0.0%	0.0%	0.0%	0.0%	0.0%
More efficient refrigerator	5.4%	2.3%	0.9%	0.0%	0.0%
More efficient dishwasher	2.9%	1.5%	3.1%	0.9%	0.0%
More efficient clothes washer	0.7%	1.6%	0.0%	1.7%	0.2%
More efficient clothes dryer	0.0%	0.0%	1.6%	0.0%	0.9%
Efficient windows	10.9%	0.9%	0.0%	0.0%	0.0%
Efficient doors	1.5%	2.4%	0.0%	0.0%	0.0%
Other (specify)	2.4%	11.4%	3.9%	0.8%	0.0%
Do not know	0.0%	0.0%	0.0%	0.0%	0.0%
Prefer not to answer	0.0%	0.0%	0.0%	0.0%	0.0%
System Missing	29.7%	70.6%	87.3%	94.4%	97.4%

F2.O1: What else did you do?

Value	Percent
Air sealing	2.2%
Air sealing, shower head, bathroom faucet	0.7%
Ceiling fan motors all changed to high efficiency	0.7%
Hot water heater	2.4%
Installed a humidifier	1.6%
Insulation	2.9%
Oven	0.7%
Range	2.4%
Replaced older outdoor lighting with sunlight-sensing lighting	2.2%
Solar panel	0.2%
Stove	0.2%
Tankless hot water system	2.2%
System Missing	81.5%

Section G: Net Promoter and Household & Demographic Characteristics

G1: How likely are you to recommend the residential heating rebate program to a friend or family member, or colleague?

Likelihood to Recommend	Percent
Extremely likely	47.9%
Very likely	33.2%
Somewhat likely	12.3%
A little likely	0.7%
Not at all likely	5.2%
Don't know	0.7%
Prefer not to answer	0.0%

Gen1: Do you own or rent your home where the furnace was installed?

Value	Percent
Own	97.1%
Lease / Rent	2.9%
Other	0.0%
Don't know	0.0%
Prefer not to answer	0.0%

Gen1a: Do you pay your Xcel energy bill, or does someone else (renters only)?

Value	Percent
Pay own	2.9%
Other pays	0.0%
Don't know	0.0%
Prefer not to answer	0.0%
System Missing	97.1%

Gen2: Is your home a single-family home or a structure with more than one housing unit, such as a duplex, triplex, or quad?

Value	Percent
Single family home	94.2%
More than one unit	5.8%
Don't know	0.0%
Prefer not to answer	0.0%

Gen2a: How many units are in the structure?

Units	Percent
Two	2.4%
Five	2.2%
100	0.6%
Don't know	0.6%
Prefer not to answer	0.0%
System Missing	94.2%

Gen3: Approximately what is the total square footage of your home?

Units	Percent
Less than 500 square feet	0.0%
Between 500 and 749 square feet	0.0%
Between 750 and 999 square feet	0.8%
Between 1,000 and 1,499 square feet	15.2%
Between 1,500 and 1,999 square feet	13.9%
Between 2,000 and 2,499 square feet	26.2%
Between 2,500 and 2,999 square feet	19.7%
Between 3,000 and 3,999 square feet	16.1%
4,000 or more square feet	6.4%
Don't know	1.7%
Prefer not to answer	0.0%

Gen4: Approximately what year was your home built?

Year Built	Percent
1939 or earlier	7.4%
1940 to 1949	0.8%
1950 to 1959	15.0%
1960 to 1969	2.6%
1970 to 1979	15.9%
1980 to 1989	14.4%
1990 to 1999	21.7%
2000 to 2009	22.3%
2010 to 2013	0.0%
2014 and later	0.0%
Don't know	0.0%
Prefer not to answer	0.0%

Gen5: How many people live in your household?

Household Size	Percent
1	15.8%
2	36.4%
3	18.5%
4	21.4%
5	5.0%
6	0.2%
7	0.3%
8	0.2%
Don't know	0.7%
Prefer not to answer	1.6%

Gen6: What is your current age?

Age	Percent
31	1.9%
32	1.2%
33	1.5%
34	1.7%
35	4.0%
36	3.2%
37	0.9%
38	0.7%
39	2.2%
40	2.2%
43	0.6%
44	2.5%
45	2.2%
46	3.7%
47	6.5%
48	2.3%
49	1.5%
50	0.7%
52	0.6%
53	0.6%
54	1.6%
55	2.9%

Age	Percent
56	0.7%
57	2.2%
58	2.4%
59	2.3%
60	3.2%
62	0.7%
64	4.5%
65	0.7%
66	1.6%
67	3.9%
68	1.8%
69	1.4%
70	2.1%
71	2.6%
72	4.6%
74	1.6%
75	2.9%
77	1.6%
78	0.6%
79	4.4%
80	0.8%
81	1.6%
85	0.2%
86	0.7%
Prefer not to answer	5.3%

Gen7: Which of the following ranges best reflects your household's total income before taxes last year?

Household Income	Percent
Under \$20,000	2.9%
\$20,000 to \$39,000	7.1%
\$40,000 to \$59,000	5.5%
\$60,000 to \$79,000	6.2%
\$80,000 to \$99,000	10.7%
\$100,000 to \$119,000	11.8%
\$120,000 or over	37.1%

Household Income	Percent
Don't know	3.0%
Prefer not to answer	15.9%

APPENDIX D: TRADE PARTNER INTERVIEW INFORMATION

Section A: Screener/Introduction

A-1: What is your title or role at COMPANY NAME [PROBE: Designer, Developer, Engineer, Contractor, Project Manager, etc.]

Role	Percent
Owner	50%
Office Manager	18%
Project/Construction Coordinator	11%
Operations Manager	7%
Outside Sales	3.5%
General Manager	3.5%
President	3.5%
Didn't say title	3.5%

A4. Can you briefly describe your company's work? [PROBE: Specific specialties such as installation of heating & cooling equipment, etc.]

Role
Primarily residential heating, some commercial. We do heating and air conditioning products plus tankless water heaters
Primarily residential. We focus on higher efficiency and do a lot of variable speed furnace and 95% furnaces. Xcel has been a good partner as far as that goes. We are mostly retrofit - for the most part we deal with complete systems, a lot of times matching a furnace with an AC and a coil
We are 99% residential but we are slowly trying to work our way back in to commercial. We do furnaces, conditioners, boilers, mini-splits and are the #1 Lenox dealer in CO
90 percent of everything we do is related directly to residential - 10 percent commercial. 2/3 of our company is installing new equipment from the standpoint of retrofit and we do a minimal amount of new construction. The other 1/3 is service work, repairing peoples units that are still in operation
Heating and ac residential service install
We do both new install on new build homes. We also have a retro side, the side that I work on, and do replacement add on.
We install and repair heating and ac systems
Commercial and residential ac and heating, tankless water heaters
Heating, air and ventilation company.
Service experts in heating and ac and also have a plumbing branch
We have been around for 19 years. We only do service work for plumbing, heating, cooling and electrical. We serve only the Denver Metro area. We will do about \$27 million in business this year and \$11 million of that is in furnaces.
We do a wide range of typically residential, new construction, add on or replacement, HVAC services.

Role
We do replacement for HVAC systems, windows, and doors and we do production.
We have been in business for 71 years and do residential and commercial heating and boiler work. We service the Denver and surrounding suburbs South to Castle Rock Colorado.
Just mechanical contracting which is steam and hot water, furnaces and ac
We do mainly evaporative coolers, furnaces and air conditioners.
We do furnace installation, boiler and ac installation, evaporative coolers, that whole realm. We also do some service and plumbing
we do HVAC, electrical, and plumbing work. Most part only residential and we don't do new construction....
we are about 99% residential, very little commercial so I don't have any info as far as commercial rebates but I'm one of the owners, small family business, my wife's uncle and we bought in 2003, been in business since 1971. been doing Xcel rebates since 2003 in various forms
Front range has been around 29 years, heating and cooling contractor in front range Denver area. 350 installs a year, couple 1000 service calls.. 85-90% retrofit, no multifamily or new construction, single family dwellings, then some light commercial
we just do existing construction, no new construction. We just primarily do, 90%, 16 SEER and above only do VS. furnace, two stage minimum. Because of basement, not always 97% but usually its 97% modulating or two stage 80% version if we cant get venting
Mostly we are 80% residential and that is with install and service as well. Probably 10% light commercial and 10% hydraulics
Started the company and he was a one man show and did a lot of installs of solar and boiler work in the Mountains. We are down in Denver now. We do high-efficiency and AC and Furnaces.
Service and installation for HVAC
We install HVAC, new installs and swap outs and service work
pretty broad, not just res but also lots of commercial, family owned since 1970, 35 employees. If we broke that down to res vs. commercial, id say we are 60/40, commercial. Then we take that another step, and our service side with maintenance. Employee wise that's 65% res side. large service industry type things but yet id say our res install program, were probably 1.5 million a year
Residential HVAC replacements, remodel and service work
We service whole HVAC systems, Heat Pumps, motors, anything that involves heating and do ventilation as well.

A5. What types of customers does COMPANY NAME typically serve? [PROBE: In general, do you serve residential, commercial, multi-family?]

Customers
Residential - single family homes and mostly retrofits projects
Residential
Residential
Majority residential partly commercial
Residential
Residential, commercial and multifamily

Customers
Residential (70-80%) and light commercial
Commercial, residential and multifamily
Residential and light commercial
90% residential and 10% commercial
99% residential
Residential (95%-97%) with some small commercial
Residential
80% residential and 20% light commercial
Mostly commercial and a few residential but mostly commercial
We do mostly residential and some small commercial
Mostly residential and very little commercial, and it usually just straight replacement, probably 85% residential
residential, 99%
residential, no new construction whatsoever
85-90% res
I only do res, some multifamily, but no buildings over, you know primarily townhouses is multifamily, not doing any apartment buildings per say
80 % Residential, 10% light commercial and 10% hydraulics
96% Residential
Residential (95%)
Residential (95%) and a little bit of light commercial (5%).
60/40 commercial/residential
Residential (90%) 10% commercial
Mainly residential (98%) and a very few small commercial

3. Has this changed over time?

Change over time	Percentage
No	25%
I don't know	3.5%
That was about the time that I consolidated down to just that list of work (heating, air-conditioning, water heaters). We use to do new construction and varied projects but I consolidated down to doing just that and it works out a lot better for us	3.5%
Always	3.5%
As we've grown we have gotten to more things. We started as only residential and now we expanded	3.5%
Always been residential and light commercial	3.5%
Has been that for quite a while, as long as I can remember	3.5%
About 10 years ago 20% of our work was commercial	3.5%

Change over time	Percentage
It has always been like that	3.5%
It has always been that way	3.5%
We have always been primarily residential	3.5%
That has always been our primary focus (residential) we did a little more commercial in the past but not a lot	3.5%
yes; we've been residential for awhile but there is a time when we did more commercial work, maybe 10% instead of 1%. Also a time when we did new construction work.	3.5%
no not really, we've always specialized in residential. Within the last 10 years have we taken on commercial projects, just retrofit projects. No building out duct work or anything. I've tried, and we just cant make any money on it	3.5%
yes, part of it is seasonal but economically, if the economy is doing well, more residential, when its not, more commercial	3.5%
Yes, pretty consistent, not built for commercial, my company is pretty small as far as, taking on commercial is not something I'm interested in	3.5%
That was our focus all along	3.5%
This spring we will be branching out to more commercial because once you get in to the commercial part of it because you start putting those PMs together and it becomes a really good cash flow item.	3.5%
I do less commercial now then I use to and that is by my own choosing, I just prefer residential.	3.5%
Always been that way	3.5%
It has always been that	3.5%

4. **[IF YES:]** Did the Residential Heating rebate program have anything to do with this change?

Value	Percentage
No	21%
N/A	75%
Not necessarily but it shifted our product mix. We were doing a lot of basic furnaces, two-speed two stage, now variable speed and ECM motors because of the efficiency gains. When we price pointed it, set it up so we could show customer a rebate that would get them within 4 year pay back net with the higher efficiencies. Typically homeowners move every 7 years, so if we catch them early on in that process they go for 4 year pay back	3.5%

A6. How long has [COMPANY NAME] been a registered Trade Partner for residential heating?

Length in program
Since they started it probably. Many years
6 or 7 years
At least since 2011 but could have been before that
2010 - since program started

Length in program
7 years at least
I don't know
Whenever they started doing rebates, maybe 10 years ago. As long as they have been offering it I've been part of it I believe
1.5 years
Since 2010, maybe longer than that
From the beginning
8-9 years
It has been many years but I'm not sure
Unfortunately I do not know
I'm not aware; more than 3 - 6 years but I'm not sure beyond that. Actually we were 17 years ago because a customer told me they did Xcel so we have been a partner for a very long time
I'm thinking 4 or 5 years, I don't remember exactly when it was to begin with
I don't know it was before I started here which was about 6 years ago so at least 6 years
I've been here for about 4 years so I know we have been before then, not sure how far back it goes though
Not sure, I think its been quite awhile. As far as I'm aware since inception
I'd say at least 8 years
6 years
N/A
At least 8 years
I believe about 4 years but I've been here for about 2.5 so I'm not positive on that
At least 6-7 years, before that I worked with my father who was a trade partner since the beginning of the trade partner program.
3 years
I would say probably 7-8 years, I think since it started. When I got in office I started going to more trade shows and getting connected with Xcel. Ann has been proactive about educating people in the field. I will be honest, trying to sell you on a furnace, I'm going to give you options, good, better, best, but I'm not one to sell a rebate. I'm into selling our company, and our product. We are licensed Carrier dealer, that's the old guy in me. Selling product and service. Not saying I can't change, and we do that; explain the rebates, might be negative
10+ years
8-10 years

A7: Do you have experience with other utility energy efficiency programs? [PROBE: what about Black Hills Energy or Atmos Gas?]

Experience
We work with the Platt River Power Authority Program, Atmos Energy and occasionally Poudre Valley REA. Poudre Valley REA was dual fuel heat pumps but Platt River Power Authority was a mixture of heating and conditioning, and tankless water heaters as well

Experience
Black Hills Energy and IREA
We only offer service for Xcel
United Power - they do strictly heat pumps. Black Hills and Atmos Gas. Just the homeowner communicates with them but we help with any rebate we can
Poudre Valley REA, Atmos Gas, and Efficiency Works (City of Ft. Collins)
No
Black Hills
No
No
Black Hills, Boulder County, Denver
Yes, we have some small utility companies but most of them don't offer any special rebates. As far as a program like Xcel they don't offer anything. We do work in Black Hills and we do extend those rebates to our clients. Any of the markets that we work in we will search out for our clients if there is any rebates that are available and we will help coordinate that
Yes, Efficiency works, Fort Collins, Boulder Valley REA, Black Hills
No
Black Hills Energy - we assist customers with information for them to fill out for their own rebates. I just know Black Hills has a lot of rebates but we are not trade partners, we just have a lot of customers that don't have Xcel that try and get rebates for them and we help with that as we can
I've been doing work with Energy Outreach (not a utility program) but some of those projects are funded by Xcel Energy. Has experience with other Xcel programs and through DOE, did 3 jobs through Black Hills Energy.
No, we only use Xcel
No I do not
no, very limited but no is the right answer. Maybe during the course of our time we may have had one or more interaction with those folks
a little bit with United Power, north of here, rural electric set up
I do. United power and tri state power. They are primarily heat pump driven. Both strong electrical but not much Natural Gas. More mountain or rural application and they want folks off the propane tank. By getting into heat pump, higher efficiency than propane and long story short they give a ton of money
no, haven't. I actually haven't had the opportunity to look into it. I did energy stuff in California previously
Yes, in Well County and that was Atmos Gas and it wasn't a trade partnership they offer rebates but that was a very small portion of our work.
We offer some rebates through United Power but it is really specific though. I'm not sure about the logistics on it and we don't do it often.
Yes, Black Hill Energy.
No
Yes, we're based central Denver metro, we get into some suburbs that may have different providers. South, things like that but we don't associate with those programs. If they tell me they tell me they may have a program, I'll look into it for customer.

Experience
United Power
The only one I have is United Power

A7a. [If they mention participation with another utility or municipality]: How does your experience with their high-efficiency gas furnace programs compare to your experience with Xcel Energy's high-efficiency gas furnace program?

Value	Percentage
N/A	36%
Xcel's rebate program has always been top of the line. They have been way easier to work with compared to others. Often times, homeowners only have Xcel which works well for us.	3.5%
They run a very good program and they're very similar programs to Xcel in terms of working relationships. Xcel makes their program easy to work with so I wouldn't say anything is easier.	3.5%
They're similar - the only difference is that we are able to help the customer with paperwork with the Xcel program (which I prefer).	3.5%
Efficiency works is pretty detailed, Xcel is easier and more direct for what you need to do	3.5%
Overall I would say they're pretty close but Xcel does a better job updating what they do (meaning their rebates and information regarding rebates). They also require the NATE certification which is think is good for the industry. Once a year they do a presentation to update everybody on the current rebates so I would say they do a better job.	3.5%
Pretty similar. They're basically based on the municipality, Xcel doesn't cover all of the areas.	3.5%
Can't say	3.5%
One of the most similar programs would be the Efficiency Works program, we just had a meeting with those folks. Xcel's process we feel is very streamlined and very easy to navigate compared to theirs.	3.5%
I don't work with them directly so I'm not entirely sure	3.5%
I've done too little jobs to fairly compare that	3.5%
since we are talking furnace, I guess not really, that ones electric heat pumps and AC, they don't have natural gas so no furnace	3.5%
we had to hire a person to do nothing but rebates because of the amount of paper work but we also do quite a bit of furnace and ac work. A little cumbersome it has helped us...if I have a crew going out to replace basic furnace but if they can do variable speed and get the rebate and we can recover more money back its great	3.5%
I would say they had a flat rate for a furnace I would say we did very few of those and I never got any complaints from the customers that they didn't receive rebates but we haven't done one for Atmos for 2-3 years	3.5%
It has nothing to do with furnaces	3.5%
I would say overall Xcel's information is easier to obtain and it is more straight forward in terms of filling out the forms and providing them the information.	3.5%
I would say 1-5, Xcel has always been at the top. Receptive for emails, up at a 5. Some of	3.5%

Value	Percentage
these smaller utilities, they don't have the resources so return phone call might take 24 hours, maybe a 3, not as timely	
Xcel is a lot better, that one is further out and I don't do too much work in that area	3.5%
No experience with high efficiency gas furnaces through United Power.	3.5%

A7b. Are any of these programs easier to work with than the others? [IF YES] Why is that?

Value	Percentage
N/A	46%
No	11%
Xcel has been easiest to work with	3.5%
The Xcel furnace program is easier in terms that we can help with the paperwork. The only thing is the signature thing, it seems unnecessary to do this because we aren't signing over anything	3.5%
Xcel	3.5%
Once you get the form they are both easy to work with	3.5%
Can't say	3.5%
The paperwork process, commissioning, the equipment in the field to submitting the rebates.	3.5%
I don't work with them directly so I'm not entirely sure	3.5%
I don't know. Xcel has been easy to work with though. I don't think any of them are hard to deal with	3.5%
Well, we've got it down pretty good, probably ore paper work with Xcel. United Power deals directly with homeowner, they do the paper work and it's just a copy of our quote, they go out to house to inspect and we don't get in the middle at all.	3.5%
Yes, Xcel is easier. I would say overall Xcel's information is easier to obtain and it is more straight forward in terms of filling out the forms and providing them the information.	3.5%
I would say 1-5, Xcel has always been at the top. Receptive for emails, up at a 5. Some of these smaller utilities, they don't have the resources so return phone call might take 24 hours, maybe a 3. not as timely	3.5%
Yes, Xcel is easier	3.5%

A8: Is your company a registered Trade Partner for other energy efficiency programs at Xcel Energy?

Experience	Percentage
No	64%
N/A	7%
Yes but we don't use them often.	3.5%
Yes	3.5%
We are trade partners for the AC and evaporative cooler, I did submit one for a boiler	3.5%

Experience	Percentage
tune up for commercial and that was the first time I've done that	
Yes, part of cooling program	3.5%
Yes, cooling	3.5%
Yes, cooling as well. Hot water, thermostats, AC obviously	3.5%
Yes, cooling as well	3.5%
Yes, the AC program.	3.5%

A9: Approximately what percent of your jobs are for projects through the Xcel Energy Residential Heating Products program?

