

| Program | Recommendation | Recommendation Summary | Type of Recommendation | Level of Effort | Priority | Product Manager | Status | 2021 Update |
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| Commercial New Construction | Recommendation #1: Willdan should continue its current practices of maintenance for energy modeling protocols and the current quality assurance/ quality control (QA/QC) of energy models to ensure sustained accuracy for project savings estimates | Most of the key impact findings from the PY2015-PY2016 evaluation were sufficiently addressed. This resulted in improved adherence to modeling protocols, more consistency in energy modeling techniques, better overall documentation for projects, and fewer findings than the previous evaluation. The Tetra Tech team assessed the degree to which the relevant recommendations from the last CNC program evaluation were addressed. The recommendations related to baseline model assumptions used an incorrect building energy code or minimum efficiency levels, and updates to the program manual were all sufficiently addressed. This resulted in verification and reports that were easy to reconcile with the modeled parameters in the simulation input files for most projects. The Tetra Tech team found that code minimum parameters from ASHRAE 90.1 were correctly applied in almost all cases, and all projects were modeled with the correct systems as outlined in the Performance Rating Method. Finally, tracked savings were reasonable for all projects and measures. | Data Tracking and QA/QC | Medium | High | Dave McCammant | Completed | COMPLETED: Willdan will continue its current practices of maintenance for energy modeling protocols and the current QA/QC of energy models to ensure sustained accuracy for project savings estimates. |
| Commercial New Construction | Recommendation #2: Willdan should consider incorporating these exceptions into the modeling protocols and consider adding additional QA/QC checks for these items to ensure sustained accuracy for project savings estimates. | Application of exceptions lacked documentation. During the desk review process, the Tetra Tech team found a few projects with various types of spaces and configurations exceptions, but documentation of these exceptions was not included in the project files. Without documentation of the exceptions, the Tetra Tech team could not determine if these projects reported savings beyond code. Follow-up conversations with Willdan did resolve these questions. | Documentation | Medium | Medium | Dave McCammant | Completed | COMPLETED: The instances of program baseline exceptions noted in the evaluation were all related to lighting controls—automatic lighting controls and daylight dimming controls. The modeling protocol has been updated to clarify how automatic lighting controls and daylight dimming controls are modeled. ASHRAE 90.1 2010 Appendix G specifies that savings for automatic lighting controls beyond code are calculated by reducing LPD by specified factors. The program models savings from automatic lighting controls beyond code by adjusting lighting schedules. The Modeling Protocol table with ASHRAE 90.1 2010 modifications has been updated to include this modification. The process for calculating the savings has been updated for clarity, and a new table with the lighting schedule adjustment factors has been added to the modeling protocol. Recommendation considered completed |
| Commercial New Construction | Recommendation #3: A NTG ratio of 70 percent is recommended for the CNC program in Illinois. | The NTG research indicates moderate program influence on customer decision-making. Overall, interviews with Illinois participants resulted in a calculated NTG ratio of 40 percent for gas and 38 percent for electric, and no spillover. Due to the small number of interviews completed with Illinois participants (n = 2), benchmarking of other programs with characteristics similar to MidAmerican's service territory in Illinois was completed and shows that most of the NTG ratios for these programs are between 58 and 77 percent. These ratios are in line with what the Tetra Tech team heard from market actors and other information gleaned from Iowa respondents. | Savings Adjustment | Low | High | Dave McCammant | Completed | COMPLETED: A NTG ratio of 70 percent will be used for CNC. |
| Commercial New Construction | Recommendation #4: Continue to have program staff and key account managers build and leverage relationships to proactively engage customers in the program and early in project development. The Tetra Tech team recognizes that Willdan continues to increase outreach and that MidAmerican continues to meet with Key Account Managers to increase awareness of energy efficiency programs to help build relationships with customers. | Interviews with program participants and market actors show that satisfaction with the program and the services provided by Willdan remains high. The participants and market actors interviewed expressed high satisfaction with the program and found Willdan's services and technical support to be valuable. Many commented that Willdan staff were very supportive, technically sound, and helped the process to go smoothly. Experience with MidAmerican staff and previous projects were identified as the primary sources of program awareness. Additionally, even though natural gas incentives are no longer offered for commercial new construction projects in Iowa as part of MidAmerican's current Energy Efficiency Plan, the Tetra Tech team confirmed with Willdan and MidAmerican that there have been no changes on the modeling or implementation side related to projects with natural gas mechanicals. | Marketing and Education | Medium | Medium | Dave McCammant | Completed | COMPLETED: The program will continue to have program staff and key account managers build and leverage relationships to proactively engage customers in the program and early in project development. |
| Commercial New Construction | Recommendation #5: Consider providing additional check-ins between major project milestones to keep participants and market actors aware of any changes to the program. Consider adjusting the presentation and report materials to include more information about the cost estimates (e.g., sources for upfront cost) and the incentive breakdown. | Customers and market actors provided suggestions for program improvements in the areas of modeling information, incentives, and interactions with Willdan and MidAmerican staff. While satisfaction is high, the participants and market actors interviewed did offer some program improvement suggestions. A few respondents noted that some new construction projects take several years, and during that time, they may not keep up with program and staff changes. Other respondents reported that it would be helpful to receive more information on the calculation of upfront costs and incentives (e.g., what sources and assumptions are considered in return on investment calculations or how incentive levels change based on the type of features installed). | Program Design and Implementation | Medium | Medium | Dave McCammant | Completed | COMPLETED: (a) Additional check-ins: For budgetary reasons, the program eliminated some check-ins from the program to reduce administrative costs. Willdan does try to check-in and verify construction completion dates 6 months and 3 months prior to completion. (b) More information about cost estimates: Starting in 2021, there is a formal schedule to update costing information on an annual basis. Willdan has a group that is tasked with researching and updating incremental costs. Costing information comes from a variety of sources including RSMeans, product vendors, direct inquires on prices, and reports on incremental costs. The Net Energy Optimizer (NEO) tool shows the estimated incremental cost, ROI, and payback for each measure. If the project team has more specific costing information for their project, Willdan can enter it into NEO. This can be done live during a results meeting or before/following the results meeting. |
| Residential Equipment | Recommendation #1: For increased accuracy in savings estimates, use the actual installed equipment capacities for thermostat calculations when that information is part of the application submitted for associated equipment measures. When the information is not included with the application, use the Iowa TRM's default sizing values. | Smart thermostats used the default cooling system capacity in savings calculations. About half of the smart thermostat measures in Iowa were part of a project that included the cooling equipment (central air conditioners or heat pumps) replacement or installation. The cooling model numbers and Air Conditioning, Heating, and Refrigeration Institute (AHRI) sheet were included in the participant documentation but tracked in the central air conditioner or heat pump measure. This actual value was not applied to the associated thermostat measure; instead, the default Iowa TRM cooling capacity was used to calculate energy savings for the thermostat. The calculation is more accurate when actual capacity and efficiencies are used. The use of documented cooling system capacities was responsible for most of the savings adjustments in this evaluation. | Savings Adjustment | Medium | High | Julie Swisher | In Progress | System adjustments and procedure changes are under review. |

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|-----------------------|---|--|-------------------------|-----------------|----------|--|-------------|--|
| Residential Equipment | Recommendation #2: We recommend a NTG ratio of 60 percent for the Residential Equipment program in Illinois. | The NTG research indicates moderate program influence on customer decision-making. Overall, responses to the participant survey resulted in a calculated free-ridership rate of 55 percent and no spillover. Both the free-ridership value and the lack of spillover seem to be in line with what the Tetra Tech team heard from trade allies as well as customers. This is particularly true for spillover—that is, the equipment currently incentivized through the program are large and relatively expensive, and thus, customers are not likely to install another similar central air conditioner or furnace on their own. Although half of the surveyed Illinois participants said they followed the contractor recommendation on what to install, half also said they had already been planning to install the same high-efficient equipment before they learned about the rebate available through the Residential Equipment program. Responses from Illinois participants to the question of their likelihood of purchasing the exact same equipment without the rebate provided through the Residential Equipment program showed that 56 percent were highly likely (rating 9 or 10) to purchase the equipment on their own. Seven percent said they were unlikely to purchase it without the incentive (ratings 0 to 4). However, 48 percent of the Illinois respondents rated the influence of the rebate high (9 or 10). Another 40 percent rated the rebate influence between 5 and 8. Trade allies also reported some program influence, but as noted earlier, the lower incentive levels seem to be sending customers back to non-eligible program equipment. Benchmarking of other programs in Illinois show NTG rates of 63 to 83 percent, though these included a large amount (8 to 12 percent) of nonparticipant spillover from trade ally studies. For MidAmerican, the addition of air source heat pumps and ductless min-splits in Iowa in July 2020 may stabilize NTG, as long as trade allies can generate projects that do not result in fuel switching. | Savings Adjustment | Low | High | Julie Swisher | Completed | COMPLETED: A NTG ratio of 60 percent will be used for REQ. |
