

MidAmerican Energy Company

Residential Assessment Program Impact and Process Evaluation





6410 Enterprise Lane, Suite 300 | Madison, WI 53719
Tel 608.316.3700 | Fax 608.661.5181

tetrattech.com

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1.0 EXECUTIVE SUMMARY

MidAmerican Energy Company (MidAmerican) offers energy efficiency programs to their customers throughout their Iowa and Illinois service territories. These programs cover electric and natural gas energy efficiency measures, as well as other services such as the online home energy assessment and kit provided through the Residential Assessment program. This report details the activities, results, and recommendations from the evaluation of the online assessment and kit component of the Residential Assessment program from April 1, 2019 through March 31, 2020 for Iowa only.¹

1.1 BACKGROUND

The Residential Assessment program provides an interactive online energy assessment, including energy savings suggestions, and offers an energy efficiency kit upon completion of the online assessment. The program is marketed under the registered trademark name HomeCheck® Online. All of MidAmerican's residential customers are eligible to participate. The Residential Assessment program also encourages participation in other programs by using the online energy assessment tool as a promotional vehicle. Because the online assessment and kit program component was not available in Illinois until PY2020, Illinois customers were not included in this evaluation.

1.2 EVALUATION METHODOLOGY

The evaluation included both impact and process components. To help guide both evaluation activities, the Tetra Tech team conducted interviews with MidAmerican program staff and implementation staff from Nexant. Additionally, a web-based survey was implemented for a sample of PY2019 and PY2020 Q1 Iowa program participants that included both impact and process-related questions. A total of 676 web surveys were completed.

For the impact evaluation, the Tetra Tech team reviewed the Iowa Technical Reference Manual (TRM) Versions 3 (PY2019) and 4 (PY2020), and the resulting energy savings to make sure tracked savings were appropriately calculated.² The Tetra Tech team included questions in the web-based survey to assess measure verification and to help inform future installation rates.

For the process evaluation, the Tetra Tech team assessed program materials, evaluated the usability and effectiveness of the online home assessment tool and tips platform through a review of the design and in-depth participant interviews (referred to as “design review” throughout), and included process and satisfaction related questions in the web-based survey. The Tetra Tech team also completed an omnibus telephone survey with 198 MidAmerican residential customers who had not participated in an energy efficiency program in the previous two years based on the time they were surveyed (referenced throughout this document as a “nonparticipant” survey). Results were analyzed to better understand the consumers' understanding, use, and purchasing behaviors, as well to better understand the most impactful modes of communication.

¹ Due to legislative changes in Iowa in 2019, MidAmerican refiled their 2019-2023 program plan resulting in a delayed launch of programs in Iowa. Therefore, for Iowa only, the Tetra Tech team assessed program activities from April 1, 2019 through December 31, 2019 of PY2019 and additionally assessed the first quarter activities of PY2020 (January 1, 2020 through March 31, 2020).

² The Tetra Tech team compared the savings calculations to the Iowa TRM V.3 for 2019 participants and the Iowa TRM V.4 for 2020 participants.

1.3 SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

Overall, the Tetra Tech team found that the Residential Assessment program has been operating effectively. Based on review of the Iowa TRM, tracking data analysis, and participant surveys, the evaluation reports a 100 percent realization rate and 100 percent net-to-gross (NTG) ratio, resulting in no savings adjustments.³ Based on participant responses from the web survey and the design review, the Tetra Tech team found that customers received their kits after completing the online assessment, reported high rates of satisfaction with the program and MidAmerican, and that some design improvements could be considered in the online home assessment tool and tips platform. The Tetra Tech team also found that repeat customers who had participated in the previously-offered in-home assessment component of the program were feeling disappointed and missing the personalized attention—for example, three out of the 12 participants interviewed as part of the design review process did not realize they would receive a kit and valued it less than the customized upgrades and recommendations they received in the in-home version of the program.

Table 1. Savings Impacts

Impact	Tracked Gross Savings*	Evaluated Gross Realization Rate**	Evaluated Gross Savings	NTG Ratio***	Evaluated Net Savings***
Iowa – PY2019 and PY2020 Q1					
kWh	1,624,331	100%	1,624,331	100%	1,624,331
Peak kW	191	100%	191	100%	191
Therms	71,387	100%	71,387	100%	71,387
Peak Therms	180	100%	180	100%	180

* Tracked savings shown are from PY2019 tracking data received from MidAmerican on April 9, 2020.

** The realization rate is the ratio of evaluated gross savings to claimed gross savings.

*** The NTG information is for informational and program design purposes only.

**** Evaluated net savings are derived by multiplying the evaluated gross savings by the NTG ratio.

Next we present the key findings from the evaluation and associated recommendations.

Finding #1: The program appropriately applied Iowa TRM inputs and assumptions to its savings values and tracking data, resulting in 100 percent realization rates.

The Tetra Tech team performed a review of how the program applied Iowa TRM inputs to its kit measures and kit types (electric, gas, and dual fuel), and found that these assumptions were appropriately used. The tracking data was also reviewed, and no inconsistencies were identified. When calculating future savings estimates, we note that the Iowa TRM bases participant savings for advanced power strips on the assumption that 41 percent of strips are used in home offices and 59 percent are used in entertainment systems. The Iowa TRM recommends using improved ratios for home office and entertainment system distribution, when available.

Recommendation #1: Consider surveying program participants to gain insight into how the smart power strips are used in customer homes and to better estimate the percentages that are being used for home office applications versus entertainment centers.

³ Because kits are free to participants, the Tetra Tech team and MidAmerican determined it appropriate to apply a NTG ratio of 1.0 to all measures. This practice is typical for these types of programs.

Finding #2: The Iowa TRM installation rate assumptions for water saving devices are higher than what was found in the customer web survey and postcard responses.

The Iowa TRM embeds installation rates within the measure-level deemed savings calculations and values. On average, both the survey and the postcard responses show that installation rates were close to participants' installation activities for all measures except water saving measures (e.g., bathroom aerator, showerhead). For the water saving measures, both the survey and postcard responses reflect lower installation rates for water saving measures than what is currently documented in the Iowa TRM. For future years' planning, it will be important to ensure savings values better align with participants' installations of these measures.

The discrepancy in water saving measures installation rates appear to be driven by customers not always needing the measures provided in the kit. Survey results reflect that some customers simply did not need the measures they received in the kit (aerator n=115; showerhead n=179), and kits come with a standard suite of measures. Lower installation rates for aerators and showerheads are likely to persist for this reason.

Recommendation #2: Consider adjusting the installation rates for individual kit measures to match the rates identified through the customer survey, particularly for the water saving measures. Given this affects the Iowa TRM, this recommendation should be brought to the Iowa TRM Technical Advisory Committee (TAC) for review.

Finding #3: Customers are satisfied with the program and MidAmerican; however, the tips platform does not appear to motivate customers to engage in energy saving actions or behaviors.

Eighty percent of participant survey respondents said they were either extremely or very satisfied with the program overall. Further, nearly all participants (91 percent) were very or extremely satisfied with MidAmerican.

While customers gave high ratings on the usefulness of the program, including the tips, in the survey and in interviews the design review participants (n=12) described the usefulness was more about receiving an affirmation that the activities they had already done were valuable and less about motivating them to do new or more activities around their home. Design review survey participants described that they had not and would likely not revisit the tips page, including to engage with the features of the tips page to look for suggestions of other improvements to make, to check off items that they have done, or to bookmark items to "Save for later." This feedback from a small number of participants indicates that there is an opportunity for MidAmerican to review website analytics to further assess whether customers engage with the tips platform to create a list of actions they can take to save energy, which is a key outcome of the tips platform.

Recommendation #3: Review website analytics to learn how customers engage with the interactive feature of the tips page (e.g., check complete, bookmark to save for later).

Finding #4: Navigating to the online assessment was not always easy for customers.

MidAmerican could simplify website navigation features to make it easier for customers to access the online assessment both to support ongoing engagement of existing participants and to support new participation among those who have never completed the assessment.

Through the participant survey, about two-thirds (65 percent) of customers said it was very to extremely easy to navigate to the online assessment. However, upon further exploration during the design review interviews, the Tetra Tech team found that 11 out of 12 participants interviewed had challenges in navigating to the online assessment through the MidAmerican website. Menu options were not

necessarily intuitive for customers, and some felt they were not tech savvy enough to figure out how to easily get to the program page. While participants were able to find the online home assessment when they originally participated, they could not do so again without instruction from the Tetra Tech team interviewers.

Recommendation #4: Simplify navigation features on the MidAmerican website leading to the HomeCheck® Online home assessment to make it easier for customers to find.

Finding #5: Customers engaged in response to marketing messages through the residential newsletter.

MidAmerican began implementing their marketing plan to heavily market the program in quarterly marketing activities starting in Q1 2020. This is reflected in a substantial increase in participation, including 6,992 kits requested in Iowa the week after the newsletter was issued and 7,696 total kits requested in February 2020.

Recommendation #5: Implement similar marketing and outreach practices to continue to increase participation in the Residential Assessment program.

2.0 INTRODUCTION

This report presents the detailed Residential Assessment program impact and process evaluation results for program year (PY) 2019 and the first quarter of 2020 (Q1) for Iowa⁴.

2.1 PROGRAM DESCRIPTION

This program provides an interactive online energy assessment, including energy savings suggestions, and offers an energy efficiency kit⁵ upon completion of the online assessment. Kits were made available to MidAmerican's Iowa customers in PY2019 and Illinois customers in PY2020. The program is marketed under the registered trademark name HomeCheck®. All of MidAmerican's residential customers are eligible to participate. The Residential Assessment program also encourages participation in other programs by using the online energy assessment tool as a promotional vehicle.

This program has historically offered in-home energy assessments. Due to regulatory changes in Iowa, beginning with the 2019-2023 Energy Efficiency Plan, the program no longer includes the in-home energy assessments component. In Illinois, on-site assessments were still available to MidAmerican's Illinois customers in PY2019, but discontinued beginning in PY2020. In PY2017, the online assessment tool was made available to all of MidAmerican's residential customers and ran concurrently with the in-home assessment. In PY2019, MidAmerican's customers were provided program resources through both the online assessment tool and the call center, as well as offered kits with select easy-to-install energy efficient measures. MidAmerican leverages social media, print and email correspondence, as well as the Residential Behavioral program's Home Energy Report (HER) modules to promote the Residential Assessment program and engage customers.

MidAmerican contracts with both Oracle and Nexant for program implementation.

- **Oracle** is responsible for designing and maintaining the online assessment tool and accompanying results report.
- **Nexant** manages kit distribution (through subcontractor TechniArt) and provides customer support services through its call center. Nexant trains their call center staff to address customer inquiries, including questions on eligibility to participate, completing the assessment, and installing kit measures. The call center also receives and tracks the kit measures installation verification information and feedback that customers share through the mail-in postcard survey included in the kit.
- **Techniart** is responsible for ordering kit supplies, packaging kits, and tracking kit delivery. TechniArt shares tracking numbers and distribution information with Nexant, who then compiles this information and reports it back to MidAmerican.

Customers navigate to the online assessment tool through their account profile or through a direct link provided on the MidAmerican website. After a customer completes the online assessment, they are provided with a summary of their results, including customized energy efficiency tips based on the

⁴ Due to legislative changes in Iowa in 2019, MidAmerican refiled their 2019-2023 program plan resulting in a delayed launch of programs in Iowa. Therefore, for Iowa only, the Tetra Tech team assessed program activities from April 1, 2019 through December 31, 2019 of PY2019 and additionally assessed the first quarter activities of PY2020 (January 1, 2020 through March 31, 2020).

⁵ Customers may only receive one kit per household during the 2019-2023 Plan cycle.

information provided. These customized tips are available to customers each time they log into their account and view their assessment. This allows customers to continuously plan and make improvements. Customers also receive notification in the form of a web banner at the top of the page that a kit will be delivered to their home. The notification appears after completing the online assessment and includes an opt-out option, should customers wish to decline the kit. Oracle tracks online assessment response data and kit opt-out data and reports it back to MidAmerican.

Kit contents vary based on customer's water heating fuel type reported by customers through the online assessment and may contain all or some of the following measures:

- WaterSense certified faucet aerator
- WaterSense certified low-flow showerhead
- ENERGY STAR® certified LED bulbs
- Advanced power strip (APS)
- Marketing materials, including a thank you note, Top 10 energy efficiency tips, a brochure providing information on other residential energy efficiency programs, and a postcard survey.

MidAmerican annually reviews and may adjust the kit contents and eligibility requirements as market conditions and equipment standards change.

2.1.1 Summary of Researchable Questions and Evaluation Activities

This section describes the analytic methods and data collection activities implemented as part of the impact and process evaluation of the MidAmerican Residential Assessment program. The Tetra Tech team designed a methodology to evaluate the program and address the researchable questions outlined in the program's Detailed Evaluation Plan⁶ and addressed other issues that became relevant during the evaluation process.

2.1.1.1 Key Researchable Questions

Key researchable questions were developed and prioritized for the Residential Assessment program evaluation based on discussions with the MidAmerican product manager, energy efficiency director, and implementation contractor. Researchable questions were addressed within the customer research and the process and impact evaluation activities. The table below outlines the researchable questions that this evaluation examined.

⁶ A select group of Iowa and Illinois stakeholders were provided an opportunity to review and comment on the draft Residential Assessment Detailed Evaluation Plan in July of 2020.

Table 2. Residential Assessment Program Researchable Questions

Researchable Questions	Activity to Support the Question
Program Design	
How do customers access the online assessment tool?	<ul style="list-style-type: none"> • Program and implementation staff interviews • Participant survey
Were there barriers to kit component installation?	<ul style="list-style-type: none"> • Participant survey
How well does the design of the online assessment tool and results page follow visual, informational, and behavioral design best practices?	<ul style="list-style-type: none"> • Design review
Customer Education, Outreach, and Marketing	
What is the level of customer awareness of the program?	<ul style="list-style-type: none"> • General population survey
Engagement	
What drives customers to complete an online assessment?	<ul style="list-style-type: none"> • Participant survey
What motivates customers to interact with the recommendations page, including updating the status of their recommendations?	<ul style="list-style-type: none"> • Participant in-depth interviews
Does participation vary by demographic or other characteristics?	<ul style="list-style-type: none"> • Participant survey
Program Satisfaction	
How satisfied are customers with kit components?	<ul style="list-style-type: none"> • Participant survey
What are the customer perceptions of the online assessment tool? Do customers have any recommendations for improvement?	<ul style="list-style-type: none"> • Participant survey • Participant in-depth interviews
How satisfied are customers with MidAmerican Energy?	<ul style="list-style-type: none"> • Participant survey
How useful was the information and recommendations provided?	<ul style="list-style-type: none"> • Participant survey • Participant in-depth interviews
Program Impacts	
Which kit components did participants install?	<ul style="list-style-type: none"> • Participant survey • Postcard survey from the kit
What assumptions were used to develop savings estimates? Are there any updates that should be made?	<ul style="list-style-type: none"> • Program tracking data review • Review of the Iowa TRM
What are the program's verified gross savings?	<ul style="list-style-type: none"> • Program tracking data review • Iowa TRM
What are the program's net savings?	<ul style="list-style-type: none"> • Discussion with program staff

2.1.2 Detailed Evaluation Activities

The table below documents the activities that were completed as part of this evaluation. The evaluation focused on estimating and verifying program impacts and providing key feedback on the functionality of program processes.

Table 3. Summary of Residential Assessment Program Evaluation Activities

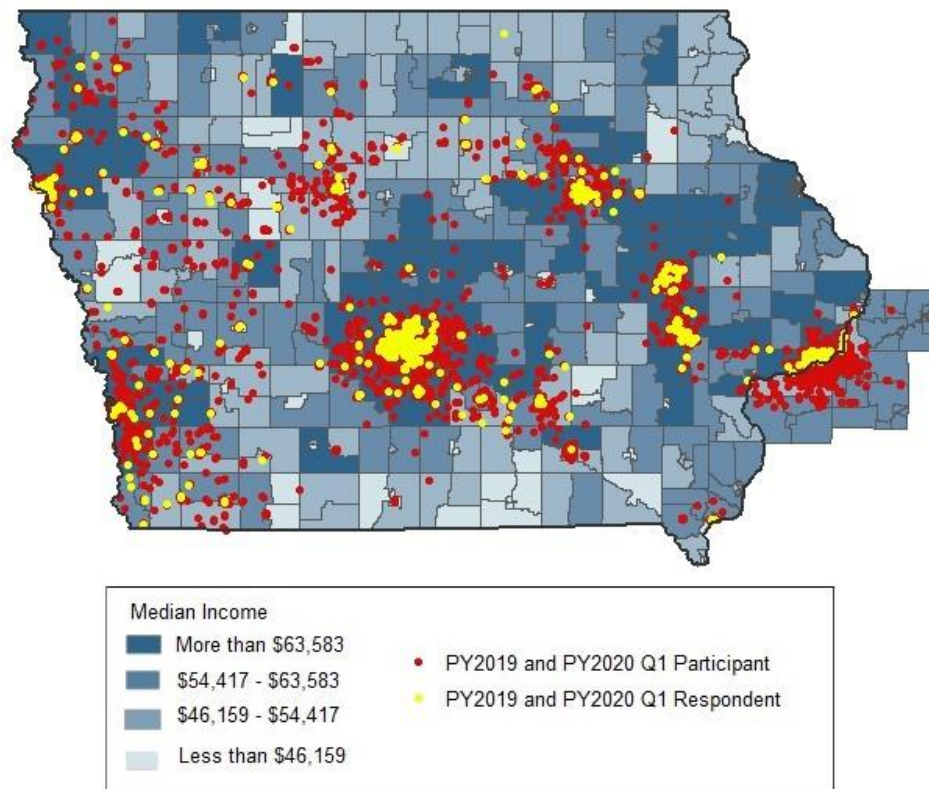
	Activities
Overarching Evaluation Activities	<p>Program and implementation staff interviews: Conducted two in-depth interviews with the MidAmerican product manager and energy efficiency director, and implementation staff in April 2020.</p> <p>Program documentation review. Assessed completeness of program documentation.</p> <p>Net-to-gross: Determined a program-level NTG value for informational purposes only in Iowa, based on industry best practices for similar programs.</p>
Impact Evaluation Activities	<p>Program tracking data review: Analyzed the tracking database, reported savings, and documentation for consistency.</p> <p>Savings verification. Compared tracked savings values and inputs to the Iowa TRM. Surveyed participating customers to inform future measure installation rates.</p>
Process Evaluation Activities	<p>Participant survey: 676 web surveys were completed by Iowa participants from August 11 - 31, 2020. The survey was implemented with a sample of the PY2019 and PY2020 Q1 Iowa program participants.</p> <p>Participant in-depth interviews: Conducted in-depth telephone interviews with 12 program participants between September 2 – 11, 2020.</p> <p>Design review of the online assessment and report. Conducted a review of the content and components of the online assessment tool and tips platform considering design best practices. Specifically, this review addressed visual, informational, and behavioral design components of the platform.</p> <p>Nonparticipant customer survey: Completed 198 customer telephone surveys with a random sample of residential customers in MidAmerican's Iowa service territory who had not participated in a MidAmerican energy efficiency program in the past two years. The survey was administered between August 20 and September 25, 2020.</p>

The figure⁷ below shows the location of MidAmerican's customers who participated in the Residential Assessment program in red and the participants who responded to the web survey in yellow, against the median income by county to show where program opportunity exists and where program activity has been achieved.⁸ The web survey is representative of customer participants geographically, including across rural and urban areas.

⁷ Iowa median income data was sourced from: <https://www.iowadatacenter.org/data/acs/econ/poverty/ctecon>
 Illinois median income data was sourced from: http://proximityone.com/ustr0509_il.htm
 and: <https://www.census.gov/data/datasets/2018/demo/saie/2018-state-and-county.html>

⁸ This information is also tracked in MidAmerican's database by zip code. Information can be provided at this level, if desired.

Figure 1. Residential Assessment Participants and Surveyed Respondents by County Median Income



Below we provide more detail related to the methodologies used for the different evaluation activities associated with MidAmerican's Residential Assessment program evaluation.

- Program and implementation staff interviews.** On April 20, 2020 Tetra Tech team members interviewed the MidAmerican product manager and energy efficiency director, and on April 30, 2020 Tetra Tech team members interviewed relevant Nexant implementation staff. The Tetra Tech team also participated in a walk-through of the online assessment portal and results page with the MidAmerican product manager on April 17, 2020. The Tetra Tech team completed these interviews to gain a better understanding of the program design and delivery, to discuss program successes and challenges, and to identify and prioritize researchable issues for the evaluation.
- Design review of the online assessment and report.** The Tetra Tech team reviewed the content and components of the online assessment tool and tips platform, considering design best practices. Feedback provided related to the design elements. Specifically, this review addressed the following design components:
 - Visual design: Was the online assessment tool and results page designed to visually attract and interest the user?
 - Informational design: Was the content in the online assessment and results page easy to see, read, and understand?

- Behavioral design: Was the online assessment and results page designed with the intention of motivating the user to take energy-saving actions? Were recommendations clear?

A summary of the design review findings can be found in Appendix A.

- **Program tracking data review.** The Tetra Tech team used the Iowa TRM to determine gross evaluated savings. An Excel spreadsheet method was used that replicated the tracked savings for all kit measures found in the VisionDSM tracking system to confirm accuracy. This analysis allowed for verifying the degree to which MidAmerican correctly used the Iowa TRM, assessed the level and reasonableness of the information tracked, and achieved at least a 90% confidence (+/- 10% error) at the program level.