Value
40-50%
10 - 15%
80%
80%
75%
75 percent
Two parts. We do a ton of new construction and every house we do would qualify because we do 95% furnaces on each house but none of my builders are filling out the rebate form, these are all eligible for rebates but the builders miss out on them. On the flip side, 90% of our projects are eligible and we're making sure those rebates are being processed.
About 30 percent
About 10 percent
80%
95%
80% - we don't have that hard number but between the heating, ECM and AC rebates it is close to 70-80%
About 10%
I would say 75% but they took boilers out so probably 60%
At the moment not that many because most everything has been commercial. Although Ann Kirkpatrick is good to work with because she understands all sides. When you do have a question she can always answer it.
Probably 80% (not confident)
I would say a very high percentage probably 80%
Don't know the answer to that. We do a lot of smaller service jobs; maybe 10%
I'm going to say probably 80-85% of jobs
35%
Probably about, honestly, all of them because the minimum furnace I do is qualified, its about 50% of total business
10-12%
Not a whole bunch. We don't get a lot of people who want to move in to the high-efficiency direction because of the

Value
ventilation issues and the ROI is about 6 years to get any kind of savings to see anything so people don't tend to lean towards those options. Most people aren't saving up for furnaces, they just tend to go out and then it is crisis mode so many people are looking for the cheaper options.
For heating probably 50% and AC only 5%
It is a fair amount. I would say, this is a guess but I would say around 75%.
I would say probably unfortunately, 10%, wish it was higher. Could be higher, might not have the income to get 96%, she just wants to be comfortable. In 3-5 years ECM might be everywhere
33%
25%

Section B: Awareness

B1: How did you initially learn about becoming a trade Partner for the Residential Heating rebate program?

Value
We stay on top of what is going on in within the industry. I assume we were invited to a meeting and we signed up from there. When you're a trade partner, that typically helps promote your business
I believe I used them before with another company I was working with. I was aware of them before we started our current company
I just fell in to the role and the rebate program. Others were already aware of it before I began working here
I don't remember if they presented to us or if we just heard about it
Already part of it when I started
I don't know
Most times I have to search things online. As I mentioned earlier Xcel is getting better at alerting us but it was probably a mix of searching and once involved then I got on a email list
Previous company that I was working for and then I started my own company
When Frank attended a seminar at one of our companies. I believe at that time it was through York.
Xcel reached out to us. We were tied in with the Denver and Boulder County programs and Xcel became a partner
I'm sure it was brought to our attention through our distributors
I can't recall if it was through our distributor Carrier West out of Denver, they're a Carrier distributor for us. Or it could have been through email
Not sure
No, I think it was 17 years ago so I'm not sure
It was through Energy Outreach because they're doing things for nonprofits and some of their projects were being funded by Xcel and so we figured we would join this program as well
I don't know, I do know that I went to one of the classes that they had and discovered that the customers can sign the rebate over to us and I believe that was in 2012. That was great for us.
I just learned when I took over, my predecessor went over everything. Went through their conference a couple of times and got knowledge through that

Value
I don't remember its been a number of years back, my guess is probably email from Xcel but not sure
boy its been so long...I think it was because we did AC, different company I owned before 2003, we did Xcel AC, and it was natural to start the heating side
they came to us, sent us a letter to see if we were interested
mainly honestly through customers. You know asking for it...they would say I know there's a rebate. They pretty aggressively advertise rebates through online bills and the consumers are educated. I think some companies talk about it and then don't process the rebate, its a lot of work to get them rebates. its driven by Xcel and by people doing bids, saying they have rebates. I run across rebates all the time and once I look at it I say hey you're not actually going to get that much, I think some contractors just throw it in there and aren't actually going to get that much. when the process who does most rebates, I mean I'm pretty new, and I think within two years ill be doing more rebates than anyone in CO area because it seems like, I haven't kept track, still have some to process and im behind, but every project with a bid out and they say s but I look them up and they are not Xcel trade partners. I think they use it to sell but they don't process paperwork, that's my take. I just don't see people participating in high numbers. in the next year, if I raise to number 1, that means a lot of it is not happening. I guaranteed ill be number 1 of process rebates in two years
I was aware through another contractor that I worked with and I purchased the company from a gentlemen that had experience with Xcel so we figured we would join.
I don't know, I'm not sure how it was originally brought to our attention
Through my father who was a trade partner
She (owner) heard about the rebate program through their suppliers Lenox and Carrier
I think if we go back, were authorized Carrier dealer, they have a Denver Metro, they come with new products online and then they have a national meeting too. I go to York too, I've been to product shows and most of those, and this is how I found out, Xcel was at those things. Ann Kirkpatrick is there and explains what's out there. How we can upsell on the 96%. so at a trade equipment show
Through the supply house, the HVAC supply house in town
We're always trying to look at stuff but if I remember correctly one of my customers knew that they were providing rebates. So I learned through my customer.

B1a: Is this your preferred method for hearing about opportunities?

Value	Percentage
No, email	29%
N/A	25%
No	7%
Word of mouth	3.5%
Letters in the mail	3.5%
Seminars, meetings, through our vendors. They're normally the ones who make him aware. This is the best way for us to learn	3.5%
Yes - Ann is the best way to reach us	3.5%
Word of mouth, emails	3.5%

Value	Percentage
Ann has done an excellent job through email and that is typically the best way for me to redistribute the program information	3.5%
I like hearing from Ann and how she sends everything out through email	3.5%
This was easy for me	3.5%
I'm open to any and all. I think that one of the things they saw is that we are licensed contractor in 20 jurisdictions so by getting us involved we cover a lot more turf. And that being said its been a good partnership	3.5%
At first it was because they were new to the area but now we get most of our information from Ann.	3.5%
I think, I'm not as much with the email, my age group, which in our industry is at the top, we like the hands on eye-to-eye...younger groups may not like that	3.5%
N/A	3.5%

B1b: What are other ways that you like to hear about Xcel Energy Trade Partner opportunities?

Value
Email
Email
Email works well for us
Occasionally we get an email from Ann and I think that method is efficient
Email
Email is the easiest
Phone calls alerting us that there are new opportunities. Sometimes emails get lost in the inbox
No
That is the best way for him. He is a very busy person, he would miss any emails that get sent, etc.
Radio and TV - our customer base hears it and they ask us about it. We get emails from Ann which updates us as far as what's going on, what the programs are and the changes that are being made.
Any updates, word of mouth, email, Xcel - Ann does a fantastic job at updating us and does an exceptional job both by phone and email
Email most effective
Email would be easiest
Sales reps for vendors, I think its good that she (Ann) notifies vendors. She talks to Carrier and lets them know what is to be expected and they then tell me and I do like to hear about it from them as well
Through word of mouth
Email or phone call
I like email because I pass those along to comfort advisors and others helping in the office, that spreads the word the best. Also keeping everyone up to date on the changes that could have been made and the new rebates that come into play, that's usually best
Email is good and Ann has a good reach out method that works well

Value
Email is what works best
Primarily, the way Ann has contacted us, almost all email and when they are rolling out training operations, they cover with video, online attached video
Email is preferred
Face to face with a rep from the company coming and explaining to us what it is but email is a good ice breaker for that
Email and this is one of the problems that we are having with this because our guys have to be up to date on program changes but it always seems too late by the time we actually figure out what is going on. A phone call would be nice to get these updates
Email is the best way to get it that way when I don't remember what I read I can always go back and find it.
Word of mouth
Maybe email follow up
I attend their classes and that works best for me
Emails and the advertising is nice so if the customer knows about it the better it gets for the contractors.

B1c: What program information was most useful for you when deciding to participate? [PROBE: incentive levels, materials, application process, program requirements]

Value
Qualifications needed, benefits of the program, what kind of marketing they're going to do with consumers
The rebates and as they change, the promotional rebates - those usually help us push the high efficiency technologies.
Rebates and the fact that the customer can sign a form, hand everything over and not look back knowing that their rebates will be applied for with the correct documentation.
The dollar amount.
Don't know
Program requirements
Incentive levels, application process, program requirements. Emphasis on the rebate amount
No, they just emailed me the information that I needed and I went through it. It is because customers were wanting it and that's why I did it
We knew the incentives would be useful
The rebates are always useful and the customers were asking if we were trade partners
The incentive to plumb line isn't what we get out of the program but what our client gets out of the program. We felt that we were obligated to be a part of the program otherwise we would lose a competitive edge. From a contractor stand point there are a few things that are a pain to us as far as the submitting of forms and the requirements but I understand why they're all there. We've been doing it so long it becomes second nature, when we were new at it there is a cost that comes along with it and I know we get \$50 when we submit a rebate but it costs us a lot more in administrative fees to run the program. If we didn't feel we were losing a competitive edge we would drop the program.
The program requirements were useful
Don't know, I wasn't here

Value
N/A
I thought the program requirements and rebates would help me increase business but my my business has still stayed mainly commercial
Not sure, I wasn't around at the time
N/A
Incentive levels for sure, that's important
Probably the actual specifics of the rebates, how much money we can offer customer, time frame, as if its limited or not
Understanding the requirements and the amount of paper work involved
Probably, you know the brain shark stuff they do is pretty good, that's a pretty good class they do on that. I haven't had an issue with that. They just do, I've had to, to originally get in, I had to be NATE certified but I was already, the other thing I had to do was take online class they had but it was through a company called Brain Shark and do a test
It was just very easy and explained very well no issues at all with any of the information pieces.
NA
Usually the amount of the rebates as an incentive for my customers, if it is a small rebate of maybe \$100 a lot of the times it is not worth my time and paperwork to offer it as an incentive.
I don't know
I think the updated emails with changes, Xcel sends those out, and they explain how much they are offering, what qualifies. I think the emails, read them all the time, and sharing that with our technicians...so just understanding the program and what the equipment is
The incentive levels and the customers benefit of being able to receive a rebate
The requirements is very nice because it forces the contractors to hold themselves to a higher standard.

B2. What are the reasons why your firm decided to register as a Trade Partner?

Value
We like to be part of energy efficiency programs and want to promote these to our customers and this programs allows us to do both
Its good to team up with somebody that everyone has heard of
It was probably determined at some point it would be a good sales tool. (Wasn't entirely sure, wasn't at the company at this time).
We take pride in selling some of the best equipment out there - we aren't bound to one equipment type and that goes right in line with the rebate program.
Don't know
N/A
The biggest reason is you have to believe in energy efficiency and you have to believe that it is truly better to have a 95% furnace over an 80% furnace. It can also help increase sales by having the rebates
The customers were wanting the rebates
The fact that we were able to offer a discount to our customers we knew that would be an incentive for them to use us.

Value
The customers were asking about it. If there is a program out there that is available to the customer and you're not part of that you don't get that customer
It gives us a competitive edge
Having a nice competitive edge and being able to differentiate ourselves from the competition and going through the actual requirements of the program as far as the commissioning, startup process, the duct sealing, those kind of items we are differentiating our installation and obviously the rebates are a great plus to help customers afford more efficient equipment for the home, that is a win for everybody.
I don't know
N/A
At the time I thought that it was a good opportunity and would allow me to increase the size of my business
Not sure, I wasn't around at the time
Well, I know its important as far as trying to get people knowledgeable about high efficiency and using less energy and definitely a perk for homeowner to hear about money back for certain systems, works both ways
Incentive levels for sure, that's important. It created a marketing opportunity to offer those rebates, that's the most important thing
Well, because it's a great money maker for us all. We offer a majority of high efficient furnaces so it's an added incentive for homeowner to invest in better units instead of plain Jane standard
Well, I looked at it from financial standpoint, took the approach that if I'm sending crew out to do x, I could get x plus by doing the rebate program and creating higher value and warranty for customer and more cash flow while were out there doing the same work. when doing a furnace, work depends on pipes and motor types, if you send them for 5-6 hours, might as well try to have the better equipment
you know at the end of the day, its like, you're not doing customer right if you're not getting them the money. People are already stretching for new equipment, if I can get them some rebate it's a nice gift in the mail to them. Its more to how do you not do it when its available to customer
They were already aware of the program and figured it would help their business.
N/A
Being able to offer rebates to my customers
Because it serves the customer well. Being able to offer rebates helps a lot and the ability to get the higher efficiency equipment in their homes is appealing to them
I think due to the fact that people as we know are becoming more educated, and people go to Xcel's website and they say we want to do a project with a registered partner so we wanted to keep up with that
So I could get the rebate for the customer
To provide the rebates to customers and to set ourselves apart from the rest of the industry.

B3. Do you feel you have all the information you needed to be a successful Partner?

Value	Percentage
Yes	68%
No	7%
Yes, and every year we have to register again to keep our customers eligible to receive	3.5%

Value	Percentage
rebates and a good way to advocate for them (customers) which also helps increase our sales	
Yes, reached out for help on those but as far as this program I am apt to handle those	3.5%
Yes; it's a learned curve. I've gotten it down now, take a year but I have it down and it's a process, lots of work. I don't know how I could turn it over to office person to do it because there is too much info there, I don't know how you train someone to do load calculate and what not. Lots that has to be right, I don't know how you turn it to admin and say here it is. Its a lot of work but I've got a system down now where I can basically do it and it probably takes me a couple hours after the test and that. My service technicians do the test, and that takes an hour. Its a service we do for customer and gets us repeat work with other people because they pass it along to friends	3.5%
Yes, I think so. I'm not versed in the commercial aspect of it and I've reached out for help on those but as far as this program I am apt to handle those	3.5%
Yes, Xcel is good at sending out new information and keeping us updated on all changes	3.5%
Yes, I think the program is very well and we get all the information we need, all of the forms, every year we have to go through a class and if there is something you don't see you can go back and check. You have all the information you need from Xcel.	3.5%
Yes, if I don't it is easily accessible	3.5%

B3a: [IF NO:] What additional information about being a registered Trade Partner would be useful for you to know?

Value
An extra phone call would be useful with program changes. It is frustrating when you send things in and there is an error and they just send it back with red checkmarks. It would be really nice if they just called and let us know the issue. It is a waste of mail and resources sending the forms back and forth for minor fixes
There should be more education on the SBS Tool that is on the rebate form.

B4. What information was particularly useful to you when you were registering to become a Trade Partner?

Value	Percentage
N/A	46%
Don't know	14%
They lay out what is expected of us and what benefits there are to the customers. All of that is important to have a good working knowledge.	3.5%
A lot of the requirements are pretty straight forward and laid out there for you and that helps know exactly what it takes to participate, what the process is, the turnaround time, that's all pretty useful	3.5%
The rebate information	3.5%
It has been so long ago I can't remember that part of it	3.5%
I would say Ann Kirkpatrick is amazing and she makes sure we are in the loop on everything. She is a phone call away. Her personal touch on the program is what makes it	3.5%

Value	Percentage
successful in Denver.	
They hold annual informational meetings with upgrades on programs, offering training as well and they have a lot of great tools that they offer us	3.5%
Ann Kirkpatrick and the information that I got through Energy Outreach	3.5%
Not sure, I wasn't around at the time	3.5%
All of the information was useful and easy to understand	3.5%
It all seemed pretty self-explanatory. They had the criteria and what qualifications you had to have to become a trade partner and I met those qualification so I registered.	3.5%
Again, the program requirements and the rebates are good to get to the customer	3.5%

Section C: Motivations/Barriers Registered Trade Partner

C1. Over the years, what have been your greatest successes as a result of being a registered trade partner with the Residential Heating rebate program?

Value
Our customers appreciate us offering the rebates to them and they can't get that with a lot of the contractors that don't meet the qualifications. Our customers benefit because they know that we're trained, tested and have the right equipment.
Breaking in to that top 10 and top 5, providers. People can go to the website and when you're in that top area that helps our reach to our customers.
We've gotten more customers, jobs and have submitted application rebates
We use that as an advertising tool as well. We've always been at the top of the list through their program and that has been a good opportunity to educate our customers about the program. When customers see your loyalty to getting the best equipment to the them, this helps our company get additional customers
Customers are excited about getting the rebates. If we weren't a partner I'm sure they would move along to someone that they could get it from
We take care of all the rebate information, our customers don't have to do anything in terms of the logistics. This is seen as a huge benefit to our customers and helps them make the decision to invest in the high efficiency product
Just being able to put high efficiency furnaces in and provide rebates to the customer
Securing more jobs with the rebates and it also sets me apart from other contractors
The closing of the actual bid process and being able to offer that rebate is a big plus for us.
The biggest benefit is that the homeowner is able to receive the rebates.
Not sure
Not sure
We have found that it is easier to sell the HVAC if it qualifies for the rebate and the customer typically knows about it.
When Xcel supports the high-efficiency units that is a good support system for us because if we are offering something that Xcel is also saying is a great product then that means more high-efficiency sales for us.
Nothing stands out, again, most of my business is commercial

Value
I think the fact that the customers can sign the rebate over to us as part of the payment helps us a lot in terms of our sales. It has increased out sales and has made a large impact
I know that we have hit their top 15 contractors for evaporative coolers a couple of years. And to see the numbers grow as each new year progresses and we get more business and get more customers looking for more rebates. The number of furnace and ECMs, the ECMs has been huge. We pretty much don't install furnaces without one of those. Even though it's a small dollar it still gives customers something else to go on. We pretty much don't offer much without that motor
if we were talking about AC, I would have something more concrete for you. I would just stick with its created a good sales tool for us
best success is like I say, getting folks to upgrade to better units that have better mark up on our end
well we have received recognition from Xcel from being in top 10 for a number of years. Lots of customers that have sought us out through the Xcel site, looking for experienced trade partners. Able to reduce the amount of advertisements wed have to spend
you know the thing is, I don't really sell by rebates, I sell by what's the best for you in your home and o by the way I can get 1100 in rebates through this. Some of the top rebates you cant even do the top equipment in their home because of the venting. so I have to go into it with what's best for this home and then I use the rebates to upsell them to the next level. I can do this furnace for this price, but this furnace and this AC is only 300 more for a lesser system. its a tool to enhance the sale after you get in there. Sometimes the rebates just don't work
People are educating themselves before they make the phone call but those people aren't usually just after the rebate and also want the efficiency
Be able to offer that rebate to the customer is the biggest positive as of now
Being able to sell higher efficiency heating equipment since the rebate goes part of the way towards paying for it but certainty not all of it but it helps incentive the customer. That is the big selling point.
If Xcel was really busy customers would call and ask where their rebates are but that is during the busy season but Xcel is always good at answering our questions in a timely manner. They're always very helpful and respectful.
I think one thing Xcel has done out here, they will have, and I know I'm getting off heating, but honestly it's the easiest thing to be a part of. Evaporative coolers at the start of every year with a 2-3 hour class from Xcel and they update on events. The knowledge is out there
The generous rebates offered and the customers are excited to get that check
I think it has been great. To be in the program you have to be NATE certified which tells the customer you are qualified. I think it has been a great requirement.

C2. And what have been the greatest difficulties or challenges of being a registered trade partner with the Residential Heating rebate program?

Value
Meeting the requirements can take some time. We have to make sure that our guys are properly trained and have the necessary tools to complete the project. However, there is nothing that I can think of that seems to be completely out of bounds in terms of what we have to do to be a trade partner
We've been able to overcome any challenges. For example, filling out forms, etc.
Nothing
The paperwork. If you miss anything and get it sent back and after the cooling season it can be difficult to keep all

Value
customers information organized and some are bound to fall through the cracks. The other problem is the sheet they used to mail everything back and we would have to fix the paperwork and send it back but now everything is moving much smoother.
Keeping track of when all the rebate amounts go up and down
Nothing to my knowledge
I like that they categorize it and they have awards for most rebates sold. The downside of that is that in CO they lump us all in one market. Our area is much smaller compared to Fort Collin/Denver. It would be nice if they localized it so we can be competitive and be in the top ten in our area.
It's extra paperwork
Their website can be improved but I think they are working on that. I did an online submittal last week and was very happy with the improvements that have already been made
Early on but that has all been corrected. The communication between the trade partner and Xcel and the data collection which had to be done at the branch level - it has all been fixed. It has gone paperless and that I beneficial to everybody
The biggest challenges that we have are sometimes because we're a growing company and bringing salesman's up to date on the rebates and the HRI and the match ups that goes along with it is almost inevitable when I hire a new salesman's that he is going to make some mistake initially. So if we promise a client that they will get \$500 for their AC and \$500 for their furnace and in reality they only get \$350, well Plumblin takes the hit on that, we made a promise to our clients so when the client gets a check for \$350 and calls us and says "I was supposed to get \$1000," we make it right and we apologize and there was a misunderstanding for what you qualified for and we are going to cut you a check for the \$650 because we promised you \$1000. I can't tell you how many checks I've written over the last 4 or 5 years because of mistakes like that. I get it's mostly training within but those mistakes are going to happen and then again sometimes the match ups it's not full proof.
Giving us a good time frame for the commissioning process because we may offer rebates when we aren't allowed to commission them yet and they allow us a good window to go back and do those commissioning's.
Yes, getting the rebate. If we only sell a condenser coil there has to be a furnace in order to match up to the AC rebate. They don't get a furnace which means these customers who are getting a 16-17 SEER rating are still not getting their AC rebates because we didn't sell a furnace.
Only the PDF forms because the font is really small and hard to read when you print them. The font size should increase on the forms because we do it all electronically. I really do like the electronic submittal process
No challenges that I can think of
No challenges
I don't think so. We've run into a couple snags in regards to AC rebates and customer getting the dollar amount they were planning on with SEER ratings, but for the most part noting else. Having the option for an online submittal is nice, not having to fax or send those in.
its creates an admin paper work burden for us.. Its more paper work to do more to keep track of, overhead burden for us
no
biggest dilemma is the paperwork. Dealing with folks in Minneapolis, and communication between customer and us and them, struggles a bit. More of an online partner in the last 6 months and that's cut a lot of issues out
no, well, its just a learning curve. One of the things, that I wish I could do, is log in, like I wish, being a trade partner.....that term is not a true partnership because I would like to log in and now I'm organized when customer

Value
calls. Now I print out app when I do it so I have the app number but I get calls from customers saying I haven't seen anything yet. so now I do rebate instantly. but id like to log in and say he that rebate has been processed and they have it...sometimes they email me and say I haven't received anything yet from Xcel and I come to find out that maybe the email was wrong. biggest thing is learning curve and I said, it took me a year, and now I have it figured out. id like to login and say this app, click on it, and being filed and see an update. you have to call in to Xcel team which is not that big of deal, pretty helpful, but still seems like a waste of time to call stay on hold and then if they are not available it goes to the general line but they cant always help you and then you're waiting for call and it's complex but I've got it down now. There is simpler versions in CA but it's great because it sets the bar high. I just have to now convey to customers that hey, just because somebody sells you a rebate, they may just be jacking price up and not doing the testing, which is so important to check if equipment was installed correctly. they are just selling the Xcel name but not checking if its installed correctly...I think most guys jack up price and then say here is a discount
I would say it was a good nice install that qualified for every rebate possible and his income level was higher but the challenge comes when Xcel Energy will advertise a rebate and the consumer thinks that regardless they will receive the rebate but depending on the income level they can't purchase the equipment and then don't qualify for the rebate. To get a \$2,000 rebate I have to spend \$15,000. Anybody promoting their products need to better at explaining to the consumer what they have to purchase to qualify
It is frustrating when you send things in and there is an error and they just send it back with red checkmarks. It would be really nice if they just called and let us know the issue. It is a waste of mail and resources sending the forms back and forth for minor fixes
The rebates move up and down which is fine they don't do it on a calendar year so a rebate might change in June or something so you have to keep track of what the rebate is so you don't tell a customer that hey you'll be getting \$400 back and then they only get \$200 back.
None
None; we plug them in and never hear from customers again.
The paperwork that is necessary in order to fill out the forms correctly for the rebate
The only thing I don't like is the paperwork, I'm not a paperwork kind of guy. I wish they would do a little more for the heating, the AC program is excellent.