| Residential Equipment | Recommendation #3: Consistent with previous findings, continue portfolio-level marketing efforts and engaging trades to help educate customers on program offerings. Further, investigate social media options for reaching younger homeowners. | Outreach to customers from both trade allies and utility sources is important. At least two-thirds of the nonparticipants surveyed were aware that MidAmerican offers rebates and services to customers to help them save energy, and half had specifically heard of the equipment rebates. Nonparticipating survey respondents were more likely than surveyed participants to mention that they heard about the program from a MidAmerican bill insert (36 percent) or brochure (17 percent), which would explain why they are aware of the program, but maybe not the specific incentives or eligibility requirements. In addition, 20 percent of nonparticipating survey respondents heard about the program from a friend, family member, or co-worker, compared with about 13 percent of surveyed participants. This corresponds with the trade allies reporting that residential customers tend to come to them aware that there is something available through MidAmerican, but they are unsure of the actual incentive levels or equipment eligibility. Trade allies said they provide this level of information and education, which is further exemplified by the high proportion of participating surveyed respondents (59 percent Iowa and 75 percent Illinois) that indicated a contractor or retailer was their primary source of information about the program. There was a high proportion of older customers who completed the participant and nonparticipant surveys. This may be a reflection of the demographics across the MidAmerican territory, and/or that the measures currently eligible for rebates through the program are higher-cost measures typically installed in single-family homes by higher-income earners who tend to be older. This also may indicate an opportunity to develop more targeted marketing to reach younger homeowners. | Marketing and Education | Medium | Medium | Julie Swisher and Stacy Christoffersen | In Progress | Energy efficiency messages are promoted on social media through Facebook, Twitter and Instagram. Energy efficiency messaging is included in bi-monthly electronic newsletters which have an audience of over 585,000 customers. Customer bills also included energy efficiency messaging in the form of envelop design, newsletter inserts, remittance slip image or bill messages. |
| Residential Equipment | Recommendation #4: Continue to work with trade allies to facilitate the use of the electronic application process and provide timely responses to questions. | The application process is frequently completed by trade allies who have dedicated staff to work on applications. All trade allies interviewed mentioned completing the application for their customers in some capacity, many completing all of it. About 20 percent of surveyed participants said they filled out the application themselves and 42 percent said they had help from their contractor. Both trade allies and surveyed participants reported the application was easy to understand, complete, and submit. MidAmerican has recently launched the online application option for trade allies; half of those we spoke with have signed up to use the online application, but half have not. Questions arose regarding contact procedures for alternate payees and issue resolutions, but these are quality control processes that are documented and instituted to prevent issues. | Marketing and Education | Medium | Medium | Julie Swisher and Stacy Christoffersen | In Progress | MidAmerican continues to encourage trade allies through email, phone calls and trade ally meetings to utilize the electronic application process. As of Dec. 31, 2021 there are 277 trade allies that have access to the online application portal and have been trained. In addition, new in 2021, MidAmerican is now able to accept an alternate payee for residential HVAC applications submitted online, if authorized by the customer. Previously, applications involving an alternate payee required a paper application to be submitted. Response to trade ally questions is provided within 24 hours of the inquiry. |
| Residential Equipment | Recommendation #5: Include messaging about non-rebate benefits to help lessen potential disappointment with lower incentives. Continue to investigate additional methods for increasing proactive communication with trade allies, potentially supplementing in-person vendor annual meetings with webinars. | Surveyed program participant and trade ally satisfaction remains high, but trade ally satisfaction could be improved. Among surveyed participants, the overall program satisfaction rating was higher in Illinois, with 94 percent rating their satisfaction as very or extremely satisfied, compared with 78 percent in Iowa (previously 87 percent). The decrease in overall program satisfaction in Iowa is at least partially a result of the decrease in incentive amounts, as the proportion of very or extremely satisfied ratings for “the amount of the incentive received” was 63 percent in Iowa and 73 percent in Illinois (previously 76 percent and 91 percent, respectively). Ratings for other aspects of the program remain high and similar to the previous evaluation results. In addition, 60 percent of the surveyed participants said they were extremely likely to recommend the program to others. Half of the trade allies interviewed said they were very satisfied with the program. They were also highly likely to recommend the program to a peer. However, some trade allies suggested increased communication about the program would be appreciated, noting they have not been able to attend annual vendor meetings and may not hear about program updates until they submit an application. | Marketing and Education | Medium | Medium | Julie Swisher and Stacy Christoffersen | In Progress | Customer messaging now includes non-rebate benefits such as how to save money and energy on your utility bills. |

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|--------------------------|---|---|-------------------------|-----------------|----------|--|-------------|---|
| Nonresidential Equipment | Recommendation #1: Continue to ensure exterior lighting fixtures use the parameters for outdoor lighting rather than interior lighting. | Exterior lighting projects used an incorrect coincident factor across all projects in Illinois and all Iowa 2019 projects. The Tetra Tech team found that 181 projects across Iowa and Illinois were using a coincident factor determined by the building type from the Iowa TRM, rather than the coincident factor of 0 percent as specified for exterior lighting. In discussing with MidAmerican, the coincident factors were adjusted for the PY2020 Iowa population, and a new data extract was submitted, in which the Tetra Tech found that the savings had been calculated correctly. It was decided that these variances would not be changed for the PY2019 projects, and as result, represent the largest adjustment to the peak demand savings across both Iowa and Illinois. | Savings Adjustment | Low | High | Julie Swisher | Completed | COMPLETED: The calculation issue in the system was already resolved. The coincidence factor will be 0 on all exterior lighting fixtures going forward. |
| Nonresidential Equipment | Recommendation #2: Continue to ensure the savings calculations use the tracked interaction factors for energy and demand savings. | Multiple projects used waste heat or interaction factors in their lighting savings calculations rather than the factors specified in the tracking system. The Tetra Tech team found 27 projects across Iowa and Illinois that were using an interaction factor in their energy and demand savings calculations that differed from the values that were tracked in the tracking system. In discussing with MidAmerican, the savings for the measures where this occurred in the PY2020 Iowa population were corrected, and a new data extract was submitted, in which the Tetra Tech found that the savings had been calculated correctly. It was decided to not make adjustments to the PY2019 populations in both Iowa and Illinois. | Savings Adjustment | Low | High | Julie Swisher | Completed | COMPLETED: The TRM has since been updated therefore, going forward, we will no longer use the Appendix-A savings calcs in the LED Fixtures regardless of the lumens. |
| Nonresidential Equipment | Recommendation #3: We recommend a NTG ratio of 75 percent for the Nonresidential Equipment program in Illinois. Additionally, continue outreach to the small businesses, as there is indication that rebates are effective for making energy efficiency improvements in this sector. | The NTG research indicates moderate overall program influence on customer decision-making. However, in looking more specifically at "small" versus "large" businesses, NTG values are higher among the small business sector. The program-level calculated NTG is a weighted value comprising both free-ridership and spillover. Program participants interviewed as part of this evaluation generally agreed that the rebates offered have had some effect on their decision to install high efficiency equipment. However, the magnitude of this effect varied by customer, with some surveyed participants indicating that they likely would have installed the same equipment even without the rebate. This is not surprising given awareness trends across the country, including for businesses to increase their sustainability practices, for which energy efficiency can play a key role. Very few, if any, similar types of programs across the country have a NTG value of 100 percent. Interviews with trade allies corroborated the finding that the rebates are having some influence on customer decisions around high efficiency equipment in MidAmerican's service territory. The Tetra Tech team did review NTG for the small business sector. In analyzing the NTG value for the "small" versus "large" businesses, the Tetra Tech team found higher NTG values for small businesses—values ranged from 73 percent to 89 percent, depending on the question and methodology. | Savings Adjustment | Low | High | Julie Swisher | Completed | COMPLETED: A NTG ratio of 75 percent will be used for NEQ. |