Through this tracking system review, the Tetra Tech team reviewed energy savings calculations for engineering fundamentals, appropriateness, and accuracy. This report outlines differences or suggestions to energy savings algorithm or protocol changes as a result of the tracking system review. The first step of the analysis was to isolate potential outliers, including working with MidAmerican to identify any potential data quality issues that may contribute to higher or lower than anticipated savings for a given measure. This exercise was completed early in the evaluation process.

- **Participant web survey.** The Tetra Tech team administered an online survey resulting in 676 responses and a response rate of 17 percent. For sample selection, a stratified random sampling approach was used, stratifying by fuel type. Participating customers were sampled to achieve at least a 90% confidence (+/- 10% error) at the program level. Survey questions were based on the key researchable questions and sought to address topics such as program delivery processes, interactions with program staff, preferred marketing channels, and satisfaction with different facets of the program. Surveys also contained demographic information questions in order to provide additional insight into the population. In addition to these process-related and demographic questions, the survey included impact questions, including measure verification for the kit measures to determine installation rates. The Tetra Tech team worked with MidAmerican to determine protocols for customer advance notification as well as processes for informing internal stakeholders, including the MidAmerican customer experience center. A copy of the web survey response rate can be found in Appendix C and the survey instrument can be found in Appendix D.
- **Participant in-depth telephone interviews.** As a follow-up to the survey, the Tetra Tech team conducted 12 in-depth phone interviews through an online video and screen-sharing tool with a subset of customers to better understand the usability of the online assessment tool, associated report, and recommendations. Surveyed participants were shown on-screen snapshots of the assessment and results report to probe for customer perceptions of usefulness, drivers to follow recommendations, and motivations to maintain the statuses of the recommendations as listed in their account profiles. Interviews lasted up to one hour and respondents received a \$75 VISA gift card for their time. A copy of the design review survey can be found in Appendix E.
- **Nonparticipant telephone survey.** The Tetra Tech team conducted a nonparticipant survey, completing interviews with 198 residential customers to support the evaluations of MidAmerican's residential programs in its Iowa service territory. Among other items, the questions assessed consumer awareness of different program offerings, interest in program participation and rebates, energy efficiency attitudes, and any recent energy efficiency activity. The nonparticipant surveys were administered through Tetra Tech's in-house Survey Research Center in September 2020. A copy of the nonparticipant survey response rate can be found in Appendix C and the survey instrument can be found in Appendix F.

3.0 PROGRAM SAVINGS AND IMPACT EVALUATION FINDINGS

This section presents the results for the Residential Assessment program impacts for PY2019 and PY2020 Q1 for Iowa. The impact evaluation was designed around the key researchable questions identified in the methodology section 2.1.1.1. First, we present the final evaluated savings and then discuss the impact activities completed.

3.1 PROGRAM SAVINGS

In this subsection we present the electric and natural gas energy and demand savings results for Iowa, including kit measures distributed between April 1, 2019 to March 31, 2020.

The Tetra Tech team received participant tracking data for the Residential Assessment program from MidAmerican on April 9, 2020.⁹ The combined tracking data file contained a total of 19,913 records representing 17,488 unique customer account numbers with participation dates that crossed multiple program years, as requested. Due to program design changes between PY2019 and PY2020, the program tracking data file was inclusive of current program measures (dual fuel, electric, and gas kits) as well as previous program measures (direct install measures from on-site assessments). The file contained customer name and address, project ID, detailed measure descriptions, number of units installed, equipment cost, delivery date, and electric and gas savings.

Records were aggregated that represented kits within this timeframe and location requirement to the customer level. After review of the data, 15,147 unique Iowa participants were identified to be included in this study. The table below summarizes the count of valid records.

Table 4. PY2019 and Q1 PY2020 Participant Population Summary–Measure Level

Criteria	Iowa
PY2019 Participants	4,530
Dual fuel kits	3,390
Electric kits	651
Gas kits	489
Q1 PY2020 Participants	10,617
Dual fuel kits	7,408
Electric kits	1,396
Gas kits	1,813
Total Number of Records	15,147

The Tetra Tech team confirmed that MidAmerican followed the Iowa TRM guidance for deemed savings values through a program tracking data review, and as such, applied a realization rate of 100 percent to all kits. No savings adjustments were made.

⁹ Filename: Res Assessment_Vision_2019_2020YTD_4.9.2020.xlsx. Numbers represent participation in MidAmerican's Iowa and Illinois programs. Records for the measure "online assessment" are not included in the counts because these records reflect payments to Oracle for the online assessment tool rights.

Table 5. PY2019 and PY2020 Q1 Program Tracked and Evaluated Impacts

Kit Type	Tracked kWh*	Evaluated kWh	kWh Realization Rate**
Dual fuel kit	1,453,361.22	1,453,361.22	100%
Electric kit	170,970.10	170,970.10	100%
All Projects	1,624,331.32	1,624,331.32	100%
Kit Type	Tracked Peak kW*	Evaluated Peak kW	Peak kW Realization Rate**
Dual fuel kit	170.92	170.92	100%
Electric kit	20.38	20.38	100%
All Projects	191.30	191.30	100%
Kit Type	Tracked Therms*	Evaluated Therms	Therms Realization Rate**
Dual fuel kit	55,876.44	55,876.44	100%
Gas kit	15,526.97	15,526.97	100%
All Projects	71,386.95	71,386.95	100%
Kit Type	Tracked Peak Therms*	Evaluated Peak Therms	Peak Therms Realization Rate**
Dual fuel kit	137.71	137.71	100%
Gas kit	42.47	42.47	100%
All Projects	180.11	180.11	100%

* Reported savings shown are from tracking data received from MidAmerican on April 9, 2020.

** The evaluated gross realization rate calculation is the ratio of evaluated gross savings to tracked gross savings.

3.2 INSTALLATION VERIFICATION

The Tetra Tech team found that MidAmerican accurately applied the in-service rates for kit measures as documented in the Iowa TRM. As a result, no adjustments to reported savings were made.

As an additional impact activity, the Tetra Tech team assessed in-service rates (ISRs) for each kit measure by verifying installation via a participant survey and analyzing customers' postcard responses. The postcard includes a short survey for customers to confirm which of the kit measures they installed (Appendix G). MidAmerican includes the postcards in each kit and gathers the information as an additional source for understanding customers' installation behaviors. As ISRs are already embedded within the Iowa TRM savings values reported by the program, the installation rates found through the survey and postcards were not used to adjust evaluated savings. Instead, the analysis was completed for future considerations by the Iowa TRM TAC, and can be found in Appendix B.

3.3 PROJECT LEVEL TRACKING DATA REVIEW

The Tetra Tech team reviewed the Residential Assessment program measure algorithms for each of the measures included in the kits: advanced power strips, A19 LED light bulbs, low-flow bathroom faucet aerators, and low-flow showerheads. Specifically, we:

- Reviewed measure algorithms and assumptions for reasonableness with industry standard approaches
- Compared the savings calculation to the Iowa TRM V.3 for 2019 participants and the Iowa TRM V.4 for 2020 participants
- Reviewed measure algorithms for inadvertent errors
- Reviewed savings values to confirm that the savings claimed align with the savings workbook

Based on the review, the Tetra Tech team determined that the algorithms, assumptions, and savings calculations for each measure are reasonable compared to industry standards and agree with the Iowa TRM methodologies.

Advanced Power Strips. The Iowa TRM approach is unchanged between V.3 and V.4, and participant savings assume advanced power strip use as 41 percent in home offices and 59 percent in entertainment systems. The Iowa TRM recommends using improved numbers for home office and entertainment system distribution, when available.

A19 LED Bulbs. The Iowa TRM approach is unchanged between V.3 and V.4 and the baseline wattage in the savings calculation applies a blended baseline wattage based on equivalent wattage bulb distribution of 55 percent EISA, 13 percent CFL, and 32 percent LED. This breakdown is reasonable and is based on growth in the LED market and reduction in CFLs. The heating waste heat factor, which accounts for the heating increase from reducing waste heat from efficient lighting, is based on home heating type. When the home heating type is unknown, the Iowa TRM assigns 17 percent electric heat and 83 percent natural gas heat. The waste heat factor for cooling, which accounts for the cooling savings from reducing waste heat from efficient lighting, is based on the presence of central cooling. When the presence of central cooling is unknown, the Iowa TRM assumes 88 percent of homes have central cooling. The home heating and cooling distributions when heating and cooling types are unknown are based on studies cited within the Iowa TRM. The savings calculations align with the Iowa TRM approach.

Low-Flow Bathroom Aerators. In both Iowa TRM V.3 and V.4, the baseline flow rate is 2.2 gallons per minute with a 0.83 throttling factor, and the efficient flow rate is 1.5 gallons per minute with a 0.95 throttling factor. Variable assumptions for the average number of people per household and annual domestic hot water (DHW) recovery hours low-flow faucet aerators is updated in Iowa TRM V. 4 as follows:

Table 6. Change Between Iowa TRM V.3 and V.4 - Aerators

Variable	Iowa TRM V.3	Iowa TRM V.4
Average number of people per household – single family homes	2.12	2.51
Average number of people per household – multifamily homes	1.4	2.18
Annual DHW recovery hours for bathroom faucet use per faucet (electric resistance DHW or unknown) – single family homes	37.9	44.9
Annual DHW recovery hours for bathroom faucet use per faucet (electric resistance DHW or unknown) – multifamily homes	25.0	39.0

When the hot water heating type is unknown, the Iowa TRM and the savings calculations assume 30 percent electric water heating and 70 percent gas water heating. This breakdown is reasonable. According to responses from the participant survey, the distribution of participating respondents' water heating sources are 25 percent electric water heating and 72 percent gas water heating, respectively. The Tetra Tech team finds these ratios to be similar and no adjustments to savings calculations based on water heating fuel type distribution are needed at this time.

Low-Flow Showerheads. The baseline showerhead flow rate in both Iowa TRM V.3 and V.4 is 2.35 gallons per minute, the value for efficiency kits. Like the low-flow bathroom aerator measure, the average number of people per household and annual electric DHW recovery hours for shower use is updated in V.4 as follows:

Table 7. Change Between Iowa TRM V.3 and V.4 - Showerheads

Variable	Iowa TRM V.3	Iowa TRM V.4
Average number of people per household – single family homes	2.12	2.51
Average number of people per household – multifamily homes	1.4	2.18
Annual DHW recovery hours for low-flow showerhead for Efficiency Kits (electric resistance DHW or unknown) – single family homes	209.9	248.6
Annual DHW recovery hours for low-flow showerhead for Efficiency Kits (electric resistance DHW or unknown)– multifamily homes	138.6	215.9

Also like the low-flow faucet aerator measure, the Iowa TRM and the savings calculation assigns 30 percent electric water heating and 70 percent gas water heating when the DHW system is unknown. Like faucet aerators, this breakdown is reasonable. The Tetra Tech team finds these ratios similar to those from the participant survey and no adjustments to savings calculations are needed at this time.

4.0 PROCESS EVALUATION FINDINGS

This section presents the findings from the process evaluation activities for Iowa. The process evaluation was designed around the key researchable questions identified in the methodology section 2.1.1.1. Process evaluation activities involved interviews with program and implementation staff, a customer survey, interviews with participating customers, and a design review of the online home assessment tool and tips platform. In addition, the Tetra Tech team conducted a nonparticipant survey with 198 residential customers to support all Iowa residential program evaluations. The key process-related findings are detailed in the subsections below.

4.1 PARTICIPANT CHARACTERISTICS

4.1.1 Survey Participant Characteristics

Table 8 summarizes the number of PY2019 and PY2020 Q1 Residential Assessment program participants (customers who completed their online assessment and were eligible to receive a kit) by comparing counts of those who participated in the web survey to the full population by month and year. Table 8 also reflects the substantial increase in participation in February 2020, when an article was included in the MidAmerican eNewsletter that advertised the free kit and direct link to the online home assessment and resulted in an influx in participation.¹⁰

Table 8. Summary of PY2019 and PY2020 Q1 Participation Dates

Month and Year	Number of Web Survey Participants	Number of Program Participants
August 2019	27	848
September 2019	50	1,348
October 2019	19	761
November 2019	32	871
December 2019	29	664
January 2020	41	1,031
February 2020	384	7,696
March 2020	94	1,890
Total	676	15,147

Source: PY2019 and PY2020 Q1 tracking data received from MidAmerican on April 9, 2020.

Table 9 shows the number of participants in the survey population by kit type. Program participants that responded to the web survey received dual fuel, electric only, gas only kits. Nearly two-thirds of program participants that responded to the survey participated in the Residential Assessment program in PY2020 and received a dual fuel kit (61 percent).

¹⁰ The Residential Newsletter sent on February 18, 2020 with the main article promoting, "Get a free energy efficiency kit in a 5 minutes or less." Customers in Iowa requested 6,992 kits during this week alone.

Table 9. Summary of Participants Surveyed by Kit Type

Kit Type	Surveyed Participants		
	PY2019	PY2020 Q1	Total
Dual Fuel	130	409	539
Electric Only	16	55	71
Gas Only	11	55	66
Total	157	519	676

Source: PY2019 and PY2020 Q1 tracking data received from MidAmerican on April 9, 2020

As shown in the table below, most survey respondents (85 percent) owned single family detached homes with central air conditioning (95 percent). More than half of respondents (56 percent) reported that they were 55 years of age or older. The average household size was 2.26 people per household with 75 percent of respondents in one or two person households. The average home age was 47.8 years old, and respondents reported living in buildings ranging from brand new to up to 200 years old.

Table 10. Participant Characteristics

Participant Characteristics	Iowa Web Survey Participants	Nonparticipants
Home Type		
Single-family detached house	85%	86%
Single-family attached house (townhouse, row house, or duplex)	7%	8%
Apartment building with 2-4 units	2%	<1%
Apartment building with 5 or more units	4%	4%
Mobile home or house trailer	1%	2%
Other	1%	0%
Respondents (n)	670	186
Home Ownership		
Own / buying	90%	92%
Rent	10%	8%
Respondents (n)	666	195
Central Air Conditioning		
Have Central Air Conditioning ^a	95%	87%
Do not have Central Air Conditioning ^a	6%	13%
Respondents (n)	668	198

Participant Characteristics	Iowa Web Survey Participants	Nonparticipants
Main Heating Fuel		
Natural Gas	74%	74%
Electricity	20%	16%
Bottled Gas Propane ^a	3%	8%
Fuel oil	<1%	0%
Wood	<1%	<1%
Other	2%	2%
Respondents (n)	655	192
Main Water Heating Fuel ^b		
Natural Gas	72%	-
Electricity	25%	-
Bottled Gas Propane	2%	-
Other	<1%	-
Respondents (n)	642	-
Home Size (Square footage)		
Less than 1,000 square feet	14%	13%
1,000 to 1,500 square feet	29%	33%
1,501 to 2,000 square feet	29%	27%
2,001 to 3,000 square feet	23%	19%
More than 3,000 square feet	6%	9%
Respondents (n)	611	168
Respondent Age Category		
18-24	2%	1%
25-34	10%	9%
35-44	14%	15%
45-54	18%	16%
55-64	24%	21%
65 or older	32%	37%
Respondents (n)	651	179

Participant Characteristics	Iowa Web Survey Participants	Nonparticipants
Respondent Household Size		
1 person ^a	25%	16%
2 people	50%	50%
3 people	10%	11%
4 people	9%	11%
5 people	4%	7%
6 people	2%	3%
7 people	<1%	2%
8 people	<1%	<1%
9 people	<1%	0%
Respondents (n)	647	184
Household Income		
Less than \$24,000 ^a	7%	12%
\$24,000 to less than \$50,000	25%	19%
\$50,000 to less than \$75,000	24%	20%
\$75,000 to less than \$100,000	20%	23%
\$100,000 or greater	23%	26%
Respondents (n)	676	146

Source: Question DEM1, DEM2, DEM6, DEM9, DEM10, DEM11, DEM14 (Participant Survey); DEM1, DEM2, DEM9, DEM10, DEM13, DEM14 (Nonparticipant Survey)

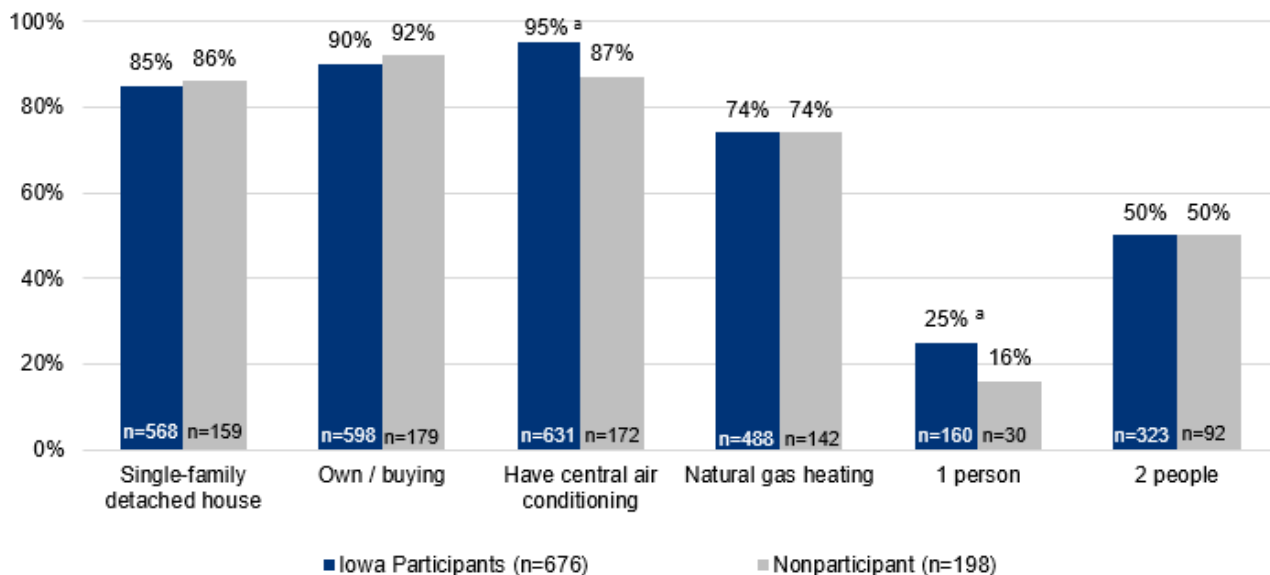
Don't know and refused responses are excluded

^a Differences between the participant survey and the nonparticipant survey are statistically significant at the p-value ≥ 0.05 , 95% confidence level.

^b Information about water heating measures was not collected through the nonparticipant survey.

Customers who participated in the nonparticipant survey were similar to those that completed the program participant survey, although participant survey respondents were slightly more likely to have central air conditioning and lived in one-person households (Figure 2).

Figure 2. Participant and Nonparticipant Participant Characteristics



Source; Question DEM1, DEM2, DEM4, DEM6, DEM10, (Participant Survey); DEM1, DEM2, DEM4, CW6, DEM10 (Nonparticipant Survey)

^a Differences between the participant survey and the nonparticipant survey are statistically significant at the p-value ≥ 0.05 , 95% confidence level.

4.1.2 Customer Age Categories

The Tetra Tech team conducted an analysis to explore differences among age groups to check for information that may be useful to consider in program marketing and outreach strategies. Survey participants were divided into three age groups, specifically 18 to 44 years old (young adults), 45 to 64 years old (middle age adults), and 65 years and older (elder adults). Some differences were found among the groups, many of which would be expected, most notably that the income level of middle age adults is typically higher than that of the other two groups. Young adults more commonly live in households with three and four people than the other groups, but also tend to live in households of one or two with a household size of two being most common with all groups. Other findings are highlighted throughout the report where results are compared by age group.

Young adults (18-44 years):

- Majority lived in single-family detached homes (81 percent) and eight percent lived in apartments with five or more units, compared to two percent of middle age adults and four percent of older adults
- Majority were homeowners (79 percent) and 21 percent were renters
- Half lived with one or two people in the household (50 percent), and were more likely than other age group to live with four (18 percent), five (11 percent), or six (six percent) people

Middle age adults (45-64 years):

- Majority lived in single-family detached homes (88 percent)
- Majority were homeowners (92 percent)

- About three-quarters lived with one to two people in the household (75 percent)

Older adults (65 years and older):

- Majority lived in single-family detached homes (84 percent)
- Majority were homeowners (95 percent)
- Almost all lived with one to two people in the household (95 percent), and were more likely than other age groups to live in a one-person household (33 percent)

4.1.3 Interviewed Participant Characteristics

A mix of participants were selected for the design review telephone interviews based on their satisfaction with the program and their awareness of the tips the program provides after customers complete the online home assessment. The table below shows counts of interviewee characteristics.

Table 11. Design Review Interviewee Characteristics

Interviewee Characteristics	Number of Design Review Participants
Program Satisfaction	
Program satisfaction rated 7 or higher	6
Program satisfaction rated less than 7	6
Respondents (n)	12
Awareness of Tips and Recommendations	
Aware of recommendations	8
Not aware of recommendations	4
Respondents (n)	12

Source: Interview sample and questions SAT1, B4 (Participant Survey)

4.2 PROGRAM PROCESSES

4.2.1 Program Design

4.2.1.1 Program-Specific Marketing

Customers primarily learned about the program through bill inserts (54 percent) and MidAmerican's website (26 percent). In comparing by age group, 57 percent of middle aged (45-64 years) and 63 percent of older adults (65 years and older) learned about the program through their utility bills—this was significantly more often than any other mode of marketing for these groups. Young adults (18-44) learned about the program through their bills about as often as they learned about it through MidAmerican's website, but learned about the program through the website significantly more often than older adults (65 years and older).