C3. What is your perception regarding the importance of NATE certification?

Value
I don't think it is that great of a program. It does provide a distinction between contractors who are and are not NATE certified. It takes some time to get certified, which involves not only our time but the trainees as well. It does separate the competition.
It separates the men from the boys. A lot of homeowners don't necessarily see the value in that but being NATE certified separates us from the industry in terms of quality of work, etc.
No knowledge about NATE certification
All these guys should be held accountable of some sort. In CO we are one of the worst states for having the properly trained mechanical contractors. Approximately 3/4 of the installs we look at have been installed incorrectly but we are trained so we can go in and gain some credibility by letting the customer know how we can fix it.
The company wants to make sure everyone gets NATE certified
There is a lot of subpar work being done in customers homes and when we can say we're NATE certified, this helps our customers feel better about what we will be able to do for them.

Value
It's huge. I use that all of the time, there is probably less than 10 people in our area that have the certification and 4 of those work here.
I think it's great. I think every company should be NATE certified. They should require licenses, trade partners should have to provide proof of liability and licenses as well.
I believe it is important. It helps keep our technicians up to date on code
We're 85-90% NATE certified and that was our company goal but that was before Xcel. It has nothing to do with Xcel
We should be, although I'm against most regulations, I think there needs to be regulation in our trade and all of our employees in our HVAC or insulation department have to be NATE certified or they can't be a lead, only a apprentice. I would like to see more regulation and licensing on that side and NATE right now is the best known as far as certification goes. I think the industry as a whole should get behind it and it has a lot of a value.
A little torn on that one. We send our folks to a lot of training courses through our various distributors where as the NATE holds you accountable to get X amount of hours, I'm not a huge believer and they don't do a good enough job marketing what NATE is.
I don't have mine. I only hear what everyone else is saying about it and they say it is a waste of time and money.
I think it is important that the technicians have been through equal levels of training throughout the company. We send all techs to get NATE certified.
I think it's good. It keeps people current in the HVAC industry which in today's market that is important because there is so many changes happening even almost monthly. Although, I didn't like that they changed from the 4 year program to the 2 year program but I suppose that may be necessary.
I think it is important for our guys to be NATE certified and have that knowledge to know exactly what they are testing
well I know that most of our guys do have that, the ones in charge of the rebate testing. I know that's something that's important for our company and for Xcel to require that as well. We recommend guys keeping up with that
I believe that it is, since not a lot of required standards in heating field, it's a good requirement. As far as I know its been awhile. Adds value yes
you know, I feel, not to bad mouth, but a lot of it is just a money maker for NATE. I rarely use what they teach in the real world. A lot of what they cover is just not important and I've got guys that are NATE certified that frankly don't know squat. that's not like a big incentive to hire them when I see that because I'm not impressed with the program because it does not teach real world. I've got another guy that went through whole school and thing and the things he doesn't know surprises me...I don't think the classroom teaches the real world that well. like I said, were resentful of NATE, now its only good for 2 instead of 5 years so its a lot of reschooling. don't think it teaches enough real world. dealing with homeowner is good, I think its common sense but it may not be second nature to them
Personally I think its critical. With the amount of requirements to prove efficient, AC, heating, whatever it is, they need to know how to verify. Approx. 10% of our installs, we've sent NATE back and seen that we need to have install crew go back out and fix it. a lot better this year after 6 years but the first couple of years we had opportunities. frankly, the program drove the industry. with NATE, they understood what the needs were but our internal cop, they hold us accountable for efficiency requirements
I think its important, it's a just another thing that sets the bar higher, so not everybody can do it. I have 27 years experience, when I took NATE test, easiest test of my life so I don't know how people don't pass it. Simple test that I think is a good thing. at least lets Xcel know that you have someone willing to take a class
I think it's very important and it's mandatory here. In Colorado we don't have to have a State license we should have to have a State license but since we don't the next best thing is that we have to be NATE certified. It is important to

Value
me because we try and promote it, if I'm selling product that is on every proposal we have. We think it helps.
I think it is very important. We want our guys to have that skill. In the commercial side it doesn't seem to go hand in hand but it does work well with the residential side. I think when they train these guys to be NATE certified, the electrical side is useless because you still have to hire an electrician for any of that work.
I think for Xcel using it as a qualifier to become part of the program is good but in general I think NATE is kind of a joke their organization just because they require all of this continuous education, I don't know it just kind of seem like a by in. You have to keep paying them money that sort of thing but for what Xcel is using them for I think it is appropriate just so it weeds out some of the people that don't want to take the time and effort to do some of that stuff.
I think it is very important. The owner thinks it is super important and she was already NATE certified before joining the Xcel program
very important, we pay for schooling but we have ongoing education. Most guys work 45-50 hours a week and for them to take classes in evening and weekend is demanding. But its something that needs to be kept in program. If we go back to 2008, we are competing with single guys in trucks and I cant compete with them because I have overhead. And it's definitely important. We sell ourselves on service and product qualify
I think it is overrated. People who have been in business for 20 years gets less credit then someone who has the NATE certification but no experience
I think it is a great thing. I believe it really helps us to do the job right. It helps the industry get out of their bad habits, contractors tend to find short cuts and the NATE certification helps get you in the habit of not taking those short cuts.

C4. Were you already NATE certified or did you decide to become NATE certified to enroll as a trade partner with the program?

Value
Yes
A little of both. That is something I knew was big and was something we were going for but it being part of the requirement pushes you to get to that.
No knowledge about NATE certification
We were NATE certified before the program
Kind of both. I was looking into becoming NATE certified right when it became a requirement for Xcel so it worked out for me in that case and I think Xcel paid for some of the testing or classes or something in order to take the test so that was also an incentive.
They already were and the ones that aren't are working on it
No
I was already NATE certified
They became NATE certified as a result of the program
I've been NATE certified for a long time, one employee is not and two others are.
We've always required the NATE certification
Like Xcel, we needed to have X amount of technicians NATE certified through our distributor. I just wish NATE had a different structure

Value
We had two of our technicians become NATE certified because of the trade partner program.
Some were NATE and some weren't all new technicians now have to get NATE certified. That is a result of ongoing training because we have them do a lot of different kinds of training and not just to be an Xcel partner.
I was NATE certified
I believe we had a few techs that were already NATE certified before
For the most part they came with certification and then like I said, we want them to keep that up and renew that. We did have a couple of guys go through the program and get certified after the fact.
We were made certified prior to
I think we did get it because of Xcel program
We had a few NATE but we doubled down because of program for every guy in company...made testing scheduling a lot easier too
Well you got to understand, I had big company in CA, and all my techs were NATE but I didn't do service anymore, so when I came out here, I didn't have the NATE certification so I just went out and took it without studying.
We have been NATE certified
We had technicians that were NATE certified before
Was NATE certified before
Was already NATE certified.
I think the whole industry, it just came along. As a Carrier dealer they require us to be and that bled over to Xcel. What we are running into, back 3-4 years, we have guys that have expired and have not redone it. We are authorized as NATE certification program here actually, but it doesn't look good to certify your own guys so we let them test elsewhere
I decided to get NATE to get in the program
I became NATE certified to enroll as a trade partner

C5. Has the addition of the NATE requirement changed your approach to program projects?

Value	Percentage
No	54%
Yes - some of the quality and the details.	3.5%
It is one of our selling points as well - that our technicians are NATE certified and how they're educated. We also use the Xcel Energy as a selling point because there is less than 10 percent of contractors that are part of the Xcel Energy program	3.5%
Not very common. Right now only one person in the company has to be NATE certified, I think because this is already becoming more common that they should require all technicians to be NATE certified	3.5%
Being a NATE certified contractor when you're doing jobs you do them differently then people that aren't. You know how to do them better	3.5%
No. We were doing everything already but having that certification reassures our customers that we are confident in what we are doing. We do mention we are NATE certified and we market that we are on our website and on flyers	3.5%

Value	Percentage
No, we were already NATE certified and as it becomes more	3.5%
Not necessarily to projects, we do have a group that we want to only focus on the rebate testing. As far as projects go, we will always complete those the same way and have those few out there to do the rest.	3.5%
we advertise it, you know if we spend money on it we might as well let our customers know we went through this testing...and we are Lennox premier dealer and it's a requirement with them too so that was another reason to get it...we had to jump through the hoops.. I mean there was a test of an old wives tale about something real old, and he added comments that this doesn't pertain to me today. Its relevant to the 1940s. Teach me important things for the real world	3.5%
not necessarily, more so how we deal within ourselves. Are we doing certain things to make sure customer is getting full value of efficiency? Say duct work, maybe were at 60% efficiency, we double check internally and we realize we had a lot of opportunity there and restructured our crews and all these things happened to make sure that by Xcel standards we were giving them an efficient set up. the NATE, they were looking at testing internally with giving us feedback on how to modify things. made us a better company	3.5%
Yes, I think a lot of the guys, especially the younger guys but they all pick something up that they do differently because of the NATE certification.	3.5%
No not at all, she was already NATE certified so the work has stayed the same	3.5%
not really, didn't change much. But we can use it as a sales tactic	3.5%
Maybe a little bit, I was trained by someone who has very old school so the NATE certification helped update my skills	3.5%

C6. Does the NATE requirement create any benefits for your business?

Value
It helps you separate from other contractors. There is nothing in the industry that promotes NATE except for the Xcel program and you need it to stay in. I wouldn't say it's the best program but it is one of the few programs that are available.
Helps separate us from the smaller unqualified installers...we can say you may pay more
Slight benefits but not a lot of customer know about NATE, it is more of a trade and Xcel interest
It pushes people to do a better job. I don't advertise so the NATE certification helps "advertise" my skills.
Yes - there are always those people that it is an absolute requirement so it is one of those things that we try to minimize that would prevent me from getting a job
No knowledge about NATE certification
Yes - our price can go up with being NATE certified. Plus our staff can become more educated
Some customers want to make sure that their contractor is NATE certified before they allow them in the house
I'm sure there is lots of benefits. The biggest thing when going in to a customers house and talking about the install and seeing something subpar, the fact that we can let the homeowners know that we are certified and that we keep the certification up to date and that we are always on top of the code requirements helps them trust us a little more
Minimal. During the sales process some customers can appreciate it in some degree but most don't really understand what it is or don't care

Value
Being able to say you're NATE certified and people trusting you
Makes customers more comfortable and it has brought us additional business that we may have not been able to get without the certification
We get to say our company and technicians are NATE certified which adds a layer of credibility to us
I don't know if it brings a lot of benefits outside of attracting the right technicians - when we are advertising and interviewing it helps us decide. As far as a consumer side I don't think customers will know what NATE is.
I wouldn't say the NATE doesn't have any value, it does. There are some customers that do understand and recognize it and when we explain it to them they see the value in it but our training courses in general have way more value because of the knowledge that they are gaining from them.
Having the NATE certification is probably beneficial to the service aspect of Sears it is not beneficial to me as a production aspect of Sears
Probably very little, a lot of customers don't know what it means. What I don't like about the NATE certification is that everyone can go in and take the test. They have X amount of hours to complete it but to be honest you can let it lapse and bypass all of those classes
No
Letting customers know that they are going to have a NATE certified technician installing their equipment helps us with letting the customers know that they will be well taken care of.
Not necessarily, as a company we offer a reimbursement for those classes and you get credit for taking them so that's something.
I'm going to say that it, you know not all that much. I think it allows us to create some marketing advantages and it also helps us encourage our employees to train
well like I said I think to the homeowner it helps...it shows we're committed to training and such like that, at that respect it's good, can't say 100% since I'm somewhat jaded. Every once in a while someone will ask about NATE but not every day
its given the guys a career path, sped up testing procedures, we also help guys move from journeymen to project leader, and if they pass these exams they get extra money and added benefit of education and I'm paying for it. Changed our budget internally, but the big thing you need to know is it cuts down the go backs because of mistakes
I think its important, it's a just another thing that sets the bar higher, so not everybody can do it. I have 27 years experience, when I took NATE test, easiest test of my life so I don't know how people don't pass it. Simple test that I think is a good thing. at least lets Xcel know that you have someone willing to take a class
We think it helps make the sale.
No, most of our techs are NATE certified and almost all HVAC companies want NATE certified technicians now. It is just a common certification in the industry at this point.
No
It is a benefit, if customer are able to recognize what being NATE certified means then that is a great selling tool for us.

C7. Does the NATE requirement create any challenges for your business?

Value	Percentage
No	54%

Value	Percentage
Not really - like anything else you have to keep up with it	3.5%
You have to get your guys signed up for a specific test and they have to study and then be scheduled to go take that test. There is some time involved both on the employees part and well as ours	3.5%
No. The only thing is that passing it is tough and we don't have a proctor in town so we have to travel to take the test but that seems like a minimal ask.	3.5%
It is almost like NATE is a byproduct because there is so many training courses that understand that in order to maintain your NATE certification you have to take training courses so it is like come take these training courses and you'll get X amount of NATE hours for doing that. But we aren't necessarily taking it for the NATE but to gain the knowledge and the expertise.	3.5%
I mean we definitely, if we have technicians that don't have NATE that we need to get rebate done quick it takes some rearranging of the schedule but that's somewhat normal	3.5%
Again, a little admin burden but its not a heavy one. A lot less paperwork than rebates	3.5%
Reschooling, its getting where its more common sense, I don't event study and I pass no problem but its something else we have to pay for.. And now that its ever 2, its even more work	3.5%
Honestly, they have a 2 year requirement, and getting guys to keep current is not so hard as it is with getting scheduling available. We wish there was a better way, takes some guys out of work loop because they are in education classes even though they know the stuff already	3.5%
No, you know, to me, I've never had one customer ask me if we are NATE certified. I actually like it because it gives my guys, I have two guys studying for NATE, I bought them the program stuff and they are working hard. I told them if they pass they get 2\$ an hour raise and for its a tool to get my guys going and its a good benchmark to Xcel and they put in the effort	3.5%
Any challenge would be that if I hire somebody that can't pass the test.	3.5%
The challenge would just be staying on top of it and making sure that it doesn't expire and when it is about to expire and panicking and trying to go get some continuous education and pay the dues so I can keep it up to date. The general public has no idea what it is so it doesn't mean anything to anybody.	3.5%
Lots of work for education and keeping up; but in general no main challenges	3.5%
Keeping it up to date and the cost of getting my other guys NATE certified	3.5%

Section D: Trade Partner Marketing/Program Interaction

D1. What sales techniques do you use to attract new customers? [PROBE: brochures, cold calls, ads, door to door]

Value
Word of mouth and referrals. We do market by direct mail and we keep our website updated
We track everything through our system. We do a lot of radio and internet promotion
Costco kiosk

Value
All of the above
Direct mail, emails, and special deals
Radio ads, marketing, home shows, word of mouth
Been around 21 years and our town is very word of mouth. We haven't had to do to much marketing but as we've grown we have been using the local media (newspaper)
Referral and online marketing, mail inserts, social media
We've been in business since 1937 so we are largely word of mouth from our customer client base. We are big on referrals. We have a website that has very basic general information and we have tried other avenues but it didn't increase our sales. Once a year we send out a flyer to one of the areas we generally work in and offer a little discount
Advertising, we have a national advertising account - billboards, flyers, many things.
Marketing - radio, TV print-ads, pay-for-click, word of mouth, direct mail, cross marketing as well
One thing our advisors do when they are in the home is they do a comprehensive home comfort analysis that evaluates the customers' home. One of the big questions we make sure they ask is what are your utility providers so we can maximize the rebates when we are customizing specific equipment options for you. So we are internally promoting those rebate programs and educating the customer about it. One thing we need to do a better job, we need to probably market it a little more on our own website, I think we could improve on that but we just make sure that when we are in the customers home we are educating them on that if they qualify. And we talk about rebates during every sales meeting about how to leverage those relationships and opportunities.
We were using the rebate but are no longer using that. They just do the steps that they are being taught in training and if the rebate issue comes up it is only from the customer. We do brochures, cold calls, job fair, stuff like that
We do SEO Marketing, direct mailing, and then we have a program with our distributor (Bryant and Carrier) and we are a partner of their advertising programs (they have TV, radio online ads, Pandora ads)
At the moment I'm really not doing anything, I'm turning down work. In the past it was mostly cold calls
Word of mouth and advertising through Google and on-line reviews (Yelp)
We advertise through Trane and Lennox. Our best business is word of mouth, we've been in business over 25 years and it's family owned so if we can get customers to recommend that's always the
We don't do any print ads to speak of.
Basically we get a lot of business off internet searches, Google and yelp revise. Rarely, I still do get calls from Yellow pages. We do general mailers that's our other source. We've tried radio, and its so expensive that the internet presence and keeping up with SEO, we do a lot of that. we just reset everything up for mobile set up too. that's where the future is
Xcel is maybe 3-5% of our ad mix, not a big chunk. We use a lot of internal mail, email, social media, shotgun approach, value ads, target markets ads (single family households), pretty good mix of things
referrals, we do zero ads. I started this company in June of last year, 1000 customers in 15 months and I have not spent one penny on ads. All Facebook and word of mouth. We have 5 employees now and were on pace to be a pretty good company this year. zero ads, just doing good word
Mostly through Trane, we also have a website, we have tried almost everything, Angie's list, home advisor, and I would say Xcel has been a big one too.
We use service heighten, which is a company that has a owner that is a wiz at marketing. We are on Angie's List, review buzz and they attract new customers. We get a lot of referrals as well
All of my customers right now are word of mouth. I ask for people for referrals on Next-door and that has been a

Value
really good business tool for me just because it helps keep, I don't have to do any of the marketing because my clients get on there and write a review for me and it also keeps things local since Next-door is geared towards local neighborhoods.
Word of mouth is huge for us. There is a website called word of mouth on Facebook and we are always recommended on that Facebook page. We don't upsell, we don't lie, so a lot of our sales is word of mouth. We do Home Advisor but majority is word of mouth
When we've been in biz for 50 years we have a great return client base. We don't do much outside ad, just spent money on website than anything else. Not in comfort zone to say we are going to stop marketing. We mostly want to see our brand and we want to be recognized by customers
Word of mouth is the vast majority and the only thing we've done in the last few years. I have a website but that is about it
Word of mouth almost 100%, I'm part of a franchise so there is advertising through that but I don't personally advertise anything.

D1a. Which sales techniques are most effective?

