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Efficient Products Program Impact and Process Evaluation

PROGRAM YEAR 2018

July 13, 2019

Prepared for:

Ameren Missouri

1901 Chouteau Avenue

St. Louis, MO 63103

Prepared by:
David Ladd
Brian Evans
Joan Wang
Andrew Carollo
Sara Wist
Jane Colby
Apex Analytics

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Executive Summary

Ameren Missouri engaged Cadmus to perform annual process and impact evaluations of its Efficient Products program for a three-year period: 2016 through 2018. This annual report covers the impact and process evaluation findings for Program Year 2018 (PY18), a period from March 1, 2018, through February 28, 2019—the final year of the three-year program cycle.

Program Description

Ameren Missouri's Efficient Products program provides its residential customers with rebates for purchasing qualifying energy-efficient equipment. Program rebates partially offset the costs of purchasing more efficient models. To participate, residential customers may purchase the equipment from any retailer, including online sources. Beginning in PY17, the program began offering smart thermostats directly through the Ameren Missouri Online Store, with the incentive presented as an instant discount rather than requiring a rebate application.

In PY18, the Efficient Products program provided downstream mail-in and online rebates for the following:

- ENERGY STAR®-certified room air conditioners (RACs)
- ENERGY STAR-certified heat pump water heaters (HPWHs)
- ENERGY STAR-certified room air purifiers
- ENERGY STAR-certified multispeed pool pumps
- ENERGY STAR-certified variable-speed pool pumps
- Smart thermostats (selected models)

For PY16–PY18, Ameren Missouri contracted with ICF International (ICF) to implement the program. ICF marketed the program, recruited retailer participation, processed rebate applications, and operated Ameren Missouri's online store. ICF also took primary responsibility for maintaining a website dedicated to data reporting and for conducting quality-control checks. ICF subcontracted a field team (Crossmark) to visit retail locations, provide training and marketing materials, and monitor stocking practices.

Key Impact Evaluation Findings

The following sections describe Cadmus's key findings for the PY18 evaluation period.

Program Data Adjustments

During our review of PY18 tracking data, Cadmus found records for a small number of smart thermostats that did not meet program qualifications. Measures were disqualified if not on the list of qualified smart thermostat models, though in most cases, measures did not qualify due to record-keeping errors (measures incorrectly labeled as thermostats). Disqualified measures were removed from the tracking data.

Cadmus applied a 99.9% verification rate to smart thermostats as a result of verification activities. In PY18, the program rebated 11,147verified measures, compared to 11,160 measures reported by Ameren Missouri.

Gross Impacts

The program achieved realization rates of 91% (or more) for all PY18 program measures, excepting smart thermostats which had a 70% realization rate. The differences between *ex ante* and *ex post* values resulted from differences in the rebated equipment mix indicated through program records (i.e., on average, room air purifiers were more efficient than predicted), due to updated parameter values from PY18 survey results (e.g., heating and cooling saturation for HPWH participants), or new research (e.g., percentage of HPWHs installed in conditioned space). Prior to PY17, smart thermostats received deemed per-unit savings, with PY17 the first year that smart thermostat savings had been calculated using actual program tracking and weather data.

Table 1 summarizes PY18 participation, *ex post* gross per-unit savings, realization and installation rates, and *ex post* total gross savings.

Table 1. PY18 Summary: *Ex Post* Program Gross Savings Accounting for Installation Rates

Measure	PY18 Participation*	Per-Unit *Ex Post* Savings (kWh/yr)	Realization Rate	Installed and Operating	Total *Ex Post* Gross Savings (MWh/yr)
Equipment Rebates					
HPWHs	331	2,300	91%	100.0%	761
RACs	990	49.8	115%	97.5%	48
Room Air Purifiers	1,872	608	109%	94.0%	1,071
Multispeed Pool Pumps	113	1,800	100%	98.5%	200
Variable-Speed Pool Pumps	1,083	2,053	100%	98.5%	2,190
Smart Thermostats	6,758	326	70%	98.3%	2,163
Total**	**11,147**				**6,432**

* Verified measures. Participation is based on the application date rather than the date the rebate was invoiced to the program. PY18 total participation includes only measures occurring prior to March 1, 2019, although some of these measures were invoiced to the program after that date.

**Measure gross savings may not sum to total due to rounding.

Net Savings

As shown in Table 2, the Efficient Products program achieved an overall savings-weighted net-to-gross (NTG) ratio (excluding NPSO) of 74%. First year NPSO savings are shown below, as are 2023 NPSO savings which have been adjusted to account for measures with an estimated useful life (EUL) that does not extend through 2023. NPSO is added separately to net savings because it is made up of measures with different load shapes than the program and therefore will affect demand NTG differently than energy NTG.

Table 2. PY18 Net Impact Results Summary

Measure Group	*Ex Post* Gross Savings (MWh/yr)	Free Ridership	Participant Spillover	NTG (w/o NPSO)	Net Energy Savings (MWh/yr)	Net Demand Savings - First Year (kW/yr)	Net Demand Savings - Year 2023 (kW/yr)
HPWHs	761	20%	1%	81%	617	55	55
RACs	48	41%	1%	60%	29	27	27
Room air purifiers	1,071	32%	1%	69%	739	344	344
Multispeed pool pumps	200	22%	1%	79%	158	37	37
Variable-speed pool pumps	2,190	22%	1%	79%	1,730	407	407
Products Nonparticipant Spillover					**6**	**4**	**4**
Smart thermostats	2,163	31%	1%	70%	1,514	1,434	1,434
Smart Thermostats Nonparticipant Spillover					**4**	**2**	**2**
Total*	**6,432**	**27%**	**1%**	**74%**	**4,796**	**2,311**	**2,311**

* May not sum to total due to rounding.

As shown in Table 3, the PY18 program achieved 70% of its net energy savings target of 6,847 MWh, specified in the Ameren Missouri's residential tariff.[1] The program exceeded its participation and net energy saving goals in PY17, therefore in PY18 Ameren Missouri and the program implementer reduced marketing to limit participation so that the budget for program incentives would not run out before the end of the year. Appendix A presents the coincidence factors used to calculate demand savings for this program.

[1] Union Electric Company. d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy File No. EO-2015-0055 Efficiency as Allowed by MEEIA. Appendix B. MEEIA 2016-2018 Summary

Table 3. PY18 Efficient Products Savings Comparisons

Metric	MPSC-Approved Target	*Ex Post* Gross Savings Determined by EM&V[1]	*Ex Post* Net Savings Determined by EM&V[2]	Percent of Goal Achieved[3]
Efficient Products				
Energy (MWh)	4,760	4,270	3,278	69%
Demand – First Year (kW)	1,235	1,175	874	71%
Demand – Year 2023 (kW)	1,235	1,175	874	71%
Smart Thermostats				
Energy (MWh)	2,087	2,163	1,518	73%
Demand – First Year (kW)	1,974	2,049	1,436	73%
Demand – Year 2023 (kW)	1,974	2,049	1,436	73%
Total				
Energy (MWh)	6,847	6,432	4,796	70%
Demand – First Year (kW)	3,210	3,224	2,311	72%
Demand – Year 2023 (kW)	3,210	3,224	2,311	72%

[1] MWh calculated by multiplying verified program participation by Cadmus' evaluated per-unit savings values; kW calculated by applying coincident factors provided in Appendix A.

2 Calculated by multiplying Cadmus' evaluated gross savings and evaluated NTG ratio and adding the appropriate program-level allocation of NPSO savings.

[3] Compares MPSC Approved Target and *Ex Post* Net Savings Determined by EM&V.

Figure 1 and Figure 2 illustrate the program's energy impacts—from target to *ex post* net savings—for products and thermostats subtotals, respectively. The blue bars represent total savings (targets, ex ante, etc.), orange bars represent factors that decreased savings, and the light blue bars represent factors that increased savings.

Figure 1. Waterfall Chart of PY18 Efficient Products Energy Savings (excluding Smart Thermostats)

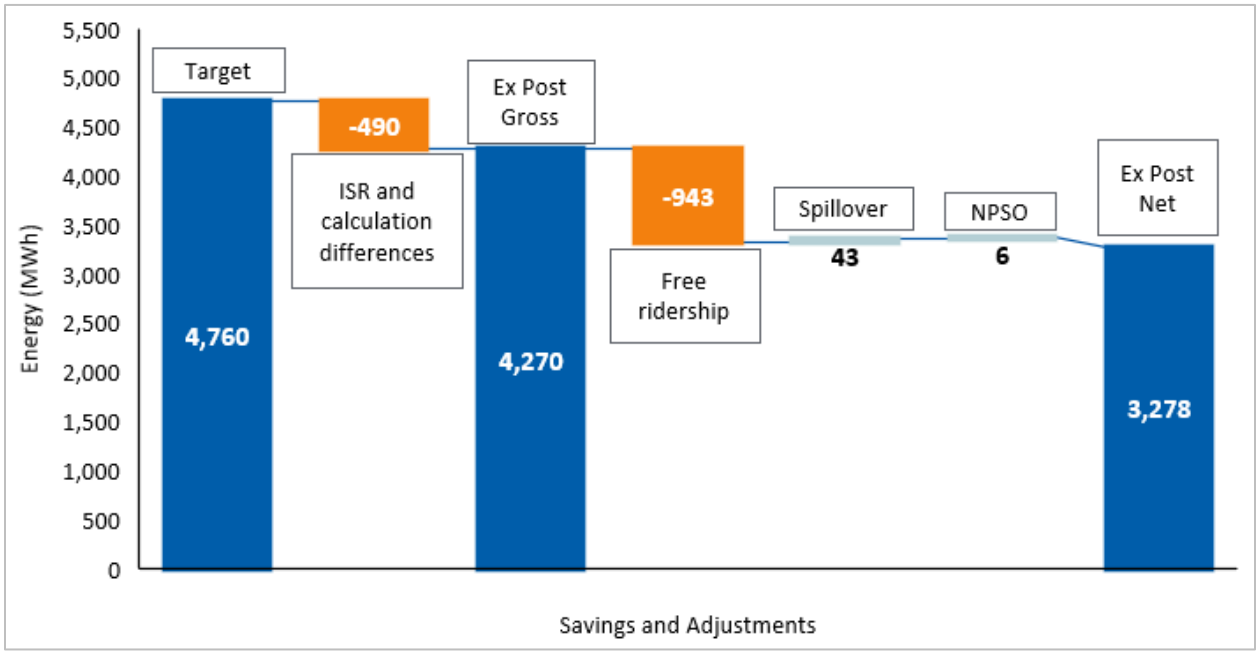
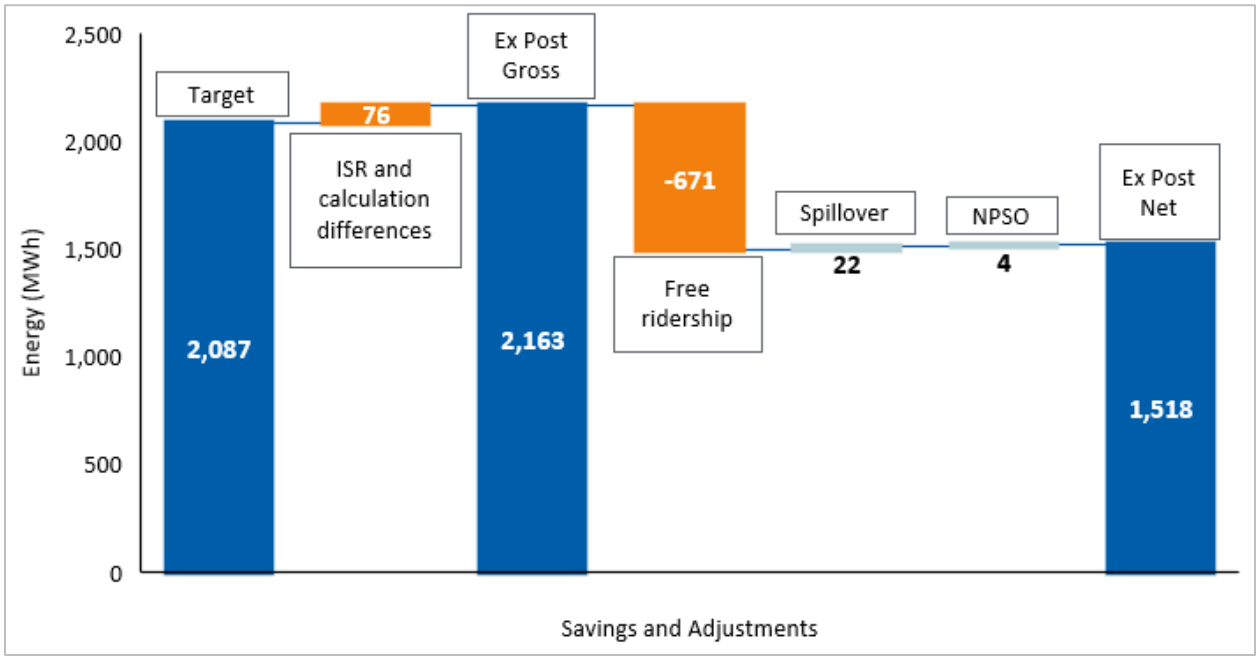


Figure 2. Waterfall Chart of PY18 Smart Thermostats Energy Savings



CSR Impact Evaluation Requirements

According to the Missouri Code of State Regulations (CSR), demand-side programs serving as part of a utility's preferred resource plan were subject to ongoing process and impact evaluations that met certain criteria. Specifically, the CSR required that demand-side programs' impact evaluations satisfy the requirements listed in Table 4. The table also indicates data that Cadmus used to satisfy these impact

CSR evaluation requirements for the Efficient Products program. Table 5, at the end of the Process Evaluation section, summarizes the process CSR requirements.