Table 12. Source of Program Awareness (Multiple Choice)

Source	Web Survey Respondents	18-44 Years	45-64 Years	65 Years or Older
MidAmerican utility bill insert (n=321)	54% ^a	39% ^d	57%	63%
MidAmerican website (n=157)	26% ^b	37%	25%	18% ^e
Email from MidAmerican (n=94)	16%	18%	14%	16%
MidAmerican brochure (n=85)	14%	18%	15%	10% ^e
Friend / family member / other business (n=29)	5% ^c	6%	4%	5%
Respondents (n)	600	164	240	177

Source: Questions C1 DEM11 (Participant Survey)

Don't knows and refused responses excluded

a The difference between bill insert and all other marketing modes is statistically significant (p-value ≥ 0.05 , 95% confidence).

b The difference between website and all other marketing modes except email is statistically significant (p-value ≥ 0.05 , 95% confidence).

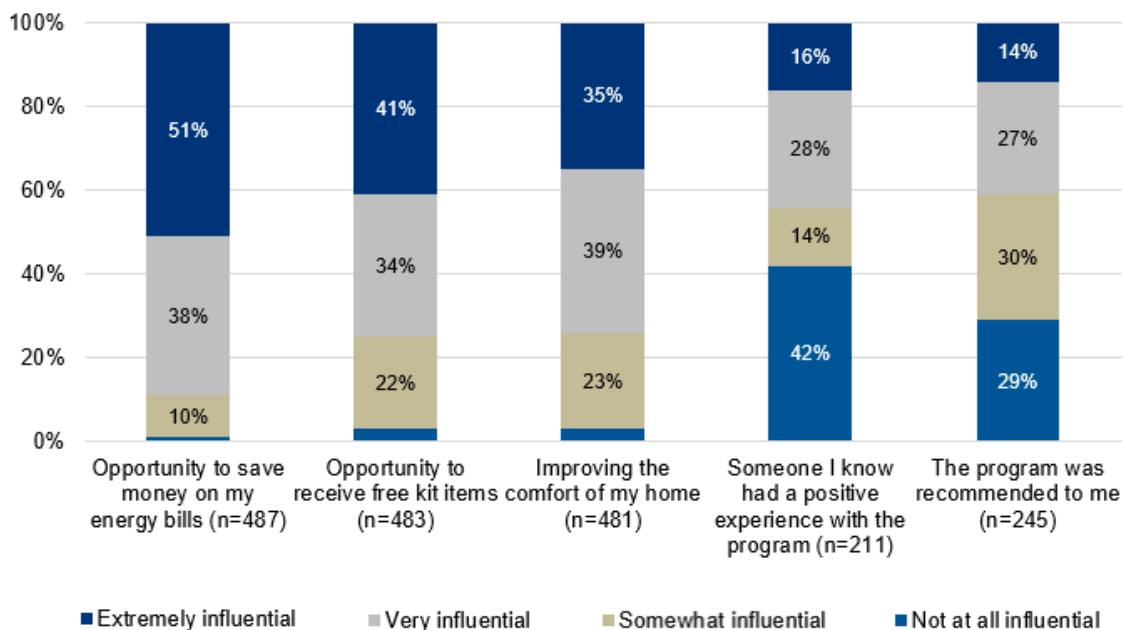
c The difference between friend/family member/other business and all other marketing modes is statistically significant (p-value ≥ 0.05 , 95% confidence).

d The difference between 18-44 and the other two groups is statistically significant (p-value ≥ 0.05 , 95% confidence).

e The difference between 65 or older and the other two groups is statistically significant (p-value ≥ 0.05 , 95% confidence).

4.2.1.2 Motivations for Participation

As shown in the figure below, saving money, getting the free kit, and making their homes more comfortable were the most common reasons that motivated survey respondents to participate in the program. About 73 percent of customers that responded to the survey rated the influence of certain factors in their decision to complete the online home assessment. Of those, the most common reasons were to save money on energy bills (98 percent), to receive a free kit (95 percent), and/or to improve the comfort in their home (95 percent). In comparing by age group, there was no particular factor that customers said were very or extremely influential more so than others.

Figure 3. Motivations to Participate

Source: Question C7 (Participant Survey)
 Don't knows and refused responses excluded

Program participants interviewed as part of the design review went deeper into their motivations and noted themes such as improving home and family safety, home renovations, looking for rebates for projects they already planned to do, had general curiosity about program offerings or upgrade opportunities, or were planning for the future. One respondent had decided to install new windows to reduce drafts ahead of her daughter and newborn grandchild moving into her home. This home improvement project prompted her to look around for other ways to increase her home comfort and reduce bills. She said, “In that time, I [didn’t have] my daughter and she...actually moved back in a year and a half ago when she was pregnant...I had a big push to do more to make my house warmer with the new baby coming. So, I did. I replaced a bunch of windows and it was about that time that I think I saw the HomeCheck.”

4.2.1.3 Accessing the Online Assessment Tool

Overall, about two thirds of customers who responded to the survey said they found it very or extremely easy to navigate to the assessment tool online (65 percent). No differences among groups were found. Surveyed program participants were asked a follow-up question related to their response and revealed that lower ratings were primarily due to challenges in navigating the site.¹¹ Specifically, that they:

- Struggled to find the right link in the menu on the website or said that it was generally hard to find a direct link to the assessment (n=12).
- Expressed that difficulties they had were mostly because they were “not that tech savvy” (n=5).
- Had issues with the tool not working correctly (n=3).

¹¹ Source: Questions B2 and B2a (Participant Survey). Don't knows and refused responses excluded.

Interviews completed as part of the design review supported the challenges uncovered through the survey, most of those interviewed (11 out of 12) needed support from interviewers to navigate the menu options on MidAmerican's website before they eventually found their way to the assessment. The one other customer was unable to share their screen during the interview and completed the exercise using screenshots shared by interviewers.

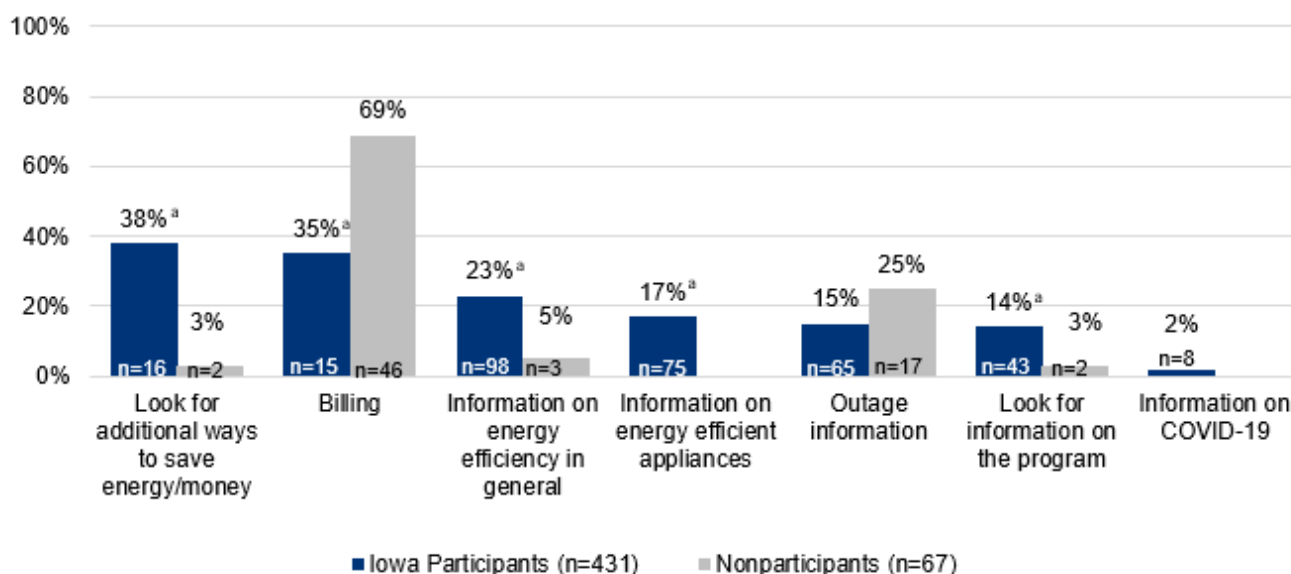
4.2.2 Education, Outreach, and Marketing

4.2.2.1 Visits to the MidAmerican Website

About two-thirds of participants said they had visited the MidAmerican website for reasons other than for completing the HomeCheck® Online assessment (65 percent). In comparing age groups, this was true among all three groups, however young adults (18-44 years) reported doing so at slightly higher rates than middle aged adults (45-64 years) and older adults (65 years and older).¹²

Of these, most participants responding to the survey were looking for additional ways to save energy or money (39 percent) or information about billing (36 percent). This varies significantly from the nonparticipant survey group where just three percent said they visited the website to look for additional ways to save energy or money and 69 percent said they visited to get information about billing.

Figure 4. Reasons for Visiting the MidAmerican Website



Source: Question C3 (Participant and Nonparticipant Survey)

Don't knows and refused responses excluded

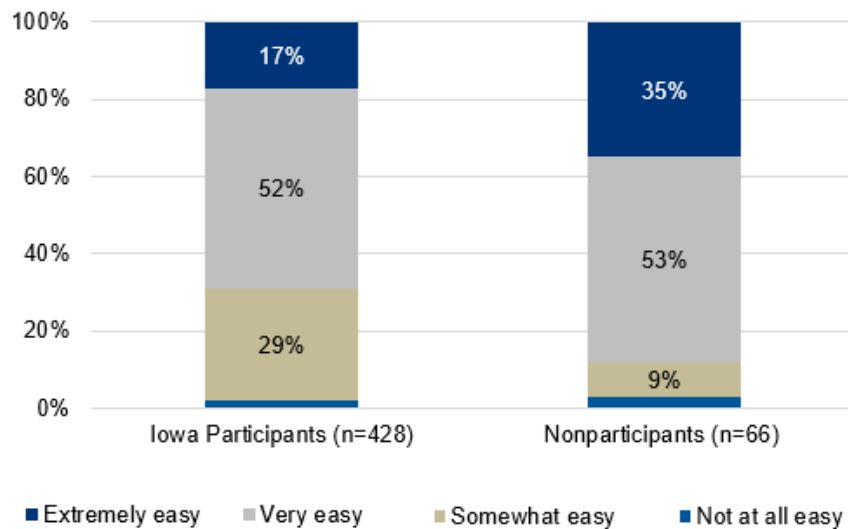
^a Differences between the participant survey and the nonparticipant survey are statistically significant at the p-value ≥ 0.05 , 95% confidence level.

The nonparticipant survey respondents felt it was easier to find the information they needed than program participants. However, as Figure 5 and Figure 6 show, most survey respondents in both groups said the information they found was helpful. Sixty-nine percent of customers responding to the survey said it was very (52 percent) to extremely easy (17 percent) to find information on the

¹² Source: Question C2 (Participant Survey). Don't knows and refused responses excluded.

MidAmerican website (69 percent), which was significantly fewer than the 88 percent of survey respondents from the nonparticipant (53 percent very easy, 35 percent extremely easy).

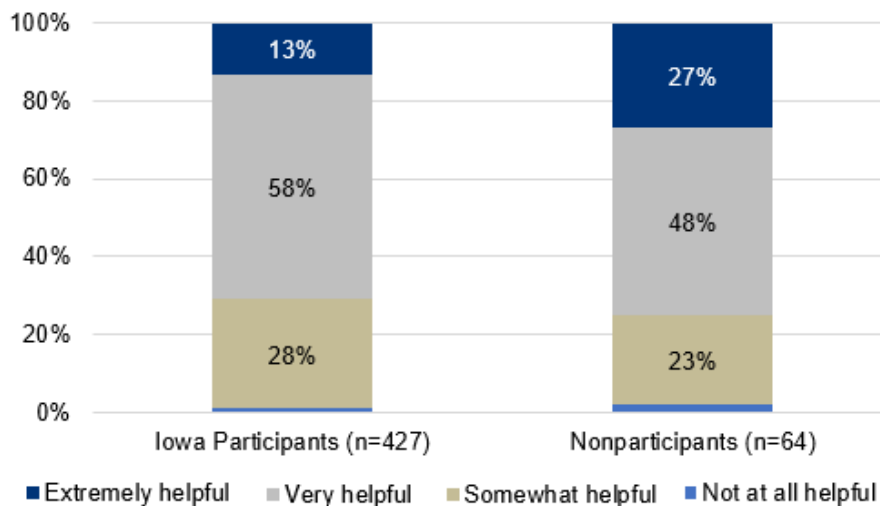
Figure 5. Ease of Finding Information on the MidAmerican Website



Source: Question C4 (Participant and Nonparticipant Survey)
Don't knows and refused responses excluded

Seventy-one percent of customers responding to the survey said the information on the MidAmerican website was very (58 percent) to extremely helpful (13 percent), which was similar to 75 percent of the respondents from the nonparticipant survey (48 percent very helpful, 27 percent extremely helpful).

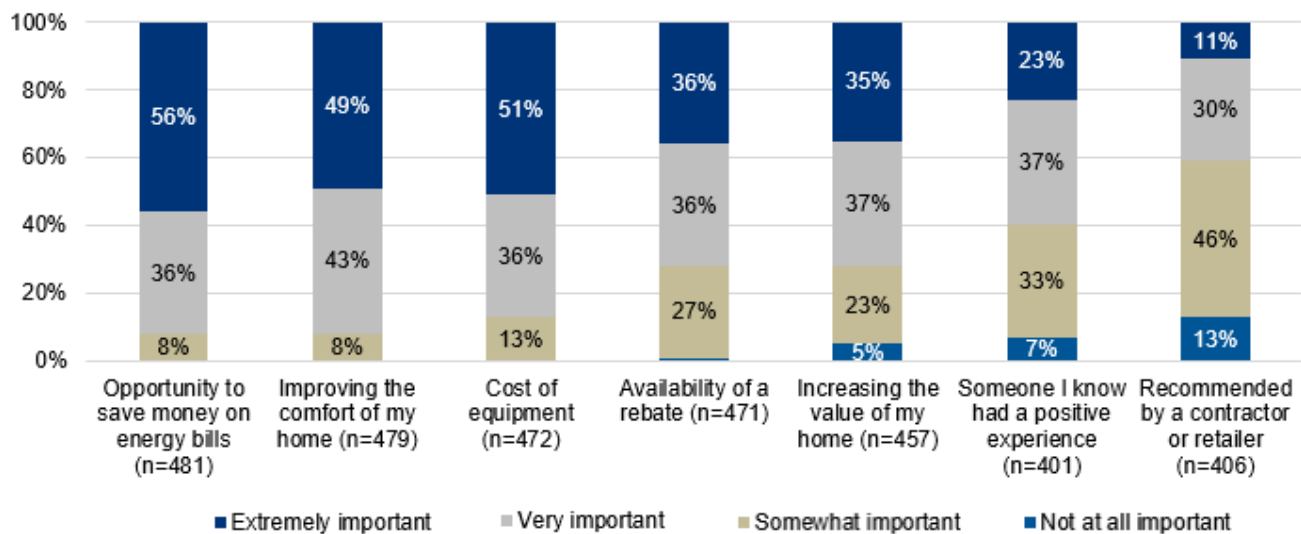
Figure 6. Helpfulness of Information on the MidAmerican Website



Source: Question C5 (Participant and Nonparticipant Survey)
Don't knows and refused responses excluded

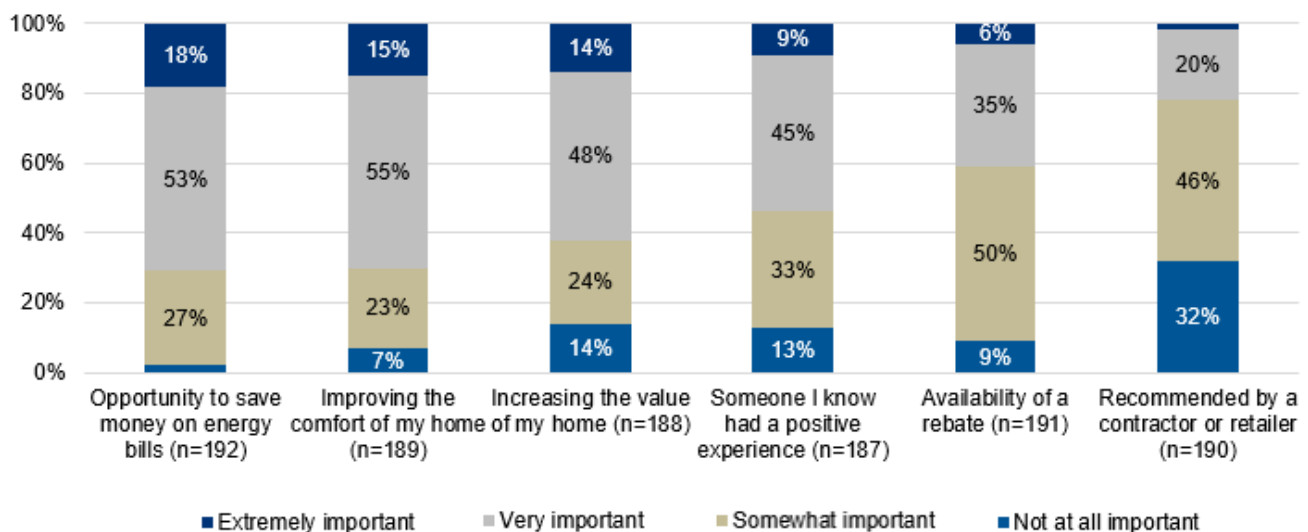
Participants responding to the survey said the opportunity to save money on their energy bills (92 percent) and improving the comfort of their home (92 percent) were very to extremely important factors they consider when making an appliance or equipment purchase for their home. This varied significantly for the nonparticipant survey respondents who said the cost of the equipment (72 percent) was about as important as the opportunity to save money on energy bills (71 percent) (p-value ≥ 0.05 , 95 percent confidence).

Figure 7. Participant Motivations for Purchasing Equipment



Source: Question C6 (Participant Survey)
Don't knows and refused responses excluded

Figure 8. Nonparticipant Motivations for Purchasing Equipment



Source: Question C6 (Nonparticipant Survey)
Don't knows and refused responses excluded

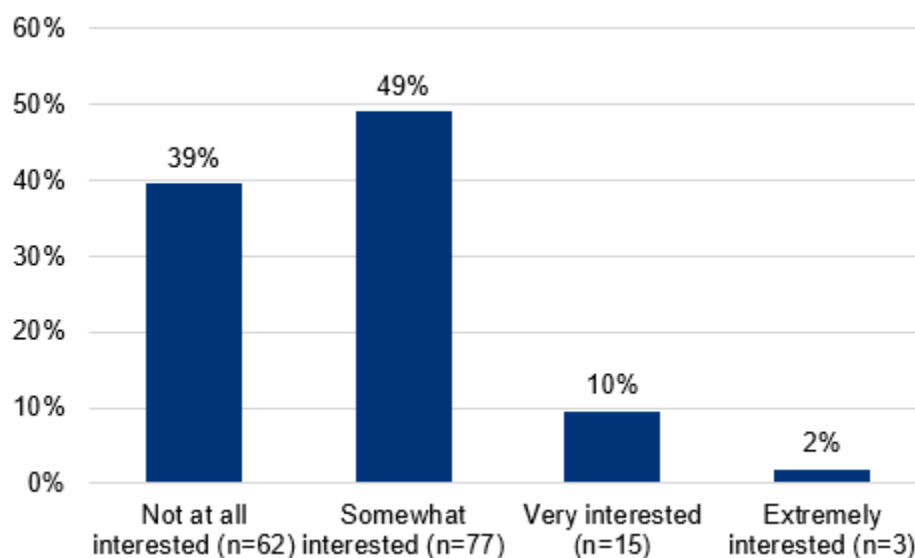
4.2.2.2 General Customer Awareness of the Program

As noted earlier, education and outreach of the Residential Assessment program also includes cross-marketing of other energy-saving opportunities by using the online energy assessment tool as a promotional vehicle. MidAmerican currently tracks the data needed to conduct a preliminary assessment of cross-participation by way of manually assessing which customer account numbers appear as participants in two or more programs and extrapolating the timing of their participation as an indicator for the potential that these customers learned about one or more programs after participating in another. MidAmerican is working with their implementer to develop a more streamlined method for tracking cross-participation.

The Tetra Tech team assessed cross-participation by identifying customers who completed the online assessment and determined which other programs they participated in. In reviewing program tracking data¹³, Tetra Tech found that 19 percent of Residential Assessment program participants also participated in at least one other program and two percent have participated in at least two other programs. These programs could include Appliance Recycling, Residential Equipment, and/or SummerSaver.

About 40 percent of the nonparticipant survey respondents were aware of the HomeCheck® Online program. About 28 percent of those who were aware of the program said they completed the assessment, although none of these customers appeared in the program tracking data.¹⁴ Of the customers who were aware of the program but had not participated, about half were somewhat interested (49 percent) and another 40 percent were not at all interested (Figure 9).

Figure 9. Nonparticipant Customer Interest in HomeCheck® Online Assessment (n=157)



Source: Question HC3 (Nonparticipant Survey)
Don't knows and refused responses excluded

¹³ All program participant tracking data was analyzed for the same timeframe as the evaluation: April 1, 2019 through March 31, 2020 for Iowa only.

¹⁴ The Tetra Tech team reviewed the Residential Assessment program tracking database and did not find any of these survey respondents (identified by account number) in the file. Additionally, none of these respondents provided an answer to the question 'When was the most recent year you participated?' As a result, this could likely be a self-reporting error.

4.2.3 Engagement with Tips

4.2.3.1 Motivation to Interact with Tips Page Features

Overall, participants interviewed as part of the design review described that they have little motivation to interact with the tips page or the features to update the status of the tips. Aside from seeing the tips immediately after completing the online assessment, 11 out of 12 interviewed participants had not engaged with tips. Customers said:

"I don't know that I'm going to come back here later and look at this again."