Value
Referrals are far more effective
Its all across the board but internet is probably the big one
Majority of our business comes through all of the Costco jobs
I don't know
Direct mail
Referrals and the radio ads
Word of mouth and Google
Referrals
Referrals
It is all over the board really. Using the media, Google reviews, Angie's List, those are all areas that we focus on getting our name out there
Cross marketing
Xcel does a job from their website standpoint and that can explain a little more in depth but I'm not sure if we get a lot of hits from the website. We do an excellent job promoting while in the home
Word of mouth
Direct mail postcards and the search engine SEO Marketing
Cold calls
As far as the rebates go I think people do appreciate that they get that straight off of the top so that helps with our sales and our salesman are educated on the subject so that helps as well
Referrals/word of mouth
Yes, word of mouth.
-
SEO, Internet presence. And of course referrals, that's huge

Value
Well I can tell yes this, when were looking at minimum 2-3 installs a day, in 22-24 MF workdays, maybe 65-75 installs, and they probably have thank you notes because they are referrals from other customers. Our social media presence is 5s across the board. when people do find us they call us. When we do an estimate, we give folks lots of info, some generic, not brand specific, were playing teacher. By the time we are done telling them what to look for, we close 80% at the table and within a 1/3 will be referral, trying to stand out. And the trade partnership has helped, they want a good reputation and value add, and the Xcel program is one of those things. they do feel like there's something do it
I said most of work comes from we have, doing a job today that the lady was walking by and saw us doing a job three days ago and she saw us doing it. Her neighbor came by and then he wanted it too. Were getting jobs from doing jobs. Vehicles look good and our guys are professional, almost every day we get new jobs from trucks or Facebook's
Most of our in-house calls almost every time comes from Trane and Xcel website leads
Referrals
Usually just asking for that referral. Taking the time to talk to the customer and say your referral is really important and if you're happy with what I've done please write be a referral so I can continue to serve people in the community.
Word of mouth and it is free!
active website and keeping up with our existing customer
Word of mouth is by far the most effective.

D2. What aspects of the Residential Heating Products program do you discuss with customers?

Value
We go over the parts of the program that applies to their circumstance. If they're looking for a furnace we go over all the rebates that they would be eligible for based on the rebate amount. The rebates make it more likely that they will go with the higher efficiency option.
We don't have Xcel in all of our territories and sometimes I'll have two programs if that's how that area is setup from a utility standpoint. Its not always one or the other it is more of a combination
All of it is geared towards the rebates and future energy savings.
We discuss all aspects of the program. The customers are typically money driven with efficiency as being mentioned
The efficiency and then we sell a lot of energy savings motors not only on the rebate amount but we also show them the dollar amount they save each year.
The sales person outlines the options
I don't go into too much detail. It all depends on the SEER/EER, I talk to them about the rebate program but I don't go in depth.
What rebates the are eligible for and that it is not free money and we are paying the rebates through our monthly bills
When they're interested in a new unit I tell them they can get rebates from Xcel for higher efficiency equipment and they enjoy that incentive and I show them the pricing differences using rebates
Just the services that we offer. The Xcel rebates and how that applies and what it applies too. We take Xcel information with them to share with potential customers
We talk systems - not just a furnace only or an ac only, we talk about the whole system. The rebates come up and some already know that we're a Xcel trade partner.
On the front side (service tech, plumber, electrician) if they notice the client has an older piece of equipment then they will mention the specials and rebates that are available. If the client shows an interest they call the office and have

Value
a service tech come out and take a look or one of their comfort advisors come out and talk about replacement options
The rebates. We discuss that there is certain qualifications that they have to meet and based off of our analysis we customize their needs and talk budget and we are always looking to see what equipment will qualify for them
We don't discuss it at all unless they are getting a 90%, if it is a 80% we don't even mention it
Mainly the furnace efficiency and the ECM motor on the furnaces. Most of the time when they will do an Xcel rebate we discuss how they should have a system that all works together. Explaining the whole new system and if they just have the furnace then it would be the efficiency of the systems. We heavily discuss what equipment that qualifies and what doesn't because of our competitors will try to say things qualify when they really don't. Just explaining the higher end systems and that is why we want to put them in.
I usually do domestic water to go with a tankless or at least high efficiency on it. Same thing with boilers as well to go with high efficiency, sometimes it just makes sense to fully replace an old unit with problems versus doing a major repair on it. So I always discuss the higher efficiency options that are available through the program.
I don't know
That would be more towards the salesman side of things. I know that they do go over the different units we can provide and sizes, efficiencies, and give them options to let them decide how they want to go with it. Every furnace we offer does qualify for at least ECM so I know rebates do come up with the pitch in the end
We don't push Xcel rebates hard but we do have it on a page on our website. On occasion we may mention it when we do SCM marketing and certainly we push it once were in the door with customer. When we market to database of customers it may be in newsletters or emails blasts....with them, its not a given each communication is different but we talk about rebate levels, why EE equipment that qualifies may benefit customers, why the rebate would benefit customer, why the features of equipment might be more comfortable for them in their home
Basically how if they choose 96% efficiency or better, that it helps pay for the difference of less efficiency furnace...showing them that they hey its not going to cost you an arm and leg to upgrade to a better unit, higher efficiency, better warranties. And its worth the investment because Xcel helps. we do instant rebates all year round so custom signs over to us and they get it instant
first they need to understand what the equipment can do for home in terms of quite and efficiency and comfort, then you go into the rebate where if you do x, here is what's coming back, and here is y, here is the big savings you an get...give them a payback schedule based on fuel used, we do manual load calculate on every house and do gas studies on October to march period so they have financial savings for real
I just tell them, when I get the opportunity, the biggest thing is when I can to 97% furnace if the venting is doable. That's when I say, hey, now with the extra rebate, that 400 is a big deal because that pays for at least 35% of upgrade so that's a big deal. Almost a no brainier so that's what I talk about with mostly when it gets into rebates. The 100 for 80% VS., that's more of a throw in, that's not life changing, but 400 is a lot
When we go into a home we don't offer any entry level products, we start with top of the line products and we approach it with the benefits and rebates
The cost effectiveness of moving to a high-efficiency unit and then trying to sell that based on the Xcel Rebates that will qualify for the rebate
Usually just the dollar amount. That is what most people are interested in, is saying hey I can get a furnace for #\$\$ more and Xcel helps me pay for it. And the fact that the high efficiency equipment saves them money on their utility bill. It is those two things.
That there is a rebate for the higher efficiency equipment and they can get money back on top of getting a better system. People are able to use less energy so it is good for Xcel and the customer

Value
Basically, if I'm the one in living room, going to offer you and say that Xcel is offering these rebates to reduce consumption across CO, and I break it down from 80 to 96% and say you will save 16 cents on natural gas you save. Plus better products have better warranties. Lifetime heat exchanger vs. 20 year is big and then I can show them the payback period... if you have higher efficient equipment in home, may not sell faster but wont question home inspector.... then we tell them about the incentive. I'd go through your house and what your needs are. I would go through whole program and then towards the end, here s a two stage ECM motor but with this you get 350 back or whatever
Just keeping the rebates with the high efficiency equipment and explain how they can receive these rebates from Xcel
First I'm trying to find out what customers want and what they're looking for and then I mention the programs and the efficient systems that they can qualify for. The rebate programs are really helping the customer afford the high efficiency gas furnaces.

D2a. What do you think motivates customers to participate?

Value
The rebates
The rebates and future energy savings
The rebate amount and payback period
The rebates, savings and comfort
A lot of it is the rebate
The rebate but a very small percent care about energy efficiency
Long term is money savings and rebates it also depends on if they're going to live in that house for a longer period of time they are more likely to buy higher efficiency.
The rebate and we are a company that we don't mark up our prices from season to season and that is an extra benefit that they see that we are giving to them. Everybody likes a refund.
We have a great finance package, matching of the systems, brand new ac on top of a 10 year old furnace is not money well spent. The rebates probably come up but the bottom line is that if they don't buy a program that matches Xcel then the rebates aren't there
Incentives
Being able to get the money, the money is a huge factor in them making their decision and purchasing a higher end system.
The additional money that they receive
Getting the large amount back from the rebates and savings on efficient equipment
A lot of it is the rebates that are offered through the program
The rebate is a motivator because it is a savings to them and because we can take it off of the cost of the job it becomes an upfront savings and requires almost no work on their part. I know a lot of customers do want more energy efficient products as well and being able to afford the higher efficiency product motivates them.
I know they are thinking about efficiency and what they will be paying for energy use and seeing that change. Also, that extra benefit of having that rebate, and rebates through manufacturers that we provide constantly
From customer perspective it would be the money that they save because generally speaking they are already interacting with us and the features that generate the rebates for them, being EE, we are already stressing to customer.

So not the program per say but they reinforce each other
Well I think the size of the rebate and the ease that we make it because they don't have to do anything
You know, is it the end all? No, it's a contributor (rebate). There are folks that don't want to spend extra money but the customers we seek out are the guys that are going to go look for full benefit of efficiency. And when we get in front and tell them about the rebates and here is how it works, here is what's included, here is what it will look like, here is the cost benefit of it, when they see that, it was tough with the 200 incentive but now with 400, were turning a lot more heads. it did make a different in summer sales
you know, everybody is a little different, I think most people pick the job because of us, the person standing in front of them. If somebody is using the rebates, it's a sales tactic that can be good and bad. If you're good and using it, its good, flip side it's a bad thing. Lots of bad companies out there. Were a reasonable company, if we do 10k good system and then we turn around and get them 1500 back, there's 8500 out there pocket, while others will sell them that same system for 17k and then pretend rebates get them down to 13k... my sales technique is, hey Xcel holds us to this standard to do this for you, and their requirement is to do this right, and just because you have the rebate doesn't mean its installed correctly and working right
There is a certain amount of customer that want the efficiency so the rebate is a plus
I don't know, we give that opportunity and what the savings seem to be but in the long run it takes awhile to see the return. A lot of people call when their furnace goes out so they typically go with what they can afford.
The pay back period is shorter by the fact that Xcel is offering the rebates. Rather than the payback period being 10-12 years it might end up being 5-7 years or 3-5 years depending on the circumstance.
The rebate for sure. Not very often someone is purchasing a high efficiency furnace because their main motivation is to save energy, the rebate is always the motivating factor.
The customer base out there is completely different and you can tell when you pull up. What type of car they got, etc. Shouldn't pre judge but you do that sometimes and you realize that you may be wasting time pushing 96% furnace to certain customers. But yes, i think the incentive is big and some folks want this to be the last heating system they buy and they want it to last so product quality of these equipment types is big.
Some customers know about it, very few though. Customers are interested in saving money, and they are going with the high efficiency gas furnace because of the rebate, especially since the rebate has gone up.
Most of the time it is the rebates, the rebate is a big thing. Plus they can increase their comfort.
Rebates

D2b. How aware are customers of their options when it comes to the range of AFUE of gas furnaces available to them?

Value
There is some people that have researched the topic or talked to someone that did replace their furnace and they are really up to speed, other haven't heard of it at all.
It depends - the people who are calling directly from the website are very aware but some customers may not have heard of it so we bring it up on every one to double check to make sure.
They always go over at least 3 options regarding different efficiency levels. Customers are typically not aware before they talk to sales staff
75 - 80 percent of customers that I talk to know about high efficiency. They may not know how high it goes but they know there is a high efficient product available
Don't know
They're not. There are some that do research online and look at the 80% versus the 90% but there is few that ask at

Value
all. It is me making that recommendation
Not very. It does become a big part of the sales process of educating them. It is going to be more complicated in the future because we're already at 95%. If we go to 96% or 97%, that is not a big deal.
Some people are aware of 90% they just don't know the difference. They know there are high efficiency options and they typically figure this out by completing their own research beforehand.
I don't think a lot are familiar. Some are very because they have done background research online and ask many questions about the difference and the rebates that go with those. We encourage the high efficiency because it is better for their home and they get larger rebates. The larger rebates makes a difference for them and that motivates them to move forward.
If they have done research then they are very aware of it but if they haven't then we have to inform them. The older customer base a lot of times they have not done the research and the younger base has done the research before calling us.
We educate them but again the average consumer 99/100 will have no idea. Some consumers are aware of the options and the efficiency ratings
Our advisors try and educate the consumer on the efficiency levels and the benefits of those products. It has gotten better over the years with the information that is available to them and so we help navigate them through it but customers typically don't know what AFUE means. They know higher efficiency equipment is beneficial but we have to explain to them why it's beneficial.
When sales goes out they quote them with three different options so they are aware at that time. First time they hear about it is in sales discussions
We only have 2 ranges that we sell, 85% and 90% and a lot of it depends on what actually works in their house. If they don't not have an option to get an 80% based on the way the venting we will then provide them with whatever options they could have. Some are aware and do quite a bit of research and some have done a lot of homework and some haven't
Most of them don't really understand it until you actually start to explain it to them. With that it is easy, you can put a pencil to it and do some modeling and show them what their utility bill could go down to if they were to upgrade.
They're aware that they high-efficiency options are available but we give them options ranging from the lowest efficiency to the highest
You know every customer is different. You have people that have done their research and have seen every option out there and are very knowledgeable, and then you have the homeowner that knows very little, I think most are in the middle. They may know a few options out there but may not know how they will effect them or how it will change how their system operates
Maybe, some do some don't. Part of it depends if we are the first contractor to talk to them, part of it depends on their background, some are in tune to that sort of thing. High efficiency has been around for among time now that this may be the 2 or 3rd time they are doing a high efficiency furnace. We've been doing it since 1980s so they may have info
I am going to say that more and more people are much more educated as far as that goes, I would say 80% of quotes already know what efficiency they want and that there are incentives out there
Honestly good question. 2 types, one that has done some Google and knows, and the other one that knows nothing. The guys that do the Google, interestingly enough are uninformed of the differentials over 90% and sometimes don't realize that to get the 98% you have to be certain brand or size. takes a little more explanation to let them know that 96 vs. 98 in brands may not make a big different with rebates but there could be installation concerns like piping in the house and you have to take into account the added payback.

Value
They have some awareness, most people get their info from people giving them the bids. Sometimes you get people giving them bad info. If I go into buy a car it's right in front of me, I can go to dealership and compare Fords vs. Chevy's. On HVAC you don't get that, trust the person selling you and you don't know about all the features. To me, they get knowledge from the last person they talk to, a lot of times, when I start talking, they tell me what other contractors said and I said I don't care what they said, let me give you the info and let's start from scratch. So much, people are not, I'm not going into people's home that know more than I do. They may have Googled or looked at brochure
I think most are pretty aware. You talk about 80% efficient furnaces and you should never predetermine what the customer can afford or want. There is enough info out there that people are pretty aware
I don't think they're aware at all. That is our job to inform them
Most people don't really no. Maybe 15% are aware of it. Everybody kind of knows that yes, there is probably higher efficiency equipment and less efficiency equipment but in terms of knowing that you basically you have 2 choices, 80% efficient or jumping up into something that is in the 90% efficiency range. Most of them don't know that portion of it.
I'm not entirely sure about that
I would say that probably 45% are pre-educated before we get there. Either had another heating company ahead of us or may have been on internet or saw commercial, a lot more this fall for rebates
It depends on the customer but they're slightly aware but not totally aware. The ones that are aware are doing research before they give me a call.
The rebates are making them more aware and I would say they mostly don't understand high efficiency. They know they get a rebate if it is high efficient and they know there is savings to be had but they don't really understand the technology itself. Customers are worried about replacing a large furnace with a smaller efficient furnace because they think it won't heat their whole house. They have this mindset still that bigger is better.

D2c. What do you think Xcel Energy can do to help customers recognize and demand high-efficiency gas furnaces?

Value
Most of the customers in the Xcel areas utility are generally very aware. Xcel adds a printout to the individual's utility bills which typically is a good marketing strategy.
I'm sure there is something but I'm not sure
I Xcel does enough to make the customer aware that they can save and the rest becomes part of the contractor's job. Some of the customers do understand but some don't. Some of them are doing the research beforehand.
Sending information out to customers that are looking for high efficiency. I also think that when they send something to a customer they should also send the same thing to the contractors so we know what the customer is seeing so we can align what Xcel is sending and what the customer may already know about.
Don't know
A lot. Venting can be a challenge so some customers want high efficiency furnaces but can't get it based on venting issues.
Publicize more about annual fuel savings. Right now it's he said she said about what efficiency level is better. If Xcel came out and said this maybe people would believe more
Probably but I don't know how but I suppose they could. They get their bills sent to them every month they can put on their bills what the difference in the bills would be if using higher efficiency units with an ECM motor.

Value
More advertising on their end when sending out stuff to their customers
They could force the issue with driving the efficiency of the equipment and in some cases they have been a little bit relaxed by allowing the less SEER ac to qualify for the rebate. It depends on how the package goes together.
I don't know for sure. One thing they had a program on swamp coolers which blew my mind it surprises me that they push that and offer rebates on that. As far as educating I'm not sure there is a whole lot more that they can do different from what they are doing now. The majority of the clients we talk to are unaware of the Xcel rebates that are available maybe less than 0% bring it to our attention.
One of the big tools is ROI tools, we have an operating cost calculator that shows the customers zip codes and typical data on costs for them and we do a comparative analysis on the difference and show them their ROI. If Xcel should show a graph of their ROI over the typical operating year that would be helpful.
I think you guys are doing what you can because they receive the information with their bills.
I don't know
Just more advertising, it might make people more aware of it.
If the rebate were a little bit higher maybe but I believe they just changed it so it may already be helping.
Advertisement is best to get people to notice what's going on and take note. I think as far as ads on TV and radio that's probably best. I know that with all customer information I submit, they have email. That's great too, without spamming too much. It's just about getting that tiny little word out there
I think they are doing a good job right now, in the flyers in the bills and online they ad, and on TV and such too. Doing a good job on that. Most of the time the customer already know. They are just weary of the paperwork and all that but once we tell them its instant its great, that's the extra incentive
you know, I cant say I've seen Xcel ad for furnace efficiency of any kind. I'm pretty aware, big reader so I'm always looking at 10 sources of media, radio going all day, and they just don't do much. Occasionally newspaper, which I think is a waste, I don't think a lot of people look at it anymore. I would think that they would be smarter if they did more things like radio or billboards, but they don't do much if they are trying to raise awareness. I know they have bill fillers but I don't know that they do a good job of making that piece legible, almost junk mail to homeowner. Maybe if they printed it on the bill. take a look at website to save money on bill! Something like that. I know their website is cumbersome. you have to start at Xcel, then state, then res/biz, big house vs. little house, then equipment types....if they want to run ad in biller say specifically where to go for furnace or whatever. in fairness, there is a mix message from contractors. if there were more support pieces that they could download to us for our blue books or hand outs, so that homeowner gets consistent message from contractors x,y, and z, that would limit the miss information that's out there right now. a lot haven't taken the time to read and if Xcel made a site for contractors to look at and how to explain to customers about high efficiency
Its hard, if they put it out there and people get excited about high-efficiency furnace and then it cant be done in their house its tough. So its about have good trade partners that promote products.
Yes, for sure marketing, they do a good job but it could be more frequent
Probably more marketing on their part. You see a few commercials here and there but I think more marketing sent out to consumers would help
It seems like they do a decent job at advertising on their website and making that information available to customers. There is nothing that I can think that they're missing the point on. Some people just want to buy the least expensive equipment that they can and that is all they're concerned with in the end and with those customers that isn't really going to change. I think they do a good job overall.
I don't know. I personally wasn't aware of the rebates before I started here and I live in the Xcel territory so maybe they can advertise it a little more to the customers.

Value
no don't think, they provide us in the field the info
When they send out their bills they can advertise through that and educate people on the importance of the furnaces.
No, they don't have anything
No

D3. At what point in the project do you and your customers talk about the Residential Heating rebate program? [PROBE: introduction, discussion of costs, etc.]?