Table 4. Summary Responses to CSR Impact Evaluation Requirements

CSR Requirement[1]	Method Used	Description of Program Method
Approach. The evaluation must use one or both of the following comparisons to determine the program impact:		
Comparisons of pre-adoption and post-adoption loads of program participants, corrected for the effects of weather and other intertemporal differences	✓	The program compares the pre-adoption load, based on the assumed baseline technology, with the post-adoption load based on program technology. Corrections for weather came from the average household load, used in a Chicago metering study (Table E-1, *Draft Energy Efficiency/Demand Response Nicor Gas Plan Year 1: Research Report: Furnace Metering Study*, Navigant, August 1, 2013), adjusted for Missouri climate regions using Climate Normals Heating Degree Data.
Comparisons between loads for program participants and an appropriate control group over the same period		
Data. The evaluation must use one or more of the following types of data to assess program impact:		
Monthly billing data		
Hourly load data		
Load research data		
End-use load metered data		
Building and equipment simulation models	✓	The evaluator used ENERGY STAR calculators to model the usage characteristics of pool pumps and room air purifiers.
Survey responses	✓	The evaluator used survey responses to estimate in-service rates and net-to-gross percentages for program measures, and to gather household data (e.g., HVAC saturation rates).
Audit and survey data on:		
Equipment type/size efficiency	✓	The evaluator gathered equipment information from homes participating in the survey and from program data.
Household or business characteristics	✓	The evaluator gathered household information from homes participating in the survey and from program data.
Energy-related building characteristics	✓	The evaluator gathered building information from homes participating in the survey and from program data.

[1]State of Missouri. "Administrative Rules: Missouri Code of State Regulations." Missouri 4 CSR 240-22.070(8)(B). Revised May 2011. Available online: https://www.sos.mo.gov/cmsimages/adrules/csr/current/4csr/4c240-22.pdf

Key Process Evaluation Findings

Cadmus conducted interviews with program stakeholders, reviewed program tracking data, and surveyed customers to inform the PY18 process evaluation. This report presents key findings arising from this research. As program delivery did not change significantly, the report does not include detailed process evaluation results, unless they identify significant differences or concerns. Participant survey results are provided in Appendix I, Appendix J, and Appendix K.

Program Design

Participants awarded the Efficient Products program high ratings: 98% said they were "very satisfied" or "somewhat satisfied" with the performance of measures that they purchased; and 97% gave similar satisfaction ratings for the program overall. These ratings remained consistent between participants surveyed immediately after receiving rebates and participants surveyed six months later.

Marketing and Outreach

Ameren Missouri markets the Efficient Products program directly and through participating retailers that use Ameren Missouri's program marketing materials and co-branded materials. Ameren Missouri's marketing includes bill inserts, direct-mail postcards, Internet and television advertisements, brochures and tear sheets, and other channels. In PY17, the Efficient Products program began selling smart thermostats directly to customers through Ameren Missouri's online store, offering an immediate discount equal to the rebate amount.

Program Data

ICF updated and maintained program data through the Vision database. Cadmus reviewed these tracking data for reasonableness and completeness. Though the team identified some data entry errors in the final data set (i.e., typographical errors and equipment listed under the wrong measure category), systematic errors did not appear.

CSR Process Evaluation Requirements

As discussed, the Missouri CSR requires that demand-side programs operating as part of a utility's preferred resource plan remain subject to ongoing process and impact evaluations that meet certain criteria. At a minimum, process evaluations must address the five questions listed in Table 5, which provides a summary response for each specified CSR process requirement.

Table 5. Summary Responses to CSR Process Evaluation Requirements

CSR Requirement Number[1]	CSR Requirement Description	Summary Response
1	What are the primary market imperfections common to the target market segment?	As in prior years, less-efficient equipment is available at lower initial cost. High costs present a barrier to customers who may be unable to make large purchases. Additionally, customers may not factor in the long-term cost savings that would result from purchasing more-efficient equipment that can cost less to operate. New products coming to market, changes in retail prices, and other changes to retailer stocking practices can complicate communications regarding the benefits of more-efficient equipment.
2	Is the target market segment appropriately defined, or should it be further	Yes. The program continues to appropriately target all residential customers who purchase qualified energy-saving items for use in their homes. Increasing crossover between participants who apply for Heating and Cooling program rebates and smart thermostat rebates could eventually lead to a merging of those segments, although to date most thermostat replacements do not involve HVAC replacement, and Heating and Cooling participants who applied for smart thermostat rebates appear very similar to Efficient Products participants who applied for thermostat rebates without replacing

CSR Requirement Number[1]	CSR Requirement Description	Summary Response
	subdivided or merged with other market segments?	HVAC equipment.
3	Does the mix of end-use measures included in the program appropriately reflect the diversity of end-use energy service needs and existing end-use technologies within the target market segment?	Yes, for measures that are cost-effective. It is increasingly challenging to offer a wide-variety of residential end-uses that are also cost-effective. For equipment other than smart thermostats, the program rebates solely require that equipment has been ENERGY STAR-certified (i.e., the only requirement is energy efficiency). For smart thermostats, equipment is limited to the necessary technological features (i.e., it must be a "learning" model with geofencing capabilities) and includes the most popular models in this emerging market. The program includes rebates for a variety of equipment targeting a variety of end-uses (water heating, air conditioning, swimming pools, heating) that were cost-effective. The program does not offer rebates for kitchen or laundry appliances because current market offerings would not produce savings cost effectively. Other cost-effective end-use technologies are targeted through other programs.
4	Are the communication channels and delivery mechanisms appropriate for the target market segment?	Yes. Customers may purchase qualified items from any retailer, within or outside of Ameren Missouri's service territory. Online purchases are also eligible for rebates, and Ameren Missouri's implementer has offered smart thermostats to customers through Ameren Missouri's online store since PY17, with a discount applied to the purchase price rather than a mailed rebate check. Ameren Missouri markets the program directly through a variety of channels and through the several large national retail chains that serve differing, broad, cross-sections of the population. Reviews of program marketing materials found Ameren Missouri follows marketing best practices.
5	What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation for each end-use measure included in the program?	Program promotions that provide program and energy education can help to overcome market imperfections. Timing product promotions so that they coincide with seasons of high use for a given measure also helps implementation. Adjusting program incentives in response to market changes, and for the purpose of reallocating budget to more cost-effective measures, also improves implementation. In PY18 program incentives were unchanged from PY17, however the program implementer reduced marketing efforts from previous years in order to conserve budget so that the program would be able to continue paying incentives through the end of the three-year program cycle.

[1]State of Missouri. "Administrative Rules: Missouri Code of State Regulations." Missouri 4 CSR 240-22.070(8)(A). Revised May 2011. Available online: https://www.sos.mo.gov/cmsimages/adrules/csr/current/4csr/4c240-22.pdf

Key Conclusions and Recommendations

The Efficient Products program—effective, well-received, and well-implemented—encourages Ameren Missouri customers to upgrade to efficient equipment when making new equipment purchases.

Cadmus offers the following conclusions and recommendations for improving the program.

Conclusion 1. There are circumstances where smart thermostat installations result in limited or no energy savings. Based on PY18 survey responses, 5% of smart thermostats replaced other smart thermostats, which does not contribute to program savings. This percentage was not large in PY18 but has increased every year and would be expected to continue to increase. According to the Illinois TRM formula for calculating smart thermostat savings, there are no additional heating energy savings for installing a second or third smart thermostat in the same home (though there are additional cooling energy savings).

Recommendation 1. Consider adding additional limitations on smart thermostat rebates, such as no more than two per household per three-year program cycle, and disqualifying rebates through Heating and Cooling program contractors for projects where smart thermostats are replacing other smart thermostats. Limiting retail sales to the online store (as Ameren Missouri already plans for PY19) will also reduce overall free ridership, as free ridership has been lower through the online store than retail outlets.

Conclusion 2. The Efficient Products program currently has limited offerings. During PY18, the program offered rebates for five types of equipment. Planned program changes for PY19 include adding a smart strip measure to the program and ending rebates for RACs and room air purifiers. The program manager also reported that Ameren Missouri was planning to expand offerings through the online store in PY19.

Recommendation 2. Pursue fulfillment solutions for cost-effectively delivering more energy-saving products through the Ameren Missouri online store. Ameren Missouri could offer products through its online store, and work with retailers or fulfillment subcontractors to fulfill the orders. As Cadmus reported in the PY17 evaluation, measures delivered through the online store had lower free ridership than those purchased through retailers. This is because it is impossible for customers to make a purchase and then discover there is a rebate available after the fact, a situation which is scored as a 100% free rider when estimating free ridership. Additionally, in the PY16 evaluation Cadmus reported that many customers were purchasing their rebated equipment from online retailers rather than making in-store purchases, a trend which has likely continued as online sales in general continue to gain market share from “brick-and-mortar” retail.

PY17 Recommendation Tracking

Cadmus followed up on Ameren Missouri’s response to the PY17 evaluation’s recommendations, tracking recommendations that had and had not been implemented. Table 6 presents these actions, as reported by Ameren Missouri.

Table 6. PY17 Evaluation Recommendation Tracking

PY17 Recommendation	Recommendation Status	Ameren Missouri Response
Recommendation 1. Continue to offer smart thermostats through Ameren Missouri's online store and consider offering more products through this channel when practical to do so. In PY17, the Efficient Products program measures with the highest free ridership rates were RACs and air purifiers. Consider offering these measures for sale through the online store, provided the program can sell them at cost-effective price points, including shipping costs.	Complete	Ameren Missouri 2019–2021 Products plan intends to expand the Online Marketplace store to include rebated measures (e.g., Smart Thermostats, Tier 2 Advanced Power Strips, LEDs) and to include other energy-saving products.
Recommendation 2. Consider initiating a RAC early retirement program that provides coupons for new units, when old, but operating, units are turned in. This could be designed in concert with an appliance recycling program, or with special "turn-in" events at convenient locations across the service territory or through the retail partners already in the program. This change would increase the gross savings for this measure and could also reduce free ridership.	Not applicable	Ameren Missouri 2019–2021 Products has discontinued rebates for RAC measures.
Recommendation 3. Monitor new product offerings in the "smart" and "interactive" technology space that offer potential energy savings through occupancy sensing, programmable schedules, remote access, and interconnectivity with other devices and systems. These technologies have been popular with customers, given the rapid adoption of smart thermostats. This occurred partly due to the measures' energy-saving potential and partly due to customers' enthusiasm with these devices' interactive features.	Ongoing	Ameren Missouri and the implementation contractors continue to review and analyze new measures and innovative technologies that pertain to energy efficiency measures.

Introduction

Ameren Missouri engaged Cadmus to perform annual process and impact evaluations of the Efficient Products program over a three-year period, from 2016 through 2018. This annual report covers the impact and process evaluation findings for Program Year 2018 (PY18)—a period ranging from March 1, 2018, through February 28, 2019, and the final year of the three-year program cycle.

Program Description

The Efficient Products program provides incentives to encourage customers to purchase technologies that save energy, save money, and improve comfort. The program also seeks to educate customers about energy-efficient product options and to provide energy-savings tips.

From 2009–2012, the Efficient Products program began as the energy-efficient appliance rebate component for within the PY09 Lighting and Appliance program. Beginning in PY12, Ameren Missouri discontinued the Lighting and Appliance program's appliance portion and focused the program exclusively on lighting products.

In PY13, Ameren Missouri and CLEAResult introduced RebateSavers as a new, standalone appliance program, designed to promote a variety of energy-efficient products in the marketplace. In PY14, Ameren Missouri changed the program name from RebateSavers to Efficient Products. In PY14 and PY15 the program also mailed energy efficiency kits to customers. The kits, however, became the basis for a separate program in PY16: the Energy Efficiency Kits Program.

In PY16, Ameren Missouri hired ICF International (ICF) as a third-party implementation contractor, who processed rebates on Ameren Missouri's behalf and managed a network of retail partners who sell qualifying equipment.

The PY18 Efficient Products program provided downstream mail-in and online rebates for the measures listed in Table 7. PY18 measure rebate amounts did not change from PY17.

Table 7. PY18 Efficient Products Measures

Measure	Rebate Amount
ENERGY STAR-certified Heat Pump Water Heaters	$500
ENERGY STAR-certified Room Air Conditioners	$50
ENERGY STAR-certified Room Air Purifiers	$50
ENERGY STAR-certified Multispeed Pool Pumps	$350
ENERGY STAR-certified Variable-Speed Pool Pumps	$350
Smart Thermostats (Selected Models)	$50

Program Activity

In PY18, the Efficient Products program delivered 11,160 rebates to Ameren Missouri participants, as shown in Table 8. Overall, the program rebated 42% fewer items than in PY17 (19,171 rebates delivered), with participation decreasing for every measure except VFD pool pumps (1,083 units rebated in PY18 compared to 1,012 units in PY17). Smart thermostat rebates decreased the most from the previous year's participation levels, experiencing a 51% decline (down from 13,693 in PY17). Ameren Missouri and Implementer staff reported that they had deliberately "throttled" marketing efforts for the program in PY18 to manage participation levels and ensure that the program's incentive budget did not run out before the end of the program year.