"If there is an app, yes, but there is no way that I'm doing this on a laptop or on a computer...For example, send me a notification, give me a weekly update...I would say the recommendation would be if possible, to transfer everything that you have in this environment in an app environment...to make it more accessible for everybody. "

4.2.3.2 Usefulness of Tips

Customers who completed the participant web survey remembered seeing the assessment results and tips that appear online through their account portal after completing the online assessment (75 percent) and said the results were very easy (70 percent) or extremely easy (22 percent) to understand.¹⁵ However, the tips customers said they recalled may not have been the tips that appeared online after completing their assessment. Four of the 12 participants interviewed during the design review described seeing the tips in an email, app notification, or a source other than the tips that appeared after completing the online home assessment, which indicates that there may be some overlap in participation with other programs like Residential Behavior where tips are distributed to customers via email.

The tips customers recalled in the participant survey were very useful (62 percent) or extremely useful (13 percent), especially to confirm activities customers had done and were already aware of.¹⁶ Surveyed customers said:

"(I) already do the suggestions or the options are not available for my home."

"I read them, understood them, and felt affirmed by what we already do and will continue to do."

"Most of the information was tips or recommendations that I already knew about. I was hopeful (MidAmerican) would offer more suggestions for rebates, high efficiency equipment that is affordable, and more (MidAmerican) options like summer energy cycle."

This aligns with what design interview participants said (three out of 12), who found the tips useful. Additionally, most of them were glad to get the information as both a reminder and confirmation that what they are doing in their home is correct and will help save energy. Interviewed customers said:

"(I) have done that, ...consider that, I mean, a lot of these things."

"[This is] good information. I've done a lot of this without knowing... It's good to know I'm doing the right things."

¹⁵ Source: Questions B4 B5 (Participant Survey). Don't knows and refused responses excluded.

¹⁶ Source: Questions B12 (Participant Survey). Don't knows and refused responses excluded.

“It was like tips, you know, it's like okay...I'm doing this, but maybe there's some things that I could do better. You know, because things are always coming out. I mean, you're doing this and research. I think it's important. And there's always new things that are related to research that we learn. And so maybe there's things that I could implement if I knew about those kinds of things.”

When asked which tips they had done or planned to do in the next 12 months, participants who completed the web survey most commonly had replaced lightbulbs with LEDs (19 percent), turned lights off when they were not in use (18 percent), and cleaned furnace filters (17 percent). Participant survey respondents most commonly planned to keep areas around vents clear (13 percent) and clean their furnace filters (10 percent).

Table 18. Recommendations Customers Remembered, Implemented, or Planned

Source	Recommendation Recall	Recommendations Done	Planned Action on Recommendations
Replace incandescent lights with CFLs or LEDs	15%	19%	2%
Turn off lights when not in use	13%	18%	9%
Clean furnace filter regularly	13%	17%	10%
Use drapes or shades to stay cool in summer/warm in winter	10%	12%	9%
Change thermostat in winter/summer	10%	11%	7%
Perform air sealing (includes caulking, weather-stripping, duct sealing)	9%	6%	5%
Upgrade to efficient appliances (refrigerator, dishwasher, dehumidifier, etc.)	7%	3%	3%
Keep areas around vents clear	7%	9%	13%
Add insulation	6%	1%	3%
Replace windows	3%	1%	3%
Hang dry laundry	2%	1%	7%
Replace water heater	2%	-	3%
Replace heating system	1%	-	3%
Replace air conditioning system	1%	-	4%
Respondents (n)	326	315	326

Source: B6, B7, B9 (Participant Survey)

Don't knows and refused responses excluded

4.2.3.3 Influence of the Program to Implement Tips

When describing the influence of the assessment results on their decisions to adopt tips for their home, participants who responded to the web survey indicated that the tips were influential—almost two-thirds of participants said the results of the online home assessment were very influential (52 percent) or extremely influential (10 percent), another 33 percent said the results were somewhat influential.¹⁷ The Tetra Tech team asked those who said the results were not at all to somewhat influential to explain why they gave that rating. Comments from these surveyed participants mostly centered around the tips they recalled that appeared after completing the assessment and not the results associated with how their homes use energy. These customers described having already implemented the tips they felt they could, although some said that they felt “nudged” to take more action:

“It’s good information, a lot I had already known. It’s a helpful nudge though to take action.”

“Some of the things I was already doing. Seeing the difference that could be made by change to CFL/LED was very influential - I don’t think I have an incandescent left anywhere in my home. Learning about improvements in window efficiency nudged me toward more rapid replacement of my windows.”

“...[I] had already done the light bulbs, caulking was on the list of things to do. For the non-novice, how do we get to the next level of recommendations?”

“As a renter, I don’t have the freedom to make all the changes recommended.”

4.2.4 Participant Satisfaction

Participant survey respondents generally expressed high levels of satisfaction with the HomeCheck® Online program and with MidAmerican as a service provider. Satisfaction was consistent across age groups.

4.2.4.1 Net Promoter Score

A new metric being presented for MidAmerican programs in this evaluation cycle is the Net Promoter or Net Promoter Score (NPS)¹⁸. The NPS is calculated based on responses to a single question: How likely is it that you would recommend our company/product/service to a friend or colleague? The NPS is then the percentage of customers rating their likelihood to recommend a company, a product, or a service to a friend or colleague as 9 or 10 (“promoters”) minus the percentage rating this at 6 or below (“detractors”) on a scale from 0 to 10. Respondents who provide a score of 7 or 8 are referred to as “passives.” The result of the calculation is expressed without the percentage sign. Promoters are considered likely to exhibit value-creating behaviors, such as buying more, remaining customers for longer, and making more positive referrals to other potential customers. Detractors are believed to be less likely to exhibit the value-creating behaviors.

¹⁷ Question B8 (Participant Survey). Don’t knows and refused responses excluded.

¹⁸ NPS is a management tool used as a measure of customer satisfaction and has been shown to correlate with revenue growth relative to competitors. NPS has been widely adopted by Fortune 500 companies and other organizations. Scores vary substantially among industries, so a good score is simply one whose trend is better than that of competitors in the same industry, as measured by double-blind benchmark research. The metric was developed by (and is a registered trademark of) Fred Reichheld, Bain & Company and Satmetrix. It was introduced by Reichheld in his 2003 Harvard Business Review article, “The One Number You Need to Grow”. Its popularity and broad use have been attributed to its simplicity and its openly available methodology.

Figure 10. Net Promoter Score Scale

Based on telephone survey respondent answers, the Residential Assessment program in Iowa has an NPS of 35 (53 percent – 18 percent = 35).

Table 13. Iowa Net Promoter Score

NPS Score and Category	Iowa Participants
NPS Score	35
Promoters (rating 9 or 10)	53%
Passives (rating 7 or 8)	29%
Detractors (rating 0 – 6)	18%
Respondents	239

Source: SAT3 (Participant Survey)

Don't know and refused responses are excluded

Rated on a scale of 0 to 10, where 0 was "extremely unlikely" and 10 was "extremely likely."

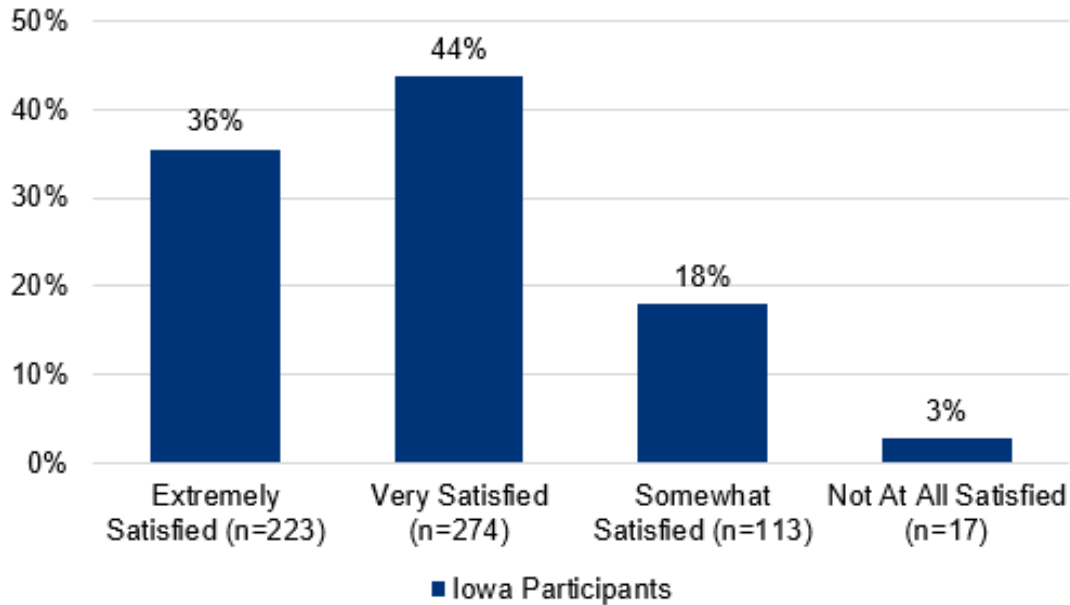
4.2.4.2 Program Satisfaction

While most participant survey respondents (80 percent) were very to extremely satisfied with the program (Figure 11), experiences with the kit measures lowered program satisfaction for about 20 percent of survey respondents. Those who were somewhat or not at all satisfied (20 percent) were hoping to choose their mix of measures in the kit (n=45), disliked the quality and performance of items in the kit (n=13), or were disappointed with the kit offering and had expectations of an in-person assessment (n=8).^{19,20}

¹⁹ Questions SAT2 (Participant Survey). Don't knows and refused responses excluded.

²⁰ For customers looking for an in-person assessment, MidAmerican maintains a list of contractors that can conduct in-person assessments and makes the list available to customers upon request via the customer call center. MidAmerican is working on an initiative to add the list of contractors to the trade ally search tool on the MidAmerican website in 2021. If the list is added to the search tool, then MidAmerican will add a link to the search tool to the Residential Assessment program web page to make it more accessible to customers looking for an in-person assessment.

Figure 11. Satisfaction with the Program (n=627)



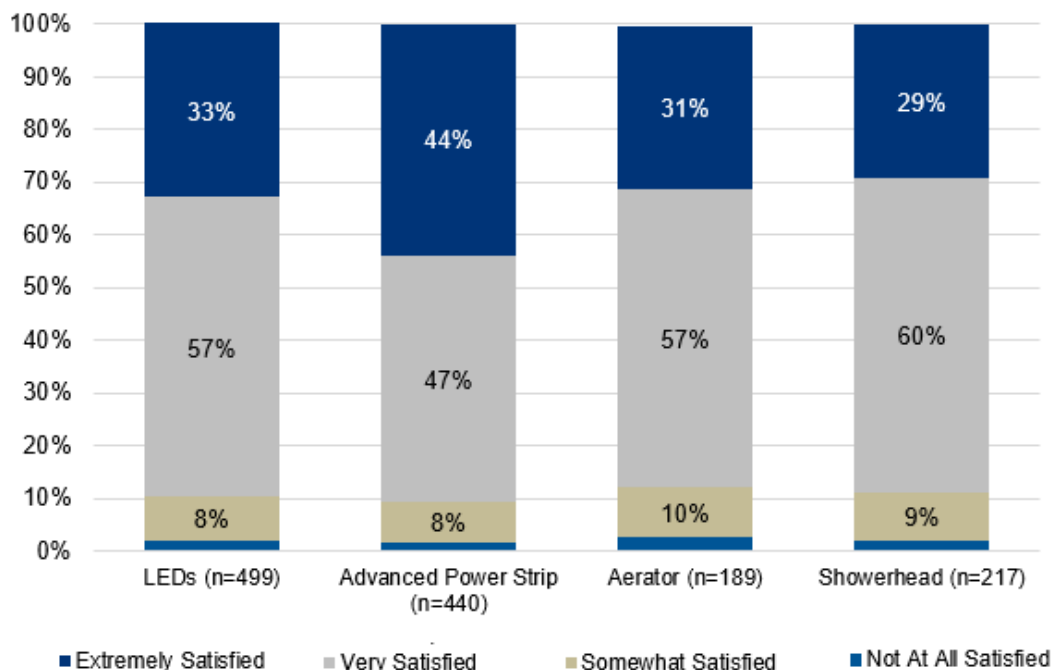
Source: Question SAT1 (Participant Survey)
Don't knows and refused responses excluded

4.2.4.3 Kit Measures Satisfaction

Similar to the overall program satisfaction, almost all survey respondents were very or extremely satisfied with each of the kit measures they received (Figure 12). Survey respondents who were somewhat or not at all satisfied described reasons for each measure, including they preferred a different color or level of brightness in bulbs (n=22), the APS was defective or low quality (n=17), they did not like the performance of the showerhead (n=14) or aerator (n=12), that the LED bulbs were poor quality or burned out (n=8), or they did not understand how to use it (n=8).²¹

²¹ Source: Questions D8, E6, F6, G6 (Participant Survey). Don't knows and refused responses excluded.

Figure 12. Satisfaction with Kit Measures



Source: Question D7, E5, F5, G5 (Participant Survey)
Don't knows and refused responses excluded

Beyond their satisfaction with measures, survey respondents gave reasons for why they had not installed measures they received (Table 14). Of the 362 survey respondents that did not install either the aerator (n=301) or showerhead (n=292), many noted that they did not need the measure (38 percent and 61 percent, respectively).

Table 14. Reasons Customers Did Not Install Kit Measures

Kit Measure	Reasons
LED (n=89)	<ul style="list-style-type: none"> • Stored bulbs away for future use (n=76)
Advanced power strip (n=114)	<ul style="list-style-type: none"> • Did not need it (n=58) • Broken or didn't work the way the customer needed it to (n=17) • No time to install it (n=12) • Not sure how to use it (n=10)
Aerator (n=309)	<ul style="list-style-type: none"> • Did not need it (n=115) • Did not fit in the existing fixture (n=84) • No time to install it (n=36) • Not sure how to install it (n=23) • Broken or didn't work the way the customer wanted (n=20)
Showerhead (n=320)	<ul style="list-style-type: none"> • Did not need it (n=179) • Broken or didn't work the way the customer wanted (n=37) • No time to install it (n=35) • Did not fit in the existing fixture (n=29) • Not sure how to install it (n=11)

Source: Questions D5, D6, E2, F2, G2 (Participant Survey)

Don't knows and refused responses excluded

Three of the 12 participants interviewed as part of the design review had experience with the in-home assessment and direct install program. They described disappointment with the kit measures and wanted customized upgrades and recommendations for their homes. These participant comments included:

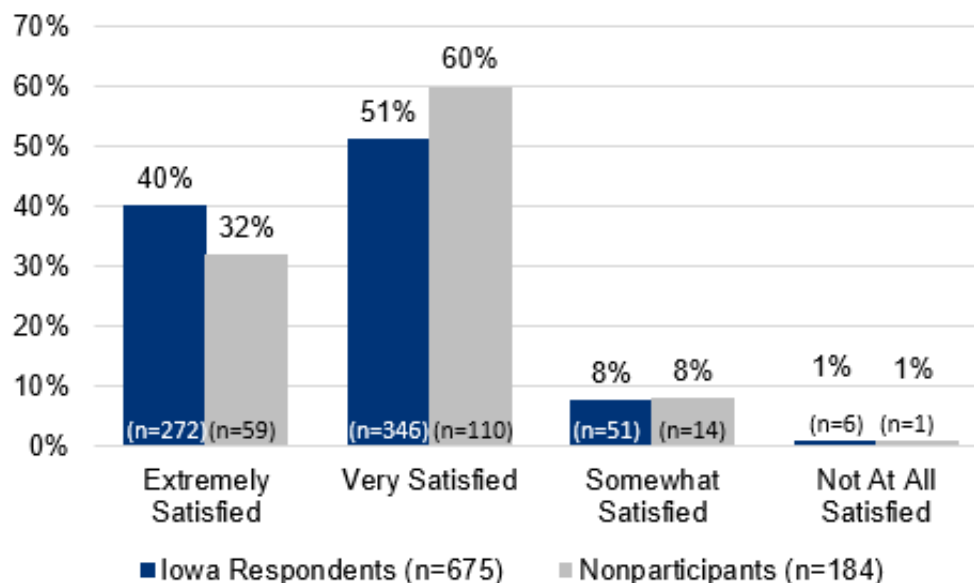
"I'm always curious about how well the house is actually working. You know, I have my opinion, but wondering what someone else would say...what MidAmerican's opinion would be of what I should do next...maybe they'll come up with something that I hadn't thought about...MidAmerican was going to send me a package...."

"Myself, I can tell you every one of my neighbors - none of us know the ins and outs of energy efficiency. It's not in my bailiwick to know what I should and shouldn't have to help out my situation. When I got the website and saw free light bulbs. I was extremely disappointed."

4.2.4.4 MidAmerican Satisfaction

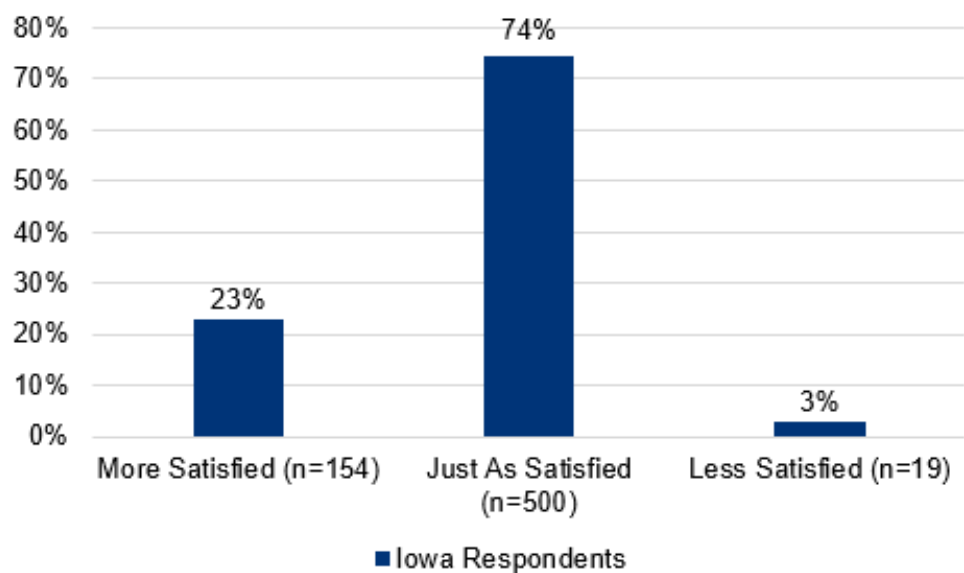
Ninety-one percent of program participants responding to the survey were very (40 percent) or extremely satisfied (51 percent) with MidAmerican (Figure 13), and most were just as satisfied with MidAmerican after they participated in the program as they were before they participated in the program (74 percent) (Figure 14). The nonparticipant survey respondents gave similar ratings where 92 percent were very satisfied (60 percent) or extremely satisfied (32 percent) with MidAmerican.

Figure 13. Satisfaction with MidAmerican (n=675)



Source: Question SAT5 (Participant and Nonparticipant Survey)
Don't knows and refused responses excluded

Figure 14. Satisfaction with MidAmerican After Program Participation (n=673)



Source: Question SAT8 (Participant Survey)
Don't knows and refused responses excluded

APPENDIX A: DESIGN REVIEW SUMMARY

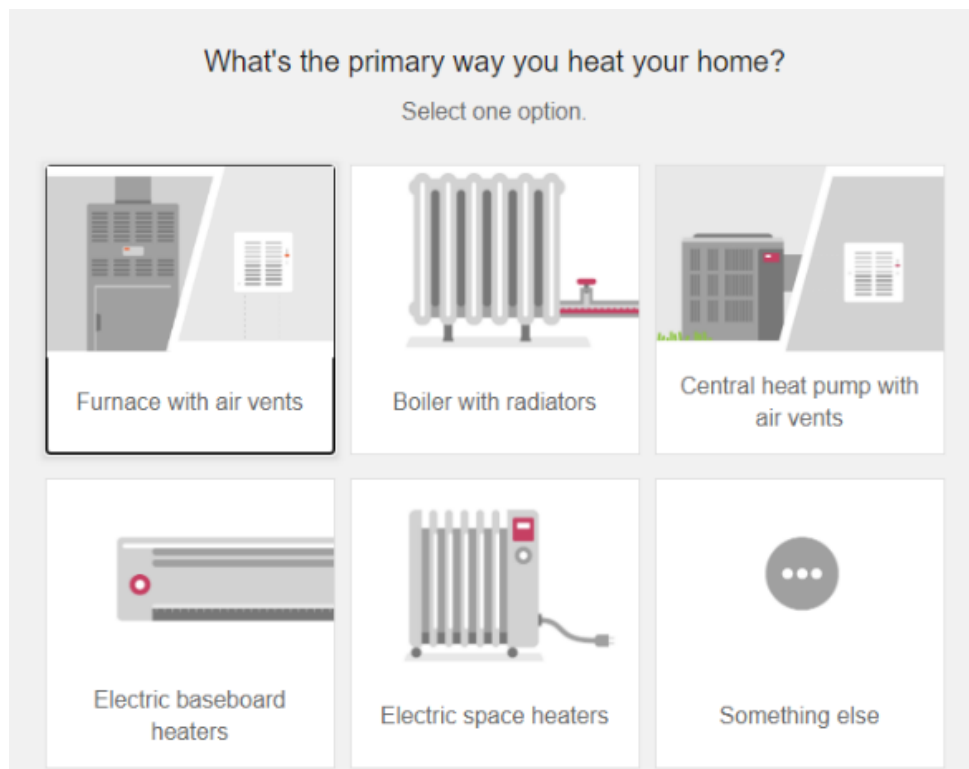
Included in the evaluation activities was a review of the HomeCheck® Online assessment tool from initiation via MyAccount, including the online assessment survey questions and the home energy analysis and tips pages. How well the design follows visual, informational, and behavioral design best practices were all assessed. This appendix provides a summary of the design review and does not include findings from any of the survey efforts. The Tetra Tech team understands online assessment questions are standard and come from the program implementer. Should an opportunity to make changes to assessment questions become available, the following considerations are offered.