Value
Right up front. Our customer is someone who wants to replace the furnace or ac unit, or both so we discuss right away
Pretty early on. It tends to come up in that initial questionnaire.
Beginning of our discussions
We usually bring it to their attention
The sales person goes over it in the introduction regardless if the customer is interested or not
I don't discuss until I sit down to review the different equipment that I'm proposing to them. This way I can explain the differences in the rebates, this is done at the end of the sales meeting.
Early on especially with the customers that are price based or they just had other price-based contractors out there. When we're sizing up what they currently have is when I bring it up
When I take them down to the mechanical room I tell them and when we sit down I show them the difference in costs and show them the rebates. I focus on high efficiency first and then go down to the more basic options
At the beginning when he sends out the bid that is included in there (the rebate) and that is on our quote that we send out to the customers as well.
For sure not in the introduction. It is a tool that is used to provide all the options to the customer - after they choose which option they want then we talk about the rebates and how/if they would apply to that situation
Typically when we are presenting the options. We have already done a load calculate, put together several options, talk about budget then we let them know
At the end after we do a comprehensive analysis and ask the comfort questions and that's when we design systems
If they know they will qualify we will explain it to them at that time but we typically don't bring up the program.
The first time they call in here for a quote for an install, so before we even go out there we send them an email or talk to them about it and let them know we participate and what systems will qualify
Usually it's pretty close to the beginning of our conversation. Most of the people that I get involved with already have other problems as well so this works as an add on to the other work they may need done.
I believe it is at the time when we sit down and calculate the cost and we always give them more than one option.
I think its mentioned on the first visit with the salesman. Dependent on feeling the customer out and where their interest mostly lies. Sometimes it's the first thing they talk about if they are trying to save some money or money is tight
it might come up initially if their initial call came in through dispatch office, depending on how in-depth the convo is. And then generally peaking, we go about generating furnace sales in two ways. One is via a call for repair that was needed, a regular furnace inspection. Or, a call may be just a straight sales call and want a quota on a new furnace so depending on which avenue is how it gets introduced. if its repair, not introduced until the end when the convo turns

Value
into the possibility of replacement, where for a straight sales call it could happen whenever depending on convo with customer. Generally speaking, weighted towards middle or end when we get into financials
Basically as soon as we start discussing efficiency, that's how I do it. I show them the efficiency and tell them it qualifies for the 400 rebate
I would say before we get to costs but after we've talked about equipment benefits
to me, its when I'm giving them the proposal, and I tell Yes, if someone brings up rebates before that I stop them and say hey lets not think of rebates, lets go through what's best for your home first and then lets see how the rebates fall in line and I can pull those out to show them...you're supposed to show them the ratings and I have a book with 100+ ratings and furnace/rebate offerings.
Usually within the first 5-10 minutes when we are talking about what they are looking for
During the sales, right on the first contact.
Usually after I've, I always have the mindset when doing the quote that I'm looking at the options and constraints and whether if high efficiency is even possible based on the layout of the home. It is usually once I've done a walkthrough of the house and looked around then I offer it to the customer if it applies. Some of my customers are landlords or they're selling the house or whatever so sometimes I have to qualify that and see if it is something that I know they're going to be interested in or not. But it is usually after I've looked at their equipment, sized them up and talked to them about what their options are and moved towards the sales discussions.
It is when they call here to start with, I tell them right off the bat, it is discussed pretty quickly.
I'm going to say maybe number 1 Is wants and needs, offer them products and some are preset on what they want to spend, probably in the second third of presentation I bring up rebates
More towards the end when we're presenting them the proposal and giving them options. We go around asking them about how concerned they're about their utility bills, comfort is usually first and bills are typically second.
I mention when customers are talking about replacing their furnace and I immediately talk about the program.

D3a. Who typically brings up rebates/incentives [**PROBE:** customer or contractor]?

Value	Percentage
Contractor	39%
Most times it's me but some customers are already aware	3.5%
Both us and customers. 50/50 split	3.5%
They are getting more educated on the rebates and they do inquire about it on the front end because I think Xcel is doing better at marketing the rebate programs and we are always having that conversation with the customer	3.5%
Some customers will know a little bit about it and we will have already installed their unit and then they will come ask me why they didn't get a rebate after the fact and I guess it is because that is the first time they hear about it. It's hard to explain to anybody how it works because they don't understand that it depends on the combination of the units that are sold.	3.5%
They are getting more educated on the rebates and they do inquire about it on the front end because I think Xcel is doing better at marketing the rebate programs and we are always having that conversation with the customer	3.5%
Usually I do. Some of the people will bring it up but most of the time I'll bring it up first. I	3.5%

Value	Percentage
carry forms with me that explains the rebate program and we go over that together.	
We are always bringing it up but we do have some customers that call in specifically because they found us on the Xcel website and that we are offering the rebate so some are aware	3.5%
For the most part we bring it up but I do have people calling in for estimates and say they have gone to the Xcel website or they are aware of what they are offering. 1/4 of phone calls I take they are setting it up themselves	3.5%
Not out in the field but from experience its from us more than often, contractors. May depend though.	3.5%
They may be aware but we bring it up to them, probably don't know dollar amounts	3.5%
90% contractor	3.5%
Its 100% me (its actually 75%, I always bring it up. The part of the customer bringing it up, depends on, I don't get people calling saying we are upgrading because of great rebates, its just they may have been told of rebates and they bring it up. That maybe 25% of time	3.5%
If it is a phone call to us it's usually them bringing it up but if it is me and I'm out on a sales call I'll usually bring it up	3.5%
I would say probably 25% of customers know, mostly contractors	3.5%
90% me	3.5%
Both	3.5%
The customer typically knows but I bring it up regardless	3.5%

D3b. About how often are your customers already aware of the Residential Heating rebate program before you tell them about it?

Value
At least half
Probably about half have heard something about rebates or know there is various things out there
Didn't answer
15 - 20 percent
A lot of them are aware of it upfront
Pretty low - maybe 10 or 15 percent
Under 10 percent
50% of the time
The same 50/50
It depends on how much they listen to the media. In my opinion that is not a top driver -in most cases people aren't shopping for ac or furnaces. It is something that is needed at last second when they go out, meaning most people aren't taking the time before to check to see what is available.
10%
10-15%
Very few

Value
Probably 50%
Probably somewhere round 60-70%, they don't have the details but they know there is a rebate program
I don't know how often, I just know that some are aware beforehand
I think probably more, those are the ones that bring it up first thing, I'd say about 50% are somewhat knowledge or know at least there are rebates to be had
I would guess maybe 40%
80%
some customers say they've heard of rebates but don't know anything about it, and most don't know it at all
25%
70% of the time but may be a little higher like 75% of the time
Maybe 5 times in the last 2.5 years that I've been here
Maybe 15%-20% of the time the customer initially when they contact me they say hey I want a high efficiency furnace and I've heard about a rebate. The other 75% of the time it is be bringing it up.
Probably 60/40, us 60 them 40
25%
10% of the time
80%

D4. Please provide an example of how you typically approach rebates/incentives discussions for Residential Heating Products program?

Value
Either the customer knows or it segue naturally by laying out the program
Starts with a questionnaire and discussion goes from there
We discuss all aspects of the program and present 3 ranges of efficiency, then we let them know which will qualify for the rebate
N/A
N/A
We discuss when we are proposing the equipment types to them
We let them know early on in the discussions, we try and read the customer first to see if they would even be interested.
When we are looking at their current equipment and deciding what they would like then we discuss this with them
We put the rebate in the bid, so it is known right away what the price will be after the rebate
It is a tool that is used to provide all the options to the customer - after they choose which option they want then we talk about the rebates and how/if they would apply to that situation
When we present the options that are available then we discuss what of those options will qualify
We go through the home comfort analysis and figure out their needs and wants based on budget and then we present the options to them.

Value
We typically don't bring it up to them unless we know they will qualify
Once they call in for a quote we will immediately bring it up to them
We just bring it up in the beginning of our discussion, we let them know that there is rebates and options to qualify for those rebates
When we calculate the cost of the equipment we will also talk about the rebates that will qualify
There again it depends on the customer and how they are acting, and the questions they have to kind of form that conversation. I know that once we tell them about the unit we are looking to install for them, we tell them, there's also a rebate for this equipment that Xcel will send you a check directly after we submit the paperwork. It could be in the beginning or end, but it is brought up almost every time.
Pretty straight forward, here is how much you can save with this equipment. We generally promote and recommend higher tiered equipment that include components associated with rebates. So for us not a driving force but it's a contribution thing...were usually selling these anyways so just goes into the package when breaking down the options for them...its helpful closing tool
Laying out efficiencies then showing what qualifies. Then couple it with any manufacture rebates that's are available
Take a look at equipment, talk to homeowner about benefits, listen to their concerns, then get to table, give them a number of questions to ask (whose doing job, what's the qualification, and how do I get apples to apples). When I get to that last part, I explain the benefits and take some examples for their house specifically and explain he benefits and then say well there's also rebates that we will cover in am minute. and then explain which pieces of equipment covered by which rebates.
It is one of the first things we bring up in our discussions with a customer
We can sell it in a couple of ways. One we can take the rebate amount off the top and that is a key selling point. The other is they can get it later from Xcel
Usually it comes down to that payback period. I talk to them about how much fuel savings they will have and try to monetize that based on going over the efficiency of the equipment and then I do a quick projection, just something easy that they can understand that shows if their utility bill is going down by \$30 a month and our heating season is 7 months out of the year, you have \$X you're saving per year and just try and keep the math simple for them but fairly accurate so I can show them the payback period on how long it is before they start seeing those actual dollars return to their pocket based on the additional expenditure of the equipment.
I couldn't tell you that, that is the sales gal that does that
I let them know that if you go with a high efficiency equipment you can get a large amount of rebates from the power company and these are checks directly paid to you. I let them know about the high efficiency blower motors and the rebates for those.
When I first start talking to them I let them know about it and again we talk about it during the discussions of the types of equipment and then again at the end when we are discussing costs. I mention it about 3 times.
Basically, if I'm the one in living room, going to offer you and say that Xcel is offering these rebates to reduce consumption across CO, and I break it down from 80 to 96% and say you will save 16 cents on natural gas you save. Plus better products have better warranties. Lifetime heat exchanger vs. 20 year is big...and then i can show them the payback period... if you have higher efficient equipment in home, may not sell faster but wont question home inspector.... then we tell them about the incentive. I'd go through your house and what your needs are. I would go through whole program and then towards the end, here s a two stage ECM motor but with this you get 350 back or whatever
N/A

a. What questions or concerns do customers have during initial discussions about rebates, if any?

Value
They wonder how they will get the rebate. We do all the processing of the rebates so it is very simple for the home owner, they have to just wait for the check to come in the mail
Mainly qualifications - if they ever work with contractors that aren't part of the Xcel program they may have been fed false information from non-Xcel contractors
Customers want to make sure whatever system they get will qualify for the rebate bonus
They see dollar amounts online for the rebates but don't understand that those are probably best case scenario. They get confused when they have a certain expectation beforehand but when they see the final rebate dollar amount, it doesn't always line up. They think they know what is best for their house but until they can have someone like myself get in there and explain, they are going to be way off base.
N/A
N/A
None
Is it really worth it? Does it really pay off? It would be helpful if there is literature from Xcel explaining the high efficiency options and the benefits it may bring
No
Maybe about how the process works, how long before we will receive the rebate, what is the pathway (check, direct deposit). We process the rebate for them
They just want to know how much they will get back and when they can expect to get it back.
There is some questions but mainly they want to know about how they will get the rebate and how long they will have the wait to get it and what the process is to filling out and sending it in.
None
No questions
Not a lot. Usually I'll carry the rebate forms and I'll show it to them so it's pretty black and white what they can get back
Not to my knowledge
Well I think they are concerned with how quite it will run, how much heat to get out of it, easy to operate, is it going to meet needs as far as heating their home and moving the hot air. I'm sure there is more
None really, just how much they are
What the paperwork includes...no other major questions really. I think because unfortunately rebates and stuff, people are generally clearly of mailing in rebates because of the headaches you hear about and especially with online now you always hear about the bad things and that seems to be more prevalent. once I tell them they don't have to do a thing that reassures them of the easy process. I really like that
The other thing, message needs to be delivered to contractor but when homeowners say why are you giving me money? I get that I'm doing efficiency but why money? and a lot of times I say that utility companies are not meeting their demands during peak and have to go to grid to buy extra energy efficiency and the utility regulation committees say you need to produce more or have customers be smarter and if they are willing to do EE then we as a community can help offset those costs. people get that and say Yes I want to participate. everybody wants to be EE but they don't always know why. the message could be the same from contractors and it would be more consistent. some say o its just free money, others say too many hoops, probably because they are not Nate certified, but overall its inconsistent.

Value
the only thing is, sometimes, where a concern will be if they are kind of weary of hey, am I going to overpay for this rebate and I think they get visitors so far apart and are nervous about this because they think they are overpaying
Yes, how does it work? Is it real money? I let them know that Xcel will actually send you a check
I get calls all the time. They are always calling, looking for their rebates. I'm writing a check right now to a customer who hasn't received their rebate because of little mistakes on the application. Just have someone call me to fix it over the phone, it is a waste of money and time to send them in the mail.
Not usually. They want to know how long it will take to get their money back and Xcel gives a time of about 6 - 8 weeks but more often then not it will be before then because Xcel does a good job at getting the money back to you.
All of them ask if they receive the rebate or if the cost comes off of the top of the price and how long it will take to receive it.
No; only questions they may have, do you file paperwork? Do I? Now I know some do reduced cost and get the contractor the rebate and I think its more exciting for customer to get it in the mail..
How easy is the paperwork? How easy is it to get them? How long will it take to get the rebate?
No concerns, some are wondering if they get a credit on their bill or a check in the mail.

D5. How big of a factor are the high-efficiency gas furnace rebates when customers are deciding what efficiency of a furnace to install?

Value
Important to their end part, again we're lumping all customers together. It's a combo of the rebate.
Rebate amount is a factor
I don't know
We combine Xcel rebates with other promotions
Customers want to make sure whatever system they get will qualify for the rebate bonus
The increase of the rebate amount has made this a much bigger factor then it was before.
Pretty high - it is pretty significant overall. Everyone wants to get money back
The rebate is only \$120 so people will go for the ECM rebate on an 80% two variable speed. The \$120 is a very small factor
They are very high. A lot of customers, some of them are in older homes and a lot of them have a very old unit and that price of replacement is high but to be able to offer them the rebate, 80% of the time that is what motivates them in going with the high efficiency.
It is not a big factor. If they can get it financed at a reasonable rate, basically I think financing and ease of install is more of the issue and not getting the rebate
It for sure helps in that regard because the higher rebates allow us to guide clients to the higher efficiency equipment because at times they are paying close to the same for a 95% vs. 80%
Large factor
It seems to push them to the higher efficiency
Not that big of a factor, it is more of the AC rebates that they find appealing
It is a big factor, I have not done an 80% in a long time and today at wholesale costs there isn't a great deal of difference between 95% and 80% so it is pretty easy to calculate what the savings will be between the two

Value
I don't know, that is not a question for me
You have those customers that want the best of best and want highest efficiencies and don't care about costs, maybe 1/3 we have a lot that won't look at the dollar amount. Just and just wants something that runs cleanly. Then there are those you have to educate and make aware of high efficiency and those are harder to convert but we definitely have those that do that as well
Bigger the rebate the higher the factor. If talking about 100 rebates, typically not significant, when it's 400 and I'm talking furnace program here, it's a more significant factor
it can be a huge decision typically because they have made their mind up to go plus 90, it's just a little more to go 96-98, so that 400 is great incentive. We don't even price out 92-93 because they don't qualify
The guy that says this is the last house or were here for awhile, they pay a lot of attention to it. Then say it's 400 and there's only a 800 difference, and the balance of the rest will come back over the next couple of years, they see the breakeven is like only 3 seasons. at that point you're leaving money on the table if you're planning on staying in the home for that long.
I think it's pretty substantial, it definitely factors in. probably, if somebody is sitting there leaning toward high efficiency and for me, maybe paying 600 more vs. 1000 more, that's a big difference and they will see the payback
If it is possible to install it, it is very important to them and a big factor. 8/10 times they will buy the high efficiency if it is possible to install it
Honestly, I don't think it is a big factor at all. They're calling us because they need heat so I don't think it is a big factor.
If they have an option to go either way it is probably convinces 75% of the customers to go ahead and pull the trigger on it
It is a big factor. Judging from the amount of rebates I do it is a big factor
I think they are beneficial, I mean in making decision, some people may not be able to afford them but the folks can afford 96%, I think the rebate is win-win
I don't think they're at the top of the list but now they may be since the incentive has increased. It is probably more towards the bottom if anything
They play a big factor in customer choosing to go with the high efficiency gas furnaces.

D5a. To what extent does discussing rebates help or hurt the sale?

Value	Percentage
Doesn't hurt the sale	25%
It helps the sale	18%
N/A`	14%
High efficiency can be rough but bottom line high efficiency is more maintenance but as far as the rebate program it does nothing but help	3.5%
It can help but not sure why it would hurt	3.5%
It helps the sale because they know they will get money back on higher efficient equipment	3.5%
I couldn't think of a possible scenario it would hurt. Maybe if we had brought it up and that customer was IREA and they didn't qualify, that may put a sour taste in their mouth, not that we can control that. Other than that it's always helpful, I know customers that will go with the	3.5%

Value	Percentage
unit just for the rebate	
Never hurts, I see no reason, always helps to some extent	3.5%
No hurting a sale, always helps push efficient	3.5%
Only with people from Boulder. if you talk to them about rebates they may get defensive.. And if we had some info form Xcel to hand them I think it may help. On the other hand though, it helps for the most part	3.5%
Definitely helps the sales, doesn't hurt really. Some people just don't care about rebates and say rebates aren't for me	3.5%
It is usually a helpful thing, I've had maybe 1 customer who wasn't interested and didn't want to hear about the rebate but generally it is nothing but a benefit for the sale	3.5%
It is a pretty good thing to close a sale. I think if we were up against another contractor who didn't offer the rebate they would go with us every time.	3.5%
Can only help if its applicable	3.5%
I would say like 25% of the time it helps the sale	3.5%

D6. How often are there instances when you don't mention rebates during furnace replacement discussions with customers?

Value	Percentage
Not often/Never	36%
Yes there are	14%
Depends	3.5%
100 percent that are applicable	3.5%
Rare	3.5%
No, I always do. I can tell the customer if they are even a little interested	3.5%
There is only a handful of our furnaces right now where they upgrade from an 80 to a 90 so it is still not being discussed.	3.5%
Not usually, but maybe if its someone looking to spend the bottom dollar. They are going to spend the least amount possible and don't have a need, mostly with landlords, they don't have any interest in getting anything in there that will run as well as possible. They probably don't care as long as it saves them money	3.5%
No situation where I wouldn't, cant say if there would be other reasons if some sales people would but it wouldn't be do to instruction...it is a sales tool and I want them to mention it. If we don't mention it were not at competitive best	3.5%
No as long as they are on Xcel for gas and electric. Occasionally we are out east and have to make sure we are serviced by Xcel and that can happen. But no, no reason ever really we wouldn't tell customer about it	3.5%
No, ill bring it up because you never know...sometimes you just cant get a rebate for one reason or another so I have to bring it up on why they cant get it in case they have been told they are	3.5%
We offer every single time	3.5%

Value	Percentage
Very rare.	3.5%
Not often but we do	3.5%
The only place, if I'm going to a tenant and working with property owner with the actual proposal. If it's a rental	3.5%
Maybe 50% of the time they don't even care about rebates because they're landlords or flipping a house so I don't bother with them	3.5%

D6a. When?

Value	Percentage
N/A	54%
When customers want the cheapest option	3.5%
The only time we wouldn't mention it is when the customer won't allow us to put the equipment we recommend in	3.5%
Rarely	3.5%
I do on every call as long as they are Xcel customers	3.5%
When they are not eligible, for instance when they want a 80% furnace	3.5%
We always offer it to them because we try to give them 2-3 options of low range, mid range, or high range equipment types and typically there will be a rebate for at least one of those options.	3.5%
When they don't qualify for it or when it is a tenant landlord scenario.	3.5%
When I know they're in a non-rebate zone.	3.5%
Maybe if they're clear that they want just the cheapest option and aren't interested in see the high-efficiency products	3.5%
Physically impossible to get furnace in play to get the efficiency they need. It would be such a nightmare to install furnace to meet codes its better to not go there.	3.5%
If it is some sort of sale where it would be difficult to get the rebate to the correct person like if they're selling the house and won't be at the address at the time when the rebate check gets there.	3.5%
Typically when someone is just flipping a house to sell	3.5%
A rental situation	3.5%

D6b. What are the reasons why?

Value	Percentage
N/A	61%
They don't want to spend the additional money on a high-efficiency furnace	3.5%
If the customer won't benefit from it we don't want to do it	3.5%
If the customer doesn't have Xcel	3.5%
Even if the customer doesn't want a 95% option we still tell them about the option	3.5%

Value	Percentage
The landlord typically just wants to put in the cheapest option.	3.5%
They're in a non-rebate zone	3.5%
They know they want the cheapest option	3.5%
for example, crawl space furnaces and have 2 foot clearance to bottom of floor and in between there's a 17 in furnace and got to put that in, take other one out, put pipes in, it makes it an awful long install, and it ends up not making sense to offer, the breakeven doesn't make sense	3.5%
If it is some sort of sale where it would be difficult to get the rebate to the correct person like if they're selling the house and won't be at the address at the time when the rebate check gets there.	3.5%
They aren't interested in spending the extra money	3.5%
Not motivated to over spend	3.5%

D7. Do you sell any eligible projects without applying rebates?

Value	Percentage
No	71%
Yes	14%
No, even if it's not brought up in the field, when I get it, I will check for any rebates and if it does have rebates I will submit those regardless, it will get done either way	3.5%
It could happen	3.5%
Not that I can think of	3.5%

D7a. What are the reasons why?