Table 8. PY18 Efficient Products Program Activity Summary

Measure	PY18 Totals *
Equipment Rebates	
ENERGY STAR-certified Heat Pump Water Heaters	331
ENERGY STAR-certified Room Air Conditioners	990
ENERGY STAR-certified Room Air Purifiers	1,872
ENERGY STAR-certified Multispeed Pool Pumps	113
ENERGY STAR-certified Variable-Speed Pool Pumps	1,083
Smart Thermostats (Selected Models)	6,771
Total	**11,160**

*Reported measures.

Evaluation Methodology

In evaluating Ameren Missouri's Efficient Products program, Cadmus identified the following objectives for PY18:

- Identify PY18 program changes
- Estimate the program's gross energy savings and demand reductions
- Calculate the program's cost-effectiveness
- Determine measure-specific net-to-gross (NTG) estimates, including participant and nonparticipant spillover (NPSO)
- Measure customer satisfaction with the program
- Assess the program's achievements against goals
- Assess program design implementation and opportunities for improvements

Table 9 lists evaluation activities and briefly explains each activity's purpose. Descriptions of each activity follow the table.

Table 9. PY18 Process and Impact Evaluation Activities and Rationale

Evaluation Activity	Process	Impact	Rationale
Tracking Data Review	✓	✓	Provide assurance that all necessary program data are tracked accurately and incorporated into savings estimates.
Stakeholder Interviews	✓		Identify changes to program delivery and identify successes and challenges.
Participant Surveys	✓	✓	Collect customer feedback about program processes, satisfaction, and information sources about the program. Confirm equipment disposition.
Nonparticipant Surveys		✓	Cadmus estimated NPSO using a cross-cutting general population survey.
Estimate NTG		✓	Cadmus estimated NTG to determine the portion of gross energy savings influenced by and attributable to the Energy Efficiency Kits program, free of other influences.
Engineering Analysis		✓	Update gross kWh savings estimates.
Program Benchmarking	✓		Identify gaps and opportunities in program offerings, incentive levels, and results in comparison with similar programs in other territories.
Key Progress Indicators	✓		Update on key progress indicators developed in PY16 to track progress in subsequent program years.
Cost-Effectiveness Analysis		✓	Measure the program's cost-effectiveness using five standard perspectives: total resource cost, utility cost, societal cost test, participant cost test, and ratepayer impact test.

Data Tracking Review

Cadmus reviewed program tracking data recorded in the Vision database to identify and assess the variables necessary for impact calculations. Specifically, the team determined whether ICF gathered the data necessary for an accurate evaluation; these included an assessment of data quality and completeness.

The continuously updated Vision database contained information such as the following:

- Incentive amounts
- Measure types
- Customer information
- Building types and HVAC information
- Equipment manufacturer and model numbers
- Combined Energy Efficiency Ratio (CEER) for room air conditioners (RAC)
- Pool sizes for pool pumps
- Delivery channels for smart thermostats (i.e., online store discount or mailed check)

Stakeholder Interviews

In March 2019, Cadmus interviewed Efficient Products program stakeholders. The interview design addressed the following:

- Understand program successes and challenges
- Assess program marketing changes since the prior year
- Assess changes in retailer engagement since the prior year
- Identify the program's key quality assurance processes

As shown in Table 10, the team spoke with two stakeholders from Ameren Missouri and ICF. Appendix E provides the stakeholder interview guide.

Table 10. PY18 Completed Stakeholder Interviews

Stakeholder Group	Interviews Conducted
Ameren Missouri Program Management	1
ICF Program Management	1
Total	**2**

In addition, Cadmus conducted one interview with the Ameren Missouri Marketing Manager that addressed marketing strategies and messaging for all programs, including Efficient Products.

Throughout PY18, the team spoke regularly with Ameren Missouri's program staff to discuss program operations and to coordinate evaluation activities.

Participant Surveys

Cadmus conducted online surveys with participating customers who provided an email address through their applications.[2]

The team conducted two online surveys, administering one shortly after a customer received a rebate[3] (an immediate survey) and the other six months later (a follow-up survey):

- The immediate survey included questions about measure and program satisfaction, measure installation, program free ridership, information sources about the program, and demographic and household characteristics.
- The follow-up survey included some of the same satisfaction and installation questions to compare responses over time. Rather than using a battery of questions to inform program free ridership, this survey included a battery of questions to inform program spillover.

Customers participating earlier in the year could receive invitations to complete both surveys, while those participating less than six months before the end of the program year only received the immediate survey (see Appendix F and Appendix G for survey instruments). Table 11 shows participant survey response rates.

Table 11. PY18 Participant Survey Response Rates

Survey Type	Number of Invitations	Number of Responses	Response Rates
Immediate Email Survey	2,801	606	22%
Follow-up Email Survey	3,548	553	16%

If customers received rebates for more than one measure type, the team's survey asked about a single measure type. [4] When customers received multiple rebates for the same measure, the survey wording and response options reflected the number of rebates received by the participant. Online store customers who took the surveys were asked slightly different questions than other smart thermostat customers, designed to reflect differences in rebate deliveries and purchase experiences. Table 12 summarizes the number of measures purchased by survey respondents, including results for smart thermostats purchased through the online store.

[2] For PY18, 76% of program records included an email address (7,653 out of 10,065 records).

[3] A proxy for the installation date.

[4] As most measures rebated through the program in PY18 were smart thermostats, customers with multiple measure types were asked about their non-thermostat measures with the largest *ex ante* savings.

Table 12. PY18 Participant Survey Measure Quantities

Measure Type	Immediate Survey		Follow-Up Survey	
	Responses (Number of Customers)	Rebates Received (Number of Measures)	Responses (Number of Customers)	Rebates Received (Number of Measures)
Room Air Conditioners	75	94	73	80
Heat Pump Water Heaters	42	42	22	22
Room air purifiers	128	155	71	86
Pool pumps *	103	105	132	132
Smart thermostats (total)	258	297	255	292
- Mailed rebate check	229	258	253	290
- Online store purchase	29	39	2	2
Total	**606**	**693**	**553**	**612**

*Participants who purchased multi- and variable-speed pool pumps received identical survey questions/wording; survey results for the measures are reported together as "pool pumps."

Nonparticipant Surveys

In PY18, Cadmus conducted 2,323 online and 57 phone surveys with Ameren Missouri customers who did not participate in any Ameren Missouri energy efficiency programs in PY17 or PY18. Cadmus conducted the surveys to calculate nonparticipant spillover (NPSO). The evaluation team drew a random sample of 60,000 Ameren Missouri customers, fielding the survey until reaching the quota of at least 2,250 nonparticipant customers. The team asked respondents if they had adopted energy efficiency measures and about the influence of Ameren Missouri's marketing campaign on their decisions to adopt the measures (see Appendix H for survey instrument).

Estimate NTG

Cadmus estimated participant free ridership and spillover ratios using participant surveys completed during PY18. At the request of the independent auditor, Cadmus used a new questionnaire and scoring approach to determine free ridership in 2018. The free ridership methodology used for PY18 followed the 2019 Illinois Statewide Technical Reference Manual[5] (IL TRM) for NTG evaluation of a residential prescriptive rebate program. The free ridership methodology produces a No-Program (NP) score and a Program Influence (PI) score, both ranging from 0 to 10. The final free ridership score for a participant is the arithmetic mean of the NP and PI scores. A flow chart demonstrating the Illinois NTG process is presented in Appendix L.

[5] 2019 Illinois Statewide Technical Reference Manual for Energy Efficiency. Version 7.0. Volume 4: Cross-Cutting Measures and Attachments. Section 4.4. http://ilsagfiles.org/SAG_files/Technical_Reference_Manual/Version_7/Final_9-28-18/IL-TRM_Effective_010119_v7.0_Vol_4_X-Cutting_Measures_and_Attach_092818_Final.pdf

Engineering Analysis

Cadmus estimated gross savings for each record in the program-tracking database using engineering algorithms established in the Efficient Products Evaluation Plan, the ENERGY STAR Appliances Calculator, and the Illinois Statewide TRM.[6] Whenever possible, actual, customer-specific inputs were taken from the tracking database or looked up in the ENERGY STAR database. Average values were used for inputs missing from the tracking data or those that could not be looked up. The team then compared deemed per-unit savings, provided in Ameren Missouri's 2018 Technical Reference Manual (TRM), to Cadmus' gross savings estimates (presented in this report). For this comparison, the team used per-unit savings estimates that did not include adjustments for installation rates.

Program Benchmarking

As part of the PY16 process evaluation, Cadmus researched 12 other utilities that offered measures similar to those in Ameren Missouri's Efficient Products Program. The team conducted secondary research using its benchmarking database, E-Source, and publicly available information to identify programs with the most recent evaluations available and to contain information regarding metrics and topics planned for benchmarking. For the 2017 and 2018 reports, Cadmus updated Ameren Missouri's offerings, comparing to those same benchmarks, to reflect changes in qualifications and incentive amounts.

Key Progress Indicators

Across the three-year program cycle, Cadmus tracked the following key progress indicators for the Efficient Products program:

- Program year electric savings
- Participation by measure
- Free ridership by measure
- Customer satisfaction with upgrades, incentive amounts, the program overall, and Ameren Missouri

Cost-Effectiveness Analysis

Using final PY18 Efficient Products Program participation and implementation data as well as the *ex post* gross and net savings estimates presented in this report, the Cadmus team determined the program's cost-effectiveness using DSMore (a financial analysis tool designed to evaluate the costs, benefits, and risks of demand-side management [DSM] programs and services). As shown in the Cost-Effectiveness

[6] The Illinois Statewide *Technical Reference Manual* for Energy Efficiency, Version 6.0. February 8, 2017.

Results section, the Cadmus team assessed cost-effectiveness using all five of the standard perspectives produced by DSMore:

- Total Resource Cost
- Utility Cost Test
- Societal Cost Test
- Participant Cost Test
- Ratepayer Impact Test

Process Evaluation Findings

This section presents Cadmus's process evaluation findings for Ameren Missouri's Efficient Products program. The report organizes the findings into six sections:

- Program Design
- Program Delivery
- Marketing and Outreach
- Participant Experience
- Smart Thermostat Usage
- Smart Thermostats and HVAC Replacement

Program Design

The Efficient Products program sought to achieve energy and demand savings by encouraging residential customers to purchase efficient room air conditioners (RAC), heat pump water heaters (HPWH), room air purifiers, pool pumps, and smart thermostats. The program broadly targeted residential customers in Ameren Missouri's service territory; by offering downstream rebates, the program incentivized customers to replace existing or broken equipment with efficient units.

The program partnered with retailers within the territory to promote and support the program, though qualifying equipment could be purchased outside of Ameren Missouri's territory. Participants who purchased equipment from a retailer received rebates by mail after approval of their applications. Participants who purchased smart thermostats from Ameren Missouri's online store received rebates in the form of an immediate discount to the purchase price.

Ameren Missouri contracted with ICF to implement the program, and ICF managed the program's marketing and a network of participating retailers, processed rebates, and conducted quality control checks. Table 13 lists Ameren Missouri's rebate amounts for the Efficient Products program in PY18.

Table 13. PY18 Rebated Measures

Measure	Rebate Amount
ENERGY STAR-certified RACs	$50
ENERGY STAR-certified HPWHs	$500
ENERGY STAR-certified Room Air Purifiers	$50
ENERGY STAR-certified Multispeed Pool Pumps	$350
ENERGY STAR-certified Variable-Speed Pool Pumps	$350
Smart Thermostats (Selected Models)	$50

Program Delivery

This section discusses responses drawn from Cadmus' interviews with program managers. Interviews primarily focused on program changes, successes and challenges, and future program changes.

PY18 Program Changes

In PY18, the Efficient Products program did not undergo major changes in program delivery: the program offered the same incentive amounts for the same measures, through the same channels. During PY18, the implementer changed the marketing and rebate form's availability to manage the participation pace, so the program's incentive budget would not be depleted before the year's end.

Retailers

To promote efficient equipment sales (and, more broadly, the ENERGY STAR brand), the Efficient Products program actively engaged with retailers that sold equipment rebated through the program. Participating retailers disseminated information about the program, including rebate application forms. Participants did not need to purchase equipment from a participating retailer to receive program rebates.

Staff from ICF and subcontractor Crossmark regularly met with participating local retailers' staff at their stores. The meetings sought to provide program updates, marketing materials, training, and information. ICF also maintained contacts with corporate-level personnel at national retail chains as well as with some distributers and manufacturers for HPWH equipment and smart thermostats. As the Efficient Products program operated as a downstream rebate program, implementer staff reported that their main goals included affecting retailer stocking practices rather than affecting manufacturer, contractor, or distributor practices.