Most questions in the assessment were easy to understand, but not all seemed to be worded clearly. Several of the questions could be challenging for customers to answer accurately. The tips page was somewhat difficult to find, and the features of the tips page (check when done, flag to save for later) may not be that useful to customers. Additionally, there seemed to be a substantial number of tips, and organizing them in a systematic way could be helpful to customers.

Design Review of HomeCheck® Online Assessment Questions

Most questions in the assessment survey were easy to understand and answer. The icon-focused design may be simple for customers to traverse. Most of the icons should be able to provide customers with added context and visual cues to help them answer the question accurately.

Figure 15. Example Icons from the HomeCheck® Online Assessment




However, some questions may be challenging for customers to answer accurately. For example, “air leaks” may be hard for the customer to understand. While the smaller text under the main question stem provides context, customers may not read it due to the smaller font and lighter coloring.


Figure 16. Example Challenging Question from the HomeCheck® Online Assessment

Which of the following have air leaks in your home?

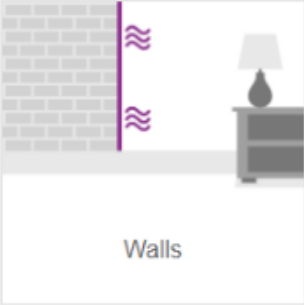
For example, if you feel air coming through cracks in the wall, your home may not be properly sealed.



Windows



Doors



Walls

Other questions could be written in a more clear or concise manner so that customers can provide accurate answers. For example, “**where** do you set your thermostat” is confusing. Simpler and more direct language can help the customer answer the question more easily. In this example, the question “**what temperature** do you set your thermostat to when you’re home in the summer,” is more clear and concise.

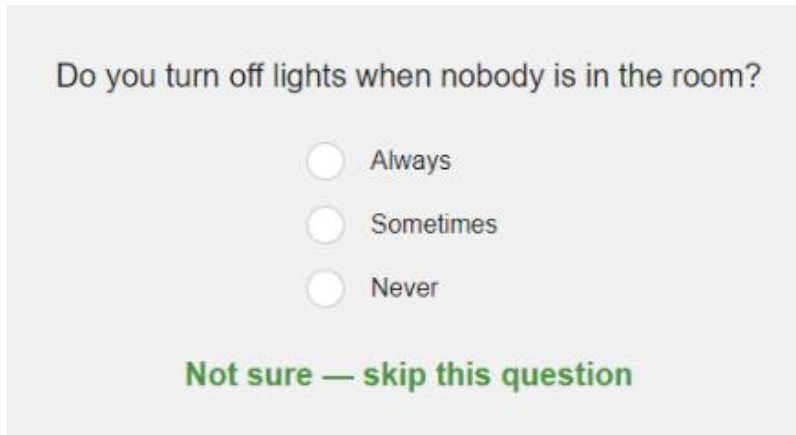
Figure 17. Example Oddly Worded Question from the HomeCheck® Online Assessment

When you're home in the summer, where do you set your thermostat?

Not sure — skip this question

A few questions lead customers to answer one way over another, irrespective of the actual behavior a customer takes. For example, the wording “do you turn off the lights when no one is in the room” can potentially make respondents feel like they *should* answer in a certain way. Another way to ask this question could be, “when do you turn off the lights,” and provide response options that describe different situations (e.g., “always,” “when no one is in the room,” “I leave them on all the time”).

Figure 18. Example Leading Question from the HomeCheck® Online Assessment



Do you turn off lights when nobody is in the room?

☐ Always

☐ Sometimes

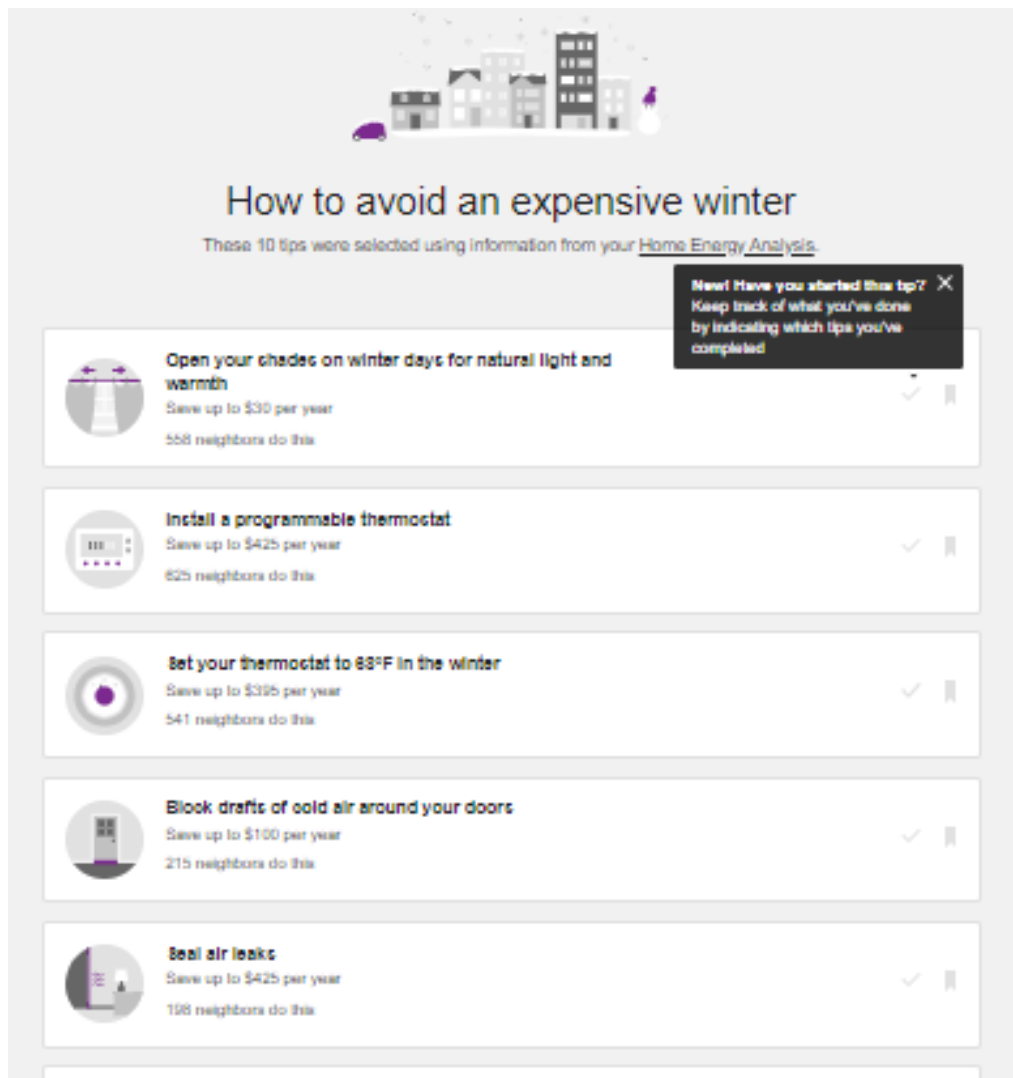
☐ Never

Not sure — skip this question

Design Review of the Tips Page

When customers click to learn more about energy saving tips, they will come to a tips screen with a list of tips to review. The Tetra Tech team’s understanding is that this platform was originally built to enable customers to create a list of actions they can take to save energy by clicking on the bookmark icon next to each tip or marking that they have already completed that tip. Figure 19 shows an example of the tips page.

Figure 19. Example Tips Page from the HomeCheck® Online Assessment

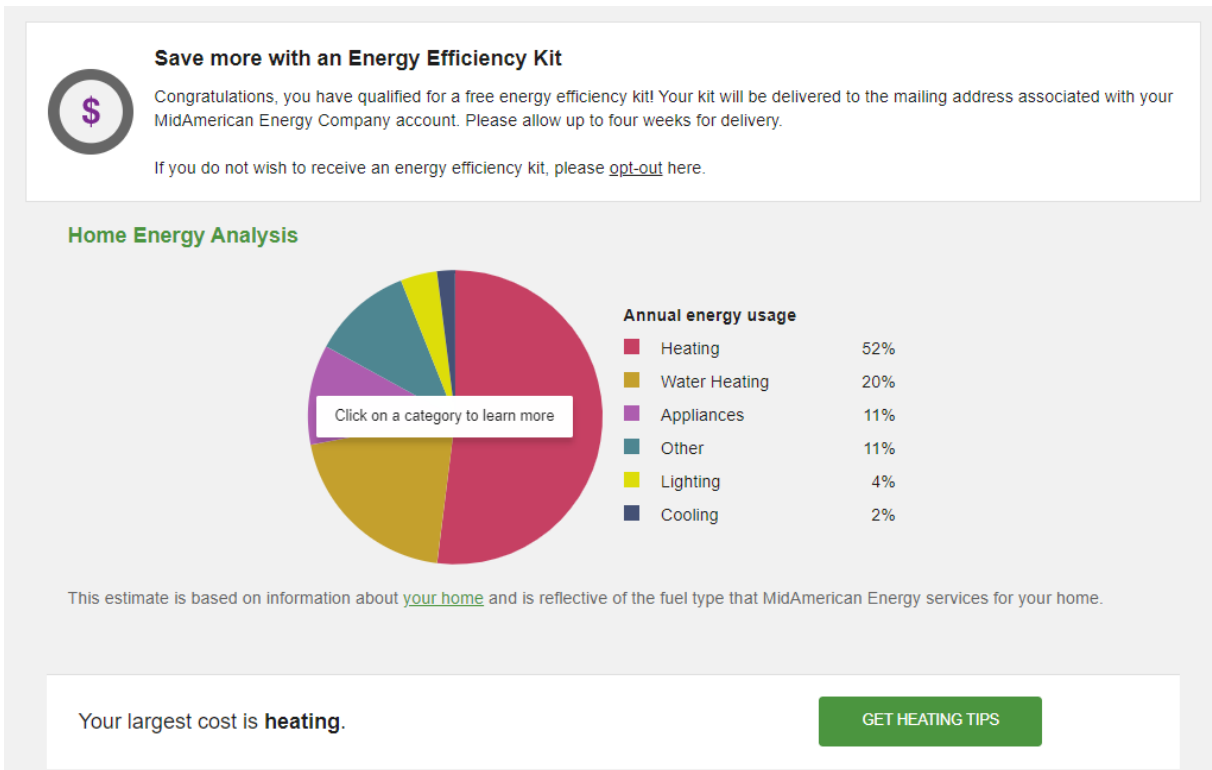


The list of tips is large and may be overwhelming to customers, thereby leading to potential disengagement by the customer. As a proxy for assessing if customers are overwhelmed by the tips page, MidAmerican should review website analytics to see how often and whether customers engage with the tips page features. This evaluation found that it could be likely that the current design of the tips page does not provide enough explanation for customers to create an energy-saving plan. To address the potential for customers to feel overwhelmed by the length of the list, and if possible, we recommend visually partitioning the tips to first display a shorter list of tips that may be most relevant to customers. For example, MidAmerican can prominently show the one tip that may yield the highest amount of savings and two tips that are low/no-cost behaviors. If customers are interested in reviewing more tips, they can click to a new page or scroll down for more tips (as they are able to do now).

Design Review of Home Energy Analysis Page

Once customers finish the assessment survey, the tool provides a pie chart that breaks down their household energy consumption and states that they qualify for an energy saving kit, as shown in the figure below.

Figure 20. Example Home Energy Analysis Page from the HomeCheck® Online Assessment



Customers can click on the green button at end of the page to review energy saving tips. This results page can potentially mislead customers by stating that customers qualify for an energy saving kit. According to MidAmerican staff, all residential customers qualify for the energy savings kit if they are a MidAmerican customer. To help provide this clarity, MidAmerican could reword this banner to highlight that they will receive a kit now that they have finished the online assessment.

The home energy analysis module provides customers with a helpful breakdown of their household energy consumption. The statement of what is the customers' largest cost can help customers interpret the data in the pie chart. As such, this interpretation could be more prominent, so customers read it before viewing the pie chart.

If customers are interested in seeing energy-saving tips, they can click on the green button. To help customers prioritize action items, the online assessment tool could provide one tip pertinent to customer's largest cost end-use, as customers may not be engaged enough to click further to explore the energy-saving tips.

Design Review Suggestions for Improvement

Below is a summary of potential improvements that could be made based on the design review, with the understanding the HomeCheck® Online assessment tool is proprietary. Changes to the design of the tool may not be feasible.

Improvement #1: (Optional) Reword survey questions to help customers answer them accurately by minimize leading questions and clarify wording.

Improvement #2: (Optional) Enhance the “Save for Later” feature of the tips page so that it automates reminders for follow-up (either by email, text, a message on their billing page, or some other means of notification).

Improvement #3: (Optional) Look for additional ways to embed direct links in the tips descriptions to help customers access rebates or additional discounts or find trade allies to work with.

Improvement #4: MidAmerican should continue identifying and ordering tips so that the most impactful tips appear first in the list. If possible, further enhance the tips platform by visually partitioning the top one to three tips to emphasize quick and easy changes customers can make, as well as tips that yield larger savings.

APPENDIX B: IN-SERVICE RATES ANALYSIS

The installation rates reported through both the survey and the postcard were somewhat higher for LEDs, in the range of reasonableness for advanced power strips, and were much lower than what is currently documented in the Iowa TRM rates for aerators and showerheads. The Tetra Tech team ran a proportions test and found significant differences in installation rates when comparing the Iowa TRM to the survey, and the Iowa TRM to the postcard. The table below illustrates these differences.

Table 15. Installation Rates by Measure

Kit Type	Installation Rates		
	Iowa TRM V.4 (a)	Web Survey (b)	Postcard (c)
LED	*	(n=974)**	(n=1788)**
Overall ^{b,c}	79%	84%	88%
Dual fuel kit ^{b,c}	79%	85%	90%
Electric kit ^b	79%	82%	87%
Gas kit	N/A	N/A	N/A
Advanced Power Strip		(n=548)	(n=894)
Overall ^{b,c}	83%	80%	92%
Dual fuel kit ^{b,c}	83%	79%	93%
Electric kit ^b	83%	89%	91%
Gas kit	N/A	N/A	N/A
Low-flow Bathroom Aerator		(n=484)	(n=582)
Overall ^{a,b,c}	70%	39%	51%
Dual fuel kit ^{a,b,c}	70%	38%	49%
Electric kit	N/A	N/A	N/A
Gas kit ^{a,c}	70%	51%	73%
Low-flow Showerhead		(n=523)	(n=582)
Overall ^{a,b,c}	74%	41%	53%
Dual fuel kit ^{a,b,c}	74%	42%	50%
Electric kit	N/A	N/A	N/A
Gas kit ^{a,c}	74%	35%	81%

a Differences between the participant survey results and the Iowa TRM V.4 are statistically significant at the p-value ≥ 0.05 , 95% confidence level.

b Differences between the postcard survey results and the Iowa TRM V.4 are statistically significant at the p-value ≥ 0.05 , 95% confidence level.

c Differences between the participant survey results and the postcard survey results are statistically significant at the p-value ≥ 0.05 , 95% confidence level.

* The Iowa TRM embedded installation rates for LEDs, the low-flow bathroom aerator, and low-flow showerhead based on the EnergyWise (Low Income) Kit program model and cites Cadmus, "Final Report: Iowa 2015 Energy Wise Program", January 29, 2016, p16. The Iowa TRM based embedded installation rates for the advanced power strip on findings from Navigant, Cadmus, EmPower Maryland Final Evaluation Report – Evaluation Year 4; Residential Retrofit Programs, 2014.

**The n of survey and postcard responses indicates the number of measures received, not the number of respondents.

Installation rates for kit measures from two other TRMs are included in the table below to provide additional context and easy comparison. The Illinois TRM (2021) was selected as another midwestern area that MidAmerican serves and the Pennsylvania TRM (2020) was selected because Pennsylvania has well established energy efficiency programs, and both states have a mix of urban and rural markets.^{22,23}

Table 16. Benchmark Comparison of TRM Installation Rates

Kit Measure	Installation Rates		
	Iowa TRM	Illinois TRM*	Pennsylvania TRM**
LEDs	79%	66%	79%
Advanced Power Strip	83%	55%	86%
Low-flow Bathroom Aerator	70%	61%	28%
Low-flow Showerhead	74%	62%	35%

* For LEDs, the Illinois TRM suggests evaluators should apply the installation rate estimated through the evaluations of their specific Efficiency Kits program, and to use the default installation rate for direct mail energy efficiency kits, with little or no education provided, where program-specific evaluation results for an installation rate are unavailable. For Tier 1 advanced power strips, the installation rate assumes a single-family, leave behind energy efficiency kit program based on research from the 2018 ComEd Home Energy Assessment participant survey. The Illinois TRM did not have an installation rate for advanced power strips in a mail-only efficiency kit. For both the low-flow bathroom aerator and low-flow showerhead, the installation rate is weighted based on Nicor and Ameren efficiency kit program uptake and their previously found installation rates. The calculation is available in Faucet Aerators and Showerheads Weighted Average ISR IL TRM.xlsx.

** For LEDs, the Pennsylvania TRM provides one installation rate for ENERGY STAR LED bulbs regardless of program model which is based on intercept surveys conducted in the PECO service territory (Navigant Consulting, Inc. "Final Annual Report to the Pennsylvania Public Utility Commission. Prepared for PECO. Program Year 5". November, 2014.). For Tier 1 advanced power strips, the Pennsylvania TRM bases the installation rate on several studies including RLPNC 17-3: Advanced Power Strip Metering Study," Massachusetts Programs Administrators and EEAC, (Mar. 2019), RLPNC 17-4 and 17-5: Products Impact Evaluation of In-service and Short-Term Retention Rates Study," Massachusetts Programs Administrators and EEAC, (Oct. 2018), and California Public Utilities Commission Database for Energy Efficient Resources (DEER) EUL Support Table for 2020, <http://www.deeresources.com/files/DEER2020/download/SupportTable-EUL2020.xlsx>. Accessed December 2018. For both low-flow bathroom aerators and low-flow showerheads delivered via kits, the installation rate is based on the average of PY9 values for kit delivery for First Energy EDCs http://www.puc.pa.gov/filing_resources/issues_laws_regulations/act_129_information/electric_distribution_company_act_129_reporting_requirements.aspx

²² 2021 Illinois Statewide Technical Reference Manual for Energy Efficiency. (September 2020). Version 9.0, Volume 3: Residential Measures.

²³ Pennsylvania Technical Reference Manual (August 2019). Volume 2: Residential Measures.

APPENDIX C: SURVEY RESPONSE RATES

Web surveys were completed by a total of 676 Iowa program participants, and 198 telephone interviews were completed with program nonparticipants in Iowa.

Table 17. Participant and Nonparticipant Response Rates

	Iowa Participants	Nonparticipants
Sample	4,000	1,895
Not a utility customer	0	0
Affiliated with utility	20	5
Eligible Sample		1,890
Does not recall participating	0	17
Refusal/Not completed	3,266	1,673
Incompletes (partial surveys)	38	2
Completed	676	198
Response Rate (Completed/Eligible Sample)	21%	11%
Average survey length (min)	12.0	15
Average number of attempts (on active sample)	N/A	8.21

APPENDIX D: PARTICIPANT WEB SURVEY

MidAmerican Energy Residential Assessment Program Process and Verification Participant Web Survey (Iowa Only)

All kit measures for all respondents were verified to ensure sufficient responses to be confident in point estimates. The burden on respondents to answer all questions was low because the survey was relatively short overall.

- Sample Variables
- Introduction
- Screening
- Awareness and Attitudes
- Process Questions
- Verification
 - LEDs
 - Power strip
 - Aerators
 - Showerhead
- Satisfaction
- Final Process Questions
- Demographics
- Conclusion

SAMPLE VARIABLES

CASEID	Unique case identifier
TERRITORY	Territory where measure was implemented
	1 Iowa
YEAR	Program year
	2019
	2020
DATE	Date of participation, defined as “Date Created” for kits
LED_FLG	Had LEDs in kit
	0 None
	1 LEDs in kit
APS_FLG	Had advanced power strip in kit
	0 None
	1 Advanced Power Strip in kit
AER_FLG	Had faucet aerator in kit
	0 None
	1 Bathroom aerator in kit

SHEAD_FLG Had showerhead in kit
 0 None
 1 Low-flow Showerhead in kit

CONTACT_NAME Premise contact listed in participant files

ADDRESS Address where measure distributed
CITY
STATE
ZIP

Phone_Num

ACCOUNT_NUM Account Number

PROJECTID

QUOTA

REP

INTRODUCTION

INTRO Thank you for being a valued MidAmerican Energy customer and participating in this survey!
 We are conducting a study about MidAmerican Energy's *HomeCheck® Online* program, a free tool that looks at your home energy use and offers energy saving tips and a free energy efficiency kit with easy to install products to help you save money and energy.

We are interested in understanding your experiences with this tool and the items you received. Your responses to this survey are very important and will help MidAmerican to improve this offering in the future.