| Nonresidential Equipment | Recommendation #4: Trade Ally Ambassadors should continue to try to connect with smaller trade allies. In addition, the program should continue with regular electronic communications and training, which are particularly helpful for smaller contractors. | Trade allies who have worked with a Trade Ally Ambassador are more likely to say they are adequately informed of program changes. Six of the 14 trade allies interviewed indicated they are adequately informed of program changes, and most of these six trade allies say they have worked with a Trade Ally Ambassador. All found the Trade Ally Ambassadors knowledgeable and services helpful. Of another six who said they are not adequately informed of program changes, only one said they have worked with a Trade Ally Ambassador, but it has been some time since they had that interaction. These six are also smaller contractors, with all but one having a staff of less than 12. | Marketing and Education | Medium | Medium | Julie Swisher and Stacy Christoffersen | In Progress | The website dedicated specifically to trade allies has been enhanced to include all necessary resources to assist customers in participating in MidAmerican's energy efficiency programs. The website includes updates on available incentive dollars and communications regarding changes to programs and/or rebates. Five emails were sent to trade allies during second quarter. These emails educated trade allies when current year's actual spending by program exceeds 50%, 65% and 75%. Other announcements included reminders on SummerSaver program information and events. Four emails were sent to trade allies during the third quarter. These emails educated trade allies when current year's actual spending by program exceeds 80% and 90%. Other email's communicated how to contact a Trade Ally Ambassador and how to become a qualified service provider. Two emails were sent to trade allies during the fourth quarter. These emails reminded trade allies about rebate submission deadline dates as well as invited trade allies to attend the annual trade ally meeting. |
| Nonresidential Equipment | Recommendation #5: Continue portfolio-level marketing efforts and engaging trades to help educate customers on program offerings. | Portfolio-level marketing and outreach efforts remain successful in raising general customer awareness of program rebates, though trade allies continue to contribute heavily to awareness. Respondents to the participant survey most commonly reported learning about the Nonresidential Equipment program through an equipment vendor, contractor, or other professional (64 percent for Iowa participants and 48 percent for Illinois participants). As illustrated in the participant survey results, trade allies continue to play a key role in customer outreach for the Nonresidential Equipment program. Most trade allies interviewed reported routinely discussing program rebates with MidAmerican customers and incorporating MidAmerican rebates into price estimates and comparisons. Most trade ally impressions of customer awareness of the program was that customers are not aware of the program. Customers may ask if there is a rebate available, knowing it is a possibility, but they really are unaware of the program itself. | Marketing and Education | Low | Medium | Julie Swisher and Stacy Christoffersen | In Progress | Strategic marketing plans have been developed for all programs. Energy efficiency messages are promoted on social media through Facebook, Twitter and LinkedIn. Energy efficiency messaging is included in bi-monthly electronic newsletters which has an audience of over 55,000 customers. |

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|--------------------------|--|---|-----------------------------------|-----------------|----------|--|-------------|---|
| Nonresidential Equipment | Recommendation #6: Continue current levels of program support and continue to find opportunities to educate customers about the value of energy efficiency. | Surveyed participants and trade allies continue to be satisfied with the program. However, there were indications that satisfaction is lower compared to the last evaluation cycle and could be driven by the decrease in rebate amounts—the amount of the incentive received was the lowest rated program aspect among surveyed participants. Participant survey respondents generally expressed high satisfaction with the program overall, as well as individual aspects of their participation experience. Over 80 percent of both Iowa and Illinois survey respondents rated their satisfaction with the program overall as a 3 or 4 on a scale of 1 to 4 where 1 was “not at all satisfied” and 4 was “very satisfied.” Using the same scale, eight of the 14 trade allies provided a rating of 3 or 4. Of the individual aspects of the program asked in the survey, both Iowa and Illinois participants gave the highest satisfaction ratings to the contractor who installed the equipment, followed by the type of equipment eligible for the program. The lowest rated item was the amount of incentive received. High satisfaction with the program is also represented by the propensity to recommend the program to others. Based on participant survey respondent answers, 65 percent of Iowa respondents and 83 percent of Illinois respondents were “extremely likely” to recommend the program (9 or 10 on a scale of 0 to 10 where 0 was “extremely unlikely” and 10 was “extremely likely”). Trade allies were also asked how likely they are to recommend the program to a peer using the same scale. Nine trade allies rated their likelihood a 10 (none rated their likelihood a 9). | Marketing and Education | Medium | Medium | Julie Swisher and Stacy Christoffersen | In Progress | MidAmerican will continue current levels of program support. Opportunities to educate customers about the value of energy efficiency will be included in business news articles, on social media, the MidAmerican website home page and more. |
| Residential Assessment | 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. | 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. | Savings Adjustment | Medium | Medium | Stacy Christoffersen | Completed | COMPLETED: Evaluation and surveys for Residential Assessment have been completed for the 2019-2023 Plan. If the Residential Assessment program is structured in a similar manner in the next plan, we will consider this recommendation. |
| Residential Assessment | 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. | 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. | Savings Adjustment | Medium | High | Stacy Christoffersen | Completed | COMPLETED: Data has been provided to the IA TRM program implementer and changes will be made in version 6. |
| Residential Assessment | 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). | 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. | Program Design and Implementation | Medium | Medium | Stacy Christoffersen | In Progress | MidAmerican launched a new user experience and customers have access to the online tool from their My Account page. In 2021, the there were over 902,000 logins and participants integrated with over 63,000 energy-saving tips. |
| Residential Assessment | Recommendation #4: Simplify navigation features on the MidAmerican website leading to the HomeCheck® Online home assessment to make it easier for customers to find. | 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. | Program Design and Implementation | Medium | High | Stacy Christoffersen | Completed | COMPLETED: MidAmerican launched a new user experience and customers have access to the online tool from their My Account page. |

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|------------------------|---|--|-----------------------------------|-----------------|----------|----------------------|-------------|--|
| Residential Assessment | Recommendation #5: Implement similar marketing and outreach practices to continue to increase participation in the Residential Assessment program. | 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. | Marketing and Education | Medium | High | Stacy Christoffersen | In Progress | The program was featured in both the printed and emailed customer newsletters, bill messaging, and social media throughout the year. Additionally, MidAmerican launched a new user experience for HomeCheck Online and customers have access to the online tool from their My Account page. This makes navigation to and within the tool easier. |
| Residential Behavior | Recommendation #1: Continue monitoring customers' satisfaction levels for the program, with HER modules, and with MidAmerican's services to understand if customer experiences continue to be consistent or if a shift occurs that may require an enhancement or adaption to the current program design. | Residential Behavior participant survey responses indicate that the program is well-received. HER recipients gave high ratings of program satisfaction, HER module usefulness, and satisfaction with MidAmerican's services in general. HER recipients were highly satisfied with the program and engaged with reports. Customers were highly engaged with HERs and found the information useful. Most customers said the sections of the HER were "somewhat" or "very useful" (83 to 97 percent), with the highest ratings given for the Track Your Progress section (97 percent). These findings were consistent across standard income treatment and low-income treatment groups. HER recipients found the similar homes comparison useful, and their satisfaction with this element generally corresponded with the evaluation report findings, which is consistent with prior evaluations. Additionally, overall satisfaction with the HERs was higher among those who were shown that they use about as much or less energy than others. This is consistent with other similar evaluation findings from around the country. Customers were highly satisfied with the services they receive from MidAmerican. The survey asked all customers to rate their satisfaction with the services they received from MidAmerican. Overall, 93 percent of customers reported being "very" or "extremely" satisfied with MidAmerican. This finding was similar across standard income treatment and control groups (89 percent standard income treatment, 96 percent low-income treatment, 95 percent control). Further, the Tetra Tech team found these high satisfaction ratings to be consistent across customers in different income groups, where 89 to 95 percent of customers who provided income and household size information reported being "very" to "extremely" satisfied with MidAmerican's services (89 percent lower income, 95 percent moderate income, 94 percent higher income). | Program Design and Implementation | Medium | Medium | Stacy Christoffersen | In Progress | MidAmerican will continue to monitor satisfaction levels and will consider conducting a satisfaction survey through the program implementer. |