Quality Assurance Processes

Implementer staff reported that the Efficient Products program conducted quality assurance by reviewing every application received. This included confirming that the applicant was an Ameren Missouri residential customer and that fields crucial for verifying the equipment's qualification were complete. Staff reported that online applications tended to require less follow-up with participants due to participants typing data online rather than writing it by hand.

In PY18, 21 smart thermostats, produced by eight manufacturers, were included in the list of qualifying models. For other measures, the equipment had to be included in a list of ENERGY STAR-certified equipment.

Delivery Successes and Program Achievements

For PY18, stakeholders reported that the program's greatest success was Ameren Missouri's and the implementer's management of participation levels through strategic marketing decisions. This included reducing marketing efforts to reduce participation, thus conserving the incentive budget so program rebates remained available to customers through the entire year. This rebalancing to conserve the

budget became necessary due to the program greatly exceeding its smart thermostat participation targets over the first two years of the PY16–PY18 cycle.

Program Implementation Challenges and Potential Changes

Program stakeholders identified the rapid pace of market change as a challenge: specifically, Ameren Missouri customers adopted smart thermostats at an unanticipated pace, presenting challenges in maintaining the program's budget while keeping incentive amounts at appropriate and effective levels. The implementer also said changes to retailer stocking practices had presented challenges in meeting HPWH participation targets.

Marketing and Outreach

Ameren Missouri marketed the Efficient Products program directly, providing materials and co-branding opportunities to its participating retailers. This marketing and outreach section provides information about marketing practices and relevant results from the stakeholder interviews, marketing manager interview, and participant surveys.

Marketing Activity

The Ameren Missouri Marketing Manager reported that the marketing strategy for all programs in PY18 was similar to PY17. For the Efficient Products Program, Ameren Missouri mostly relied on direct mail postcards, email campaigns, and social marketing. In addition, ICF collaborated with ENERGY STAR and partners within the retail supply chain to leverage national campaigns and initiatives.

Messaging

For PY18, Ameren Missouri developed a series of advertisements for social media and other platforms that included program-specific messages and more general conservation messages. All advertisements were designed to drive traffic to the website. Ameren Missouri issued the program specific messaging earlier in the year, and during critical seasons, depending the program. For Efficient Products, seasonal messaging included promotion of pool pumps and room air conditioners in the summer, and air purifiers at the end of the winter. As the programs approached their participation goals, Ameren Missouri switched to more general conservation messaging. This approach was designed to maintain the importance around efficiency behavior, without overwhelming the program budgets.

Figure 3 shows an example of messaging specific to the Efficient Products program. This advertisement was posted to Facebook and Twitter in February 2018, in advance of the PY18 program year.

Figure 3. Efficient Products Ad Posted in February 2018

Source: Ameren Missouri

Retailer Marketing Practices

In addition to the mass market campaigns managed by Ameren Missouri, ICF worked with retail and manufacturer partners to post in-store marketing materials. In general, participating stores advertised the program rebates using rebate-qualifying stickers on product boxes and brochures and rebate forms on the shelves, which program representatives set up and rotated. Some retailers also displayed end-cap or pallet displays for qualified products and advertised the program rebates on their websites. However, since smart thermostats had greatly exceeded participation and savings goals in PY17, during PY18 in-store marketing materials for these measures were removed from retail stores, and Ameren Missouri did not continue co-marketing with smart thermostat manufacturers in PY18 as they had done in PY16 and PY17.

Sources of Participant Program Awareness

Cadmus asked program participants how they learned of the Efficient Products program rebates. As in PY16 and PY17, responses varied greatly, according to equipment types purchased by customers.

Similar to PY16 and PY17, most participants who purchased RACs and air purifiers learned about the program rebate from signs and displays in the stores where participants purchased the equipment or from rebate applications attached to product packaging in the stores. The remaining customers purchasing these measures mostly learned about the program from Ameren Missouri via its website, a monthly energy statement, or a home energy report.

As in previous years, respondents primarily learned of pool pump rebates through contractors that installed the equipment (50%, n=103) and store representatives (29%). For HPWHs, respondents primarily learned of them through Ameren Missouri's website (29%, n=41), store representatives (24%) and in-store displays (15%), while only 10% learned about the rebate through installation contractors. Customers who purchased smart thermostats most often learned about the program from Ameren Missouri's website (31%, n=253) or through friends and family (30%).

Participant Experience

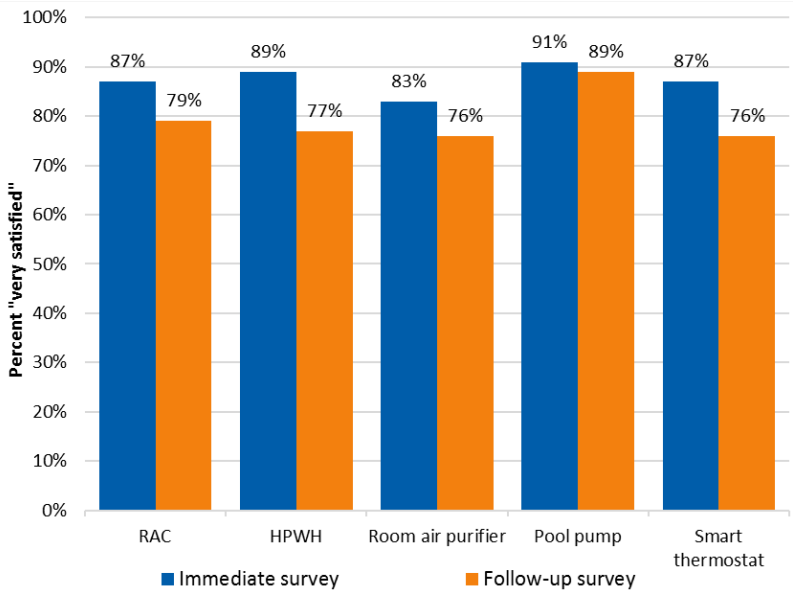
Participant Satisfaction

Cadmus asked participants about their satisfaction with their new equipment, their rebate amounts, the Efficient Products program overall, and Ameren Missouri. Participants expressed high satisfaction levels with all program elements.

Satisfaction with Measures

For PY18, participants expressed high satisfaction levels with their equipment, consistent with survey responses from PY16 and PY17. Between 76% and 91% of customers in both surveys gave the highest-possible *very satisfied* ratings for every measure, as shown in Figure 4. Combining results from both surveys, 1% or 2% of participants assigned *not too satisfied* or *not satisfied at all* ratings for every measure.

Figure 4. Participant Satisfaction with Measures, by Survey

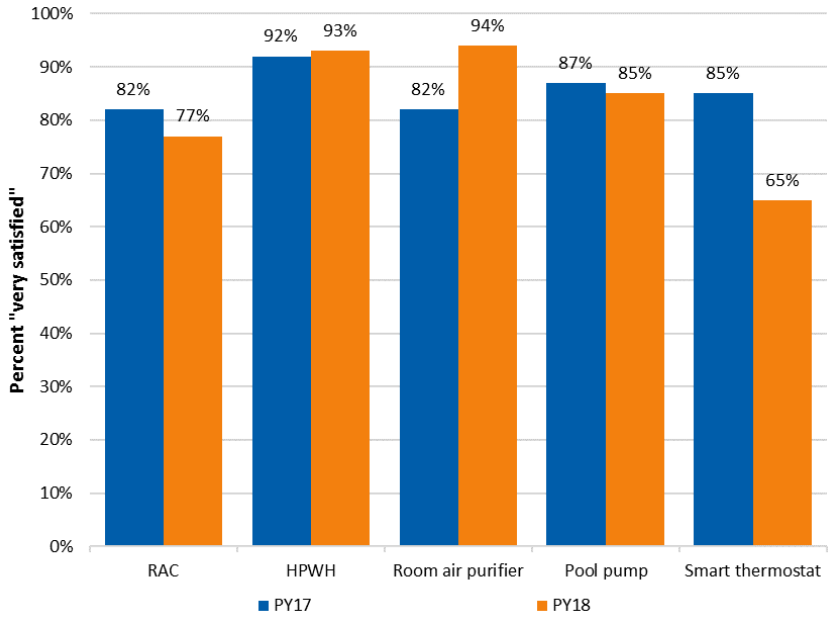


Immediate Participant Survey: B2. "How satisfied are you with the performance of your new [measure]?" RAC n=71, HPWH n=38, Room air purifier n=127, Pool pump n=95, Smart thermostat n=249, and Follow-up Participant Survey: B1. "How satisfied are you with the performance of your new [measure]?" RAC n=73, HPWH n=22, Room air purifier n=71, Pool pump n=132, Smart thermostat n=255

Satisfaction with Rebate Amounts

As shown in Figure 5, most participants expressed high satisfaction levels with rebates they received for purchasing efficient equipment. For most measures, satisfaction with rebate amounts remained consistent with PY17, except for smart thermostats, which saw a statistically significant decrease from PY17 (85%) to PY18 (65%). This corresponded to PY18 being the first full program year after the rebate amount for this measure had been reduced from $100 to $50 in January 2018.

Figure 5. Participant Satisfaction with Rebate Amounts



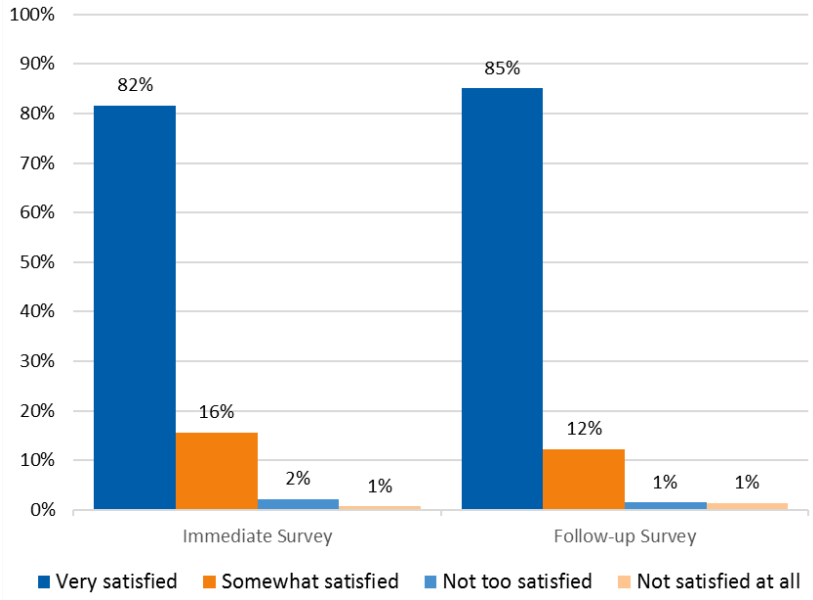
Immediate Participant Survey: PY17 D5 and PY18 B1. "How satisfied are you with the amount of the rebate you received?" PY17: RAC n=148, HPWH n=84, Room air purifier n=307, Pool pump n=167, Smart thermostat n=1,317. PY18: RAC n=75, HPWH n=42, Room air purifier n=127, Pool pump n=103, Smart thermostat n=255.

Overall Satisfaction and Suggested Improvements

Cadmus asked participants about their satisfaction levels with the Efficient Products program overall (Figure 6), and if they had suggestions for program improvements. Consistent with the previous program year, participants expressed high satisfaction levels with the program. These persisted from immediately after purchasing a measure to approximately six months after installation (i.e., between the Immediate Participant Survey and Follow-up Survey).

Compared to those who purchased other measures, customers who purchased smart thermostats were the least likely to be *very satisfied* with the program (74% immediate survey, 82% follow-up survey).

Figure 6. Participant Satisfaction with the Efficient Products Program



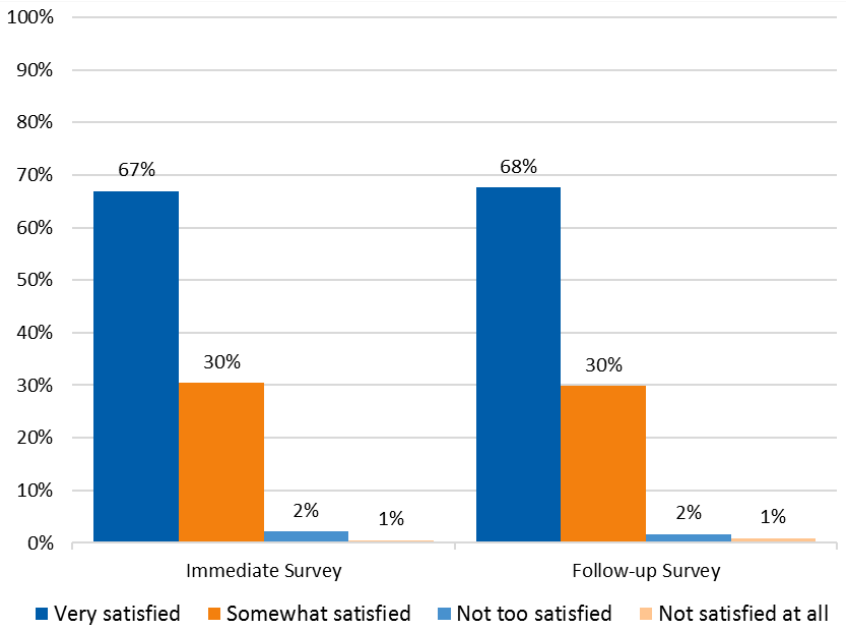
Immediate Participant Survey: B4. "Thinking about your overall satisfaction with Ameren Missouri's Efficient Products Program, would you say you are:" n=601 and Follow-up Participant Survey: B3. "Thinking about your overall satisfaction with Ameren Missouri's Efficient Products Program, would you say you are:" n=549

Satisfaction with Ameren Missouri

Cadmus asked participants about their satisfaction levels with Ameren Missouri as their utility. As shown in Figure 7, 67% awarded the utility with the highest possible *very satisfied* rating; just 3% gave ratings of *not too satisfied* or *not satisfied at all*. Ratings were similar for participants with different measures, except that pool pump respondents were more satisfied with Ameren Missouri in the immediate survey (77% *very satisfied*, n=99), though they were not any more satisfied than customers with other measures in the follow-up survey (68% *very satisfied*, n=132). In PY18, the percentage of participants giving *very satisfied* ratings remained virtually unchanged six months after purchases (compared to immediately after purchases), very similar to PY17; surveys from PY16 showed increase satisfaction over the equivalent time periods.