Your responses will be kept confidential and not revealed to anyone unless you grant permission. If you would like to talk with someone from MidAmerican Energy about this study, feel free to call MidAmerican Energy's call center at (888) 427-5632.

01 [CONTINUE]

SCREENING QUESTIONS

[ASK OF ALL]

S1 Are you, or is anyone in your household, a current or former employee of MidAmerican Energy?
 [CHECK ONE]

01 Yes [SKIP TO T1]
 02 No
 88 Don't know [SKIP TO T1]

AWARENESS SOURCE

[ASK OF ALL]

C1 How did you learn about *HomeCheck® Online*? [SELECT ALL THAT APPLY]

For C1C01 through C1C99

0 Not mentioned

1 Mentioned

C1C01 MidAmerican utility bill insert

C1C02 MidAmerican website

C1C03 MidAmerican brochure

C1C04 MidAmerican call center representative

C1C05 Retail store

C1C06 Contractor

C1C07 Home show / conference / trade show

C1C08 Newspaper

C1C09 Radio

C1C10 Television

C1C11 Billboard

C1C12 Friend / family member / other business

C1C13 Email from MidAmerican

C1C14 Key Account Manager (nonresidential only)

C1C15 Signage at local event such as school or sporting event?

C1C16 Other (SPECIFY)

C1C88 Don't know

C2 In the past year, have you visited the MidAmerican website other than for *HomeCheck® Online*?

01 Yes

02 No [SKIP TO NEXT SECTION]

88 Don't know [SKIP TO NEXT SECTION]

99 Refused [SKIP TO NEXT SECTION]

C3 Other than *HomeCheck® Online*, why did you visit the MidAmerican website? *[SELECT ALL THAT APPLY]*

For C3C01 through C3C88

- 0 Not mentioned
- 1 Mentioned

C3C01 Look for information on the program *[SPECIFY: Which programs?]*

C3C02 Look for additional ways/opportunities that MidAmerican offers to help me save energy/money at home

C3C03 Information on energy efficient appliances

C3C04 Information on energy efficiency in general

C3C05 Information on COVID-19

C3C06 Other *[SPECIFY]*

C3C88 Don't know

C3C010 *[SHOW IF C3C01=1]* Which programs?

C3C050 *[SHOW IF C3C05=1]* What specific information on COVID-19 were you looking for?

C4 How easy was it to find the information you were looking for? Was it not at all easy, somewhat easy, very easy, or extremely easy?

- 01 Not at all easy
- 02 Somewhat easy
- 03 Very easy
- 04 Extremely easy

C5 How helpful was the information you found on the website? Was it not at all helpful, somewhat helpful, very helpful, or extremely helpful?

- 01 Not at all helpful
- 02 Somewhat helpful
- 03 Very helpful
- 04 Extremely helpful

PROCESS QUESTIONS

[ASK OF ALL]

B0 Next, we would like to understand your experience with the *HomeCheck® Online* assessment tool.

Do you recall completing the *HomeCheck® Online* assessment?

- 01 Yes
- 02 No *[SKIP TO INSTA_VER]*

C7 How influential were the following factors in your decision to complete the online assessment?
[PROGRAMMER NOTE: ROTATE C7A – C7E]

For C7A through C7E:

- 01 Not at all influential
- 02 Somewhat influential
- 03 Very influential
- 04 Extremely influential
- 77 Does not apply

C7A Opportunity to save money on my energy bills

C7B Opportunity to receive free kit items

C7C Someone I know had a positive experience with the program

C7D Improving the comfort of my home

C7E The program was recommended to me

B2 How easy was it to find the assessment tool online? Was it not at all easy, somewhat easy, very easy, or extremely easy?

- 01 Not at all easy
- 02 Somewhat easy
- 03 Very easy
- 04 Extremely easy

B2a *[SHOW IF B2 = 01 OR 02]* Why did you rate it this way?
[OPEN END]

B3 Do you remember answering some questions about your home and energy habits as a part of the online assessment?

- 01 Yes
- 02 No
- 88 Don't know

B4 *[ASK IF B3 = 01 ELSE SKIP TO C6]* Do you remember seeing results and recommendations after you answered the questions?

- 01 Yes
- 02 No
- 88 Don't know

B5 *[SHOW IF B4 = 01]* How easy was it to understand the results of the assessment? Was it not at all easy, somewhat easy, very easy, or extremely easy?

- 01 Not at all easy
- 02 Somewhat easy
- 03 Very easy
- 04 Extremely easy

B5a *[SHOW IF B4 = 01 AND (B5 = 01 OR 02)]* Why did you rate it this way?
[OPEN END]

B6 *[ASK IF B4 = 01]* What kinds of recommendations do you remember seeing? *[SELECT ALL THAT APPLY, RANDOMIZE 1-15]*

For B601 through B688

0 Not mentioned
1 Mentioned

- B6C01** Change thermostat in winter/summer
- B6C02** Use drapes or shades to stay cool in summer/warm in winter
- B6C03** Turn off lights when not in use
- B6C04** Clean furnace filter regularly
- B6C05** Replace incandescent lights with CFLs or LEDs
- B6C06** Replace heating system
- B6C07** Replace air conditioning system
- B6C08** Replace water heater
- B6C09** Add insulation
- B6C10** Replace windows
- B6C11** Perform air sealing (includes caulking, weather-stripping, duct sealing)
- B6C12** Upgrade to efficient appliances (refrigerator, dishwasher, dehumidifier, etc.)
- B6C13** Keep areas around vents clear
- B6C14** Use efficient pool equipment (pool pump, pool heater, pool covering)
- B6C15** Hang dry laundry
- B6C16** Other *[SPECIFY]*
- B6C17** Nothing
- B6C88** Don't know

B6C160 [IF B616 = 1] What specific information were you looking for?

B7 *[IF B6 <> 17,88 AND B4=01] Which, if any, have you done? [SELECT ALL THAT APPLY, RANDOMIZE, PIPE IN THOSE SELECTED FROM B6 ONLY]*

For B7C01 through B7C88

0 Not mentioned
1 Mentioned

- B7C01** Change thermostat in winter/summer
- B7C02** Use drapes or shades to stay cool in summer/warm in winter
- B7C03** Turn off lights when not in use
- B7C04** Clean furnace filter regularly
- B7C05** Replace incandescent lights with CFLs or LEDs
- B7C06** Replace heating system
- B7C07** Replace air conditioning system
- B7C08** Replace water heater
- B7C09** Add insulation
- B7C10** Replace windows
- B7C11** Perform air sealing (includes caulking, weather-stripping, duct sealing)
- B7C12** Upgrade to efficient appliances (refrigerator, dishwasher, dehumidifier, etc.)
- B7C13** Keep areas around vents clear
- B7C14** Use efficient pool equipment (pool pump, pool heater, pool covering)
- B7C15** Hang dry laundry
- B7C16** Other - <B6C16O>
- B7C17** Nothing
- B7C88** Don't know

B8 *[IF B7<>17,88 AND B4=01] How influential was the information in the online assessment report in your decision to adopt these recommendations in your home?*

Was it not at all influential, somewhat influential, very influential, or extremely influential?

- 01 Not at all influential
- 02 Somewhat influential
- 03 Very influential
- 04 Extremely influential

B8A *[SHOW IF B8 = 01 OR 02] Why did you rate it this way?
[OPEN END]*

B9 [ASK IF B4=01 AND NOT ALL SELECTED IN B6] Do you plan to take any of the following actions in the next 12 months? [SELECT ALL THAT APPLY, PIPE IN THOSE **NOT** SELECTED FROM B6 ONLY]

For B9C01 through B9C88

0 Not mentioned

1 Mentioned

- B9C01** Change thermostat in winter/summer
- B9C02** Use drapes or shades to stay cool in summer/warm in winter
- B9C03** Turn off lights when not in use
- B9C04** Clean furnace filter regularly
- B9C05** Replace incandescent lights with CFLs or LEDs
- B9C06** Replace heating system
- B9C07** Replace air conditioning system
- B9C08** Replace water heater
- B9C09** Add insulation
- B9C10** Replace windows
- B9C11** Perform air sealing (includes caulking, weather-stripping, duct sealing)
- B9C12** Upgrade to efficient appliances (refrigerator, dishwasher, dehumidifier, etc.)
- B9C13** Keep areas around vents clear
- B9C14** Use efficient pool equipment (pool pump, pool heater, pool covering)
- B9C15** Hang dry laundry
- B9C16** Other [SPECIFY]
- B9C17** Nothing
- B9C88** Don't know

B9C160 [IF B7C16 = 1] What else do you plan to do?

B10 [ASK IF B7 = 17 and B9 = 17] Why not?
[OPEN END]

B12 [IF B4 = 01] How useful were the energy efficiency tips and recommendations provided to you?

- 01 Not at all useful
- 02 Somewhat useful
- 03 Very useful
- 04 Extremely useful

B13 [IF B12 = 01 or 02] Why did you rate it this way?
[OPEN END]

C6 Please tell me, when considering an appliance or equipment purchase for your home, how important are each of the following factors in your decision?
[PROGRAMMER NOTE: ROTATE C6A – C6G]

For C6A through C6G:

- 01 Not at all important
- 02 Somewhat important
- 03 Very important
- 04 Extremely important
- 77 Does not apply

C6A Saving money on my energy bills

C6B Cost of equipment

C6C Availability of a rebate, such as those offered by MidAmerican Energy or the manufacturer

C6D Someone you know had a positive experience with the equipment

C6E Improving the comfort of your home

C6F Increasing the value of your home

C6G The equipment was recommended to you by a contractor or retailer

INSTALLATION VERIFICATION

[ASK OF ALL]

INSTA_VER Our records show that sometime in the last year you may have received a home energy kit to install energy saving products delivered to your home located at [ADDRESS] in [CITY].

Is this correct? [CHECK ONE]

- 01 Yes
- 02 No [SKIP TO SAT5]
- 88 Don't know [SKIP TO SAT5]

INSTA_MEA Did you receive each of the following items in your home energy kit?
[PROGRAMMER NOTE: ROTATE IMA – IMD]

For IMA through IMD:

- 01 Yes
- 02 No
- 88 Don't know

IMA LED bulbs

IMB Power strip

IMC Faucet Aerator

IMD Low-flow Showerhead

MEASURE: LEDS

[ASK IF LED_FLG = 1 AND IMA = 1 or 88 ELSE SKIP TO E1]

D1 Okay, now we want to ask you some questions about the LED bulbs you got in your kit.

Did you receive 2 LED bulbs in your kit?

- 01 Yes
- 02 No
- 88 Don't know

D2 *[SHOW IF D1=02]* How many LED bulbs did you receive?

- _____ Record number of LED bulbs received [0-20]
- 88 Don't know

D3 *[ASK IF D1=01 OR (D2>0 AND D2<>88)]* Are all of the LED bulb(s) you received **currently installed** at your home?

- 01 Yes, all the bulbs I received are installed
- 02 No, but some of the bulbs I received are installed
- 03 No, none of the bulbs I received are installed
- 88 Don't know

D4 *[SHOW IF D3=02]* How many of the LED bulbs are currently installed at your home?

- _____ Record number of LED bulbs installed [0-20]
- 88 Don't know

D5 *[SHOW IF D3 = 02 OR 03]* How many of the LED bulbs are **stored away for future use** at your home?

- _____ Record number of LED bulbs stored [0-20]
- 88 Don't know

D6 [ASK IF D5 = 0 AND (D3 = 02 or 03)] What did you do with the LED bulb(s) you received that are NOT currently installed or stored away? [SELECT ALL THAT APPLY]

For D6D01 through D6D88

0 Not mentioned
1 Mentioned

D6D01 They burned out
D6D02 They are at another home
D6D03 Gave them away
D6D04 Misplaced them
D6D05 They broke
D6D06 Installed them but later removed
D6D07 Other [SPECIFY]
D6D88 Don't know

D7 [ASK IF D1 = 01 OR D2 > 0] Overall, how satisfied are you with the LED bulbs you got in the kit? Are you not at all satisfied, somewhat satisfied, very satisfied, or extremely satisfied?

01 Not at all satisfied
02 Somewhat satisfied
03 Very satisfied
04 Extremely satisfied

D8 [SHOW IF D7 = 01 OR 02] Why did you rate it this way?
[OPEN END]

MEASURE: ADVANCED POWER STRIP

[ASK IF APS_FLG = 1 AND IMB = 1 OR 88 ELSE SKIP TO F1]

E1 Next, we would like to ask you a few questions about the advanced power strip you got in your kit.

Are you currently using the power strip in your home?

01 Yes
02 No
88 Don't know

E2 [SHOW IF E1 = 02] Why not?
[OPEN END]

E3 [ASK IF E1 = 01] How easy was it to set up the power strip in your home?

Was it not at all easy, somewhat easy, very easy, or extremely easy?

- 01 Not at all easy
- 02 Somewhat easy
- 03 Very easy
- 04 Extremely easy

E4 [SHOW IF E3 = 01 OR 02] Why did you rate it this way?
[OPEN END]

E5 [ASK IF E1 = 01] Overall, how satisfied are you with the power strip you got in your kit?

Are you not at all satisfied, somewhat satisfied, very satisfied, or extremely satisfied?

- 01 Not at all satisfied
- 02 Somewhat satisfied
- 03 Very satisfied
- 04 Extremely satisfied

E6 [SHOW IF E5 = 01 OR 02] Why did you rate it this way?
[OPEN END]

MEASURE: AERATOR

[ASK IF AER_FLG = 1 AND IMC = 1 OR 88 ELSE SKIP TO G1]

F1 In this section, we ask you some questions about the faucet aerator you got in your kit.

Is the aerator installed?

- 01 Yes
- 02 No
- 88 Don't know

F2 [SHOW IF F1 = 02] Why not?
[OPEN END]

F3 [ASK IF F1 = 01] How easy was it to install the aerator? Was it not at all easy, somewhat easy, very easy, or extremely easy?

- 01 Not at all easy
- 02 Somewhat easy
- 03 Very easy
- 04 Extremely easy

F4 [SHOW IF F3 = 01 OR 02] Why did you rate it this way?
[OPEN END]

F5 *[ASK IF F1 = 01]* Overall, how satisfied are you with the faucet aerator you got in your kit? Are you not at all satisfied, somewhat satisfied, very satisfied, or extremely satisfied?

- 01 Not at all satisfied
- 02 Somewhat satisfied
- 03 Very satisfied
- 04 Extremely satisfied

F6 *[SHOW IF F5 = 01 OR 02]* Why did you rate it this way?
[OPEN END]

MEASURE: SHOWERHEAD

[ASK IF SHEAD_FLG = 1 AND IMD = 1 OR 88 ELSE SKIP TO SAT1]

G1 Now we would like to ask you some questions about the showerhead you got in your kit.

Is the showerhead currently installed in your home?

- 01 Yes
- 02 No
- 88 Don't know

G2 *[SHOW IF G1 = 02]* Why not?
[OPEN END]

G3 *[ASK IF G1 = 01]* How easy was it to install the showerhead? Was it not at all easy, somewhat easy, very easy, or extremely easy?

- 01 Not at all easy
- 02 Somewhat easy
- 03 Very easy
- 04 Extremely easy

G4 *[SHOW IF G3 = 01 OR 02]* Why did you rate it this way?
[OPEN END]

G5 *[ASK IF G1 = 01]* Overall, how satisfied are you with the showerhead you got in your kit? Are you not at all satisfied, somewhat satisfied, very satisfied, or extremely satisfied?

- 01 Not at all satisfied
- 02 Somewhat satisfied
- 03 Very satisfied
- 04 Extremely satisfied

G6 *[SHOW IF G5 = 01 OR 02]* Why did you rate it this way?
[OPEN END]

SATISFACTION

[ASK OF ALL]

SAT1 In these next few questions, we ask you about your overall experience with the *HomeCheck® Online* assessment and kit offering and MidAmerican as a utility.

Overall, how satisfied are you with the *HomeCheck® Online* assessment and kit offering? Are you not at all satisfied, somewhat satisfied, very satisfied, or extremely satisfied?

- 01 Not at all satisfied
- 02 Somewhat satisfied
- 03 Very satisfied
- 04 Extremely satisfied

SAT2 [SHOW IF SAT1 = 01, 02, 03] Why did you rate your satisfaction that way?
[OPEN END]

SAT3 How likely are you to recommend the *HomeCheck® Online* assessment and kit offering to a family member or friend? Please answer on a scale of 0 to 10, where 0 is "extremely unlikely" and 10 is "extremely likely".

[NUMERIC SLIDER 0-10]

SAT5 The next questions ask about your experience with MidAmerican as your energy provider. How would you rate the service provided by MidAmerican? Would you say not at all satisfied, somewhat satisfied, very satisfied, or extremely satisfied?

- 01 Not at all satisfied
- 02 Somewhat satisfied
- 03 Very satisfied
- 04 Extremely satisfied

SAT8 Compared to prior to your participation in the *HomeCheck® Online* assessment and kit offering, are you more satisfied, just as satisfied, or less satisfied with MidAmerican as your energy provider?

- 01 More satisfied
- 02 Just as satisfied
- 03 Less satisfied

SAT6 [SHOW IF SAT8 = 01 OR 03] Why do you say that?
[OPEN END]

FINAL PROCESS

[ASK OF ALL]

C10 Next we have a few questions to understand how you make decisions about energy efficiency as a part of your daily life.

Thinking about your household over the next six months, are you... not at all likely, somewhat likely, very likely, or extremely likely to do the following?

[PROGRAMMER NOTE: ROTATE A – E]

For C10A through C10E:

- 01 Not at all likely
- 02 Somewhat likely
- 03 Very likely
- 04 Extremely likely
- 88 Don't know
- 99 Refused

C10A To purchase new energy efficient equipment or appliances for my home?

C10B To allow a contractor into my home to service existing equipment or appliances?

C10C To look for additional ways to save energy in my home that are low cost or no cost?

C10D To start a major home renovation or remodeling project?

C10E To build a new home?

C11 Thinking about the last five statements, did the COVID-19 pandemic influence any of your responses?

- 01 Yes
- 02 No
- 99 Don't know

C12 [SHOW IF C11 = 01] How did it influence your responses?
[OPEN END]

DEMOGRAPHICS

[ASK OF ALL]

DEM1 What type of home do you live in? Is it a . . .? [SELECT ONE ANSWER]

- 01 Single-family detached house
- 02 Single-family attached house (townhouse, row house, or duplex)
- 03 Apartment building with 2-4 units
- 04 Apartment building with 5 or more units
- 05 Mobile home or house trailer
- 06 Other (Specify)

DEM2 Do you own your home or are you renting?

- 01 Own / buying
- 02 Rent
- 99 Refused

DEM3 In what year was your home built?

- _____ Year [1800-2020]
- 8888 Don't know

DEM3a [SHOW IF DEM3 = 8888] Approximately when was your home built? [SELECT ONE]

- 01 1930s or earlier
- 02 1940s
- 03 1950s
- 04 1960s
- 05 1970s
- 06 1980s
- 07 1990s
- 08 2000s
- 09 2010s
- 88 Don't know

DEM4 What is the main fuel used to heat your home? [SELECT ONE CATEGORY]

- 01 Electricity
- 02 Natural gas
- 03 Bottled gas propane
- 04 Fuel oil
- 05 Wood
- 06 Other (SPECIFY)
- 88 Don't know

DEM5 What is the main fuel used to heat your water? [SELECT ONE CATEGORY]

- 01 Electricity
- 02 Natural gas
- 03 Bottled gas propane
- 04 Fuel oil
- 05 Other (SPECIFY)
- 88 Don't know

DEM6 Do you have central air conditioning in your home?

- 01 Yes
- 02 No
- 88 Don't know

DEM7 How many working room or window air conditioners do you have in your home?

___ Number of units [0-20]
88 Don't know

DEM8 How many years have you lived in your home?

___ Number of years [0-200]
888 Don't know

DEM9 Not including unfinished basements or crawlspace, which of the following best describes the square footage of your home? Is it... *[SELECT ONE CATEGORY]*

01 Less than 1,000 square feet
02 1,000 to 1,500 square feet
03 1,501 to 2,000 square feet
04 2,001 to 3,000 square feet
05 More than 3,000 square feet
88 Don't know

DEM10 Counting yourself, how many people normally live in this household on a full-time basis?

___ Number of people [0-20]
99 Refused

DEM11 How old were you on your last birthday? Were you... *[SELECT ONE CATEGORY]*

01 18-24
02 25-34
03 35-44
04 45-54
05 55-64
06 65 or older
88 Don't know
99 Refused

DEM14 Including wages, salaries, pensions, Social Security and other sources of income for all members of your household, what was your total household income before taxes in 2019? Please select from the following categories. Was it... *[SELECT ONE CATEGORY]*

01 Less than \$24,000
02 \$24,000 to less than \$50,000
03 \$50,000 to less than \$75,000
04 \$75,000 to less than \$100,000
05 \$100,000 or greater
88 Don't know
99 Refused

CONCLUSION

[ASK OF ALL]

- L1** We may conduct additional research as part of this study. If selected, customers would receive a \$75 VISA gift card for participating in a 45-minute conversation about their experiences with *HomeCheck® Online*.

Are you willing to participate in additional research?

- 01 Yes
02 No

- L2** [ASK IF L1 = 1] What's the best way to contact you to schedule a conversation with you?

Name: [OPEN END]
Email : [OPEN END]
Phone: [OPEN END]

INT99 Those are all the questions we have for you. Thank you for your participation!

Please press Finish to submit your survey.

- CO Submit answers [GO TO <https://www.midamericanenergy.com/residential-efficiency-programs>]

TERMINATIONS

- T1** Based on your responses you are not eligible to complete this study at this time. We may reach out to you again in the future. We appreciate your time and willingness to participate.