| Residential Behavior | Recommendation #2: Continue to promote behavior change strategies while also encouraging customers to engage with MidAmerican through the website, customer portal, or emails directing customers to where they can access all tips and promotions for other programs and measures. | HER recipients reported higher general awareness of other MidAmerican programs and said they were motivated by the report to take energy savings actions. HER recipients in the standard income treatment and low-income treatment groups indicated higher levels of awareness with certain MidAmerican residential program offerings, including MidAmerican's smart thermostat rebates, and the heating and cooling equipment rebates. In part, this may have been a result of HERs effectiveness in referring customers to MidAmerican's energy efficiency website for product and rebate information. The Tetra Tech team found that while surveyed treatment customers commonly said that the HER had "some" to "a great deal" of influence on their decision to take energy savings actions, overall, surveyed customers in low-income treatment, standard treatment, and control groups reported doing most energy savings actions listed in the survey at similar rates. Evaluated differences, and not similarities, in energy savings actions taken between surveyed treatment and control groups typically serves as supporting evidence to impact analyses that the savings generated by HER recipients are attributable to the program. The billing analysis clearly shows that the program is driving savings despite low detection of significant differences between surveyed treatment and control customers about energy savings actions taken. Across standard treatment, low-income treatment, and control groups, the most common energy savings actions were cleaning or replacing air filters, setting thermostats to 68 degrees in the winter, and unplugging electronics or appliances when not in use. Low-income treatment customers were less likely than treatment customers to say that they cleaned or replaced their air filters. | Program Design and Implementation | Medium | High | Stacy Christoffersen | In Progress | MidAmerican will continue to promote behavior change strategies while also encouraging customers to engage with MidAmerican. The recent updated user experience for the online tool has driven more customers to the resources available online. |

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|------------------------|--|--|-----------------------------------|-----------------|----------|----------------------|-------------|---|
| Residential Behavior | Recommendation #3: Should MidAmerican choose to reduce the frequency of or completely pause report delivery for future cohorts, consider targeting lower performing (less relative energy savings) cohorts first. | Higher energy saving cohorts may experience more substantial and consistent decreases in energy savings after reduction in frequency of report delivery than cohorts that produce lower energy savings. However, while some evidence of lower savings among customers who received less frequent program treatment in 2017 and 2018 persisting into 2019 and 2020, the lack of statistically significant differences in these values prevents the team from making conclusions regarding long-term impacts of reduced frequency study. The relative electric and gas savings of customers who received reports at reduced frequency in 2017 and 2018 were variable and inconsistent. While electric and gas savings of reduced frequency treatment group have been consistently lower than standard treatment group for Iowa Pilot, reduced frequency treatment group in Iowa Expansion achieved higher electric savings in two of four years and higher gas savings in one year. Given short time period which experiment has been in place, and high amounts of variability among relative savings of standard and reduced frequency groups, the team is unable to say if there's a timeframe at which frequency of reports can be reduced with minimal impact on savings. The savings generated by Iowa Pilot have been higher than Iowa Expansion for both electric and gas since inception of the experiment, even though Iowa Pilot and Iowa Expansion had similar levels of pre-period baseline energy consumption for both electric and gas. The savings discrepancy between the two waves is so great that reduced frequency treatment group of Iowa Pilot has continued to generate higher savings than standard frequency treatment group of Iowa Expansion for both fuels on an annual basis. The higher savings generated by Iowa Pilot could be indicative of higher levels of interaction with HERs, and reduction in frequency of reports is evident through lower relative savings. Conversely among Iowa Expansion, reduction in frequency of report delivery less evident through evaluated savings, as total savings consistently lower and potentially indicative of lower report engagement overall. It is opinion of the team that both initial response to reduction in frequency of HERs, and persistence of those savings in ensuing years after reduction, are correlated with level of savings attained prior to reduction, and in turn with unobservable characteristics of treatment group that contribute to their overall savings. | Savings Adjustment | Medium | Medium | Stacy Christoffersen | Completed | COMPLETED: MidAmerican has no plans to reduce frequency in this EE Plan. |
| Residential Low Income | Recommendation #1a: Use the Iowa TRM default values for single family and multifamily homes, as reported in the tracking data, to estimate the number of people per household. Recommendation #1b: Use WHFdCool (waste heat factor for demand) in the demand savings calculation for LEDs. Recommendation #1c: Edit the label for the pipe wrap input description for gas water heaters to "therm per linear foot." | The program appropriately applied the Iowa TRM inputs and assumptions to its tracking data, resulting in 100 percent realization rates for most impact savings values. The Tetra Tech team reviewed how the program applied Iowa TRM inputs to its measures and found that these assumptions were appropriately used in most cases. The Tetra Tech team made minor adjustments and identified an error in the demand savings calculation for LEDs distributed through food banks in response to COVID-19. This resulted in a savings adjustment of an additional 22.36 kW savings overall. As such, the Tetra Tech team applied a realization rate of 100 percent to all measures except kW savings from LEDs distributed at food banks, where a realization rate of 107 percent was applied. | Savings Adjustment | Low | High | Erin Rasmussen | Completed | COMPLETED: All updates were made to the tracking data. |
| Residential Low Income | Recommendation #2: MidAmerican should continue to provide similar oversight and direction to its service delivery partners. | Evaluated program components are operating as planned. The Tetra Tech team found that Green Iowa AmeriCorps (GIAC) delivered the Iowa Supplemental Weatherization program component services according to plan. Through the evaluation, the Tetra Tech team also confirmed that Project NOW delivered the Illinois Statewide Weatherization program component in MidAmerican's service territory according to plan. Both service delivery partners in each state met the obligations in their agreement with MidAmerican. | Program Design and Implementation | Low | High | Erin Rasmussen | Completed | COMPLETED: MidAmerican will continue to provide similar oversight and direction to its service partners |
| Residential Low Income | Recommendation #3a: Consider collaborating with GIAC to identify ways that MidAmerican could assist in finding new host sites to partner with GIAC. Recommendation #3b: Continue to leverage partnerships with organizations like food banks to distribute easy to install energy efficiency measures to targeted customers. Recommendation #3c: Continue to conduct blitz events to distribute energy efficiency kits to targeted customers. | There are limited opportunities to expand the Iowa Supplemental Weatherization program component offering. Supplemental Weatherization expansion in Iowa is limited by the capacity of the current service delivery partner, GIAC, and the small pool of potential new service delivery partners. Community Action Partnership (CAP) agencies are the only other potential partner given their low-income services, statewide reach, centralized coordination, and expertise in in-home audits and weatherization services. However, barriers like staff capacity and the CAP agencies' need for program funds to cover costs above and beyond what Iowa Supplemental Weatherization funding can cover appear challenging to overcome. Opportunities to reach more eligible customers within program guidelines include exploring ways to provide additional support to GIAC, continuing activities such as LED distribution through food banks, and distribution of energy efficiency kits to targeted customers. | Program Design and Implementation | Medium | High | Erin Rasmussen | In Progress | (a) MidAmerican continues to collaborate with GIAC and implemented their Energy Saver Kit promotion in new targeted areas. (b) MidAmerican utilized excess low income dollars to distribute a supplemental weatherization kit to over 3,000 low income customers. (c) In 2021, GIAC converted the in-person blitz events to an Energy Saver Kit in response to pandemic-related restrictions. |