Additionally, a majority of participants in both surveys reported that their satisfaction with Ameren Missouri increased after participating in the Efficient Products program (i.e., immediate survey 55%, follow-up survey 50%), while only 1% (immediate survey) to 3% (follow-up survey) stated that their satisfaction decreased (immediate survey n=559, follow-up survey n=535). Although these results were similar to PY17 (immediate survey 58%, follow-up survey 53%), both years represented a decline from PY16, when 66% of respondents in both surveys said they were more satisfied with Ameren Missouri after participating in the program.

Figure 7. Participant Satisfaction with Ameren Missouri



Immediate Participant Survey: G1. "Thinking about your overall experiences with Ameren Missouri as your utility, how satisfied would you say you are with Ameren Missouri?" n=569 and Follow-up Participant Survey: F1 "Thinking about your overall experiences with Ameren Missouri as your utility, how satisfied would you say you are with Ameren Missouri?" n=543

Participant Purchase Decisions

According to program records, Nest models continued to be the most popular thermostats rebated through the program, but they no longer accounted for most rebates for this measure (41%, down from 61% in PY17). Compared to PY17, a larger portion of PY18 smart thermostat rebates were paid for Trane (15%), Emerson (11%), and Carrier (6%) models. Other rebated models in PY18 included Ecobee (11%), Honeywell (6%), Lennox (5%), and American Standard (3%).

According to program records, the most popular HPWH models in PY18 were Rheem/Richmond (47%) and A.O. Smith (31%). Fewer General Electric HPWH models were rebated in PY18 (3%) compared to PY17 (23%).

Smart Thermostat Usage

Previously Installed Thermostats

Cadmus asked survey respondents what kind of thermostat they replaced with their new program thermostats. Similar to PY16 and PY17, about one-half of PY18 respondents replaced programmable thermostats (50%, n=390 thermostats); most of the remainder replaced manual thermostats (43%), while small percentages replaced other smart thermostats (5%) or were installed in newly constructed homes (2%). Cadmus asked survey respondents what heating and cooling equipment they controlled with their smart thermostats. Results were similar to previous years: most controlled standard-efficiency central air conditioners (CACs) and gas furnaces.

Smart Thermostat Functionality and Features

Cadmus asked participants with smart thermostats if they used the geofencing function,[7] and if their thermostat connected to the Internet. A large majority of participants confirmed that their geofencing function remained active (immediate survey 75%, follow-up survey 81%), and nearly all reported that their thermostats were connected to the Internet (95% in both surveys). These results were similar to PY16 and PY17.

Smart Thermostats and HVAC Replacement

Cadmus asked smart thermostat participants if they had replaced any other heating or cooling equipment at the same time. Participants reported that 11% of furnaces, 12% of CACs, and 24% of heat pumps (HP) had been replaced at about the same time that smart thermostats were installed; these results were all higher than PY17, which in turn was higher than PY16. The largest increase occurred for HPs (up from 2% in PY16). These year-over-year increases corresponded to increasing crossover participation between the Efficient Products and Heating and Cooling Programs during the same period.

Cadmus also asked survey questions about smart thermostat usage to 107 Heating and Cooling program participants who received rebates for smart thermostats through the Efficient Products program.[8] One hundred and four of these respondents received rebates for CAC (n=92) or HP (n=12) installations, while three received Heating and Cooling program rebates for equipment tune ups. Heating and Cooling program participants who also received smart thermostat rebates represented 16% of CAC and 15% of HP installations rebated through the program in PY18. These rates were similar to PY17 (14% of CAC and 15% of HP), and represented an increase from PY16 (2% of CAC and 3% of HP). Among Heating and Cooling participants who purchased tune ups in PY18, 1% also received a smart thermostat rebate from Ameren Missouri.

As seen in PY17, Heating and Cooling participants, who also received smart thermostat rebates, gave very similar responses to survey questions compared to Efficient Products smart thermostat participants, who did not receive Heating and Cooling program rebates. The notable exception was that contractors wielded a greater influence over customers participating in the Heating and Cooling program (only 17% of smart thermostat survey respondents in the Efficient Products program were installed by contractors).

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[7] The geofencing function uses geolocation technology (i.e., GPS) to create a virtual geographic boundary, enabling software to trigger a response when a mobile device enters or leaves a particular area.

[8] The Heating and Cooling immediate surveys included questions about smart thermostat usage for participants who also received smart thermostat rebates through the Efficient Products program. These responses were analyzed and reported for the Efficient Products program report.

Gross Impact Evaluation Results

This section details Cadmus' determination of each measure's installation rate and calculations of per-unit savings for Ameren Missouri's Efficient Products program. Cadmus compared these results to unit savings values taken from the current Ameren Missouri TRM. During PY18, Ameren Missouri did not update the TRM using values from an interim gross impact analysis, performed by Cadmus during 2017, so *ex ante* savings remained the same as it was in 2017 as determined by Cadmus during 2016. The final *ex post* gross impact results included updated values, based on participant surveys and program records, through the end of the program year (which concluded February 28, 2019).

Measure Installation Verification

Cadmus used survey results to verify installations of program measures. Six months after rebate payments, the team conducted the follow-up survey, which was used to calculate the percentage of installed and operating units for measures with sufficient survey responses (i.e., 292 smart thermostats, 86 air purifiers, 80 RACs, and 132 pool pumps). Since the follow-up surveys received only 22 HPWH responses, the team combined follow-up survey installation rate responses with those from 42 immediate surveys conducted shortly after purchase.[9] Table 14 presents the percentage of measures installed and operating.

Table 14. Measure Installation

Measure	Percentage Installed and Operating
ENERGY STAR-certified RACs	97.5%
ENERGY STAR-certified HPWHs	100.0%
ENERGY STAR-certified Room Air Purifiers	94.0%
ENERGY STAR-certified Multispeed Pool Pumps	98.5%
ENERGY STAR-certified Variable-Speed Pool Pumps	98.5%
Smart thermostats	98.3%

Measure-Specific Gross Savings

Cadmus reviewed the 2018 TRM's deemed per-unit savings for all program measures. The team then compared these assumptions to other TRMs and the latest ENERGY STAR calculators to develop estimated per-unit savings numbers. The remainder of this section outlines estimated per-unit savings for each measure, along with the algorithms and inputs used. Employing engineering algorithms established in the Efficient Products evaluation plan, Illinois Statewide TRM, and ENERGY STAR calculators, the team estimated savings for each record in the PY18 tracking database. The discussion includes descriptions of gross energy savings determined for each measure, along with algorithms and inputs used.

[9] The evaluation used immediate survey responses for participants taking only one survey (only follow-up survey responses were used for those taking both surveys).

ENERGY STAR Room Air Conditioners

Cadmus estimated per-unit savings for RACs using the following Illinois Statewide TRM algorithm:

$$Energy\ Savings\ (kWh/Year) = \frac{\frac{BTU}{hr} \times \left(\frac{1}{EER_{BASE}} - \frac{1}{EER_{EFF}}\right) \times EFLH_{COOL}}{1{,}000}$$

Where:

- Btu/hr = Room air conditioner cooling capacity (Btu/hour)
- EER_{BASE} = Baseline equipment energy efficiency ratio (Btu/W-hour)
- EER_{EFF} = Efficient equipment energy efficiency ratio (Btu/W-hour)
- $EFLH_{COOL}$ = Equivalent full-load cooling hours
- 1,000 = Conversion from between Wh to kWh

Table 15 shows the average values for each parameter.

Table 15. Room Air Conditioner Savings Assumptions

Term	Value	Source
Btu/hr	10,329	Average from PY18 Efficient Products Program Database
EER_{BASE}	10.8	Federal Minimum Efficiency Standard (CEER) based on size of rebated unit
EER_{EFF}	12.0	Average from PY18 Efficient Products Program Database
$EFLH_{COOL}$	533	Missouri climate zones mapped by zip code
1,000	1,000	Conversion factor (Wh/kWh)

Using this engineering algorithm, the team estimated energy savings for each RAC recorded in the tracking database, resulting in an average value of 49.8 kWh per year for each installed and retained RAC, as shown in Table 16. This value equaled 115% of the program's *ex ante* savings estimate due to updating unit sizes and EERs based on PY18 program records (rebated units were larger and more efficient relative to the baseline).

Table 16. TRM and Estimated Savings Comparison for RACs

TRM Savings/Unit	Cadmus Estimated Savings/Unit	Realization Rate
43.5 kWh/yr	49.8 kWh/yr	115%

ENERGY STAR Heat Pump Water Heaters

Cadmus estimated per-unit savings for HPWHs using the following Illinois Statewide TRM algorithms:

$$Energy\ Savings\ \left(\frac{kWh}{Year}\right) = \left(\frac{1}{EFbase} - \frac{1}{EFeff}\right) \times (HWT - CWT) \times Den \times GPD \times Household \times 365.25 \times C_p \times \frac{1}{3{,}412} - kWhheat + kWhcool$$

$$Heating\ Interaction\ (kWh\text{heat}) = (1 - \frac{1}{EFeff}) \times (HWT - CWT) \times Den \times GPD \times Household \times 365.25 \times C_p \times \frac{1}{3{,}412} \times \frac{1}{\text{COPheatl}} \times \text{LF} \times 43\% \times \%\text{ElectricHeat}$$

$$Cooling\ Interaction\ (kWh\text{heat}) = (1 - \frac{1}{EFeff}) \times (HWT - CWT) \times Den \times GPD \times Household \times 365.25 \times C_p \times \frac{1}{3{,}412} \times \frac{1}{\text{COPcool}} \times \text{LF} \times 53\% \times \text{LM} \times \%\text{Cool}$$

Where:

EFbase = Energy factor of baseline water heater

EFeff = Energy factor of pro Combined Energy Efficiency Ratio (CEER) gram-qualified water heater

HWT = Hot water temperature (^{o}F)

CWT = Cold water temperature (^{o}F)

Den = The water density (lb/gal)

GPD = Gallons of hot water used per day per person

Household = Number of people per household

365 = Days/year

C_p = Specific heat of water

3,412 = Conversion factor from Btu to kWh

kWhheat = Heating interaction due to heat removed from room to heat water

kWhcool = Cooling interaction due to heat removed from room to heat water

COPcool = COP of central air conditioner

LF = Location factor (1.0 for conditioned space, 0.0 for unconditioned space)

LM = Latent multiplier to account for latent cooling demand

43% = Portion of reduced waste heat that results in increased heating load

53% = Portion of reduced waste heat that results in cooling savings

%ElectricHeat = Percentage of homes with electric heat

%Cool = Percentage of homes with central cooling

Table 17 shows the average value for each of these parameters.

Table 17. HPWHs Savings Assumptions

Term	Value	Source
EFbase	0.94	Federal Minimum Standard based on capacity of rebated unit
EFeff	3.44	Average from PY18 Efficient Products Database
HWT	125	Illinois Statewide TRM v6
CWT	57.9	Using 40" deep soil temp as a proxy at Powell Gardens SCAN site: 12-month average of available data from 3/28/02–10/11/14
Den	8.33	Density of water (lb/gallon)
GPD	17.6	Residential End Uses of Water Study 2013 Update. Prepared by Deoreo, B., and P. Mayer for the Water Research Foundation, 2014
Household	2.65	Ameren Missouri Efficient Products Impact and Process Evaluation: Planning Year 2015, prepared by Cadmus
C_P	1	Specific heat of water (Btu/lb-oF)
3,413	3,413	Conversion factor (Btu/kWh)
kWhheat	242	Illinois Statewide TRM algorithm with inputs from PY18 Efficient Products Database
kWhcool	403	Illinois Statewide TRM algorithm with inputs from PY18 Efficient Products Database
LF	0.81	Wisconsin TRM
LM	1.33	Wisconsin and Illinois TRMs
43%	43%	HDD60 portion of days per year for Missouri
53%	53%	CDD65 portion of days per year for Missouri
%ElectricHeat	49%	Average from PY18 Efficient Products Database
%Cool	100%	Average from PY18 Efficient Products Database
Days	365.25	Conversion Factor (day/yr)

Using this engineering algorithm, Cadmus estimated energy savings for each HPWH recorded in the tracking database, resulting in an average value of 2,300 kWh per year for each installed and retained HPWH. This value equaled approximately 91% of the program's *ex ante* value of 2,531 kWh per year, as shown in Table 18. The difference between these estimates resulted from updates to the location factor based on new research included in the 2018 Wisconsin TRM, the latent multiplier based on the Wisconsin and Illinois TRMs, and adjustments the team made based on equipment reported in the tracking data.