Value	Percentage
N/A	64%
If they can qualify for a rebate we would be sharing that with them and getting them that rebate	3.5%
If the customer won't benefit from it, that is, if the value is less than \$50 because putting together the paperwork costs more than that	3.5%
All the new construction that builders aren't processing rebates for or the rare time that someone does by an 80% furnace.	3.5%
There are always exceptions - landlords wanting the cheapest thing they can put in. There have been opportunities that we have sold rebates to landlords, they always know about the rebates.	3.5%
If they can receive the rebate then they will get the rebate	3.5%
It wouldn't be something that we would intentionally do. But its possible we've sold equipment and sales person wasn't aware of the rebate, and therefore it didn't happen, wouldn't be intentionally	3.5%

Value	Percentage
I would say that if the customer understands what they are buying, they are buying for performance and efficiency first, then the guy on the fence struggling with cash flow but cant figure out how to make it work, the rebate ends up being the push for the first customer, we would focus on what their concern is. If they want better air flow, that's what we will talk to. If we start talking about the numbers, we will mention the rebate and its icing not he cake	3.5%
I probably have done it, say if somebody is moving, they are selling house and they just say I need this done tomorrow that's the only thing I can think of but a lot of times if its just a small 100 rebate it's the last thing on mind	3.5%
If it is some sort of sale where it would be difficult to get the rebate to the correct person like if they're selling the house and won't be at the address at the time when the rebate check gets there. However, Xcel will let you do an alternative rebate section so I'll do that where the rebate comes off of the project total and then I receive the rebate so I'll do that as well if needed.	3.5%
Shame on me if we do that	3.5%

D8. Has participating in the Residential Heating rebate program changed your approach to non-Xcel Energy customer projects?

Value	Percentage
No	57%
Our price sheets include the rebates on there regardless if they are eligible for the rebates or not	3.5%
We do a little more heat load calculations than I would have done in the past	3.5%
I don't think it has changed it. We handle all of our projects the same	3.5%
N/A	3.5%
Other than looking at efficiency options. If it is not related to Xcel it is hard to sell the higher efficient product	3.5%
CO natural gas is getting pretty strong now and they just ran their rebate up to \$400 and they have jumped ahead of Xcel energy. They have other rebates as well for different thermostats, etc. They seem to be going beyond what Xcel is currently doing. This has changed part of that approach	3.5%
No, I don't think so, I mean perhaps they don't have Xcel for energy, and it doesn't take away from anything we partner with. In fact, it's favorable in their eyes we have a partnership with them even if they don't qualify because it shows we are trying to get people to high efficiency	3.5%
For us, not really. The few we have run into, we bring up Xcel rebates and that when we hear that they may only have gas and not electric through Xcel. Some places in Aurora where it seems like they would have Xcel but they may not for electric side. Changing, like this one, I didn't have any idea, I still went through everything with homeowner about pros and cons of upgrades and what not	3.5%
The trust is it has. I have become more discriminatory, maybe more discriminating in terms of appointments. The guy that says he's all about the buck, how much for the furnace? I can see its just about number, don't care about anything else and that's not how we do business.	3.5%

Value	Percentage
and a lot of times we politely step out. on the other hand, if they want education we will spend 5 minutes explaining the variables that can help the, like rebates, and then maybe they become interested. If we can get them off the bubble from basic to high efficiency, and use the rebates as part of it, so be it. As an owner, I've looked at this and said I have a choice. I can spend time on houses that are basic or spend times on houses that value efficiency	
Not really. If I'm in somewhere that doesn't have Xcel Energy I guess maybe I can say that I'm always in the mindset to sell the high efficiency equipment and because of the rebate program has put me in that mindset. So even if I end up somewhere that doesn't have rebate I will still try to sell it and maybe I wouldn't have done that in the past.	3.5%
No, Xcel is huge out here and almost all of my projects are through them.	3.5%
No not really, pretty well established in the industry.	3.5%

D9. Do you fill out the application for the Residential Heating rebate program on behalf of the customer?

Value	Percentage
Yes	50%
We take care of all the paperwork	3.5%
Yes - we handle everything when dealing with Xcel. If a customer hasn't received their rebate I call Xcel and find out where it is	3.5%
Our portion of it, they do their account info and they have to send it in	3.5%
Most of the time they will do it	3.5%
Yes - we fill it out, have them sign and we mail it for them	3.5%
Yes - we found that we get less applications back that way	3.5%
The customer will do the top portion, the installer the middle and then I'll will do the last	3.5%
Yes most of it the only thing they fill in is their own contact data, account number and sign it and then I very seldom let them forward it to Xcel, I usually do that for them.	3.5%
Correct and for the most part I utilize that online submittal for the rebates which is really nice. If the customer doesn't have an account number handy or if we forget to bring out the form it's nice to have that aspect, easily done.	3.5%
Yes, to the extent we can. Some info they need to supply but we get from them. In our case, we front end the rebate to them if	3.5%
We do that, customer signs over	3.5%
Yes, we just need email and public service account number. We file electronically	3.5%
The furnace is easy, if it's the furnace I tell people they will get it really quick. I'm not doing instant on that because it takes 10 minutes on that. I do the app for them	3.5%
Yes, we do all the paperwork for the customers. It is easier to do then it was in the past. When we first started we went through a learning curve and Xcel was as well, they would turn down rebates for little tiny mistakes on the application. Now that it is online it is much easier.	3.5%

D9a. Are you the main point of contact for the Xcel Energy Staff?

Value	Percentage
Yes	75%
No	11%
We have an install coordinator that submits the rebate applications	3.5%
Yes - I have somebody in the office that handles a lot of the paperwork but I'm the main contact for a lot of that	3.5%
Jamie	3.5%
I am, yes. Via Ann, I am yes. Via details or if something is wrong with rebate form then no	3.5%

D9b. Do the rebates go directly to customers or are they sent to you?

Value	Percentage
To the customer	46%
Directly to the customer	3.5%
Always customers	3.5%
Yes - that is another problem we had too. A customer called Xcel saying they hadn't received their rebate and Xcel told the customer that we should provide an instant rebate which isn't true and caused problems for us.	3.5%
Directly to the customer	3.5%
Directly to the customer (99% of the time) unless they would rather have that money off of the top then it comes to us	3.5%
A lot of customers want the rebate instantly so we take the rebate off of the original price. I sell more that way because they get the rebate instantly	3.5%
There have been a couple of times where we give them a discount but typically we don't ever do that (maybe 1 in a 100)	3.5%
Directly to the customer. I have primarily all of the form filled out before the install and they just need to sign and add their account number	3.5%
To the customer	
Directly to the customer	3.5%
The go directly to us, we take the rebate price off of the sale cost	3.5%
We get the rebates and we front end the rebate to customer. Could be a situation where it goes straight to them but we are set up to front end it	3.5%
No to us, since we give them instant rebates	3.5%
Yes, homeowner gets email that they are getting the rebate and they start stop watch and Xcel send them it directly. Beauty of the electronic system is the customer isn't just left out there wondering if its coming. They get that confirmation that someone from Xcel has seen the application... huge difference for us to cut down on the amount of go backs	3.5%
98% of the time it goes directly to the customer customers and 2% of the time we take it off the price of the project	3.5%

Value	Percentage
90% go to the customer	3.5%

D10. What languages, other than English, do your customers speak at home?

Value	Percentage
Spanish	25%
Not sure	11%
Not typically	3.5%
Not sure. Very seldom	3.5%
Yes, I'm sure there are but we are not particularly dealing with those customers. If we have a Spanish speaking customers calling in they typically have someone with them that speaks English. I'm a big fan of America speaking English and not being divided in our language	3.5%
Some German, French, Spanish	3.5%
Some speak Spanish	3.5%
That is difficult, CO has a large Spanish speaking population and we have been discussing for a year now how we can service that client base.	3.5%
Spanish but typically they have someone in the household that is interpreting	3.5%
The majority that we come across is English speaking but there is some Spanish	3.5%
Not that I know of	3.5%
Not really	3.5%
I'm sure there is Spanish speaking customers	3.5%
Hard to say, some Spanish	3.5%
N/A	3.5%
English	3.5%
I tell you, I have had zero non-English customers where I'm at... lots of Hispanics work where I'm at but I'm yet to run into a customer yet...some Asian customers, all speak English	3.5%
In our, maybe 1% Spanish. But I think it would be beneficial to provide info in Spanish because some contractors will work 100% with that customer base	3.5%
Spanish, Denver is very diverse and there is some Russian	3.5%
A very small portion. We occasionally run into maybe 15%, most likely they're Hispanic. Definitely more so probably second language but hardly run into any of that you can't have a conversation with or present the info in English	3.5%

D11. What percent of your customers in 2016 and 2017 do you believe would have preferred receiving information on Xcel's rebates in Spanish?

Value
The Spanish community will usually look and try to find someone who speaks Spanish. I don't wind up seeing those accounts

Value
Under 5%
Not sure
Less than 1 percent
Hasn't come across any
1 percent
I've never had a single request
They don't typically want the high efficiency equipment, they want the cheapest thing.
Very minimal
Most times when we get out to a Spanish only speaking home they have someone there to help translate
5-10%
1 person and his son was there
Maybe 5%
I don't know
No I don't think any would
I don't know
Maybe 15% but English is probably the second language. Those that are primary Spanish speaking I think that would be helpful, makes them more comfortable feeling they are reaching personally
Don't think any customers really, I mean there is some obviously but under 1% of our customer base
Probably a few, maybe 5%
We do offered multilingual issues. The thing is for Denver, the city has 30% exclusively speaking Spanish, that has not been my experience because we handle the south end of the city that is more affluent. We target based on abilities to generate incomes and generate utility bills. when we look at demographics we target, we target affluent people that can sit down and make decision on higher efficiency
No idea; no customers
I don't know, we have a large portion of Spanish communities but most of the time we don't hear anything from them regarding the rebates because they're wanting the lower level of equipment
maybe 5%
0%
That would be very low, most are English speaking and if they're Spanish speaking they usually have an English speaking person there to talk with us.
1%
Maybe 10%
N/A

D12. Do you have Spanish-speaking employees in your office or in the field?

Value	Percentage
Yes	29%

Value	Percentage
No	25%
One or two that might be able to speak a little bit of Spanish but not fluent enough to hold a conversation	3.5%
In the field - not fluent	3.5%
Yes - we have a few technicians and office staff that speak some Spanish	3.5%
Not really	3.5%
Yes - not super fluent but partial	3.5%
Yes in the field but none in the office	3.5%
Some know a little bit of Spanish but nobody is fluent but we don't really have a need	3.5%
No, we have several Hispanic employees but I don't believe they are conversation in Spanish	3.5%
Yes, 3	3.5%
Yes, a Spanish NATE certified technician	3.5%
Yes, we have 3	3.5%
In the office I think we have Spanish speaking contacts, not in the field	3.5%
N/A	3.5%

D12a. Do you have employees in your office or in the field that speak languages other than English or Spanish? [Probe on what languages]?

Value	Percentage
No	46%
N/A	32%
Not sure	3.5%
Yes - one guy that speaks 13 languages	3.5%
Not that I'm aware of	3.5%
Not that I'm aware	3.5%
Yes - Russian	3.5%
Yes - Arabic, French and Dutch	3.5%

Section E: Motivations/Barriers Install EE Through Xcel Energy

E1. About how many projects do you submit for a rebate per year?

Value
I think we we're # 2 last year in the amount of water heater rebates in the state of CO. I only have a small territory in the Xcel Gas, it's pretty dominant here. We do a very large percentage of our jobs through the Xcel program
75 - 100 roughly
423 heating rebates submitted in 2011; 2014 621 heating rebates submitted. Our cooling rebates have tripled

Value
Guess of 250
N/A
150-200
Not entirely sure but I would guess somewhere in the 100s. They should create an online portal of all rebates we've filed and the status of those rebates this way we can track how many we've submitted and how many as been paid to the customers.
20-25
Maybe 30
Doesn't know
1000
Not sure
I have no idea it would be over 100
25(is)
Maybe 6 is all
Maybe 100
I wouldn't even know where to go there. Probably 50 or so a month, so times 12 or so
not sure
N/A
Approximately 200 last year
Its going to be, by the tie I catch up, probably in the 50-60 range, end of year over 100
50 - 70 per year
15
15-20
I'm guessing 50 a year but maybe more actually
id say probably 18-30
40
30-50

E1a. Thinking back to 2016, would you say your involvement increased, decreased, or stayed the same compared with previous years?

Value	Percentage
Increased	39%
Decreased	14%
Stayed the same	18%
Stayed the same, maybe decreased	3.5%
Little increase	3.5%

Value	Percentage
Stayed the same or increased	3.5%
Increased this year. The thing is we are kind of a different area, we're up north and we do some areas down south but we just have pockets where Xcel is their main utility. We don't have the same exposure to Xcel as they do in Denver	3.5%
I think its increased a little bit, being the primary one doing this. People are more comfortable and familiar with program, little changes in rebates and how they work and I'm the main point of contact there.	3.5%
Increased some, sales are up and involvement is up. Because of rebates probably not. Weather has been a factor and it's opened a lot more doors. Folks are considering changing out equipment they couldn't do last year for economics sake	3.5%
Increasing, I'm doing it every time now. Didn't quite understand at first so wasn't doing it as much, and you know I've left some money on table, not cheating customers out of it but just didn't know the 400 was there, so for me I do it for every customer	3.5%
Increased slightly	3.5%

E1b. [IF INCREASE/ DECREASE:], what are the reasons why your involvement has increased/decreased?

Value	Percentage
N/A	25%
The rebates and promotional rebates.	3.5%
In the beginning people weren't educated enough on the program, how to do the paperwork, etc. From the time we started offering rebates until 2013 it became a mess. Now that we are more educated about the program it continues to grow	3.5%
Possibly decreased, sales went down this year	3.5%
He have doubled or tripled in size	3.5%
We've increased business, particularly in the retro replacement sector	3.5%
Growth of the company	3.5%
Our replacement market numbers are up from last year so that rebate number should also be up	3.5%
We decreased our staff this year	3.5%
Execution. When the guys go out they execute, everybody is talking about upgrading systems and saving money so execution by my guys.	3.5%
Our business has grown from \$5 million to \$27 million	3.5%
I'm making my advisor do it more now but it is really simple it gives the customer the opportunity to get those rebates to the customer and allows them to purchase a higher efficiency product. The rebate adds value to our sale they appreciate the fact that we are even offering it	3.5%
Units are not qualifying	3.5%
Mainly because of the commercial projects that I'm doing, I don't have time for the residential side	3.5%

Value	Percentage
More people are moving to Colorado, the population has gone up a lot.	3.5%
Being more comfortable with the program, and being the central point of contact for customers and if I don't have the answers for them I look into it and get back to them. I'm still learning too	3.5%
We're busier, just more work in general, not due to any change in our participation level I guess	3.5%
Coupled with manufacturer rebates, its very cost effective for homeowners and gas is not getting any cheaper. People want to keep their savings, improve their savings as much as possible	3.5%
Increased some, sales are up and involvement is up. Because of rebates probably not. Weather has been a factor and its opened a lot more doors. Folks are considering changing out equipment they couldn't do last year for economics sake	3.5%
Got the system down, easy to do now	3.5%
It has to do with both with customer awareness and getting more projects. We had the Denver metro area grow and we are doing a lot of work for people with much higher incomes so they are doing more high efficiency upgrades, these people are generally more interested in rebates and high efficiency	3.5%
It seemed like I was doing more furnace replacement for rentals/condos	3.5%
Our business has grown because of the word of mouth and we hired a new sales guy who is really good at his job	3.5%

E1c. What, if anything, about the program keeps you from participating more?

Value	Percentage
Nothing	25%
If we had more opportunity we would do more	3.5%
A lot of it comes back to the amount on the rebate.	3.5%
We fully participate	3.5%
Units are not qualifying	3.5%
When they adjusted the \$100 check back to the contractor down to \$50. With the \$100 we were already just about breaking even and when it went down to \$50 it didn't make financial sense	3.5%
Nothing. I participate as much as I can	3.5%
Nothing due to the program. It is just what the customer goes with in terms of equipment	3.5%
The fact that they cut my check in half two years ago. It doesn't pay as well to do the rebate readings. The rebate has gone down to \$50 for us.	3.5%
We are in areas where they aren't offering Xcel as a utility provider	3.5%
There is nothing keeping us from participating more	3.5%
Nothing about the program, I just have too much work and it mainly comes from the commercial side	3.5%

Value	Percentage
I don't think so, just our scope of jobs and getting in a little more into commercial when that comes up. I know there's a couple people at Xcel to get info from and they are available if I have questions	3.5%
No as I said, we participate as fully as I could imagine	3.5%
I think the struggle of all the testing on AC side, the paper shuffle involved, a lot more results driven on the thing and I have 4 techs that are NATE certified to do testing and it's a pain in the ass in the spring. Come out of winter and we've had to hold testing because of temps and all of sudden we have a ton of testing to do that we don't get paired for. but we continue program because it does make a difference when competing against another guy	3.5%
Just the amount of customers and that will grow. I estimate next year, I've forecasted, ill do 200 next year that's my forecast and keep growing from there, want to be 300-400 in a few years. Every job is eligible. And the digital application is super simple, never done one without one. if I had to do the mail in, that would be impossible	3.5%
We participate as much as we can	3.5%
Time and life in general there is nothing Xcel can do to fix that for me	3.5%
The time that is spent submitting and then getting them back for corrections and have then having to resubmit them is super frustrating and that is what makes me not want to do this anymore.	3.5%
Nothing about the program, we just need to utilize it more	3.5%
The paperwork is a hassle but it is honestly working out pretty well. The paperwork and the time that it takes to do it, if they could cut that down a little bit.	3.5%
Nothing at all, the program works well for me.	3.5%

E1d. What can Xcel Energy do to increase your participation?

Value	Percentage
Nothing	21%
N/A	14%
Higher rebates would allow for more participation	3.5%
If we had more opportunity we would do more	3.5%
It would go the other direction if rebates got to be low especially sense we're filling out the contractor portion. If the dollar amount got too low that is something we would have to turn over to the customer for the to make the decision to fill out the rebate form. Also, referring back to what I said before, if they could break it down by local jurisdiction that would help us. As of now we are being compared to areas such as Fort Collins/Denver and those bigger areas and companies make it difficult for us to submit as many rebates as them. This makes it difficult for us to be in the top 5 or 10 on the Xcel website.	3.5%
If they raised their rebate amount a little bit that could encourage some more participation	3.5%
They didn't have the consumer participate in the rebate reduction and it was just the contractor and the contractor is the one doing the work and that is a problem especially in the off season when we are installing ac in the winter and then in May and June we have	3.5%

Value	Percentage
to go back and commission it. We don't have the man power to do all of that and the \$50 rebate we get doesn't even cover starting the truck.	
We are participating at 100%	3.5%
I don't know specifics. I just know that there has to be a better way to offer a customer a rebate when they don't have a full system being installed. To me that is wrong, how are you going to offer an AC rebate if it isn't actually an AC rebate	3.5%
They should bring back the boiler rebates, I don't know why they took those away for hot water boiler systems	3.5%
I don't think so besides getting the word out to customers about their offers and their special. More for ECMs or high efficiency furnaces, getting the word out then when time frames are short	3.5%
No can't think of anything, we offer all the time. I even offer on rentals sometimes because sometimes, the rebates will help with landlord, now its rare they would got 98% but with the ECM on 80% I can get them to upgrade without a problem	3.5%
Well, honestly I think they made a good move doubling down on rebates because a lot of people were on the fence with 200 but like the 400...the price point was at a point where 200 was pour amount. Now were halfway there to the difference	3.5%
You know, probably financing would be good. I know they offered something but fore me because I wasn't in biz for two years I wasn't eligible for that but if there was that would be good	3.5%
We participate as much as we can	3.5%
If something could be digitalized, if we can download an app on our I pads and everything could be submitted through that; that would be useful.	3.5%
Nothing Xcel can fix for me	3.5%
No, we participate as much as possible	3.5%
Don't think so, I think they are providing the tools we may not be using them enough	3.5%
More education on the rebates and advertise more with the customers and cut down on the paperwork, making the process a little easier.	3.5%

E2. Are there other challenges related to selling high-efficiency gas furnaces?