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| Residential Low Income | <p>Recommendation #4a: Consider adding new offerings to the Iowa Supplemental Weatherization program component, including smart thermostats, vouchers or coupons for other services, and online home energy assessments.</p> <p>Recommendation #4b: Consider targeting a broader range of customers, including raising the household income threshold to 300 percent of the Federal Poverty Line or delivering services in languages other than English.</p> <p>Recommendation #4c: Consider applying Iowa Supplemental Weatherization program funds toward cross-promotion of other MidAmerican program offerings.</p> <p>Recommendation #4d: Longer-term, consider how Iowa Supplemental Weatherization funds could support workforce development activities for low-income populations in Iowa.</p> | <p>The Iowa Supplemental Weatherization program design could be broadened to include new ways of serving low-income customers. MidAmerican's primary goal with the Iowa Supplemental Weatherization program component is to use funds to help its low-income customers on the Statewide Weatherization Program waiting list. In addition to providing these particular low-income customers with in-home energy audits and weatherization services, MidAmerican could help eligible customers by considering new offerings and/or targeting a broader range of customers, as the Tetra Tech team learned that some other utilities do. Opportunities include instituting coupons or vouchers for services like free HVAC system tune-ups or appliance replacement, expanding the program to more non-English speaking customers beyond using the existing Spanish/English program materials, or raising the household income eligibility threshold. However, to be successful, these broader efforts likely require the capacity of service delivery partners to increase. In the meantime, MidAmerican could consider applying Iowa Supplemental Weatherization funds toward targeted marketing to eligible customers to cross-promote other program offerings like HomeCheck® Online, Appliance Recycling, or other equipment rebates.</p> <p>Based on research, the Tetra Tech team learned that there are emerging initiatives and trends targeting lower-income populations. Workforce development is one such trend. Investing in targeted workforce development activities could lead to higher levels of job attainment for these populations and result in more people with the capacity to pay their energy bills. While it may not be feasible for MidAmerican to offer workforce development under Iowa's current energy efficiency regulatory environment, the Tetra Tech team wanted to raise the discussion for longer-term thinking and consideration in Iowa.</p> | Program Design and Implementation | High | Medium | Erin Rasmussen | In Progress | <p>(a) MidAmerican continues to work with GIAC to find new ways to implement the program.</p> <p>(b) Customers that reside in counties that public tax data shows have 60% or greater of its population making less than \$50,000 annually were targeted in 2021.</p> <p>(c) Both the GIAC kit and supplemental weatherization kits included the residential program brochure in both English and Spanish.</p> <p>(d) No action at this time</p> |
| Trees Please | <p>Recommendation #1: To facilitate ensuring that all relevant grantee entities know their funds have been received, MidAmerican could consider sending an email to all relevant parties within each community once the check has been delivered. If it would facilitate internal processes, MidAmerican staff delivering the checks can request that the check recipient sign a receipt for the check. MidAmerican could then attach a picture of the receipt to the form to include in the email and to further document the check delivery process.</p> | <p>To help facilitate community relationships, MidAmerican's corporate policy is to distribute Trees Please! checks in person. While this method of check delivery is a good way for MidAmerican to connect with local leaders, in some cases, it has added a little time to the check distribution process. In addition, because the community leader receiving the check is not always the grant applicant, there can sometimes be a delay in the grant applicant knowing that the funds were paid. While most grant recipients interviewed did not note any issues with when they heard about the grant, one interviewee expressed that the timing made finalizing their tree order more challenging.</p> | Program Design and Implementation | Medium | Medium | Stacy Christoffersen | In Progress | MidAmerican will have Community LINKs who deliver the check to record the date and contact name of when check was delivered. |
| Trees Please | <p>Recommendation #2: To continue encouraging more specificity related to energy efficiency in tree plans during the grant application process, MidAmerican could consider adding additional checkboxes to the application, asking the applicant to indicate the types of buildings that will benefit from shade or windbreak, such as schools, city-owned buildings, other public/community buildings, homes, etc.</p> | <p>Many grant applicants have received Trees Please! funding from MidAmerican over multiple years. As a result, grant applicants' knowledge of the energy efficiency objective of the Trees Please! program has increased, with most applicants now including at least some description of energy efficiency on their submittal. However, some applications continue to require follow-up from MidAmerican.</p> | Program Design and Implementation | Medium | Medium | Stacy Christoffersen | In Progress | MidAmerican will consider updates to the 2023 application. This application will be reviewed in the Q3 2022. |
| Appliance Recycling | <p>Recommendation #1: The Tetra Tech team recommends that MidAmerican continue current practices for data collection and continue to use current quality assurance practices to ensure sustained accuracy for project savings estimates.</p> | <p>The reported savings for all measures reviewed were found to be reasonable and were not adjusted. The savings for all measures reviewed were found to be reasonable and completed with a high degree of accuracy. Specifically, the tracked savings were consistent with the expected savings using the Iowa TRM V4 deemed savings values for refrigerators and freezers.</p> | Data Tracking and QA/QC | Low | High | Stacy Christoffersen | Completed | COMPLETED: MidAmerican will continues current practices for data collection and continue to use current quality assurance practices to ensure sustained accuracy for project savings estimates. |
| Appliance Recycling | <p>Recommendation #2: The Tetra Tech team recommends a NTG ratio of 54 percent for the Appliance Recycling program in Illinois.</p> | <p>The secondary NTG research indicates similar values for both refrigerators and freezers. Benchmarking of other similar programs in the Midwest, including Illinois, reflected NTG ratios ranging from 40 percent to 68 percent for refrigerators and 44 percent to 62 percent for freezers.</p> | Savings Adjustment | Low | High | Stacy Christoffersen | Completed | COMPLETED: A NTG ratio of 54 percent will be used for Appliance Recycling. |
| Appliance Recycling | <p>Recommendation #3: The Tetra Tech team recommends that MidAmerican continue to provide robust appliance recycling services, as efficient services and high customer satisfaction ratings result in word-of-mouth advertising. Additionally, MidAmerican should continue marketing the program through utility messaging and MidAmerican's website (third highest source of awareness in both states).</p> | <p>Program awareness is largely created by word-of-mouth. Most homeowner survey respondents in both states mentioned sources of awareness were friends, family members, and co-workers (40 percent Iowa and 39 percent Illinois), followed by utility messaging (24 percent Iowa and 37 percent Illinois). Like homeowner respondents, the primary source of awareness for landlords that were interviewed was word-of-mouth (four of seven respondents). For homeowner survey respondents, paid advertising (newspapers, radio, television, and billboards) was rarely mentioned as a source of awareness. Given MidAmerican no longer promotes the program through these methods, this finding is reasonable.</p> | Program Design and Implementation | Low | High | Stacy Christoffersen | In Progress | MidAmerican will continue to market the program through utility messaging, social media and website. |
| Appliance Recycling | <p>Recommendation #4: Due to COVID-19, MidAmerican had to make changes to its traditional appliance pick-up process, including requiring that appliances be plugged in outside. As COVID-19 restrictions ease, MidAmerican anticipates reverting back to its previous appliance pick-up practices. For either pick-up scenario, the Tetra Tech team recommends that MidAmerican provide pick-up information more prominently, including on MidAmerican's website and in the automated pick-up reminders. Information should include the safety of leaving appliances plugged in while outside.</p> | <p>Satisfaction with the pick-up process and contractors was high among both surveyed homeowners and landlords, but pick-up information could be more prominently displayed. The vast majority of surveyed homeowner participants were satisfied with their pick-up times and the conduct of the contractors that made the pick-ups. Over 90 percent of surveyed homeowner participants felt their pick-up occurred in a reasonable amount of time (94 percent Iowa and 92 percent Illinois) and said their contractors behaved professionally (94 percent Iowa and 97 percent Illinois). Eight surveyed landlords said their pick-ups occurred in a reasonable amount of time. When asked how the pick-up process could be improved, 13 surveyed homeowner participants mentioned that moving their appliances outside and leaving them plugged in was not convenient, and several respondents were confused as to why the appliance had to be plugged in.</p> | Marketing and Education | Medium | High | Stacy Christoffersen | In Progress | In September 2021, MidAmerican returned to pre-pandemic pickup practices. Automated pickup reminders will be reviewed as an offering in 2022. |
| Appliance Recycling | <p>Recommendation #5: MidAmerican should continue to increase awareness of the online scheduling tool. Use and satisfaction with the tool appears to be a driver of overall satisfaction with MidAmerican as an energy provider.</p> | <p>Surveyed homeowner participants that used the online scheduling tool were highly satisfied with its functionality. Through the interviews with homeowner participants, it was clear that the online scheduling tool is a source of satisfaction for those that used it. More than 80 percent of online tool users described the tool as "very easy to use" (83 percent Iowa and 83 percent Illinois) and over 85 percent of online tool users were "extremely" or "very satisfied" with the online tool (90 percent Iowa and 88 percent Illinois). A larger percentage of surveyed Illinois homeowner participants used the tool (67 percent) compared to Iowa homeowner participants (54 percent). Furthermore, a larger percentage of online tool users said they were "extremely satisfied" with MidAmerican's service (37 percent) compared to those that did not use the tool (26 percent).</p> | Marketing and Education | Medium | High | Stacy Christoffersen | In Progress | MidAmerican's marketing through social media and website banners promote and direct customers to the online tool for scheduling pickups. Approximately 62% of customers scheduled through the online tool in 2021. |

| Program | Recommendation | Recommendation Summary | Type of Recommendation | Level of Effort | Priority | Product Manager | Status | 2021 Update |
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| Appliance Recycling | Recommendation #6: MidAmerican should continue to provide education and outreach to landlords to ensure they understand program requirements. | Landlords appear to have high demand for recycling appliances. Throughout the interviews with surveyed landlord participants, a common theme was the desire to recycle more appliances than MidAmerican picked up. Three landlords mentioned wanting to recycle additional quantities of appliances and two mentioned wanting to recycle other types of appliances. | Marketing and Education | Medium | High | Stacy Christoffersen | In Progress | In October, MidAmerican highlighted this program at the Iowa Annual Landlord convention. More than 150 Iowa landlords attended the event. |