- 01 Terminate programs [GO TO <https://www.midamericanenergy.com/residential-efficiency-programs>]

APPENDIX E: DESIGN REVIEW IN-DEPTH INTERVIEW GUIDE

MIDAMERICAN ENERGY RESIDENTIAL ASSESSMENT PARTICIPANT INTERVIEW GUIDE

ID Number:

Interviewee(s):

Company Name:

Interviewer(s):

Date:

BACKGROUND

This guide will be used to understand the perspectives of Iowa program participants in MidAmerican's Residential Assessment program.

In-depth interviews will be conducted by Illume staff via Zoom.com (an online meeting platform, which also allows participants to call in by phone). The interviews will generally be semi-structured. Therefore, the following interview protocol is only a guide to ensure certain topics are covered, but evaluators will follow the flow of the interview and modify questions as needed to fit the interviewee's circumstance and flow of conversation. However, some questions have been designed to be specifically followed to ensure consistency.

We expect the interviews to take 30 minutes. We will attempt to schedule interviews with respondents in advance to accommodate each participant's schedule.

RESEARCH QUESTIONS

Program Design

How do customers learn about the HomeCheck® Online assessment tool?

How do customers access the online assessment tool and the results page?

Engagement

What drives customers to complete an online assessment?

What motivates customers to interact with the recommendations page, including updating the statuses of their recommendations?

Satisfaction

What are the customer perceptions of the online assessment tool?

How useful are the information and recommendations provided?

Do customers have any recommendations for improvement?

EMAIL CONFIRMATION

Hi [FIRST NAME],

Thank you for completing the short survey about MidAmerican's HomeCheck® Online program and agreeing to participate in a brief online discussion about your experience completing the home assessment. Our discussion will take about 45 minutes. As a thank you for your time we will send you a \$75 VISA® gift card.

We look forward to talking to you on [DATE] at [TIME].

About 5 minutes before our start-time, please use this link to access the Zoom video conferencing platform:

[LINK]

The link should open in your browser; you will not need to download any application or software. The discussion will take place using Zoom meetings, a video conferencing platform. We recommend that you join from a computer (rather than a phone or tablet), if possible. We will ask you to log in to your MidAmerican Energy account to talk through some of the features. Please have your username and password ready.

If you have any questions about this research or how to use the Zoom platform or call-in number, please contact me at [EMAIL] or [PHONE]

Thank you!

EMAIL TERMINATION

Hi,

Thank you for sharing your experience through our online survey and for your willingness to participate in our conversation about MidAmerican's HomeCheck® Online program.

We have met the required number of participants and at this time we are no longer scheduling interviews.

If you have any further questions please contact me at [EMAIL] or [PHONE].

Thank you again!

INTRODUCTION

INT01 Thank you for completing our previous survey and agreeing to talk to us about your experience with MidAmerican's HomeCheck® Online (online home assessment) program.

We would like to talk to you about how you first heard about the HomeCheck® Online home assessment and why you decided to complete it. Later on, we'll ask you to share your screen to show us how you use your online account, how you found the HomeCheck® Online Home Assessment report, and how you used that information.

With your permission, I'd like to record this discussion. This is just for our reporting and note-taking purposes and we will not share the full video with anyone outside of our company.

This discussion will take about 45 minutes of your time.

1. Do I have your consent to begin recording? *[BEGIN RECORDING AFTER AGREE TO IT]*
2. Do you have any other questions before I begin?
3. Can you begin by introducing yourself and telling me a bit about your home? *[USE TO BUILD RAPPORT ADD QUICK POSITIVE COMMENTS]*

ENGAGEMENT & MOTIVATION

The questions in this section are intended to gain an understanding of what motivates customers to participate and proceed through the program.

[Throughout the conversation the interviewer will adopt the terms and language that respondents use to describe the tools and recommendations.]

4. How did you find out about the HomeCheck® Online home assessment? Thinking about when you first heard about HomeCheck® Online, what motivated you to complete the online home assessment?
5. What were your expectations of the program overall? What piqued your interest in the program?
 - a. *[Probe for]* What kind of information did you think you would get after completing the home assessment?
6. What were your primary concerns around your home before you participated in the program? Did you have any problem areas in your home?
7. Did you have plans for home improvements or renovations?
 - a. *[IF YES]* What kinds of projects did you have lined up to do?
 - b. How far along are those projects now?

8. When you completed the HomeCheck® Online assessment, what did you expect to get out of the exercise? Why did you think you needed to do a home assessment?
 - a. [Probe for saving energy, environment, saving money, to receive a kit, to impact comfort in the home]
 - b. [Probe for customized results or tips]

HOMECHECK® ONLINE EXPERIENCE

[NOTE: The questions in this section are intended to gain an understanding of how customers learned about the program and how they navigated through the online processes. We will guide respondents through a user experience activity to learn how they experienced the program and navigated through the online assessment.]

INTRO02 For this next exercise, please be assured there are no wrong answers and everything you say will be helpful. Feel free to share as much as you can. We would like to understand how you used the resources and results that were generated for you.

We encourage you to be as open as possible, and all information gathered will be reported in aggregate so that your personal information will be kept confidential.

Next, I would like to ask you to share your screen as we talk through the website and your account portal. I'll give you a minute to log into your account. Do you need me to walk you through how to share your screen with me?

[ASK PARTICIPANT TO SHARE SCREEN OF MID-AMERICAN HOME PAGE]

Instructions on how to share screen. (If needed)

I'll share my screen to show you how it's done. You'll see a green button with an arrow at the bottom of the Zoom window. When you click on it, you'll have a few options. You can either share the whole screen or a specific window. I recommend you share your specific Internet window with me.

Click on that option and then click on the blue "share" button on the bottom right corner.

[SHARE SCREEN WITH INSTRUCTIONS FROM ZOOM WEBSITE]

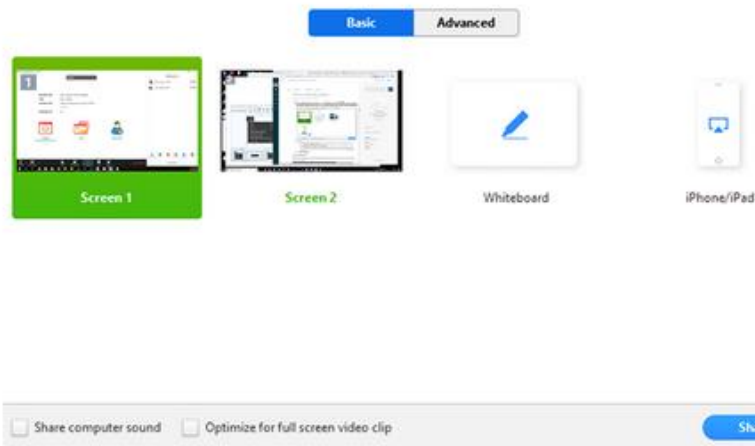
Sharing your screen

1. Click the **Share Screen** button located in your meeting controls.




2. Select one of these screen share options:

- **Basic:** Share your entire desktop, specific application window, [whiteboard](#), or [iPhone/iPad](#) screen.



The following images are for reference for the interviewer. Where possible the participant will share their screen as they talk through their experience.



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Pay by Checking | Savings
Pay by Credit | Debit Card
View Bills
Budget Billing
Payment History
Usage History
Outage Map
Email | Text Alerts
Moving?

- Start Service
- Transfer Service
- Stop Service

Account Overview

Current Amount Due:

Due Date: 7/8/2020

Last Payment Amount: _____


Last Payment Received: _____

[View Bills](#) |
[Manage Recurring Payment](#) |
[Edit Banking Info](#)

Quick Actions

[Streetlight Repair](#)
[Tree Trimming](#)

Energy Efficiency



My Profile

Account

Status: ✓ ACTIVE

Address: _____

Primary: _____

Email: _____

Text: _____

[Update Contact Info](#)
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[Add Account](#)

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 - Understanding Your Bill
- Safety
- Energy Efficiency
 - Appliance Recycling
 - HomeCheck® Online**
 - SummerSaver™
 - Iowa Programs and Rebates
 - Illinois Programs and Rebates
 - Nebraska Programs and Rebates

HomeCheck® Online

The [HomeCheck Online](#) energy assessment is a free tool that analyzes the effects of your home energy use based on your lifestyle and habits. It also provides information on what uses the most energy in your home and personalized tips to reduce your energy use. Residential customers can complete the free assessment any time.

Check in every month to gain more insight on your energy use and view tips on more ways to save!

Access the [HomeCheck Online](#) tool any time using your My Account username and password. If you don't have an online account, create one [here](#).

- In the top navigation, select **Your Energy Use** to see an overview of your energy use by month and to see how much energy your home uses.
- For customized energy-saving tips, click **Ways to Save** in the top navigation and select Home Energy Analysis to complete a short survey. Upon completion, you will see a chart of what uses the most energy in your home.

Iowa and Illinois residential customers who complete an online assessment may be eligible for a [free energy efficiency kit](#).

If you need assistance with the tool or would like to complete your HomeCheck Online over

9. *[Interviewer will modify language based on the words that the respondent uses for the HomeCheck® Online assessment/survey/questions].* How did you first get started answering the questions? Please show me, to the best of your memory, how you navigated around the website to get to the assessment?
- [Allow the participant to talk through the process]*
 - [Probe for]* What do you remember clicking on first?

REPORT EXPERIENCE – HAVE SEEN REPORT

10. *[Modify language based on the words that the respondent uses].* So after completing the HomeCheck® Online assessment, you should have received some results. Do you remember getting these customized results? *[If yes, continue. If not probe and direct respondent to the results section of the portal and skip to Q12]*
11. *[Ask those who have seen the results]* What steps did you take to navigate to your Tips page from this screen? How did you find instructions on how to access it?

MIDAMERICAN ENERGY COMPANY

Your Energy Use Ways to Save

Analyze your energy use

Tell us a bit about your home—it takes less than five minutes

How many people live in your home?

Select one...

Tell us about your home
Answer some questions about your home to complete your home profile.

See what uses most
Learn how much you spend on heating, cooling, hot water, and more.

Lower your bill
Find ways to make your home more efficient and cut back on energy costs.

MIDAMERICAN ENERGY COMPANY

Your Energy Use Ways to Save

Save more with an Energy Efficiency Kit

Congratulations, you have qualified for a free energy efficiency kit! Your kit will be delivered to the mailing address associated with your MidAmerican Energy Company account. Please allow up to four weeks for delivery.

If you do not wish to receive an energy efficiency kit, please [opt-out](#) here.

Home Energy Analysis

Annual energy usage

Heating	52%
Water Heating	20%
Appliances	11%
Other	11%
Lighting	4%
Cooling	2%

Click on a category to learn more

This estimate is based on information about [your home](#) and is reflective of the fuel type that MidAmerican Energy services for your home.

Your largest cost is **heating**. [GET HEATING TIPS](#)

Was this information helpful?

[Contact Us](#) | [Terms of Use](#) | [Privacy Policy](#) | [FAQ](#)

- a. *[Modify language based on the words that the respondent uses].*
 - i. *[Probe for]* How did you navigate to the results page? Did you find the results through MidAmerican’s main website? Through your personal Account Portal? Did you click on the green button to get more tips?
- b. Please talk me through your results. What did you see? What information do the results this convey? Looking at this, what do you like or dislike? *Why?* *[Probe for both type of information and presentation]* How easy or difficult was it to navigate the results?
- c. *[Ask respondents who have previously seen the results]* Looking at the information you received in your HomeCheck® Online assessment results, what was your initial reaction to the information provided? What did you think of the tips in your results? *Why* is that?
- d. When you saw the Home Energy Analysis pie chart, how did you interpret the information you saw? How did you use the information in the chart? How useful or helpful was this information for you?

[If needed probe with] You may use a 1 to 5 scale where 1 means not at all useful and 5 means very useful.

- e. *[Probe for]* Personalized tips/Relevance of tips?
- f. How did you use the tips page? How did you incorporate the recommendations in and around your home? Did you save any tips for later or mark any recommendations as completed? Why or why not?

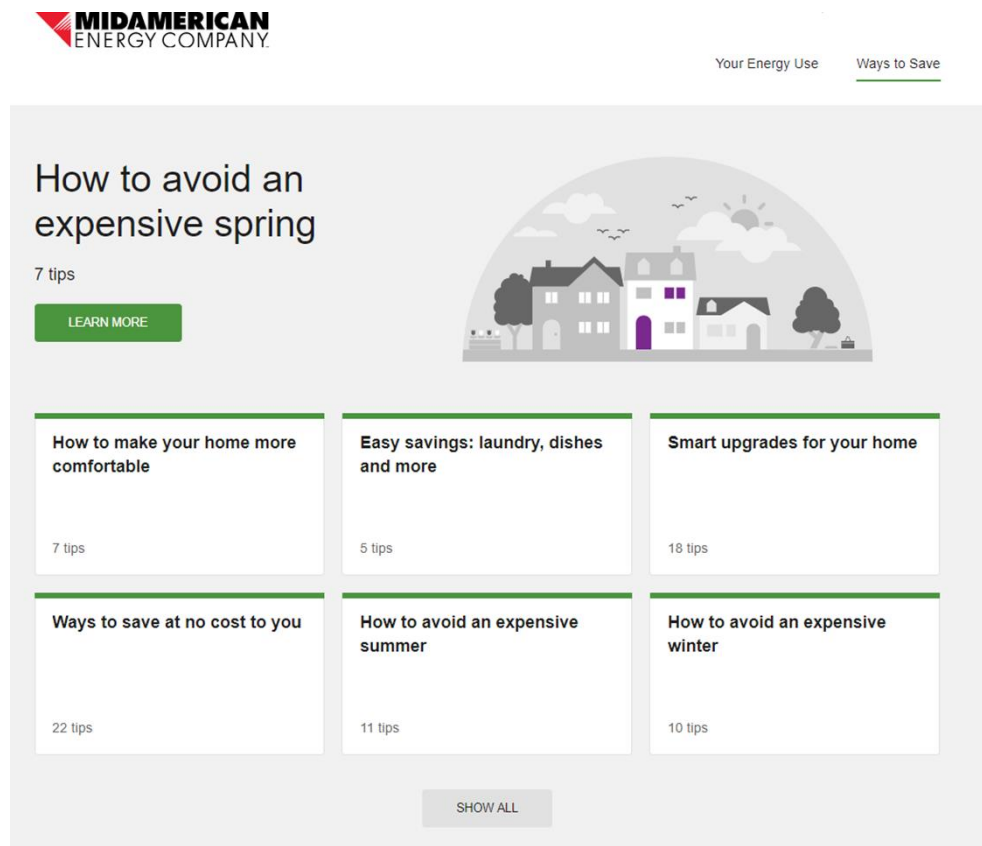
SKIP TO **Error! Reference source not found.** SECTION

RESULTS EXPERIENCE – HAVE NOT SEEN RESULTS

12. Next, talk me through what you're looking at on the results page. What interests you? What information does this convey? Looking at this, what do you like or dislike? Why? *[Probe for both type of information and presentation]* How easy or difficult is it to navigate the results?

[If needed probe with] You may use a 1 to 5 scale where 1 means very difficult and 5 means very easy.

[If necessary: Assure them that there are no wrong answers, provide encouraging feedback to keep talking through the experience].




- a. Looking at the tips generated based on your answers to the HomeCheck® Online assessment results, what is your initial reaction to the information provided? What do you think of the tips? Why is that?
- b. How do you think you will be able to use the tips page? How can you foresee incorporating the tips in and around your home? Why or why not?


SKIP TO SECTION

ENGAGEMENT WITH RECOMMENDED TIPS

[NOTE: The questions in this section are intended to gain an understanding of how respondents use the results recommendations and engage other members of their household.]



Logged in as: CLAUDIA | [Logout](#) | [Account & Preferences](#)
[Your Energy Use](#) | [Ways to Save](#)













How to avoid an expensive winter

These 10 tips were selected using information from your [Home Energy Analysis](#).

Need? Have you started this tip? X

Keep track of what you've done by indicating which tips you've completed

	Open your shades on winter days for natural light and warmth Save up to \$30 per year 558 neighbors do this	✓	🔖
	Install a programmable thermostat Save up to \$425 per year 625 neighbors do this	✓	🔖
	Set your thermostat to 68°F in the winter Save up to \$395 per year 541 neighbors do this	✓	🔖
	Block drafts of cold air around your doors Save up to \$100 per year 215 neighbors do this	✓	🔖
	Seal air leaks Save up to \$425 per year 198 neighbors do this	✓	🔖
	Clean or replace air filters Save up to \$110 per year 504 neighbors do this	✓	🔖
	Clear area around heating and cooling vents Save up to \$110 per year 436 neighbors do this	✓	🔖
	Turn down your thermostat when using your fireplace Save up to \$10 per year 58 neighbors do this	✓	🔖
	Seal leaky ducts Save up to \$320 per year 193 neighbors do this	✓	🔖
	Use LED holiday lights Save up to \$30 per 100 bulbs per season 98 neighbors do this	✓	🔖

EXPLORE OTHER WAYS TO SAVE

12. What did the information in the results mean to you and your household?
 - a. How did you feel about the amount of information in the results?
 - b. Are there any questions or concerns that you have about each of the tips, either specific tips or as a whole? *[Probe for cost, investment, impact on energy savings, level of difficulty or expertise required]*
13. Did you share the results of your assessment with anyone in your household? IF YES, whom did you share it with and why? How did they think the information would be useful to them?
14. Did you share the results of your assessment with anyone outside your household? IF YES, whom did you share it with and why? How did they think the information would be useful to them?
15. How did you use the tips list? *[Probe for]*
Please show me the status of a few of your tips. When you see the check mark and ribbon icons on the side of each tip, how do you think you would use these features?
[Probe for] Why were you motivated to update the statuses of the tips you received, if at all?

CONCLUSION

The questions in this section confirm the delivery email address and respondent information to correctly deliver the incentives.

18. Those are all the questions we have for you. Is there anything else you would like to share that we haven't asked you about?
19. Thank you for your time today! As a thank you for completing this discussion we will send you a \$75 e-gift card. Can you please verify your name and email address for us to send the \$75 e-gift card?

Name:

Email address:

APPENDIX F: NONPARTICIPANT SURVEY

MidAmerican Energy Residential Nonparticipant Survey

Survey Sections:

- Sample Variables
- Introduction
- Household Characteristics
- Overall Program Awareness
- MidAmerican Website
- Program Specific Awareness
- Lighting
- Energy Efficiency Attributed and Barriers
- Satisfaction
- Demographics
- Conclusion

SAMPLE VARIABLES

CASEID	Unique case identifier
PHONE_NUM	Contact's telephone number
CONTACT_NAME	Contact name listed in participant database
ADDRESS	Address where equipment was installed
CITY	
STATE	
ZIP	
ACCOUNT_NUM	Account number
TRF_TYPE_CD	Type of Account
	1 Residential
METER_TYPE	Electric, Gas
REP	Assigned replicate

INTRODUCTION

INTRO *[INTERVIEWER INSTRUCTION: Please dial the phone number <PHONE_NUM> and enter the call result.]*

01	Connected	[PROCEED]
02	Did not connect	[DISPO CASE OUT]

INT01 Hello, my name is _____ calling from Tetra Tech on behalf of MidAmerican Energy. We are conducting a study about MidAmerican's energy efficiency offerings. This is not a sales call, and your responses will provide MidAmerican Energy with the opportunity to collect direct customer feedback that will inform and improve MidAmerican Energy's energy efficiency programs.

May I speak with one of the people in your household that is most knowledgeable about your household's energy usage?

[IF CONTACT_NAME IS NOT BLANK SHOW "The name we have on record is <CONTACT_NAME>."]

- | | | |
|----|----------------------------------|----------------------------|
| 01 | Yes | |
| 02 | No, R not knowledgeable | [SKIP TO OTHER_R] |
| 03 | No, R is not currently available | [SCHEDULE CALLBACK] |
| 04 | Did not connect | [DISPO CASE OUT] |

PREAMBLE [IF NEEDED: I'm not selling anything; I'd just like to ask your opinions. Let me assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone unless you grant permission.]

Before we start, I would like to inform you that for quality control purposes, this call will be recorded and monitored.

- 01 Continue

FAQ [THE FOLLOWING IS AVAILABLE ONLY IF NEEDED:

Who is doing this study: MidAmerican Energy has hired our firm to gather this information.

Why are you conducting this study: Studies like this help MidAmerican Energy better understand customers' need for energy efficiency programs and services.

Timing: This survey should take less than 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALLBACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070.

Sales concern: I am not selling anything; we would simply like to hear about your experiences with MidAmerican and their programs. Your responses will be kept confidential and not revealed to anyone unless you grant permission. If you would like to talk with someone from MidAmerican Energy about this study, feel free to call the MidAmerican Energy call center at 888-427-5632.

OTHER_R Is it possible that someone else in your household would be more knowledgeable about your household's energy usage?

- | | | |
|----|------------|-----------------------------|
| 01 | Yes | |
| 02 | No | <i>[INT81 – INELIGIBLE]</i> |
| -8 | Don't know | <i>[INT81 – INELIGIBLE]</i> |
| -9 | Refused | <i>[INT91 – REFUSAL]</i> |

AVAILABLE_R May I please speak with them?

- 01 Yes [SKIP TO INT01]
- 02 Yes, but R is not currently available [INT15 – CALLBACK]
- 03 No [INT91 – REFUSAL]
- 8 Don't know [INT81 – INELIGIBLE]
- 9 Refused [INT91 – REFUSAL]

HOUSEHOLD CHARACTERISTICS

We would first like to understand a little bit more about your household.

I3 Are you, or is anyone in your household, a current or former employee of MidAmerican?