Table 18. TRM and Estimated Savings Comparison for HPWHs

TRM Savings/Unit	Cadmus Estimated Savings/Unit	Realization Rate
2,531 kWh/yr	2,300 kWh/yr	91%

ENERGY STAR Room Air Cleaners

Cadmus estimated per-unit ENERGY STAR room air cleaner savings using the following ENERGY STAR calculator algorithm:

$$Energy\ Savings\ \left(\frac{kWh}{Year}\right) = \text{CADR} \times \left\{\left(\frac{1}{Eff_{BL}}\right) - \left(\frac{1}{Eff_{ES}}\right) \times \left(Hr_{oper}\right) + \left(SB_{BL} - SB_{ES}\right) \times \left(24 - Hr_{oper}\right)\right\} \times \frac{365}{1{,}000}$$

Where:

CADR	=	Clean air recovery rate for dust
Eff_{BL}	=	Clean air recovery rate for dust per watt for baseline unit
Eff_{ES}	=	Clean air recovery rate for dust per watt for ENERGY STAR unit
Hr_{oper}	=	Hours per day of operation
SB_{BL}	=	Standby for baseline unit
SB_{ES}	=	Standby for ENERGY STAR unit
365	=	Days/year
1,000	=	Conversion factor (Wh/kWh)

Table 19 shows the average values for each of these parameters.

Table 19. ENERGY STAR Room Air Cleaner Savings Assumptions

Term	Value	Source
Eff_{BL}	1.0	ENERGY STAR Appliance Calculator*
Eff_{ES}	3.0	Average from PY18 Efficient Products Program Database
Hr_{oper}	16	ENERGY STAR Appliance Calculator*
SB_{BL}	1.0	ENERGY STAR Appliance Calculator *
SB_{ES}	0.39	Average from PY18 Efficient Products Program Database
Clean air recovery rate for dust	157.6	Average from PY18 Efficient Products Program Database

*Available online: https://www.energystar.gov/sites/default/files/asset/document/appliance_calculator.xlsx

Using this engineering algorithm, the team estimated savings for each ENERGY STAR room air cleaner recorded in the tracking database, resulting in an average per-unit savings value of 608 kWh per year for each ENERGY STAR room air cleaner (shown in Table 20). This value equaled approximately 109% of the program's *ex ante* savings estimate of 556 kWh per year. The difference between estimates resulted from updates to the clean-air delivery rate for dust and from standby energy consumption, based on PY18 program data.

Table 20. TRM and Estimated Savings Comparison for ENERGY STAR Room Air Cleaners

TRM Savings/Unit	Cadmus Estimated Savings/Unit	Realization Rate
556 kWh/yr	608 kWh/yr	109%

ENERGY STAR Multispeed Pool Pumps

Cadmus estimated per-unit, multispeed, pool pump savings using the following algorithms:

$$Energy\ Savings\ \left(\frac{kWh}{Year}\right) = Days_{oper} \times \left\{\left(\frac{kWh_{ss}}{Day}\right) - \left(\frac{kWh_{ds}}{Day}\right)\right\}$$

Where:

$$\left(\frac{kWh_{ss}}{Day}\right) = \frac{(RT_{ss} \times GPM_{ss} \times 60)}{(EF_{ss} \times 1{,}000)}$$

$$\left(\frac{kWh_{ds}}{Day}\right) = \left(\frac{kWh_{hs}}{Day}\right) + \left(\frac{kWh_{ls}}{Day}\right)$$

$$\left(\frac{kWh_{hs}}{Day}\right) = \frac{(RT_{hs} \times GPM_{hs} \times 60)}{(EF_{hs} \times 1{,}000)}$$

$$\left(\frac{kWh_{ls}}{Day}\right) = \frac{(RT_{ls} \times GPM_{ls} \times 60)}{(EF_{ls} \times 1{,}000)}$$

Where:

$Days_{oper}$	=	Days/year of operation
RT_{ss}	=	Runtime in hours/day using single-speed pump
GPM_{ss}	=	Gallons per minute using single-speed pump
EF_{ss}	=	Energy factor using single-speed pump
RT_{hs}	=	Runtime in hours/day in high speed using multispeed pump
GPM_{hs}	=	Gallons per minute in high speed using multispeed pump
EF_{hs}	=	Energy factor in high speed using multispeed pump
RT_{ls}	=	Runtime in hours/day in low speed using multispeed pump
GPM_{ls}	=	Gallons per minute in low speed using multispeed pump
EF_{ls}	=	Energy factor in low speed using multispeed pump
1,000	=	Conversion factor (Wh/kWh)

Table 21 shows the average value for each of these parameters.

Table 21. ENERGY STAR Multispeed Pool Pump Savings Assumptions

Term	Value	Source
$Days_{oper}$	121.6	ENERGY STAR Pool Pump Calculator adjusted for multispeed in Missouri*
RT_{ss}	11.4	
RT_{ls}	9.8	
RT_{hs}	2.0	
GPM_{ss}	64.4	
GPM_{ls}	31.0	
GPM_{hs}	56.0	
EF_{ss}	2.1	
EF_{ls}	5.4	
EF_{hs}	2.4	

*Available online:
https://www.energystar.gov/sites/default/files/asset/document/Pool%20Pump%20Calculator.xlsx

Using this engineering algorithm, Cadmus estimated a per-unit saving value of 1,800 kWh per year for multispeed pool pumps, as shown in Table 22. This value equals the program's *ex ante* savings estimate.

Table 22. TRM and Estimated Savings Comparison for ENERGY STAR Multispeed Pool Pumps

TRM Savings/Unit	Cadmus Estimated Savings/Unit	Realization Rate
1,800 kWh/yr	1,800 kWh/yr	100%

ENERGY STAR Variable Speed Pool Pumps

Cadmus estimated per-unit, variable speed pool pump savings using the following algorithms:

$$Energy\ Savings\left(\frac{kWh}{Year}\right) = Days_{oper} \times \left\{\left(\frac{kWh_{ss}}{Day}\right) - \left(\frac{kWh_{vs}}{Day}\right)\right\}$$

Where:

$$\left(\frac{\boldsymbol{kWh_{ss}}}{\boldsymbol{Day}}\right) = \frac{(\boldsymbol{RT_{ss}} \times \boldsymbol{GPM_{ss}} \times \mathbf{60})}{(\boldsymbol{EF_{ss}} \times \mathbf{1{,}000})}$$

$$\left(\frac{kWh_{vs}}{Day}\right) = \left(\frac{kWh_{hs}}{Day}\right) + \left(\frac{kWh_{ls}}{Day}\right)$$

$$\left(\frac{\boldsymbol{kWh_{hs}}}{\boldsymbol{Day}}\right) = \frac{(\boldsymbol{RT_{hs}} \times \boldsymbol{GPM_{hs}} \times \mathbf{60})}{(\boldsymbol{EF_{hs}} \times \mathbf{1{,}000})}$$

$$\left(\frac{\boldsymbol{kWh_{ls}}}{\boldsymbol{Day}}\right) = \frac{(\boldsymbol{RT_{ls}} \times \boldsymbol{GPM_{ls}} \times \mathbf{60})}{(\boldsymbol{EF_{ls}} \times \mathbf{1{,}000})}$$

Where:

$Days_{oper}$ = Days/year of operation
RT_{ss} = Runtime in hours/day using single-speed pump
GPM_{ss} = Gallons per minute using single-speed pump
EF_{ss} = Energy factor using single-speed pump
RT_{hs} = Runtime in hours/day in high speed using variable-speed pump
GPM_{hs} = Gallons per minute in high speed using variable-speed pump
EF_{hs} = Energy factor in high speed using variable-speed pump
RT_{ls} = Runtime in hours/day in low speed using variable-speed pump
GPM_{ls} = Gallons per minute in low speed using variable-speed pump
EF_{ls} = Energy factor in low speed using variable-speed pump
1,000 = Conversion factor (Wh/kWh)

Table 23 shows the average value for each of these parameters.

Table 23. ENERGY STAR Variable Speed Pool Pump Savings Assumptions

Term	Value	Source
$Days_{oper}$	121.6	ENERGY STAR Pool Pump Calculator* (version last updated December 2013), adjusted for variable speed in Missouri
RT_{ss}	11.4	
GPM_{ss}	64.4	
EF_{ss}	2.1	
RT_{hs}	2.0	
GPM_{ls}	30.6	
EF_{ls}	7.3	
RT_{ls}	10.0	
GPM_{hs}	50.0	
EF_{hs}	3.8	

*Available online: https://www.energystar.gov/sites/default/files/asset/document/Pool%20Pump%20Calculator.xlsx

Using this engineering algorithm, the team estimated a per-unit saving value of 2,053 kWh per year for variable speed pool pumps, as shown in Table 24. This value equaled the program's *ex ante* savings estimate.

Table 24. TRM and Estimated Savings Comparison for ENERGY STAR Variable Speed Poop Pumps

TRM Savings/Unit	Cadmus Estimated Savings/Unit	Realization Rate
2,053 kWh/yr	2,053 kWh/yr	100%

Smart Thermostats

Cadmus estimated per-unit savings for smart thermostats using the following Illinois Statewide TRM algorithms:

$$Energy\ Savings\ \left(\frac{kWh}{Year}\right) = \Delta kWh\ heating + \Delta kWh\ cooling$$

$$\Delta kWh\ heating = \%ElectricHeat\ \times \text{HeatingConsumption electric}\ \times \text{HF} \times \text{HeatingReduction} + (\Delta Therms\ \times \text{Fe} \times 29.3)$$

$$\Delta Therms = \%\text{FossilHeat} \times \text{HeatingConsumption gas} \times \text{HF} \times \text{HeatingReduction}$$

$$\Delta kWh\ cooling = \%AC\ \times \text{EFLHcool} \times \text{Capacity cool} \times \frac{1}{\text{SEER}} \times \frac{1}{1000} \times \text{CoolingReduction}$$

Where:

%ElectricHeat	=	Percentage of homes with electric heat
HeatingConsumption electric	=	Annual household electric heating consumption
HF	=	Household factor to adjust for non-single-family homes
HeatingReduction	=	Percent reduction in household electric heating consumption
Fe	=	Furnace fan energy use as percent of fuel consumption
%FossilHeat	=	Percentage of homes with gas heat
HeatingConsumption gas	=	Percent reduction in household gas heating consumption
29.3	=	Conversion factor (kWh/therm)
%AC	=	Percentage of homes with central cooling
EFLHcool	=	Equivalent full load hours of air conditioning
Capacity cool	=	Capacity of air-cooling system
SEER	=	Cooling equipment's Seasonal Energy Efficiency Ratio
1/1000	=	Conversion factor (kBtu/Btu)
CoolingReduction	=	Percent reduction in household cooling consumption

Table 25 shows the average value for each of these parameters.

Table 25. Smart Thermostat Savings Assumptions

Term	Value	Source
%ElectricHeat	16.4%	Average from PY18 Efficient Products Database
HeatingConsumption electric	11,456	Average household heating load from Chicago, based on Illinois furnace metering study ('Table E-1, Energy Efficiency/Demand Response Nicor Gas Plan Year 1: Research Report: Furnace Metering Study, Draft, Navigant, August 1 2013); converted to Missouri based on HDD60
HF	97.7%	Average from PY18 Efficient Products Database
HeatingReduction	6.7%	Navigant's IL TRM Workpaper on Impact Analysis from Preliminary Gas savings findings
Fe	3.14%	Calculation based on the certified values for fuel energy (Ef in MMBTU/yr) and Eae (kWh/yr) from a sample of 300 records
%FossilHeat	83.6%	Average from PY18 Efficient Products Database
HeatingConsumption gas	682	Average household heating load from Chicago based on Illinois furnace metering study ('Table E-1, Energy Efficiency/Demand Response Nicor Gas Plan Year 1: Research Report: Furnace Metering Study, Draft, Navigant, August 1 2013) converted to Missouri based on HDD60
29.3	29.3	Conversion factor (kWh/therm)
%AC	100%	Average from PY18 Efficient Products Database
EFLHcool	857	ENERGY STAR calculator value reduced by 28.5% based on the evaluation results in Ameren territory suggesting an appropriate EFLH of 869.The other climate region values are calculated using the relative Climate Normals Cooling Degree Day ratios (at 65F set point).
Capacity cool	36,552	Average from PY18 Heating and Cooling Program Database including nominal BTU/hour for a 3-ton system if unknown (36,000) *
SEER	13.6	Average from PY18 Heating and Cooling Program Database including minimum federal standard if unknown (13.0) *
1/1000	1/1000	Conversion factor (kBtu/Btu)
CoolingReduction	8.0%	Illinois Statewide TRM v6

***Cadmus used cooling capacity and SEER values from the PY18 Heating and Cooling program database for customers who received rebates for installing heating and cooling systems and smart thermostats (crossover participants), accounting for a minority of smart thermostat rebates. Actual cooling capacity and SEER values were not available for other smart thermostat participants.**

Using this engineering algorithm, Cadmus estimated savings for each smart thermostat recorded in the tracking database, resulting in an average per-unit savings value of 326 kWh per year for each thermostat, as shown in Table 26. This value equaled approximately 70% of the program's *ex ante* savings estimate of 462 kWh per year.