| Appliance Recycling | Recommendation #7: MidAmerican should continue COVID-19 safety practices when picking up appliances. | Surveyed program participants reported little impact of COVID-19 on their decision-making process. When asked about the likelihood of making various household decisions over the next six months, less than 20 percent of surveyed homeowner participants said COVID-19 will affect their actions. Of the respondents that said COVID-19 would impact their decisions in the next six months, the most common concerns were price increases, availability of materials, and the ability to allow contractors into their homes. Two of three surveyed landlord participants said COVID-19 would not impact their future behavior. One landlord mentioned concerns about COVID-19 reducing the availability of appliances and materials. | Program Design and Implementation | Medium | High | Stacy Christoffersen | In Progress | MidAmerican's contractor will continue to follow COVID-19 safety practices. |
| Income-Qualified Multifamily | Recommendation #1: Continue monitoring any changes to the Iowa TRM and update calculations as needed. | Across PY2019 and PY2020, the Tetra Tech team found that the tracked savings for most measures aligned with Iowa TRM V3 (PY2019) or V4 (PY2020) calculation approaches and assumptions. In particular, the following types of measures had 100 percent realization rates: common area air sealing and insulation, common area lighting (PY2020), in-unit aerators and showerheads (PY2019), and in-unit pipe insulation (PY2020). | Savings Adjustment | Medium | High | Erin Rasmussen | Completed | COMPLETED: MidAmerican will continue to use the most current TRM calculations. |
| Income-Qualified Multifamily | Recommendation #2: Update savings calculations to align with the Iowa TRM version corresponding to the program year. | Savings calculations for PY2020 kitchen and bathroom low-flow aerators, and low-flow showerhead, for both common area and in-unit installations aligned with the Iowa TRM V3 approach rather than the Iowa TRM V4. Using the appropriate Iowa TRM version for the respective program year will increase savings accuracy by accounting for the appropriate number of people per household and domestic heat recovery factors. | Savings Adjustment | Medium | High | Erin Rasmussen | Completed | COMPLETED: Savings calculations were updated to align with the TRM. |
| Income-Qualified Multifamily | Recommendation #3: Continue monitoring any changes to the Iowa TRM and update inputs as needed. | In the PY2019 tracking data, there were flow rate inconsistencies. Some of the PY2019 entries for direct install low-flow faucet aerators listed efficient flow rates of 1.0 gallons per minute for bathroom aerators and 1.5 gallons per minute for kitchen aerators. In comparison, other entries recorded the flow rate as 1.43 gallons per minute. The efficient flow rate for all aerators in the Iowa TRM V3 was 1.43 gallons per minute. MidAmerican corrected these inconsistencies for PY2020—all aerators listed efficient flow rates as 1.43 gallons per minute, consistent with the Iowa TRM V4. | Savings Adjustment | Medium | High | Erin Rasmussen | Completed | COMPLETED: MidAmerican will continue to monitor any changes to the TRM and update inputs as needed. |
| Income-Qualified Multifamily | Recommendation #4: Continue following the Iowa TRM approach for assigning the kWh heating penalty in electrically heated buildings. | The PY2019 tracking data for direct install LED fixtures in common areas of electrically heated buildings did not include the kWh heating penalty, as shown in the Iowa TRM V3. MidAmerican corrected this for PY2020, and the tracking data savings calculations for PY2020 direct install LED fixtures in common areas aligned with the Iowa TRM V4, including the kWh heating penalty. | Savings Adjustment | Medium | High | Erin Rasmussen | Completed | COMPLETED: Heating penalty discrepancy was corrected and MidAmerican will continue following TRM approach for assigning heating penalties. |
| Income-Qualified Multifamily | Recommendation #5: MidAmerican has corrected the issue in their tracking system. | In both PY2019 and PY2020, tracked kWh savings for programmable thermostats in units with natural gas furnace heating systems did not align with the Iowa TRM. MidAmerican discovered an error in the system—the calculation was multiplying the number of units twice when furnace fan energy savings were included, which substantially overstated savings for this measure. As a result, programmable thermostat measure-level realization rates were 4.5 percent in PY2019 and 11.1 percent in PY2020. | Savings Adjustment | Low | High | Erin Rasmussen | Completed | COMPLETED: Issue was corrected |
| Income-Qualified Multifamily | Recommendation #6: As COVID-19 protocols ease and program budgets allow, the program should continue to increase direct outreach to nonparticipants. Additionally, more frequent outreach may be warranted due to above-average staff and property owner/manager turnover rates. Set targets for how frequently implementation staff should follow up with each property owner or manager and continue to track these interactions. | Most nonparticipants (three out of four) had not heard of the IQMF program, indicating that program awareness may be a barrier to participation. For program participants, direct outreach was the most common way interviewed property owners and managers had heard about the program. Additionally, both program staff and TEG staff noted that direct in-person outreach had been an effective means of reaching property owners and managers. For PY2020, and continuing into PY2021, the in-person method of outreach was suspended due to COVID-19. In addition, while recruiting for participant interviews, the Tetra Tech team found evidence of higher than average rates of staff turnover and property ownership. This is also likely a result of COVID-19 and is a challenge that many industries continue to grapple with. | Marketing and Education | Medium | High | Erin Rasmussen | In Progress | The Energy Group continues to do outreach to property owners and management companies. MidAmerican is also providing refresher training on IQMF to its call center and business advantage team. The IQMF program was showcased at the Iowa Annual Landlord Convention in Cedar Rapids which had over 150 attendees. |
| Income-Qualified Multifamily | Recommendation #7: Consider opportunities to streamline the participation process, such as completing some direct install items during the assessment. | Interviewed participants were satisfied with the participation process. However, the implementer conducts the assessment and installs equipment during separate visits. Some programs, identified through secondary research, combine installing the direct install items with the assessment. | Program Design and Implementation | Medium | Medium | Erin Rasmussen | In Progress | MidAmerican will explore this opportunity with the program implementor |
| Education | Recommendation #1: While the Tetra Tech team recognizes that MidAmerican has been performing outreach activities to trade allies for many years, we recommend increasing contact between Trade Ally Ambassadors and trade allies as a means to increase trade ally satisfaction and knowledge of the programs, particularly to trade allies they may not be in touch regularly. Trade allies may often have staff turnover, so continued outreach is important to keep all staff updated on program offerings. Trade Ally Ambassadors should continue to track outbound outreach and provide regular status reports to MidAmerican. | Trade Ally Ambassadors are a key link between MidAmerican and trade allies serving customers within energy efficiency programs. Across energy efficiency programs, about half of interviewed trade allies said they have worked with a Trade Ally Ambassador and expressed positive experiences. | Marketing and Education | Medium | High | Stacy Christoffersen | In Progress | Trade Ally Ambassadors continue to perform outreach to trade allies and provide regular status reports to MidAmerican. In 2022, MidAmerican will launch a quarterly trade ally newsletter. |
| Education | Recommendation #2: The Tetra Tech team recommends that the program continue sending the parent emails even after returning to entirely in-person school schedules. These emails could include links to MidAmerican's energy efficiency programs as well as seasonal energy-saving tips. | In PY2020, the Schools initiative distributed materials to 131 schools in Iowa and 12 schools in Illinois. To ensure the program would reach students during COVID-19 and subsequent at-home and hybrid schooling, MidAmerican added features such as emails that teachers could send directly to parents, providing another touchpoint with customers and a way to cross-promote MidAmerican's energy efficiency programs. | Marketing and Education | Medium | Medium | Stacy Christoffersen | In Progress | ENewsletter was developed and encouraged teachers to share with parents, included cross promotion of MidAmerican energy efficiency programs and included links. |

| Program | Recommendation | Recommendation Summary | Type of Recommendation | Level of Effort | Priority | Product Manager | Status | 2021 Update |
|---------------------------------|---|---|-----------------------------------|-----------------|----------|-----------------|-------------|---|
| Nonresidential Energy Solutions | Recommendation #1: The Tetra Tech team recommends that MidAmerican continue current practices for project-level inputs and information and continue to use current quality assurance/ quality control (QA/QC) practices to ensure sustained accuracy for project savings estimates. | The tracked savings for most of the measures reviewed were reasonable and thus were not adjusted. Projects that were adjusted typically had adjustments resulting from site visits. The savings for most measures reviewed were reasonable and completed with a high degree of accuracy. Specifically, MidAmerican's tracked savings estimates used appropriate calculation methodologies, and the site-specific parameters were consistent with project documentation and secondary research for the non-DLC or ENERGY STAR certified equipment. Changes to project-level savings were typically small and mostly due to post-implementation changes that were discovered during the site visits for inputs such as hours of operation or equipment setpoints and were out of the program's control. | Savings Adjustment | Low | High | Dave McCammant | Completed | COMPLETED: MidAmerican will continue its current practices for project-level inputs and information and will continue to use our established (QA/QC) practices to ensure accuracy for project energy savings estimates. |