- 01 Yes [THANK & TERMINATE – INELIGIBLE 83]
- 02 No
- 8 Don't know [THANK & TERMINATE – INELIGIBLE 83]
- 9 Refused [THANK & TERMINATE – INELIGIBLE 91]

DEM2 Do you own your home or are you renting? [SELECT ONE]

- 01 Own/ buying
- 02 Rent
- 8 Don't know
- 9 Refused

CW1 Which of the following type of appliances do you have in your home? Do you have... [READ LIST; SELECT ALL THAT APPLY]

For CW1C01 through CW1C88

- 0 Not mentioned
- 1 Mentioned

- CW1C01** Refrigerator; with or without freezer
- CW1C02** Secondary refrigerator; with or without freezer that is plugged in and in use
- CW1C03** Secondary stand-alone freezer that is plugged in and in use
- CW1C77** [DO NOT READ] None
- CW1C88** [DO NOT READ] Don't know

CW2A [ASK IF CW1C01=1] Approximately how old is the primary refrigerator? [SELECT ONE]

- 01 5 years old or less
- 02 6-10 years old
- 03 11-20 years old
- 04 Over 20 years old
- 6 Programmed skip
- 8 Don't know
- 9 Refused

CW2B [ASK IF CW1C02=1] Approximately how old is the secondary refrigerator? [SELECT ONE]

- 01 5 years old or less
- 02 6-10 years old
- 03 11-20 years old
- 04 Over 20 years old
- 6 Programmed skip
- 8 Don't know
- 9 Refused

CW2C [ASK IF CW1C03=1] Approximately how old is the secondary stand-alone freezer? [SELECT ONE]

- 01 5 years old or less
- 02 6-10 years old
- 03 11-20 years old
- 04 Over 20 years old
- 6 Programmed skip
- 8 Don't know
- 9 Refused

CW3 What is the **primary** heating system you use in your home? [READ LIST IF NEEDED; SELECT ONE]

- 01 Forced air system
- 02 Radiant heat system
- 03 Hydronic system (hot water baseboard)
- 04 Steam radiant system
- 05 Geothermal system
- 06 Other (SPECIFY)
- 8 Don't know [SKIP TO DEM4]
- 9 Refused [SKIP TO DEM4]

CW3O Other primary heating system used in home

CW4 Approximately how old is the <CW3>? [DO NOT READ; SELECT ONE]

- 01 5 years old or less
- 02 6-10 years old
- 03 11-20 years old
- 04 Over 20 years old
- 6 Programmed skip
- 8 Don't know
- 9 Refused

DEM4 What is the **main** fuel used to heat your home? *[DO NOT READ; SELECT ONE]*

- 01 Electricity
- 02 Natural gas
- 03 Bottled gas propane
- 04 Fuel oil
- 05 Wood
- 06 Other (SPECIFY)
- 8 Don't now
- 9 Refused

DEM40 Other main fuel used to heat home

CW6 What is the **primary** cooling system you use in your home? *[READ LIST IF NEEDED; SELECT ONE]*

- 01 Central air conditioning
- 02 Geothermal system
- 03 Room air conditioner
- 04 Other (SPECIFY)
- 05 No cooling system
- 8 Don't know
- 9 Refused

CW60 Other primary cooling system used in home

CW8 *[ASK IF CW6 = 01, 03, 04]* Approximately how old is the <CW6>? *[DO NOT READ; SELECT ONE]*

- 01 5 years old or less
- 02 6-10 years old
- 03 11-20 years old
- 04 Over 20 years old
- 6 Programmed skip
- 8 Don't know
- 9 Refused

CW9a Do you have a “smart” thermostat? A “smart” thermostat is wi-fi enabled, and learns and adjusts to your household patterns. Brands of smart thermostats include Nest and Ecobee.
[INTERVIEWER NOTE: THIS IS NOT A PROGRAMMABLE THERMOSTAT]

- 01 Yes
- 02 No
- 8 Don't know
- 9 Refused

CW9b [ASK IF CW9a = 1] Is your smart thermostat an ENERGY STAR smart thermostat?

- 01 Yes
- 02 No
- 6 Programmed skip
- 8 Don't know
- 9 Refused

OVERALL PROGRAM AWARENESS

P1 MidAmerican Energy offers rebates and services to customers to help them save energy.

Before today, had you heard of these rebate programs?

- 01 Yes
- 02 No
- 8 Don't know
- 9 Refused

C1 [ASK IF P1 = 01] How did you learn about these programs and services? *[DO NOT READ; SELECT ALL THAT APPLY]*

For C1C01 through C1C99

0 Not mentioned

1 Mentioned

-6 Programmed skip

- C1C01** MidAmerican utility bill insert
- C1C02** MidAmerican website
- C1C03** MidAmerican brochure
- C1C04** MidAmerican call center representative
- C1C05** Retail store
- C1C06** Contractor
- C1C07** Home show / conference / trade show
- C1C08** Newspaper
- C1C09** Radio
- C1C10** Television
- C1C11** Billboard
- C1C12** Friend / family member / other business
- C1C13** Email from MidAmerican
- C1C14** Key Account Manager (nonresidential only)
- C1C15** Signage at local event such as school or sporting event?
- C1C16** Other (SPECIFY)
- C1C88** Don't know
- C1C99** Refused

C1C160 [ASK IF CAC16=1] Other way learning about program and services specified.

MIDAMERICAN WEBSITE

C2 In the past year, have you visited the MidAmerican website?

01 Yes

02 No *[SKIP TO HC1]*

-8 Don't know *[SKIP TO HC1]*

-9 Refused *[SKIP TO HC1]*

C3 Why did you visit the MidAmerican website? *[DO NOT READ; SELECT ALL THAT APPLY]*

For C3C01 through C3C88

- 0 Not mentioned
- 1 Mentioned
- 6 Programmed skip

- C3C01** Look for information on the program
- C3C02** Look for additional ways/opportunities that MidAmerican offers to help me save energy/money at home
- C3C03** Information on energy efficient appliances
- C3C04** Information on energy efficiency in general
- C3C05** Information on COVID-19
- C3C06** Other (specify)
- *C3C07** Billing
- *C3C08** Outage information
- C3C88** Don't know

C3C010 [ASK IF C3C01=1] Which programs were you looking for information about?

C3C050 [ASK IF C3C05=1] What specific information were you looking for about COVID-19?

C1C060 [ASK IF CAC06=1] Other reason for visiting MidAmerican website specified.

C4 How easy was it to find the information you were looking for? Was it not at all easy, somewhat easy, very easy, or extremely easy? *[SELECT ONE]*

- 01 Not at all easy
- 02 Somewhat easy
- 03 Very easy
- 04 Extremely easy
- 6 Programmed skip
- 8 Don't know

C5 How helpful was the information you found on the website? Was it not at all helpful, somewhat helpful, very helpful, or extremely helpful? *[SELECT ONE]*

- 01 Not at all helpful
- 02 Somewhat helpful
- 03 Very helpful
- 04 Extremely helpful
- 6 Programmed skip
- 8 Don't know

PROGRAM-SPECIFIC AWARENESS

[SKIP TO REA1 IF DEM2 = 2, -8, -9]

Next I'd like to ask if you're aware of some of the specific energy efficiency programs MidAmerican offers its customers.

HC1 The HomeCheck® Online program offers a free online home energy assessment with recommendations for making energy saving improvements. The program also offers energy efficiency kits with easy to install products, such as LED bulbs or low flow showerheads.

Before today had you heard of this program?

- 01 Yes
- 02 No *[SKIP TO HC3]*
- 6 Programmed skip
- 8 Don't know *[SKIP TO HC3]*
- 9 Refused *[SKIP TO HC3]*

HC2 Has your household completed the free HomeCheck® Online energy assessment?

- 01 Yes
- 02 No
- 6 Programmed skip
- 8 Don't know
- 9 Refused

HC3 [ASK IF HC1=02,-8,-9 OR HC2=02,-8] Based on how I described the program, how interested would you be in completing the HomeCheck® Online energy assessment? Would you say you are not at all interested, somewhat interested, very interested, extremely interested? *[SELECT ONE]*

- 01 Not at all interested
- 02 Somewhat interested
- 03 Very interested
- 04 Extremely interested
- 6 Programmed skip
- 8 Don't know
- 9 Refused

REA1 MidAmerican Energy also provides rebates for the purchase of energy efficient equipment such as heating and cooling equipment and smart thermostats.

Before today had you heard anything about the rebates available for this equipment?

- 01 Yes
- 02 No *[SKIP TO REA4]*
- 6 Programmed skip
- 8 Don't know *[SKIP TO REA4]*
- 9 Refused *[SKIP TO REA4]*

REA2 Has your household ever received a rebate from MidAmerican for these types of high efficiency equipment? [IF NEEDED: Equipment such as heating and cooling equipment, and thermostats.]

- 01 Yes
- 02 No *[SKIP TO REA4]*
- 6 Programmed skip
- 8 Don't know *[SKIP TO REA4]*
- 9 Refused *[SKIP TO REA4]*

REA2A When did you receive the rebate? *[READ LIST UNTIL R ANSWERS; SELECT ONE]*

- 01 Less than 6 months ago
- 02 6 months to less than 1 year
- 03 1 year to less than 2 years
- 04 2 or more years
- 6 Programmed skip
- 8 Don't know
- 9 Refused

REA3 For what type of equipment did you apply for a rebate? *[DO NOT READ; SELECT ALL THAT APPLY]*

For REA3C01 through REA3C88:

- 0 Not mentioned
- 1 Mentioned
- 6 Programmed skip

- REA3C01** High efficiency heating equipment (furnace/boiler/furnace fan)
- REA3C02** Water heater
- REA3C03** Central air conditioner
- REA3C04** Room air conditioner
- REA3C05** Programmable thermostat
- REA3C06** Heat pump (geothermal, air-source, etc.)
- REA3C07** Refrigerator
- REA3C08** Freezer
- REA3C09** Clothes washer
- REA3C10** Dishwasher
- REA3C11** Duct work improvement
- REA3C12** Other (SPECIFY)
- REA3C88** Don't know

REA3C120 [ASK IF REA3C12=1] Other type of equipment applied for specified.

REA4 [ASK IF REA1 = 02 OR REA2 = 02, -8, -9] How interested would you be in learning more about rebates for energy efficient equipment such as heating and cooling equipment, and thermostats?

Would you say you are not at all interested, somewhat interested, very interested, extremely interested? *[SELECT ONE]*

- 01 Not at all interested
- 02 Somewhat interested
- 03 Very interested
- 04 Extremely interested
- 6 Programmed skip
- 8 Don't know
- 9 Refused

AR1 [ASK IF METER_TYPE="Electric" ELSE SKIP TO LT3] MidAmerican Energy also offers an Appliance Recycling program, which gives customers \$50 for recycling older refrigerators or freezers. MidAmerican Energy picks up and recycles the appliances so they cannot be used again.

Before today had you heard anything about the Appliance Recycling program?

- 01 Yes
- 02 No [SKIP TO AR3]
- 6 Programmed skip
- 8 Don't know [SKIP TO AR3]
- 9 Refused [SKIP TO AR3]

AR2 Has your household recycled an appliance through this program?

- 01 Yes
- 02 No
- 6 Programmed skip
- 8 Don't know
- 9 Refused

AR2A [ASK IF AR2 = 01] When was your most recent year of participation?

- ____ Year [1900-2020]
- 6 Programmed skip
- 8 Don't know
- 9 Refused

AR2B [ASK IF AR2 = 01] Did you use the self-scheduling tool to schedule your appliance pick-up?

- 01 Yes
- 02 No
- 6 Programmed skip
- 8 Don't know
- 9 Refused

AR3 [SKIP IF AR1=01 AND AR2=01] How interested would you be in participating in the Appliance Recycling program? Would you say you are not at all interested, somewhat interested, very interested, extremely interested? [SELECT ONE]

- 01 Not at all interested
- 02 Somewhat interested
- 03 Very interested
- 04 Extremely interested
- 6 Programmed skip
- 8 Don't know
- 9 Refused

AR4 [ASK IF AR3 = 02, 03, OR 04] The program offers a self-scheduling tool option to schedule pick-ups. If you were to participate in the program, would you use the self-scheduling tool to schedule your appliance pick-up?

- 01 Yes
- 02 No
- 6 Programmed skip
- 8 Don't know
- 9 Refused

LIGHTING

I would next like to ask you a few questions about your lighting.

LT3 Thinking about all of the sockets inside and outside your home that are for screw-in type bulbs, what percent of these sockets have CFLs currently installed?
[IF NEEDED: Your best estimate if fine.] [IF NEEDED: CFLs usually do not look like regular incandescent bulbs. The most common type of compact fluorescent bulb is made with a glass tube bent into a spiral, resembling soft-serve ice cream, and it fits in a regular light bulb socket.]

- ____ [RECORD PERCENT 0-100]
- 8 Don't know
- 9 Refused

LT5 Another type of light bulb that is also being used in homes is called an LED. These bulbs look like regular light bulbs. We are not referring to battery-operated LEDs, holiday lights, or decorative strands. Thinking about all of the sockets inside and outside your home that are for screw-in type bulbs, what percent of these sockets have LEDs currently installed?
[IF NEEDED: Your best estimate if fine.]

- ____ [RECORD PERCENT 0-100]
- 8 Don't know
- 9 Refused

ENERGY EFFICIENCY ATTRIBUTED & BARRIERS

C6 Please tell me, when considering an appliance or equipment purchase for your home, how important are each of the following factors in your decision? Please respond with not at all important, somewhat important, very important, or extremely important to you. How important is... *[PROGRAMMER NOTE: ROTATE A – G]*

For C6A through C6G:

- 01 Not at all important
- 02 Somewhat important
- 03 Very important
- 04 Extremely important
- 1 Partially completed survey
- 8 Don't know
- 9 Refused

C6A saving money on my energy bills?

C6B the cost of equipment?

C6C the availability of a rebate, such as those offered by MidAmerican Energy or the manufacturer?

C6D it that someone you know had a positive experience with the equipment?

C6E improving the comfort of your home?

C6F increasing the value of your home?

C6G it that the equipment was recommended to you by a contractor or retailer?

EEA2 What challenges, if any, do you face in saving energy in your home?

[RECORD VERBATIM]

C10 Thinking about your household over the next six months, are you not at all likely, somewhat likely, very likely, or extremely likely to do the following?

[PROGRAMMER NOTE: ROTATE A – E]

For C10A through C10E:

- 01 Not at all likely
- 02 Somewhat likely
- 03 Very likely
- 04 Extremely likely
- 1 Partially completed survey
- 8 Don't know
- 9 Refused

C10A purchase new energy efficient equipment or appliances for my home?

C10B allow a contractor into my home to service existing equipment or appliances?

C10C look for additional ways to save energy in my home that are low cost or no cost?

C10D start a major home renovation or remodeling project?

C10E build a new home?

C11 Thinking about the last five statements that I read to you, did the COVID-19 pandemic influence any of your responses?

- 01 Yes
- 02 No
- 1 Partially completed survey
- 8 Don't know

C12 [ASK IF C11 = 01] How did it influence your responses?

[RECORD VERBATIM]

SATISFACTION

SAT5 This next question asks about your experience with MidAmerican Energy in general as your energy provider. How would you rate the service provided by MidAmerican Energy? Would you say not at all satisfied, somewhat satisfied, very satisfied, or extremely satisfied? *[SELECT ONE]*

- 01 Not at all satisfied
- 02 Somewhat satisfied
- 03 Very satisfied
- 04 Extremely satisfied
- 1 Partially completed survey
- 8 Don't know *[SKIP TO DEM1]*
- 9 Refused *[SKIP TO DEM1]*

SAT5a Why did you rate your satisfaction with MidAmerican Energy as "<SAT5>"?

[RECORD VERBATIM]

HOUSEHOLD DEMOGRAPHICS

We are almost done; I just have a few final questions.

DEM1 What type of home do you live in? Is it a . . . ? *[READ LIST; SELECT ONE]*

- 01 Single-family detached house
- 02 Single-family attached house (townhouse, row house, or duplex)
- 03 Apartment building with 2-4 units
- 04 Apartment building with 5 or more units
- 05 Mobile home or house trailer
- 06 Other (Specify)
- 1 Partially completed survey
- 8 Don't know
- 9 Refused

DEM10 Other type of home specified.

DEM3 In approximately what year was your home built?

- _____ Year [1800-2020]
- 1 Partially completed survey
- 8 Don't know

DEM3a [ASK IF DEM3 = -8] When was your home built? Please stop me when I get to the appropriate category. *[READ LIST UNTIL R ANSWERS; SELECT ONE]*

- 01 1930s or earlier
- 02 1940s
- 03 1950s
- 04 1960s
- 05 1970s
- 06 1980s
- 07 1990s
- 08 2000s
- 09 2010s
- 1 Partially completed survey
- 6 Programmed skip
- 8 Don't know
- 9 Refused

DEM8 How many years have you lived in your home? *[ENTER 0 IF LESS THAN ONE FULL YEAR]*

- _____ Number of years [0-100]
- 1 Partially completed survey
- 8 Don't know
- 9 Refused

DEM9 Not including unfinished basements or crawlspace, which of the following best describes the square footage of your home? Is it... *[READ LIST UNTIL R ANSWERS; SELECT ONE]*

- 01 Less than 1,000 square feet
- 02 1,000 to 1,500 square feet
- 03 1,501 to 2,000 square feet
- 04 2,001 to 3,000 square feet
- 05 More than 3,000 square feet
- 1 Partially completed survey
- 8 Don't know
- 9 Refused

DEM10 Counting yourself, how many people normally live in this household on a full-time basis?

- _____ Number of people [0-20]
- 1 Partially completed survey
- 8 Don't know
- 9 Refused

DEM13 How old were you on your last birthday? Were you... *[READ LIST; SELECT ONE]*

- 01 18 to 24
- 02 25 to 34
- 03 35 to 44
- 04 45 to 54
- 05 55 to 64
- 06 65 or older
- 1 Partially completed survey
- 8 Don't know
- 9 Refused

DEM14 Including wages, salaries, pensions, Social Security and other sources of income for all members of your household, what was your total household income before taxes in 2019? Please select from the following categories. Was it... *[READ LIST UNTIL R ANSWERS; SELECT ONE]*

- 01 Less than \$24,000
- 02 \$24,000 to less than \$50,000
- 03 \$50,000 to less than \$75,000
- 04 \$75,000 to less than \$100,000
- 05 \$100,000 or greater
- 1 Partially completed survey
- 8 Don't know
- 9 Refused

THANK Those are all the questions I have for you today. Thank you so much for your time. MidAmerican Energy appreciates your participation in this survey.

- 01 End survey

DEM15 *[DO NOT ASK]* Record respondent gender

- 01 Male
- 02 Female
- 1 Partially completed survey
- 8 Don't know

INT99 *[Count case as complete.]*

- CP Completed on phone
- 1 Partially completed survey

APPENDIX G: POSTCARD SURVEY

The figures below example postcard surveys for dual fuel, electric only, and gas-only kits. Postcard surveys are included in each kit.

Figure 21. Example Postcard Survey for Dual Fuel Kit Participants

YOUR OPINION MATTERS

Thank you for participating in MidAmerican Energy Company's energy efficiency programs. Please take a moment to complete this survey to help us improve the Energy Efficiency Kit and HomeCheck® Online programs.

I installed the following items from the Energy Efficiency Kit:

- ☐ LED 1
- ☐ LED 2
- ☐ Advanced Power Strip
- ☐ Aerator
- ☐ Showerhead


If you installed the LEDs, what type of bulb did you replace?

- ☐ Traditional incandescent bulb
- ☐ CFL bulb
- ☐ LED bulb
- ☐ Halogen bulb
- ☐ Other/Don't know


On a scale of 1 to 5, where 1 is not at all useful and 5 is very useful, how useful was the information you received as part of the HomeCheck Online home energy assessment (Circle one).


1
2
3
4
5

What would have made the HomeCheck Online home energy assessment more useful to you?



Obsessively. Relentlessly
At Your Service

For more information on all of MidAmerican Energy Company's energy efficiency programs, please visit MidAmericanEnergy.com/ee 



6-290 | 5-15-19

Figure 22. Example Postcard Survey for Electric Kit Participants

YOUR OPINION MATTERS

Thank you for participating in MidAmerican Energy Company's energy efficiency programs. Please take a moment to complete this survey to help us improve the Energy Efficiency Kit and HomeCheck® Online programs.

I installed the following items from the Energy Efficiency Kit:

- ☐ LED 1
- ☐ LED 2
- ☐ Advanced Power Strip


If you installed the LEDs, what type of bulb did you replace?

- ☐ Traditional incandescent bulb
- ☐ CFL bulb
- ☐ LED bulb
- ☐ Halogen bulb
- ☐ Other/Don't know

On a scale of 1 to 5, where 1 is not at all useful and 5 is very useful, how useful was the information you received as part of the HomeCheck Online home energy assessment (Circle one).


12345

What would have made the HomeCheck Online home energy assessment more useful to you?



Obsessively, Relentlessly
At Your Service

For more information on all of MidAmerican Energy Company's energy efficiency programs, please visit MidAmericanEnergy.com/ee



6-291 | 5-15-19

Figure 23. Example Postcard Survey for Gas Kit Participants

YOUR OPINION MATTERS

Thank you for participating in MidAmerican Energy Company's energy efficiency programs. Please take a moment to complete this survey to help us improve the Energy Efficiency Kit and HomeCheck® Online programs.


I installed the following items from the Energy Efficiency Kit:

- ☐ Aerator
- ☐ Showerhead

On a scale of 1 to 5, where 1 is not at all useful and 5 is very useful, how useful was the information you received as part of the HomeCheck Online home energy assessment (Circle one).


12345

What would have made the HomeCheck Online home energy assessment more useful to you?



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