Value	Percentage
No	14%
A lot of the application sometimes doesn't fit. Our supplier has come out with a newer model that has helped with us as well - it is easier to install in more applications.	3.5%
Cost	3.5%
The installation is a challenge	3.5%
Don't know but it is about 90% of our sales	3.5%
Sometimes somebody's house is more difficult to get the venting to work properly. Nothing that Xcel could help with	3.5%
No it's just kind of natural for us. I would say that 90-95% of the furnaces we sell is a	3.5%

Value	Percentage
high-efficiency gas furnace.	
A lot of times the job can be done and some people are ok with small construction. In older homes it can be difficult because you have to rip through walls and stuff (more invasive). \$120 gas rebate isn't worth all of that construction.	3.5%
Nothing besides the cost but it is easier to sell high efficiency AC units because the rebates are so high.	3.5%
Accessibility with being able to get it in and out of the house (referring to ventilation issues and physically being able to get the equipment in and out of the house)	3.5%
Access is an issue. In CO we have basements and a large majority of home owners will finish their basements so when you are proposing moving from an 80% furnace to a high efficiency that can involve cutting through ceiling or drywall which some consumers aren't to excited about. In condos there is access issues there as well	3.5%
Install hurdles, if we get in to a finished basement it one of the biggest challenges, being able to do the venting and having to tear into walls.	3.5%
The fact that they are more expensive and they won't get much of a rebate at the end to make a difference.	3.5%
The combustion air piping can be challenging to figure out, it takes an expert to figure out the proper venting for each house because all houses are different.	3.5%
No I don't think so. There isn't that many York national dealers in our area so I get feedback and calls because if they go to the York website or call York they will send them my way. The ROI is really good so it makes sense for them to purchase the high-efficiency gas furnaces.	3.5%
Price	3.5%
I don't think so, just based on install after it's sold, getting it installed correctly and to the customers standards but those people looking for high efficiency or those we tempt with high efficiency, those are good customers	3.5%
Honestly it's more a case of if the sales guy is looking at it from installer standpoint and seeing how easy it would be, makes it easier to drive convo to that. Were not in top 10 of furnaces by any stretch but I'm sure they have 100s of contractors and I imagine its 80-20 rule were only 20% are involved in selling 90% of rebates	3.5%
Installation challenges, and just the costs. People just, I mean everyone has a budget, that's where rebates	3.5%
No I don't think so. There is installation issues but the only other challenge is the cost	3.5%
There are some challenges in installing them based on certain home layouts. Sometimes that rules out high efficiency just because the installation might be so cost prohibitive that it is not a good option for the customer.	3.5%
I don't know that actually	3.5%
Well for some customers they will be too expensive and beyond their budget even with incentives	3.5%
The main challenge is the extra cost and not everybody can get one because you can't always install due to the venting systems	3.5%
No, not really. Just the cost	3.5%

a. Is there anything Xcel can do to help resolve these challenges?

Value	Percentage
N/A	36%
No	29%
Make rebates higher	3.5%
Improve on the information that we can give to the customer as far as going into more detail about energy savings	3.5%
Increasing the rebate and what will qualify for the rebate	3.5%
I doubt it	3.5%
Increase rebates	3.5%
Not sure	3.5%
More money and financing always work	3.5%
I don't think so. I think you're dealing with a certain demographic with a certain income. We offer financing and our financing is up as well.	3.5%
Maybe a rebate for extenuating circumstances but that would be hard for them to manage, if all it was is a box you click on the form that said hey it was hard to install give me extra money then everybody would do it so I don't know how they would manage that and make it accurate.	3.5%
Higher incentives always help but I know that's not always an option	3.5%
I think what they just did with increasing the incentive will help quite a bit	3.5%

Section F: Evolving Market Place

F1. Have you noticed any change in demand from customers for high-efficiency gas furnaces?

Value
Most do want high efficiency - 75-80% of the time. They want to make that choice if they can financially afford it.
Slightly
They seem to be more excepted in the market
N/A
Don't know
Yes. People are now more than ever more concerned with being green
No. The only people interested in a 80% is for rental units
Not so much. 30% of them actually go for high efficiency, others just want the two stage variable
No, here it is 50/50. We have a lot of people who do boilers that we service as well and those things last forever and they don't want to upgrade to newer stuff and it is cost that keeps them from doing that

Value
I don't think so. The options for gas furnaces hasn't changed a lot as far as efficiency goes. They are at 98% efficient now so how much more efficient can they really make them?
Our high efficiency percentage continues to go up but I would like to think it is because we are educating and doing a better sales job rather than consumers becoming aware of it. They don't understand the options, they know furnaces heat, ACs cool, until we educate them I don't think they know the specifics
Yes, the customer is becoming more aware of the benefits and the ROI of high efficiency equipment. Utility rates are not going down and they are seeing the value of a well built home, a well sealed envelope and the efficiency of the home. We have a couple areas around here that are very conscious of our environment
No
No not really it has been the same for the last couple of years
No I don't think so. I do think everybody is getting more educated on what energy does cost though which may change demand
Not really
No I think the people that know high efficiency and have had them before they will always go for that and keep doing that. Then those that you convert to high efficiency I think they will be on the road to
I'm going to answer that no as well, and again its because its been a focus of our business for so long that Ill just say no
Yes, I think its, over the last few years, has increases. More education for homeowners, more customers know exactly what they want before we walk in the door and that never happened. You used to have to go from scratch, and now the customers are much more informed. makes it more simple for us, customers are doing homework before. Doing research online
I'd say doing less of them, partially because a lot of convo of the price of Natural gas being down. Folks don't feel the panic, not that we try to stir it but we say that the future value of energy and feeling about carbon footprint and economics of family budget and some get it and some don't. The rebate does help
A lot of it will be in the controls, fully modulating control, wireless systems, operating on smart phones, that's the biggest trend I see, the way the furnace is controlled
Yes the people moving in on demanding higher efficient equipment because their incomes are higher
No
Generally in the fast 5 years everybody has a mindset of energy efficiency so people are thinking about that more.
Yes because the rebates are prompting customers to go ahead and get the high efficiency gas furnace
Somewhat yes, people are more knowledgeable of it now I think, somewhat higher demand for certain types of customers
Yes, every year there is a slight increase for them but I mostly sell them due to comfort and efficiency is maybe the 3rd or 4th reason down the list.
Yes, now when the customer is calling they're looking for the high efficiency

F2. What do you see as new/emerging energy efficiency opportunities for residential heating customers?

Value	Percentage
I don't know of anything new currently, product wise or program wise.	14%

Value	Percentage
N/A	11%
No	3.5%
Not that I can pinpoint right at this moment. Xcel has a wider variety of rebates now which has helped.	3.5%
The SEER ratings on the AC and same with the furnaces	3.5%
I'm not sure if it is coming but if they find a way to bring solar down to a reasonable price, then you know heat pumps. Do dual fuel, solar power with a heat pump and backup furnace	3.5%
Solar with heat pump would be the best option	3.5%
Solar cost has come down and become more attractive, that could have a big impact. In CO when you look at the data we should be a big heat pump market but we are not.	3.5%
Ductless split systems are gaining a lot of momentum and speed. Xcel should provide better rebates for the ductless systems	3.5%
No	3.5%
Can't answer	3.5%
I would like to say, like on boilers, I wish Xcel could get that rebate program brought back again	3.5%
Couldn't answer	3.5%
Maybe some focus on ductless systems as a heat source	3.5%
Not that I can think of	3.5%
here we don't do heat pumps because of altitude but we get a lot of inquires about them but financially doesn't make sense. But others are doing them. Talks of geothermal but when they hear the costs of drilling holes, not enough incentive from utility folks. but Natural gas is almost in every house here	3.5%
Basically word of mouth and knowledge of product has increased. If they have heard family has high efficiency furnace they will more likely look into it. May be something that is doable for them, getting that out there and available	3.5%
I'd say more and more you're seeing local counties getting involved with rebates as well and when they fine tune that and combine with an Xcel rebate it will be an impressive amount consumers can get back for high-efficient furnaces	3.5%
I don't know, I don't know what else we can do to offer people. Xcel needs to get companies more training about the program. I don't think their training is where it needs to be	3.5%
The ECM motors is something that is coming down the pipeline and becoming more and more affordable to get in to and that helps to sell some of that equipment. It was so expensive when it first came out.	3.5%
I think those ECMs will be everywhere in 5 years	3.5%
I think insulation would be the more important aspects for a home's efficiency.	3.5%
No, not off hand I guess.	3.5%

F3. Who do you think are some of the successful distributors, contractors or firms in the residential heating market?

Value	Percentage
N/A	43%
Don't know	21%
I think there is a few that does a good job but the majority don't compare to us because they don't do what we do	3.5%
Doctor Fix it but I'm more focused on what we're trying to do. I don't worry about who is more successful	3.5%
The big companies	3.5%
Top performing contractors - furnace (Ben Hitchcock) did an excellent job supporting the rebate program	3.5%
Cooper does a lot	3.5%
Top 3 would be Trane, Lennox, and Carrier	3.5%
Small shops	3.5%
Cooper Heating and Air	3.5%
The ones that are doing the Xcel Energy rebates and offer as much as they can to the customer and has the best customer service	3.5%
Lennox and Crane	3.5%

F3a. What are the reasons why you think they are successful?

Value	Percentage
N/A	61%
They do \$40,000 a month of advertising	3.5%
I don't know	3.5%
They have more customers and are larger	3.5%
They're in the Denver area and they have more opportunities to do the rebates	3.5%
They have a lot of business	3.5%
Couldn't say	3.5%
Just marketing that they do and most people recognize those 3 names	3.5%
I don't know, I would say the bigger shops but they are overpriced already. Maybe the smaller shops that all they do is concentrate on those customers that are looking for those high-efficiency units.	3.5%
They do a lot of advertising on it	3.5%
Because they're doing the Xcel rebates and providing the best customer service possible	3.5%
They're a name brand and able to advertise a lot and the contractors that they have. The other firms don't have the contracting base.	3.5%

F4. What do you see as trends in the market place for heating equipment? [PROBE: trends for measures]

Value	Percentage
Don't know	32%
Some of them are making adjustments to make them easier to install but I haven't seen a huge change.	3.5%
It seems like about 50% of people buying high efficiency are actually getting the high efficiency	3.5%
The Xcel program and Fort Collins Program (Platt River Power Authority) people are pretty aware of high efficiency and they want to do that if they can	3.5%
It is trending more towards high efficiency	3.5%
Just with higher efficiency. With higher efficiency comes with more work and maintenance for the home owner	3.5%
It is at a standstill. Most of the companies, Lenox, I'm not sure where you are going to get more efficiency and pick up any more energy savings then what you are already able to achieve with the current technology	3.5%
They have been pushing to elevate all 80% furnaces and I thought it would be reintroduced again this year and that's where our legislators has to be careful because they don't understand how it all actually works.	3.5%
More quality installation and load calculation within the heating systems, that would be something that I've seen different as of recent.	3.5%
Little by little the 80%'s is going by the wayside and everyone will go towards the higher	3.5%
basically word of mouth and knowledge of product has increased. If they have heard family has high efficiency furnace they will more likely look into it. May be something that is doable for them, getting that out there and available	3.5%
the ductless tech is improving making it more practical	3.5%
well I like said, trend towards more high efficiency, ever increase	3.5%
Also seeing some solar here but no ones gotten to the point where they are replacing Natural gas with solar	3.5%
A lot of it will be in the controls, fully modulating control, wireless systems, operating on smart phones, that's the biggest trend I see, the way the furnace is controlled	3.5%
Locally it will continue to go on the increase because new construction is going crazy and there is a lot of people coming in and buying homes that need new equipment and they have no problem replacing old equipment with much more efficient equipment	3.5%
I can see there is a trend in the equipment manufacturers to update their high efficiency equipment and to not re-tool their standard equipment. You'll see from an installer standpoint you'll see things on the furnaces that are nice things that makes the installers that make the install go easier on high efficiency furnaces but it doesn't trickle down to the lower efficiency furnaces because I'm sure the market share for that stuff is lower and they aren't selling as many of them so it doesn't make sense to retool them.	3.5%

Value	Percentage
Just judging by the Xcel Energy rebates that I do people are going to more efficient equipment because the rebates are there which puts the price at a more affordable level.	3.5%
ECMs, higher efficiency equipment that is better for customer and lasts longer	3.5%
I've seen a trend with ductless heating and ac systems, I think that is a wave of the future.	3.5%
Efficiency gas furnaces	3.5%

F5. What energy codes or regulatory changes do you see coming into the future that may affect code baselines?

Value	Percentage
Don't know	32%
N/A	7%
I'm sure some of the colder climates will push the higher efficiency mandates	3.5%
The mandated 90% efficiency level, increasing from the current 80% (78%)	3.5%
Mandates on the efficiency levels of some equipment which may different of single versus multifamily units. I see challenges with this due to problems you'll find with venting in older homes	3.5%
They shot down the mandatory 95% so I don't really know if they will. Maybe if they bring that back again I can kind of see that happening.	3.5%
I feel like 80% furnace will not be allowed. Energy codes I assume there is going to be a lot tighter homes and I'm sure we will have to do more ventilation.	3.5%
That is political, I don't get in to that a whole lot. That is what drives that whole entity is politics	3.5%
They have been pushing to elevate all 80% furnaces and I thought it would be reintroduced again this year and that's where our legislators has to be careful because they don't understand how it all actually works.	3.5%
I've been hearing to make it mandatory to install 90+ efficient furnaces. It will be difficult to get these in some homes, this is due to the venting issue we just spoke about. Customers typically don't want to rip open a wall and redo their venting just to receive a rebate.	3.5%
	3.5%
The 2018 International Energy Conservation code is changing and part of that is there were some loose ends that were deleted in 1977 when it was acted so the IMC and IBC (International Building Code) now a lot of these areas have been brought into compliance and the energy code hasn't been rolled out yet but it should be coming very shortly here.	3.5%
Not heating, more so AC and the refrigerant changing that will change things. Actually will help us out in long run to get people to upgrade ACs. Furnaces always get a little more efficient over time, always looking for the next step up	3.5%
I think Xcel has so much more knowledge on that that they don't need my input. But certainly the environmental issues are shaping that trend towards high efficiency requirements	3.5%
a lot of jurisdictions here, starting to talk to each other about minimum eff. Town of Wheatridge said you cant do anything in the community that's under 90% and that fell apart in 10 months. They didn't give any out and said you will comply no matter what. and the public	3.5%

Value	Percentage
said look I have furnace in my finished basement and I'm not tearing it out. but we are seeing some new construction must have 90% but retrofit they haven't figured it out. we do a lot of retrofit high efficiency as a company but I'm a real minority to most my pear	
I know right now all new homes have to be sealed and the duct has the be sealed completely and testing has to be done to make sure that is happening.	3.5%
DOE is talking about making 90% furnaces mandatory which is totally ridiculous because you can't do that everywhere due to install constraints. If the government gets involved and mandates it will be a big plus for contractors and Xcel energy but I'm not sure it can be done right	3.5%
There was big talk for sometime that everything was going to have to go to high efficiency in the Northern states for furnaces and we started telling customers that and there was certain customers that were landlords and they wanted to sneak in before that happened and so we did a lot of standard efficiency furnaces for them and then that federal guideline kind of went away and is going back through the process. I know it will come back eventually and there is also talk about ECM motors becoming standard in furnaces as well.	3.5%
I think natural gas will stay cheap in our market for awhile and electricity will stabilize so that will help.	3.5%
Not that I can see	3.5%

Section G: Satisfaction

G1. Thinking about the projects you have submitted to the Residential Heating Products program in the past, please rate your overall satisfaction with the program on a 1 to 5 scale where 1 is not satisfied and 5 is extremely satisfied?

Value	Percentage
5	46%
4	29%
4.5 - 5	3.5%
4.5	3.5%
5 now, overall id have to say a 3	3.5%
3 to 4	3.5%
5; they always take care of everything and if there are any problems it is easy to resolve.	3.5%
4.5	3.5%
4.5	3.5%

G1a. [IF G1<5] What could Xcel Energy do to increase your satisfaction with the Residential Heating rebate program?

Value	Percentage
N/A	46%
Increase the high efficiency rebate portion	3.5%
The rebate amount. When it is \$300 they get a 5, when it is \$120, I'll give them a 4. Load calculation possibilities as well, they can get to the point if a load calculation is submitted then they give a higher rebate. Suggesting higher rebates for better work being done, not just a blanket rebate for everyone	3.5%
Make the application process a little easier and put it online	3.5%
No, what falls in to play is the ones that you can't get out. A lot is the industry changing and not something the utility can change	3.5%
Maybe figure out a way to do everything online as far as paperwork submission and turn around on the rebate time faster	3.5%
The only complaint I get is the time that it takes to process the rebate during the high heating and cooling systems but other than that I think it is great	3.5%
Maybe get the rebate money back faster, it takes a long time to get people rebates. Sometimes there customers get confused because they get two rebate checks and they always get the heating one first and then call me freaking out wondering where the second one is. They should just combine the two	3.5%
Just the fact that maybe when they offer that bigger rebate for ECM or high efficiency to give it more time to get more people in there during those deadlines	3.5%
Raise amount of ads to help with participation, not a lot of support with getting the info out there. Folks have to look for it	3.5%
Such a learning curve, if they could make it easier to do this stuff, id say a 4. 5 now because I taught myself	3.5%
Reduce a little bit of the paperwork.	3.5%
They need to get better training, they need to coordinate with companies better to go to the training and if you have a problem with the paperwork call us, don't just send it in the mail back and forth back and forth.	3.5%
Once I got use to it, it was a learning curve for me. If we had printed forms that had our name and everything on it that we didn't have to copy that would help. A little more writing room on the forms would help a bit, we have to cram our writing on the forms.	3.5%
Prioritize those that have been involved with those who have been around the longest. You could also increase the incentive for the contractor, it was \$100 but now it is \$50.	3.5%
Once you give a 5 there is no room for improvement but I'm very satisfied with the programs	3.5%

G1b. How many more furnace rebates would you do per year, if your satisfaction were higher?

Value	Percentage
N/A	68%
No probably not	3.5%
I don't know	3.5%
You know it would probably be a big amount, probably a big amount to convert from ECM to higher qualify furnace, big sealing factor	3.5%
I could see another 10% minimum, lots of folks that back down that came in originally that just wanted a replacement and you talk about high efficiency and they say look no one else talks about efficiency... and I tell them to look Xcel and they may not go through all the hoops to do that	3.5%
That is not holding us back so I can't use that as an excuse	3.5%
Maybe 20% - 25% more	3.5%
We would do as many as our business could handle	3.5%
Easily another 33-50% more	3.5%
I do as much as I can	3.5%

G2. Please rate your experience with Xcel Energy on a 1 to 5 scale where 1 is poor experience and 5 is great experience?

Value	Percentage
5	43%
4	29%
3	7%
2	3.5%
4; a couple little issues with AC and trade ins but they are pretty willing to work with you	3.5%
4.5	3.5%
Prior to this year a 3, and starting this year a 5 (electronic)	3.5%
4; I would like it to be a little more like a partnership where I could login and look at apps	3.5%

G3. Please rate your satisfaction with the equipment rebated by Residential Heating rebate program on a 1 to 5 scale where 1 is not satisfied and 5 is extremely satisfied?

Value	Percentage
5	54%
4	25%
3	3.5%
5; they seem to cover everything I want to sell	3.5%
4.5	3.5%
5; I think the ECM rebate is great, gives people an option that is helpful and don't have to	3.5%

Value	Percentage
spend a whole lot more on	
4 at least, they have been receptive to what's available out there and offer rebates for that efficiency. The stuff we offer rebates for is the practical options, no weird stuff or making it hard for us to offer. Just feels like a struggle for us to have to give them all the info	3.5%
5; good requirements	3.5%

G4. Please rate your satisfaction with the Residential Heating program rebate levels on a 1 to 5 scale where 1 is not satisfied and 5 is extremely satisfied?

Value	Percentage
5	25%
4	32%
3	18%
2 for the contractor and 4 for the consumer. The rebate program for the customer is a great deal but the \$50 we get doesn't help us at all.	3.5%
3.5	3.5%
4; like I said always could bump up a little more for a little longer	3.5%
No comment on that. I guess 5, they seem reasonable. I don't know how much money to allocate to that	3.5%
4; always room for more	3.5%
3; a little more for two stage equipment, don't think they grade fairly enough, don't dig in deep enough, they grade on worst case scenario and I think they should change that because that two stage is still cutting the bill in half. It would encourage people to do that.	3.5%
5; they've increased in the last 6 month	3.5%

G5. Please rate your experience with the Residential Heating program rebate processing on a 1 to 5 scale where 1 is poor experience and 5 is great experience?

Value	Percentage
5	32%
4	36%
3	7%
2	3.5%
1	7%
4; online is great, I know they are working on the bugs there but its nice to have that option. Also maybe having them a little more involved, if people aren't getting back to them as far as clicking link to acknowledge rebate, having us get involved to let them know they are pending. I think we had like 15 or so when they did their big update when the deadline was approaching	3.5%
4; easy now, but learning curve	3.5%
5; once that's out, you don't hear back	3.5%

Value	Percentage
4; I think they do a good job but I think there is always room for improvement	3.5%

G6. Do you have a positive experience with the Residential Heating Products program that stands out to you?

Value	Percentage
No	25%
N/A	14%
One of the main things for us is getting paperwork, submitting and having everything goes through in a timely fashion and getting the rebate to the customer ASAP but that can be partially our fault. They've done a great job in making it easier to submit paperwork and the ability to correct mistakes we make. We can now email instead of mailing the paperwork in which has been a huge help	3.5%
They do a good job and their goals are a lot different than ours. They are improving energy efficiency and we are selling our products so as a utility they have a different agenda.	3.5%
All experiences are pretty good	3.5%
Being able to give back to the customer and taking care of that for them	3.5%
People are getting paid the extra money with the bonus rebate period	3.5%
The biggest positive is Ann and I can't say enough about her and her commitment to the program.	3.5%
In previous year we had to do serial model #s where we have to trade in ac systems and now we just have to put in the manufacturer and SEER. On AC SIDE (NOT HEATING). As far as heating side everything is great and I like the way that they create certain bonus rebates during certain parts of the year.	3.5%
Nothing that stands out	3.5%
We get that all the time, somebody who is not able to afford a system they want, especially with full system where they get 1100 back, that could be the while difference of doing it vs. not doing it	3.5%
I would just say it stands out that the leadership of that program is committed to being concerned about the people that participate like us., they are generally interested in how tis working for us	3.5%
No, it is a fine program but I'm not going to go out of my way for Xcel by any means	3.5%
Just overall, yes	3.5%
It is all positive, it is a tool for us because it is real money for the consumer	3.5%
I can't say yes or no on either one of those. When it works out well it works well but right now it hasn't been working great so I'm frustrated with it all	3.5%
The team that handles the rebates, they are easy to get a hold of and do a good job at correcting any mistake made on the forms.	3.5%
The people who answer the phone if I have questions they are extremely polite and always helpful.	3.5%
Mostly all positive, not just one that stands out	3.5%

G7. Do you have a negative experience with the Residential Heating Products program that stands out to you?