| Nonresidential Energy Solutions | Recommendation #2: MidAmerican should work with the Tetra Tech team and Nexant to assess the utility's process for accounting for interactive effects and document this process. The Tetra Tech team recognizes that there are dual-fuel nuances for MidAmerican's Iowa customers. This recommendation only applies to program-eligible Iowa customers where MidAmerican provides both the electric and natural gas services. | It appears as though MidAmerican's custom project savings calculator is not including interactive effects for waste heat, which impacts savings estimates for projects such as custom lighting/sensors. In discussing this with MidAmerican, the utility recognizes that the Iowa TRM provides interactive effects for waste heat in the prescriptive lighting calculations. Nexant, as the program implementer, may be applying the interactive effects in their calculations before projects are sent to MidAmerican for review. The use of interactive effects for custom lighting projects would increase accuracy by accounting for the reduction of waste heat from inefficient lighting products. | Savings Adjustment | Medium | High | Dave McCammant | In Progress | MidAmerican will continue to work with Tetra Tech and Resource Innovations to evaluate the current approach to reporting interactive effects and determine if any modifications are required. |
| Nonresidential Energy Solutions | Recommendation #3: In discussing these three projects with MidAmerican and Nexant, Nexant agreed that they will follow up with the refrigeration setpoint project to determine if they can assist with an energy control system that can realize a majority of the lost savings. | As a result of site visits, the Tetra Tech team found three projects where the schedule or equipment setpoint changed since the project was completed, resulting in savings adjustments. Out of the eight site visits conducted, the Tetra Tech team found three projects where the schedule or setpoint changes had been changed since project completion, and thus required updates to savings calculations. For these three projects, the tracked savings were calculated correctly given the schedule and setpoints present at the time of project completion. | Data Tracking and QA/QC | Medium | Medium | Dave McCammant | In Progress | Resource Innovations will address this recommendation in 2022. |
| Nonresidential Energy Solutions | Recommendation #4: The Tetra Tech team recommends that MidAmerican continue using a NTG ratio of 83 percent for the Nonresidential Energy Solutions program in Illinois. | The secondary NTG research reflects that, for similar programs, there is a range of values. Benchmarking of other similar programs in the Midwest, including Illinois, reflected NTG ratios ranging from 69 percent to 89 percent. Additionally, in the last evaluation cycle, the Tetra Tech team conducted primary NTG research, which resulted in a NTG recommendation of 83 percent. | Savings Adjustment | Low | High | Dave McCammant | Completed | COMPLETED: A NTG ratio of 83 percent will be used for NES. |
| Nonresidential Energy Solutions | Recommendation #5a: The Tetra Tech team recommends that MidAmerican continue to have program staff and Key Account Managers build and leverage relationships to proactively engage customers in the program and in particular, early in project development. This includes working with customers to determine if they have corporate policies related to energy efficiency or sustainability plans that they need to consider when purchasing new equipment or improving their buildings, and helping customers tie these plans to MidAmerican's energy efficiency programs to encourage participation. The Tetra Tech team recognizes that Nexant staff have been continually providing program outreach support, and that MidAmerican Key Account Managers and trade allies also have been working to help build relationships with customer and increase awareness of energy efficiency programs. Recommendation #5b: The Tetra Tech team recommends that MidAmerican continue efforts to maximize customer satisfaction with the program by communicating future program changes to customers, Energy Managers, and trade allies. Communications should continue to include messaging around changes to the program and incentive levels. Recommendation #5c: The Tetra Tech team recommends that the program continues to provide ongoing meetings and/or workshops to existing and new customers to educate them about new measures and technologies. | Interviews with program participants and trade allies show that satisfaction with the program and the services provided by Nexant is high. The participants and trade allies interviewed expressed high satisfaction with the program and found Nexant's services and technical support to be valuable. Experience with previous projects, contractors, and MidAmerican staff were the primary sources of program awareness. Energy Managers felt that the satisfaction and outreach could be strengthened through additional services, if possible. | Program Design and Implementation | Low | High | Dave McCammant | In Progress | (a) MidAmerican will continue to proactively build and leverage relationships with customers using the services of program staff and the Business Connections Managers (aka Key Account Managers). (b) MidAmerican will continue its efforts to communicate future program changes to customers, Energy Managers and trade allies. (c) MidAmerican's Energy Managers and Business Connections Managers will continue to conduct ongoing meetings and/or workshops for existing and new customer to educate them about new measures and technologies. |
| Nonresidential Energy Solutions | Recommendation #6a: The Tetra Tech team recommends that MidAmerican continue to monitor COVID-19 and its potential impacts. This includes continuing to implement COVID-19 safety practices, and potentially adjusting pre-approval timeframes and/or incentives again, if needed. Recommendation #6b: In the next energy efficiency plan cycle, consider including low cost or no cost measures as part of this program's offerings. | Most participants and trade allies were impacted by COVID-19, but participants were more optimistic about changes in the near future. Despite experiencing some delays, when asked about the likelihood of making various business decisions over the next six to 12 months, most participants reported a high likelihood of purchasing new energy-efficient equipment and looking for additional ways to save energy that are low cost or no cost. All eight trade allies interviewed reported delays in equipment and material supplies, four reported delays in customer projects, and three reported that customer projects were canceled. In terms of the effect COVID-19 will have on them over the next six months, perspectives were split—a few trade allies thought things might start getting better and a few others thought that things may stay the same or get worse. The difference of opinion among the trade allies did not correlate with any trade ally characteristics such as size or type. | Program Design and Implementation | Medium | Medium | Dave McCammant | Completed | COMPLETED: (a) MidAmerican will continue to monitor COVID-19 and its impacts to the program. We will follow established safety guidelines and respect and follow the guidelines of our customers with regard to on-site visits. MidAmerican will be flexible and responsive by adjusting preapproval timeframes and/or incentives as needed. MidAmerican will be sensitive to supply-chain issues which have caused our trade allies and customers difficulty in procuring energy efficient measures and related items on a timely basis. (b) MidAmerican will consider and research the possibility of including low-cost or no cost measures in this program as part of our 2024-2028 energy efficiency plan. |
| Nonresidential Curtailment | Recommendation #1: Continue using approaches outlined in the MISO Business Practices Manual. While other approaches are worth exploring and may prove accurate, the standardized approach contained in MISO's three methods provides a firm set of methods for calculating demand response savings. | MidAmerican's program calculation approach, based on MISO's Business Practices Manual, leads to reasonable savings estimates. Additionally, the general approach to calculating savings using individual account analyses is an industry best practice. MidAmerican uses MISO's three standard demand response calculation methods to develop account-specific savings for each participant. In addition, a fourth model is deployed when day(s) in the 10-day baseline period do not accurately represent the temperature and load profile of the event day. The approach allows each event hour to be individually modeled, with the average event hourly performance to claim savings and develop pay for performance incentives. The outcomes fall within the bounds of savings calculations that use MISO's baseline approaches. MISO has accepted savings calculated from MidAmerican's approach, indicating that it meets MISO's requirements for settling program performance. | Savings Adjustment | Medium | High | Julie Swisher | In Progress | No update - recommendations released in 2022. |

| Program | Recommendation | Recommendation Summary | Type of Recommendation | Level of Effort | Priority | Product Manager | Status | 2021 Update |
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| Nonresidential Curtailment | Recommendation #2: One consideration for an alternative approach is to develop calculations based on the underlying load characteristics of a given participant. However, MISO does not expect that level of effort in its baseline calculation approaches. | At the program level, the current MidAmerican approach is reasonable. However, MidAmerican may want to consider alternative calculations that address underlying differences among participant groups or load management strategies. For nonresidential load management programs, customer size, underlying loads, and how customers choose to manage loads during events differ. The current approach, using MISO's three standard methods and an additional fourth method when substantial differences in baseline temperatures exist, provides excellent coverage to represent different types of loads and the savings that are developed during events. However, exploration of other established models may provide additional accuracy or improved savings estimates. This is not to say that MidAmerican's current approach is inaccurate—it is not—rather, that demand response calculations should be seen as a continuous improvement process. | Savings Adjustment | High | Medium | Julie Swisher | In Progress | No update - recommendations released in 2022. |