Table 26. TRM and Estimated Savings Comparison for Smart Thermostats

TRM Savings/Unit	Cadmus Estimated Savings/Unit	Realization Rate
462 kWh/yr	326 kWh/yr	70%

Though *ex ante* input assumptions were not available for direct comparison, the variable with the greatest potential to influence savings was %ElectricHeat, as per-unit savings were more than three

times greater for electrically heated homes than for gas-heated homes. Additional factors affecting the realization rate included the following:

- Cadmus applied a household factor per the Illinois Statewide TRM, which served to adjust heating consumption for non-single-family homes, thus decreasing savings. About 2.8% of participant households were multifamily.
- The team calculated savings assuming a baseline thermostat mixture of manual and programmable thermostats, based on participant survey data. The resulting average heating reduction was 6.7%, compared to the Illinois Statewide TRM blended value of 7.4%. This is largely because 5% of respondents reported replacing an existing smart thermostat.
- Heating savings were calculated based on weighted average heating consumption values at the household level, irrespective of heating system sizes or efficiencies. As a result, for participants purchasing multiple thermostats, the team did not attribute additional heating savings to thermostats beyond those first installed. Cooling savings were multiplied by quantity as normal. About 2.1% of thermostats were installed in electrically heated households that received more than one thermostat rebate.

Summary

Table 27 lists per-unit, *ex ante* and *ex post* gross savings by measure (kWh); Table 28 lists the same for demand reduction (KW).

Table 27. PY18 Summary: Comparison of *Ex Ante and Ex Post* Per-Unit Gross Savings

Measure	*Ex Ante* (kWh/yr)	*Ex Post* (kWh/yr)	Realization Rate
Equipment Rebates			
ENERGY STAR-certified RACs	43.5	49.8	115%
ENERGY STAR-certified HPWHs	2,531	2,300	91%
ENERGY STAR-certified room air purifiers	556	608	109%
ENERGY STAR-certified multispeed pool pumps	1,800	1,800	100%
ENERGY STAR-certified variable-speed pool pumps	2,053	2,053	100%
Smart thermostats (selected models)	462	326	70%

Table 28. PY18 Summary: Comparison of *Ex Ante and Ex Post* Per-Unit Gross Demand Reduction

Measure	*Ex Ante* (KW/yr)	*Ex Post* (KW/yr)	Realization Rate
Equipment Rebates			
ENERGY STAR-certified RACs	0.041	0.047	115%
ENERGY STAR-certified HPWHs	0.225	0.204	91%
ENERGY STAR-certified room air purifiers	0.259	0.283	109%
ENERGY STAR-certified multispeed pool pumps	0.424	0.424	100%
ENERGY STAR-certified variable-speed pool pumps	0.483	0.483	100%
Smart thermostats (selected models)	0.438	0.308	70%

To estimate the program's total gross energy savings, the team applied the per-unit values shown in Table 27 to the Efficient Products PY18 participation rates; Table 29 shows the results.

Table 29. PY18 Summary: *Ex Post* Program Gross Savings Accounting for Installation Rates

Measure	PY18 Participation (Verified)	Per-Unit *Ex Post* Savings (kWh/hr)	Percent Installed and Operating	Total *Ex Post* Savings (MWh/yr)
ENERGY STAR-certified RACs	990	49.8	97.5%	48
ENERGY STAR-certified HPWHs	331	2,300	100.0%	761
ENERGY STAR-certified room air purifiers	1,872	608	94.0%	1,071
ENERGY STAR-certified multispeed pool pumps	113	1,800	98.5%	200
ENERGY STAR-certified variable-speed pool pumps	1,083	2,053	98.5%	2,190
Smart thermostats (selected models)	6,758	326	98.3%	2,163
Total	**11,147**	**N/A**	**N/A**	**6,432**

Net Impact Evaluation Results

Cadmus determined total programs net impacts by calculating total gross savings by measure group and then by applying the following:

- Participant Free Ridership
- Participant Spillover
- NPSO

Cadmus estimated participant free ridership and spillover ratios using participant surveys completed during PY18.

Free ridership equals the percentage of savings that would likely have occurred in a program's absence. As free rider measures incur program costs but provide none of its benefits, they decrease a program's net savings.

Participant spillover equals savings that occur when program participants undertake additional energy-efficiency measures or perform energy-efficient activities without receiving financial assistance from the program. Unlike free ridership, spillover savings do not generate program costs; rather, they generate energy-saving benefits which increase net savings.

Similarly, NPSO is a result of program or general energy-efficiency marketing and education that caused nonparticipating customers to undertake additional energy-efficiency measures or perform energy-efficient activities without financial assistance. Cadmus conducted a survey with 2,431 nonparticipating Ameren Missouri customers (from Ameren Missouri's residential customer database) to assess the influence of the program on their decision to purchase or implement energy-efficient measures without a program incentive.

To calculate the Efficient Products program's NTG, the Cadmus team used the following formula:

$$\boldsymbol{NTG = 1 - Freeridership + Participant\ Spillover}$$

Cadmus applied the resulting NTG ratio to the *ex post* gross savings for each program measure to calculate net savings for the program measures, then added the Efficient Products generated NPSO savings to arrive at total net program savings. Because NPSO is of significant size and does not have the same load shape as the program, we did not include NPSO in the NTG ratio associated with the program, but rather added the net energy and demand impacts separately.

Table 30 shows our estimates of the PY18 program's net impacts.

Table 30. PY18 Net Impact Results Summary

Program Measure	*Ex Post* Gross Savings (MWh/yr)	Free Ridership	Participant Spillover	NTG (w/o NPSO)	Net Savings (MWh/yr)
ENERGY STAR-certified RACs	48	41%	1%	60%	29
ENERGY STAR-certified HPWHs	761	20%	1%	81%	617
ENERGY STAR-certified room air purifiers	1,071	32%	1%	69%	739
ENERGY STAR-certified multispeed pool pumps	200	22%	1%	79%	158
ENERGY STAR-certified variable-speed pool pumps	2,190	22%	1%	79%	1,730
Smart thermostats	2,163	31%	1%	70%	1,514
NPSO	-	-	-	-	**10**
Program Total	**6,432**	**27%**	**1%**	**74%**	**4,796**

Free Ridership Results

At the request of the independent auditor, Cadmus used a new questionnaire and scoring approach to determine free ridership in PY18. The free ridership methodology used for PY18 followed the 2019 Illinois Statewide Technical Reference Manual[10] (IL TRM) for NTG evaluation of a residential prescriptive rebate program. The free ridership methodology produces a No-Program (NP) score and a Program Influence (PI) score, both ranging from 0 to 10. The final free ridership score for a participant is the arithmetic mean of the NP and PI scores.

The NP score was calculated by using the minimum likelihood rating, on a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, of specific Timing (T), Efficiency (E) and Quantity (Q) questions. The following questions were used to develop the NP score:

- Without the Ameren Missouri Efficient Products program, what is the likelihood you would have purchased a new [MEASURETYPE] within 12 months? (T)
- Without the Ameren Missouri Efficient Products program, what is the likelihood you would have purchased the same exact [MEASURENAME] model as the one(s) you purchased? (E)
- [IF QUANTITY > 1] Without the Ameren Missouri Efficient Products program, what is the likelihood you would have purchased fewer [MEASURENAME]s? (Q)

The PI score was calculated by asking participants, on a 0 to 10 scale, with 0 being not at all important and 10 being very important, how important they found various program elements were on their decision to purchase a high-efficiency measure. Participants were asked to rate the importance of the following program factors to inform the NP score:

- Ameren Missouri rebate

[10] 2019 Illinois Statewide Technical Reference Manual for Energy Efficiency. Version 7.0. Volume 4: Cross-Cutting Measures and Attachments. Section 4.4. http://ilsagfiles.org/SAG_files/Technical_Reference_Manual/Version_7/Final_9-28-18/IL-TRM_Effective_010119_v7.0_Vol_4_X-Cutting_Measures_and_Attach_092818_Final.pdf

- Contractor Recommendation
- Information about energy efficiency provided by Ameren Missouri
- Interaction with Ameren Missouri program staff
- Previous participation in an Ameren Missouri rebate program

In addition to asking about specific program influences, Cadmus asked respondents whether they planned to purchase a high-efficiency version of the product before learning of the rebate program. The respondent's rating of the rebate's influence is adjusted by 0.5 for those answering the question "yes."

The Preliminary Program Influence score equals the maximum influence rating for any program element rather than, for example, the mean influence rating. This is based on the rationale that if any given program element had a great influence on the respondent's action, then the program itself had a great influence, even if other elements had less influence.

An inverse relationship occurs between high program influence and free ridership: the greater the program influence, the lower the free ridership. The PI free ridership score = 10 - Preliminary Program Influence score.

Finally, the NP free ridership score is averaged with the PI free ridership score to calculate the final free ridership value for a participant.

$$Free\ Ridership\ (FR) = Mean(NP, PI) \div 10$$

Following the guidelines of the IL TRM, if a participant's NP score was 0, 1 or 2 and their PI score was 8, 9, 10, Cadmus considered their responses inconsistent and reviewed verbatim responses to the open ended question that stated "In your own words, please tell me the influence the program had on your purchase of the <insert measure name>. The IL TRM states "if warranted based on clear additional information, they will adjust the score based on expert opinion. If an inconsistency exists and the open-ended response does not resolve the inconsistency, the respondent will be removed from the calculation." Subsequently, Cadmus did not find the verbatim responses to the open-ended question to provide clear enough information to resolve the discrepancy and they were initially flagged for removal from the free ridership analysis.[11] However, Cadmus noted that many of the inconsistent responses occurred when the respondent indicated Contractor Recommendation was the highest scoring PI factor for the pool pump and smart thermostat measures. Of the 81 participants flagged initially for removal due to inconsistent scores, 41 had rated Contractor Recommendation as an 8, 9, or 10, with 0, 1, or 2 for NP scores which suggests that program participants were unaware that contractors were agents of the program. Cadmus adjusted the NP free ridership score for these 41 participants to match the rating they

[11] 81 participants were initially flagged for removal from the free ridership analysis due to inconsistent 'No-Program' and 'Program Influence' scores.

gave for the influence of their contractor's recommendation and the 41 participants are being included in the free ridership analysis reported.

Cadmus then averaged individual free ridership scores (weighted by evaluated gross energy savings) to arrive at measure category level free ridership estimates for the program.

Table 31 provides PY18 free ridership estimates by measure in comparison to PY17.

Table 31. Efficient Products Free Ridership Results

Measure	n	PY18 Total Weighted Free Ridership Estimate*	PY17 Results
ENERGY STAR-certified RACs	41	41%	62%
ENERGY STAR-certified HPWHs	37	20%	10%
ENERGY STAR-certified room air purifiers	113	32%	45%
ENERGY STAR-certified multispeed pool pumps	94	22%	19%
ENERGY STAR-certified variable-speed pool pumps			
Smart thermostats	314	31%	27%

*Estimates are weighted by *ex post* gross program savings.

Free Ridership Scores and Incentives

Cadmus calculated the average purchase price for each measure from program records.[12] These results are shown in Table 32, along with each measure's incentive-to-price ratio and estimated free ridership.