Value	Percentage
No	36%
The first time Xcel implemented the digital rebate application it was terrible. The rebates weren't being processed which added more work, stress and I was not happy. I will not use the digital tool again.	3.5%
Most issues that I have are our own fault	3.5%
IREA purchases their energy from Xcel but IREA customers are not allowed to be eligible for the Xcel rebates	3.5%
There was a bonus rebate opportunity that was sent by email, which got lost in my 100s of emails that I receive each day and I didn't see it in time. I suggest better notifications on what/when things are occurring	3.5%
The rebate is too low for heating. It is hard to sell a \$120 rebate on a system that is almost \$1000 more expensive. I personally wouldn't do it	3.5%
No. This program isn't something we focus on, it is a tool that we use to help the customer. There are very few situations where the rebate is a determining factor in the customer's choices.	3.5%
Because we have been doing it for some time it has become much easier and the processing can still be difficult at times. For smaller contractors or contractors that don't have the admin abilities that we have would probably be challenged. If there was a quicker way to process rebates it would be better	3.5%
One time I missed one model # on one digit and I wish they would have called me and asked me or just look at the other time I wrote it and transfer that one digit to the other sheet of paper. The corrections people could fix some of the intuitive corrections without having to send it all the way back to me first	3.5%
There was a time we missed out on trade in, didn't make it on the sheet and had to get in touch with Xcel and it was a back and forth process	3.5%
No negatives which is amazing	3.5%
It's been a learning curve for both of us. Xcel and paperwork has been cumbersome in past years, and lots of pain where customers never got paperwork back and we had to start over a 2nd or 3rd time and they would write nasty letters to us and it was bad sometimes. But not that it's electronic is a pleasure	3.5%
No, it is a fine program but I'm not going to go out of my way for Xcel by any means.	3.5%
Well only on, for the most part they are very quick to issue checks but there are times when things slow up, like right now. They, in the middle of summer, we were getting checks in 3.5 weeks and now it's getting closer to 6 weeks and still haven't gotten approved yet. We tend to check weekly as new ones come up but other than that nothing. Towards the end of the year they got really backlogged, it's almost like waiting till the beginning of the next year to write checks. I don't get it, because we are toward the end of cooling season now and doesn't make sense to me	3.5%
Some people don't understand how it works, whether the monetary side of it limits what	3.5%

Value	Percentage
they can purchase or the install side of it for what will work in their home	
I can't say yes or no on either one of those. When it works out well it works well but right now it hasn't been working great so I'm frustrated with it all	3.5%
N/A	3.5%

G8. Is there anything else that if changed or improved would likely increase your engagement with the Residential Heating Products program? [PROBE: bigger rebates, better communication, updated application process, services, etc.]

Value	Percentage
Yes	39%
No	29%
Bigger rebates	7%
N/A	3.5%
No, they do everything well and I like the way it is done right now	3.5%
just the rebate process, the only minor issue really. And it goes in spurts, all summer they have stayed really quick and now it slows a bit	3.5%
Participating as much as possible already	3.5%
I don't think so, nope.	3.5%
I don't believe so	3.5%

G8a. If so, what and why?

Value	Percentage
N/A	32%
Rebate levels	3.5%
They could do a little higher rebate on some of their equipment. There are others out there that are doing a little bit more and you wonder why Xcel can't match that or do a little better	3.5%
Bigger rebates/tier rebates where better work from contractors leads to higher rebates for customers. The local jurisdiction thing as well this would make it so we could be a top 5 producer in our county and not be compared to large areas such as Denver.	3.5%
Larger rebates would get us more people	3.5%
Bigger rebates	3.5%
Rebate levels maybe	3.5%
We offer it all the time. We are going to do it no matter what	3.5%
we're probably 99% engaged as it is	3.5%
Application process, bigger rebates would certainly be helpful and be another incentive for the clients	3.5%
The program, we love the program and we think it is very easy to navigate and the support we get from them is great and our technicians have no issues with the paperwork or	3.5%

Value	Percentage
commissioning process especially compared to other programs	
Just the way it is structured would help me where it seems like it is getting more difficult to get the rebate and that is my decline in it	3.5%
It would make it easier to sell high-efficiency rebates	3.5%
Along those same lines, for some reason this summer, typically we sign everything over to us, must have been 6 or 7 that the checks cut and mailed to homeowner by mistake. and our paperwork has always been perfect but someone is addressing the checks to wrong person. Happened a lot more this summer than anytime in the past	3.5%
Bigger rebates, more promotion from Xcel	3.5%
just the login side, a little more control from the trade partner , and higher rebates always helps. Also, making the app process mobile because I like to run things off iPad. Its like old websites that weren't mobile friendly and everything has switched over now, apps need to be done the same way	3.5%
Bigger rebates and more useful applications to be able to submit the forms, maybe electronically something in real time	3.5%
Just keeping the rebate levels somewhat consistent and more than just \$100 because that isn't a big enough incentive for people	3.5%
Like I said just us being more active with it	3.5%
Bigger rebates and the application should be simplified and letting people know that there are contractors that have been doing this for a longer time than the new ones that sign up	3.5%

G9. Is there anything the Residential Heating rebate program is doing well and that they should keep doing?

Value	Percentage
No	61%
Yes	21%
N/A	7%
Just keeping ECM motor on there and offering higher efficiency rebates, I think it's a good program all in all. Keep on offering what they have	3.5%
Keep doing what you're doing.	3.5%
I'm not sure.	3.5%

G9a. If so, what and why?

Value	Percentage
N/A	21%
They've been willing to improve and make things more efficient. That is a great thing.	3.5%
Everything is great	3.5%
Everything is mostly fine	3.5%
All is working pretty well	3.5%

Value	Percentage
It is a simple process for the rebate application	3.5%
The rebates and the bonus rebates has peaked my interest	3.5%
I think it would be better if they got it out there a little more, maybe showing them the difference in the bill would be huge.	3.5%
On the whole the program is working pretty well. They do a good job about thinking about things and trying to make the process work better for the contractors and they've done that numerous times	3.5%
There is nothing that sticks out in my mind on that	3.5%
Maybe introduce rebates but don't break the mold	3.5%
The communication with the customer when they call in is awesome	3.5%
I think everything should be left in place, it seems to be doing a good job.	3.5%
Even though the rebate is not that much, the little amount gives the customer the motivation to go with a variable speed rather than the 2-stage furnace.	3.5%
Keeping it simple, not having excessively criteria is helpful, fairly black and why	3.5%
I really like the email functionality, I have a history of when I emailed it, don't delete those, always have them and are good to reference the dates. If something is getting old I know immediately and I'm on the phone with Paul (MN) and get things taken care of.	3.5%
Electronic paperwork system is great. I think the program itself has been pretty flexible and based on what they see in market, increasing or decreasing amounts and communication and offerings in terms of types of equipment. They have been good at listening to us and playing with the market. Always been a struggle the rebate center is in MN but they are helping us calm customers down. The 6 weeks, no one understands that. I'm sure its just a paper push but we've had lots of folks that want a bill credit next month or something like that. They are looking for immediate gratification.	3.5%
I think the online app process is great; anything they can do to keep improving would be good too.	3.5%
I think they're doing very well I think they could do more local marketing but other than that they are doing a good job at it	3.5%
Just having that rebate team that again helps sort out problems.	3.5%
The customer service part of it. The people that are answering the phones, they are always helps and polite.	3.5%
The fact that we don't have to pay into the rebate, or the rebate doesn't come out of our pockets is great. I don't usually like rebates for that reason in general but this way its easy	3.5%
Keeping the incentives up and keeping them consistent	3.5%

G10. Have you had any feedback from your customers about their experiences with the Residential Heating Products program that you think Xcel Energy should know?

Value	Percentage
No	29%
The quick turnaround with receiving the rebate is a great thing for them	3.5%

Value	Percentage
It has been mostly really positive. Sometimes the rebate takes a little long - the process we go through to turn in information that Xcel needs is also long which makes it long for the customer as well	3.5%
Pretty satisfied	3.5%
Sometimes rebate times take some time and they call looking for the status of their rebate. We recommend they call Xcel and check the status.	3.5%
Some complain that they don't qualify when their AC is too new	3.5%
No, they are getting their money and they're happy	3.5%
No not really	3.5%
I don't know	3.5%
No, typically they aren't the ones dealing with it, we are on this end	3.5%
The only time we get feedback from the consumer is if the check hasn't come.	3.5%
I haven't had anybody tell me specifically what their experience has been like	3.5%
I get more feedback on the AC program, no feedback regarding their interaction with Xcel	3.5%
Yes, they have always been positive.	3.5%
For the most part, not dealing too much with Xcel directly. Some of them if it takes 8 weeks they get antsy and want to know what's going on. But for the most part everyone is satisfied	3.5%
In our case not really because the only thing they do is fill out account number and sign it	3.5%
Last year, 60-70 that were ready to throw me under the bus because of the paperwork...they assumed the paperwork had been submitted and they hadn't, and they had no way to see it...	3.5%
You know, only feedback, and it was mostly on my end, but its hey, I haven't seen my rebate yet. So I tried to do it instantly and at first I didn't know, when I went out what the savings would be...	3.5%
Yes, they're very upset about how long the rebates take. We just did a \$27,000 boiler and they guy got \$100 back. It takes 6-7 years to see any kind of return on it.	3.5%
We do some cold calls to follow up on installs asking about satisfaction. We should do that more honestly, upwards of 80%. Ill be honest, I might call 3 months later and they may say the equipment may not be working as great as they may have wanted but its more than likely is just normal for the two stage furnaces. We receive phone calls from customer about how great the furnace we installed is. And yeah we got the rebate and its great, want to use for other	3.5%
N/A	3.5%

G10a. In your experience, how satisfied are customers with the Residential Heating Products program in general?

Value	Percentage
Very satisfied	14%
Satisfied	14%
N/A	14%

Value	Percentage
4 but would be a 5 if Xcel was more efficient getting the rebates sent	3.5%
Satisfied - happy with how much money they can save	3.5%
Very satisfied. They like that I handle everything for them and they just have to receive the rebate. Switching to the online has been a timesaver for us	3.5%
The only minimal complaint is that every so often they question how long the rebate will take but they understanding that during busy times of the year it may take a little longer. The process is very smooth and easy for them	3.5%
We do all the work for them so I assume they would be satisfied	3.5%
For the most part, not dealing too much with Xcel directly. Some of them if it takes 8 weeks they get antsy and want to know what's going on. But for the most part everyone is satisfied	3.5%
I think people are generally happy that they get something for something they would have to do anyways	3.5%
Absolutely satisfied	3.5%
In general the customers are satisfied	3.5%
But they appreciate the testing and feel satisfied with the rebate program. Its not just the money, it's the validation with testing and what not. Customers are satisfied. This year has been a dream. The feedback from folks has been I'm happy I did that, I got the rebate, everything is perfect and its just another touch for us...for them it can be painless for them now, a lot are glad they did it	3.5%
I think its 100% satisfied, haven't had one customer unhappy with what we've done and the rebate enhances it for them. And we help drive that. I say, take the rebates out of equation because I do all the paperwork and what not, I take the responsibility...I would take it out of original cost.. the furnace is so easy, just a couple weeks so I've just kept it through them but most of what I do is AC/furnace	3.5%
Not satisfied maybe rate them a 2	3.5%
I think some customers, elderly customers, have a harder time understanding what they have to include in the envelop in order to go back to Xcel so we have to send a rebate form and a copy of the invoice and the HHRI certificate. We try and put that all together and put it in a envelope and have it for the customer all ready to go but certainly for some elderly people it is difficult for them to understand exactly what they have to do.	3.5%
I don't know, probably satisfied	3.5%
in general, the few I hear from are pretty satisfied because the equipment is working up to their expectations	3.5%
They're very satisfied once they get the check	3.5%

G11. How likely would you be to recommend the Trade Partner program to another contractor where 1 is very unlikely and 5 is extremely likely?

Value	Percentage
5	64%
4	11%

Value	Percentage
3	7%
1	14%
1 & 5	3.5%

G11.a. What are the reasons why?

Value
It's good for the industry to work at a higher level. I think the higher we set the minimum level the better for everyone
Ease of use, promote higher efficiency product
I don't know why everybody isn't doing it
Everybody should be in the program. Every customer should have the opportunity to get a high efficiency rebate.
It works well, customers are very interested and it is not difficult process.
N/A
I don't want the competition to offer it (joking voice). Rephrased to he wouldn't recommend it to people competition in his area because he doesn't want more people to offer. However, he stated that he would be extremely likely (5) to offer it to firms not in his area.
I don't want extra competition. That's why I want it to be harder to be one, Xcel should require all trade partners to show that they have liability insurance and the proper licenses.
I like the fact that the customer gets their rebate and that is nice to give them back something
That is competition. A lot depends on Xcel Energy is large enough and if he (competitor) is not participating then shame on him
Because I want to keep every competitive advantage that I have and the less people offering it the better.
I want to differentiate myself. That is our competitive edge (joking tone, but serious)
It is a combo of everything that we've discussed
It depends on who it was but if they asked about it I would say it has been great for us as long as they work in the areas Xcel services
It is a great program
It helps increase sales and that is the bottom-line in business and gives incentive to customers to go with our company and the option to sign over the rebate as part of their payment has helped us a lot.
Its something that if you're a serious contractor doing installs all the time, its not necessarily a choice, it should be mandatory. Get and keep more customers, higher satisfaction, definitely a must.
I would say 5 from the standpoint if tis someone I am looking to help. Just as you said, I would like if they didn't participate because it helps us!
Helps drive business, makes sense
Had to ask them if they are willing to go through hoops. If they don't want certification then obviously not worth it. About 750 license contractors, I bet Xcel has 150, and I bet within that, 1/3 are doing 90% of activity. Some guys are lazy, but others just don't have info
if not my competitor it's a 5 but if it is non-competitor it's a 1....its great to help the customers out

Value
It would depend on the contractor but I wouldn't want them in my territory
We want efficiencies if things change. If things change everything would be a 5
It is a good selling tool and it is not that difficult, getting the NATE certification isn't that hard and doing the paperwork is not terribly difficult either.
It is good for the customer and good for the push to higher efficiency and saving on energy is a good thing. It is good all the way around.
Again, if I say a 5, they would be taking work away from me. And what I say is that I get a salary so no incentive to upsell furnace
Not everybody is set up to do this program well but it can be useful for some contractors and can bring the rebates to customer, which is beneficial.
N/A

Section H: Closing

H1. Is there anything we didn't cover that you'd like to mention or any recommendations you have based on your experiences as a registered Trade Partner for the Residential Heating Product?

Value	Percentage
No	61%
N/A	7%
IREA customers should be able to participate in the Xcel Energy rebate program	3.5%
I would like to see some statistics on the rebates and how we are stacking up against the other guys. That would drive us and our staff on how we can be up there and compete with the big guys.	3.5%
If the rebate were higher I think we would sell them more often because we do sell a lot of high efficiency AC's and those rebates are pretty high	3.5%
Don't think so	3.5%
Just focusing on not making it too complicated...the other thing is, when rebate amounts flip flop and change and then go back, that creates a little admin issue in terms of keeping up with it. Our sales people get used....I think its just turning it off and on arbitrarily, we front end everything and its hard to get the word out to all 15 people say that are in the field at the time...the more it can stay the consistent the better.	3.5%
Just maybe improve check processing a bit, and lets get even bigger rebates increase dollar amounts.	3.5%
The 25\$ visa cards they use for AC is huge, I think that would help; get them to put more money in the hopper!	3.5%
one thing I think they should insist on but it would probably hurt numbers a bit, I think they should have requirement that it has to have permit pulled with it. They are saying hey we want you to be NATE certified and we want you do these tests, and all those tests, and that stuff can be faked, and the NATE, they can be using others numbers but the permits cannot be faked. They should have a signed permit to do it, to me that would take it to another level, the	3.5%

Value	Percentage
best of the best contractors doing it and that would be easy to do. Enter in permit number through county or same thing where you upload. If there was a way to know that when their name was used on a proposal, it's just impossible to know though. I'll know more when I see numbers come out on who I compete against	
The only other thing I'd say, I appreciate you guys reaching out to better the program. I'd say, you know people don't understand, as a contractor, I'm paying for half the rebate. Say Carrier has \$500 rebate, I'm paying \$250 of that probably and the customers may not know that. With Xcel, nothing to buy down on which is great. The thing with me, too much heart. If I see markup on some equipment and I may get a kickback I just cant do that. Don't like upselling in certain situations.	3.5%

Colorado Residential Heating

2017 program evaluation recommendations and responses

Recommendation	Response
Recommendation 1: Meet internally and with external stakeholders to determine the importance of NATE certification in the success of the Residential Heating product.	Met with the EEBC on 4/26. Presented at Q2 DSM roundtable (5/17/18), invited stakeholders to give input regarding this recommendation.
Recommendation 2: Determine barriers to greater participation by installation contractors in the Residential Heating product.	Planning a survey of trade partners and key external stakeholders in the fall, and possibly focus groups. Invited all stakeholders present at the Q2 DSM roundtable for their input.
Recommendation 3: In bill inserts, print, and/or other forms of advertisement make explicit the difference between standard efficiency and high-efficiency gas furnaces (defined as 95% or greater AFUE).	Customer-facing materials including web pages, brochures, and other messaging has been adjusted to specifically associate “high efficiency” with “95% efficient” or greater AFUE furnaces.
Recommendation 4: The evaluation team recommends that Xcel Energy increase the NTGR for high-efficiency gas furnaces installed through the Residential Heating product to 0.86 for the 2018 program year.	60-day notice will be filed in Q3 2018.
Recommendation 5: Conduct semi-annual or continuous evaluation of the Residential Heating product focused on market testing of customer satisfaction and the impact of rebate levels on free-ridership and the NTG ratio for high-efficiency furnaces.	A follow up email is sent to customers automatically, when they – or their contractor – has submitted the rebate online, beginning in May 2018. Further continuous evaluation methods will continue to be considered; however cost will be a significant concern.
Recommendation 6: Continue or even expand resources—such as more extensive online promotion and marketing material to distribute to customers—to these “primary” trade partners.	Recommendation is in action. Printable document is on our website. Every product that utilizes participating contractors has a link to the participating contractors list on their web page. That resource displays the “primary” trade partners at the top of each list.
Recommendation 7: Continue or even expand the practice of promoting on the product website who the “primary” trade	Recommendation is in action. “Find a participating contractor” is called out in a prevalent location on the Residential Heating web page, as well as on

partners are so customers can more easily identify contractors with the most experience with the product.	every applicable product web page. Also, for the products that have 100 or more participating trade partners, including, the “primary” trade list has been deepened to the top 30 trades in each category.
Recommendation 8: Consider an alternative energy efficient measure to take the place of the ECM.	The Product Development team is researching this emerging technology.
Recommendation 9: Maintain strong channel management to continue to effectively communicate and coordinate with trade partners throughout the rebate process, and ensure trade partners have the most current product information.	Recommendation is in action. The channel manager is working to continually deepen and improve the trade partner’s successful experience with the Company and the rebate processes.
Consideration 10: Create an online tracking system that shows a project’s stage in the rebate process.	The leadership team is working to increase customers’ and trade partners’ knowledge of the status of pending rebates.
Recommendation 11: Develop an “early-replacement” marketing campaign to promote replacing old and inefficient gas furnaces during the summer.	<p>Q1 2018: A postcard with a magnet was sent to the customers most likely to replace their HVAC system with high efficiency equipment. The outside reads, “Here’s a magnet, put it on your furnace or water heater. Someday you will be glad you did!” The magnet’s call to action is “Find a participating contractor and earn rebates!”</p> <p>Q2 2018: Consumer Education is distributing the postcards with magnets at customer-centric events.</p> <p>An analysis of 2017 heating rebates, using the invoice dates, reveals that 42% of furnace replacement decisions were made in non-traditional “heating” months – that is, between April and September (Q2 and Q3). Participating AC trade partner contractors are doing an effective job of promoting this furnace “early retirement” concept during the summer. Onsert marketing will be considered for 2019 and beyond. Customer Education will continue to promote the postcards during summer months.</p>