| Nonresidential Curtailment | Recommendation #3: MidAmerican should maintain the current approach to leveraging Key Account Managers for maintaining relationships with customers. Ensuring that Key Account Managers continue to have the tools and information they need to maintain program-related communications will continue to be essential to maintaining the customer relationship. | Interviewed participants were highly satisfied with the program overall and with key program features. The incentive continues to be a key motivator. Some perceived risk was expressed, as there is the potential for events to occur during the time of peak operations. Still, all participants we spoke with indicated their commitment to the program and plan to continue their participation. The relationship with the Key Account Manager also continues to be an important program component. | Program Design and Implementation | Low | High | Julie Swisher | In Progress | No update - recommendations released in 2022. |
| Nonresidential Curtailment | Recommendation #4: MidAmerican should consider ways to enhance program support. The Tetra Tech team recognizes that some of the suggestions made by participants and Key Account Managers could be challenging to implement, such as access to real-time data. However, other suggestions may be easier to execute, such as providing additional information about why and when events are called. | Opportunities exist to provide additional support. For example: 1) One program design change was the move from three-year contracts to one-year contracts, mentioned by two interviewed participants and one KAM. The interviewed participants did not necessarily see this as an issue but were more curious about why the change occurred. For the KAM, he noted that the annual contract signing timeframe seems to come during a busy time of year. 2) During events, customers can monitor their progress at reducing loads through software MidAmerican provides. Two interviewed participants and one of the interviewed KAMs mentioned that it would be helpful to have real-time data available through the tool so they know precisely what their reduction is tracking during an event. MidAmerican program staff noted they would also like to have this level of information. 3) One KAM suggested that an annual refresher training would be helpful, including information about what is new and program deadlines or timeframes (note that this KAM also said he was adequately informed of program changes). One other suggestion from this KAM was for MidAmerican program staff to offer training to customers focused on MidAmerican's transmission pool, including why MidAmerican and MISO may call events. He noted that not all customers might be interested in this level of information but does have some customers that are. | Program Design and Implementation | Medium | Medium | Julie Swisher | In Progress | No update - recommendations released in 2022. |
| Residential SummerSaver | Recommendation #1: As MidAmerican continues to rely on a sample of program participants to develop program savings, the current approach is appropriate. | MidAmerican's continued approach to using a load research sample is a best practice for utilities that do not have a broad deployment of smart meters. MidAmerican's approach uses a sample of 146 participants with whole-house interval meters installed to obtain granular load data. MidAmerican extrapolates this sample to the program population using Oracle's Lodestar analysis, widely used for load research and forecasting. This approach provides data at the granularity needed in lieu of advanced meter infrastructure and remains a typical industry approach. | Savings Adjustment | Low | High | Julie Swisher | In Progress | No update - recommendations released in 2022. |
| Residential SummerSaver | Recommendation #2: Consider utilizing one of the three MISO BPM methods for calculating estimated savings for settlement with MISO. MidAmerican should continue utilizing a load analysis model for internal purposes. | The LCR estimated savings calculation methods applied to PY2021 participants were developed by MidAmerican and the smart thermostat estimated savings were developed by CLEAResult, rather than following one of the three MISO Business Practice Manual (BPM) methods. MidAmerican's current method to estimate savings from LCRs relies on either load modeling using hourly regression models of the program population's loads that were extrapolated from the load research sample or a method similar to the MISO symmetric multiplicative adjustment. The current method also relies on identifying 'like' days for construction of the initial baseline. The MISO BPM methods allow for baseline construction from days regardless of their similarity in temperature profile and also a simpler adjustment. Although accepted by MISO, MidAmerican's current method may be underestimating performance relative to goals and with a methodology that is complex relative to MISO methods. In this case, because the event day was preceded by much cooler weather, the MISO method of using 10 previous days (non-weekend or holiday) resulted in an artificially low baseline event with adjustment. The Tetra Tech team found that using three previous days rather than 10 provided a good match to the event day. The CLEAResult method for estimating savings from smart thermostats, similar to MidAmerican, used a slightly different adjustment method similar to the MISO symmetric multiplicative adjustment. | Savings Adjustment | Medium | High | Julie Swisher | In Progress | No update - recommendations released in 2022. |
| Residential SummerSaver | Recommendation #3: MidAmerican should continue working with CLEAResult and its smart thermostat data provider to determine if additional data could be available from each OEM. In particular, MidAmerican should explore options for obtaining annual runtime data (at a minimum) from Honeywell. | Smart thermostat data is incomplete. The SummerSaver program allows customers who bring their own smart thermostats to the program to use three different brands (OEM) of thermostats—Nest, ecobee, and Honeywell. Data from Nest and ecobee was mostly complete, though measured in different time intervals. However, no runtime data was available for the Honeywell devices, only setpoint data. Fortuitously, Honeywell had the lowest number of program participants, and the Tetra Tech team had to base estimated savings for the Honeywell devices on an average value from the Nest and ecobee devices. | Savings Adjustment | Medium | High | Julie Swisher | In Progress | No update - recommendations released in 2022. |

| Program | Recommendation | Recommendation Summary | Type of Recommendation | Level of Effort | Priority | Product Manager | Status | 2021 Update |
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| Residential SummerSaver | Recommendation #4a: While the Iowa Technical Reference Manual recommends using 2.5 tons in the absence of a known system rating, MidAmerican could improve smart thermostat estimated savings calculations by collecting information about HVAC system ratings. Because collecting this information could be an onerous process, using the QAQC data already collected by MidAmerican could be used instead. However, the QAQC HVAC data would need to be used in combination with actual smart thermostat runtime data. Recommendation 4b: The Tetra Tech team discussed with MidAmerican that the QAQC HVAC data should be stored as an integer rather than a whole number. MidAmerican has already made this change. | The current method for calculating smart thermostat estimated savings relies heavily on a uniform assumption of HVAC system size. The current CLEAResult kWh estimated savings calculation assumes an HVAC system size of 2.5 tons (8.8 kW). While the Tetra Tech team, MidAmerican, and CLEAResult reviewed historical HVAC system size information tracked by MidAmerican, the SummerSaver program does not collect HVAC size as part of the participant intake form. MidAmerican does collect QAQC data on HVAC system size, but this information has been limited to integers, thus requiring non-integer sizes to be rounded for recording purposes. Tetra Tech completed an analysis of how much the savings over an event may vary based on this unknown rounding and found a difference of 18 percent from the mean HVAC system size method. | Data Tracking and QA/QC | Medium | High | Julie Swisher | In Progress | No update - recommendations released in 2022. |
| Residential SummerSaver | Recommendation #5: Continue to maintain high program standards for customer interactions but monitor the effect of incentive changes on program participant retention. | The SummerSaver program continues to have high satisfaction, and attrition can be expected to be low. Satisfaction continues to be high across all elements of the program. Incentives were found to be the primary motivation for customers to enroll in the program. While a very high percentage of participant respondents indicated their intent to continue participating in the program (95 percent overall), the incentive level being a primary motivator creates an element of program risk, should incentives change. | Program Design and Implementation | Medium | Medium | Julie Swisher | In Progress | No update - recommendations released in 2022. |
| Residential SummerSaver | Recommendation #6: The Tetra Tech team understands that MidAmerican's SummerSaver program is fully subscribed, but still plans to grow the smart thermostat program component, as the program allows. Given the program's high satisfaction scores and participants' willingness to recommend the program (38 percent of respondents said they were extremely likely to recommend the program to a friend or family member), as MidAmerican seeks to grow the smart thermostat program component, greater awareness could be created through a "refer a friend" program. | Program awareness is primarily created through utility bill messaging, emails from MidAmerican, and the thermostat app. Overall, 38 percent of respondents (39 percent Iowa, 36 percent Illinois) mentioned learning about the SummerSaver program through MidAmerican's utility bill messaging, followed by emails from MidAmerican (23 percent overall), and the thermostat app (22 percent overall). Only four percent of respondents mentioned learning of the program through a friend, family member, or coworker. | Marketing and Education | Medium | Medium | Julie Swisher | In Progress | No update - recommendations released in 2022. |
| Residential SummerSaver | Recommendation #7: To improve smart thermostat customer comfort levels, conduct pre-cooling for future events. | Although few participants had any concerns about the program, those who did have concerns were worried about uncomfortable temperatures. Many surveyed respondents (81 percent Iowa, 78 percent Illinois) said they had no initial concerns about participating in the SummerSaver program. However, of the respondents that did have concerns (n = 35), 74 percent (76 percent Iowa, 71 percent Illinois) mentioned being concerned about uncomfortable temperature increases. Both LCR and smart thermostat surveyed participants shared these concerns. | Marketing and Education | Medium | Medium | Julie Swisher | In Progress | No update - recommendations released in 2022. |