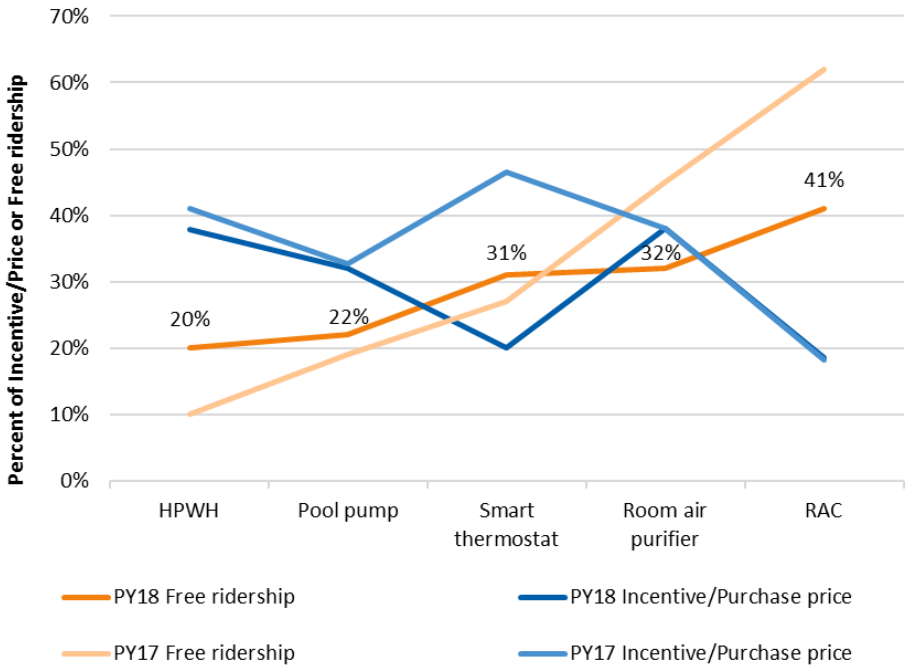
Table 32. Incentive Relative to Price Compared with Free Ridership Scores by Measure

Measure	Incentive	Average Purchase Price	Incentive as Percent of Purchase Price	Free Ridership Estimate
ENERGY STAR-certified RACs	$50	$284	18%	41%
ENERGY STAR-certified HPWHs	$500	$1,320	38%	20%
ENERGY STAR-certified room air purifiers	$50	$131	38%	32%
ENERGY STAR-certified multispeed pool pumps	$350	$1,082	32%	22%
ENERGY STAR-certified variable-speed pool pumps				
Smart thermostats	$50	$247	20%	31%

[12] Program records included valid purchase price data for more than 99% of rebated measures (10,549 records used in this analysis). Cadmus found that participants paid similar average purchase prices for multispeed ($1,112) and variable-speed ($1,079) pool pumps, so these measures were reported together.

Figure 8 shows the distribution of assigned free ridership scores by measure for PY18 and PY17, plotted with the incentive amount as a percent of each measure's average cost. An inverse relationship emerges between the incentive's relative amount and free ridership, with measures experiencing lower free ridership tending toward higher incentive-to-price ratios (the blue lines have a negative slope while the orange lines have a positive slope). From PY17 to PY18, the incentive-to-price ratio was stable for all measures except smart thermostats (the dark blue line is plotted very close to the light blue). The steep decline in this ratio from PY17 to PY18 for smart thermostats was due to the incentive being reduced from $100 at the beginning of PY17 to $50 during the last two months of the program year while purchase prices remained stable. The trend in free ridership from PY17 to PY18 showed decreases for RACs and room air purifiers, but increases for HPWHs, pool pumps and smart thermostats.

Figure 8. Incentive Relative to Price Compared with Free Ridership Scores by Measure



Participant Spillover Results

Cadmus asked Efficient Products program participants whether they had undertaken additional energy-efficient actions since participating in the program. To calculate spillover, we asked them to rate the importance of the following factors on their decisions to purchase additional energy efficient equipment:

1. Receiving funding through Ameren Missouri's Efficient Products Program
2. Information they heard from Ameren Missouri or a retailer contractor about the benefits of installing additional equipment

Survey respondents reported installing 29 additional energy-efficient measures after participating in the Efficient Products Program and said their experience in the Program was "very important" to the subsequent decision to purchase a high-efficiency appliance rather than a standard efficiency model.

We estimated energy savings for the participants' spillover responses, and then divided the total Efficient Products program survey sample spillover savings by the survey sample Efficient Products Program gross program savings, drawn from the survey sample, and as described in the following equation:

$$Spillover\ \% = \frac{\sum[Spillover\ kWh\ savings\ for\ all\ respondents]}{\sum[Program\ kWh\ savings\ for\ all\ respondents]}$$

Table 33 presents the spillover details.

Table 33. Participant Spillover Savings

Spillover Measure	Quantity	Participant Spillover kWh/year Savings	Total Survey Sample Spillover kWh/year Savings
Central Air Conditioner	2	321.2*	642.4
Efficient Faucet Aerators	2	10.2**	20.4
Efficient Showerheads	1	85.2**	85.2
ENERGY STAR Clothes Washer	2	74.7***	149.3
ENERGY STAR Clothes Washer	1	49.5†	49.5
ENERGY STAR Clothes Washer	3	26.3††	78.9
ENERGY STAR Dehumidifier	1	204.0†††	204.0
ENERGY STAR Freezer	1	23.4^	23.4
ENERGY STAR Refrigerator	8	25.4^^	203.2
ENERGY STAR Room Air Purifier	1	610.0^^^	610.0
Efficient Insulation	3	192.3^^^^	576.9
Smart Thermostat	1	296.1^^^	296.1
Recycled a Freezer	1	901.9^^^^	901.9
Recycled a Refrigerator	2	1,027.5^^^^^	2,055.0
Total	**29**	**N/A**	**5,896.2**

*Based on savings calculated for the PY18 Heating and Cooling program.

**Based on savings calculated for the PY18 School Kits program.

*** Deemed savings for ENERGY STAR Clothes washer - ENERGY STAR, CEE Tier 1 - Electric DHW / Electric Dryer - Front Loader, from the MO-TRM-2017_Vol. 3_March 31, 2017_Final. https://energy.mo.gov/sites/energy/files/MOTRM2017Volume3.pdf. Reduced by one half due to high market shares of ENERGY STAR clothes washers.

†Deemed savings for ENERGY STAR Clothes washer - ENERGY STAR, CEE Tier 1 - Unknown DHW / Unknown Dryer - Unknown Configuration - Weighted Average scenario, from the MO-TRM-2017_Vol. 3_March 31, 2017_Final. https://energy.mo.gov/sites/energy/files/MOTRM2017Volume3.pdf.

Reduced by one half due to high market shares of ENERGY STAR clothes washers.

††Deemed savings for ENERGY STAR, CEE Tier 1 - GasDHW / Electric Dryer - Front Loader, from the MO-TRM-2017_Vol. 3_March 31, 2017_Final. https://energy.mo.gov/sites/energy/files/MOTRM2017Volume3.pdf.

Reduced by one half due to high market shares of ENERGY STAR clothes washers.

††† Weighted average of deemed savings scenarios from MO-TRM-2017_Vol. 3_March 31, 2017_Final.

^ Deemed savings for ENERGY STAR Freezer - Upright Freezers with Automatic

Defrost from the Illinois TRM Version 5.0 Volume 3. Reduced by one half due to high market shares of ENERGY STAR freezers.

^^ Deemed savings ENERGY STAR Refrigerator - Bottom Freezer - CEE TIER1 - Unknown building characteristics from MO-TRM-2017_Vol. 3_March 31, 2017_Final. https://energy.mo.gov/sites/energy/files/MOTRM2017Volume3.pdf.

^^^Based on savings calculated for the PY18 Efficient Products program.

^^^^Average ceiling insulation savings per home, calculated for the PY15 Home Energy Analysis program.

^^^^^ Deemed savings for freezer recycling from MO-TRM-2017_Vol. 3_March 31, 2017_Final. https://energy.mo.gov/sites/energy/files/MOTRM2017Volume3.pdf.

^^^^^ Deemed savings for refrigerator recycling from MO-TRM-2017_Vol. 3_March 31, 2017_Final. https://energy.mo.gov/sites/energy/files/MOTRM2017Volume3.pdf.

Cadmus divided the total Efficient Products program survey sample spillover savings by the survey sample Efficient Products Program gross program savings to arrive at the 1% participant spillover estimate, rounded to the nearest whole percent, for the overall program, as shown in Table 34.

Table 34. Participant Spillover Estimate

Survey Sample Spillover kWh Savings	Survey Sample Gross Program kWh Savings	Spillover %
5,896.2	507,158.0	1%

Nonparticipant Spillover

Effective program marketing and outreach generates program participation *and* increases general energy-efficiency awareness among customers. Sustained utility program and general marketing can affect customers' perceptions of their energy usage, and, in some cases, motivate them to take efficiency actions outside of the utility's program. The energy savings caused by—but not rebated through—a utility's DSM activities are designated as NPSO.

During PY18, Ameren Missouri spent $726,844 to market individual residential efficiency programs (excluding the Low Income and Home Energy Report programs).[13] To understand whether these program-specific marketing efforts generated energy-efficiency improvements outside of the incentive programs, Cadmus implemented a large online survey of PY18 nonparticipating residential customers.

Compared to the PY17 version, the PY18 survey added measures from the Heating and Cooling program to the list of measures considered for NPSO. Moreover, for questions asking how respondents knew the installed product was efficient and why respondents took efficiency actions, the PY18 survey included more predefined responses for respondents to select, reducing uncertainty around the interpretation of responses.

[13] The Home Energy Report program is evaluated using billing analysis, which accounts for program savings and spillover savings. Consequently, this NPSO excludes it.

Methodology

Survey Sampling and Disposition

Similar to PY17's approach, Cadmus administered an online survey (see Appendix H) to efficiently obtain a significant number of survey completes. The sample design relied on analysis of PY17 survey results to determine sample sizes necessary to achieve 90/10 confidence/precision in PY18 survey results.

Out of 2,431 survey respondents in PY17, 77 (3%) reported like measures that qualified for NPSO. Based on this result, Cadmus estimated that 3% of all nonparticipants in the population adopted like measures with ±0.58% absolute precision at 90% confidence. Additionally, the team analyzed confidence/precision around NPSO savings for each type of like measure. The absolute precision—with 90% confidence—for each of nine qualified like measure types was within ±10%. To increase the likelihood of achieving similar precision at the measure level for the PY18 survey, Cadmus estimated a sample size of approximately 2,250.

From Ameren Missouri's entire residential customer base, Cadmus selected customers who did not participate in any Ameren Missouri programs in PY17 or PY18 (including the Home Energy Report program); these 777,931 customers served as the nonparticipant survey population.[14] From this population, the evaluation team excluded customers who were contacted for the PY17 NPSO survey and randomly selected 60,000 customers to serve as the PY18 survey sample. Cadmus assumed a conservative response rate of 3.75% would achieve a quota of 2,250 completes.

Cadmus mailed postcard invitations, asking customers to enter a web address that would take them to the online survey administered through Qualtrics (an online survey software vendor). To thank customers for completing the survey, the team entered them into a drawing for one of five $100 Visa gift cards. If customers expressed interest in completing the survey but did not have access to a computer linked with the Internet, the team arranged for them to complete the survey over the phone with a Cadmus employee. Within a four-week fielding period, Cadmus achieved the target quota with 2,323 online and 57 phone completes.[15]

NPSO Measures

The survey asked respondents if they adopted any of 18 energy-efficiency measures offered through Ameren Missouri programs (i.e., the measures shown in Table 35). In prior evaluations, we excluded all products in the Lighting program and most products in the Heating and Cooling program to avoid double-counting NPSO savings captured through those programs' NPSO analyses (described in those programs' reports). Because the PY18 evaluation did not conduct a separate NPSO analysis for the

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[14] Cadmus removed invalid or duplicate phone numbers from the sample frame as well as Home Energy Report participants.

[15] About 7% of respondents completing the survey (n=167) self-reported that they participated in an Ameren Missouri program in PY18; so were not counted as part of the 2,380 nonparticipant completes.

Heating and Cooling program (in contrast to prior evaluations), the previously excluded Heating and Cooling products (denoted by an asterisk in Table 35) were added to the list of PY18 measures.

Table 35. PY18 Measures

Like Measure	Like Measure
Room air conditioner	Heat pump water heater
Room air purifier	Learning or "smart" thermostat
Pool pump	Air-source heat pump*
Showerhead	Ductless or mini-split heat pump*
Kitchen faucet aerator	Duel-fuel heat pump*
Bathroom faucet aerator	Ground-source or geothermal heat pump*
Hot water pipe insulation	Central air conditioner*
Furnace fan with ECM (Electronically Commutated Motor)	Air conditioner tune-up
Filter whistle	Heat pump tune-up

Customers also could adopt energy-efficiency measures or perform energy-saving actions outside of Ameren Missouri's PY18 program offerings (i.e., "non-like" NPSO). These were not considered as part of the NPSO estimate.[16]

NPSO Qualification Criteria

To confirm a relationship between Ameren Missouri's energy efficiency programs and measures adopted by nonparticipants, Cadmus created a set of selection criteria and operationalized these into survey questions. To qualify for NPSO savings, respondents had to meet all following criteria (see Appendix C for the NPSO qualification flow charts):

a) Familiarity with at least one Ameren Missouri program, rebate, or discount.

b) At least one element of Ameren Missouri's program marketing and outreach motivated them to adopt the measure.

c) They had a valid reason for considering the adopted measure energy-efficient.

d) They had not received a rebate from Ameren Missouri, had not tried to receive a rebate from Ameren Missouri, and stated a valid reason for not applying for an Ameren Missouri measure rebate.

e) They had a valid reason for deciding to install the measure.

f) The adopted measure generated electric savings, not gas savings.

For criterion a, respondents had to have seen or heard of Ameren Missouri's energy efficiency programs or be aware that Ameren Missouri offered rebates and discounts for energy-saving equipment in customers' homes.

[16] In PY16, the team estimated that non-like NPSO savings equated to 15.1% of the total portfolio evaluated savings. However, in subsequent discussions with stakeholders, Ameren Missouri agreed not to count these savings toward overall spillover estimates in PY17 or future years.

For criterion b, the team asked respondents to rate the importance of several Ameren Missouri program marketing and outreach elements (shown in Table 36) in motivating them to adopt the measure, rating these "very important," "important," "not important," or "not important at all." The measure in question met criterion b if the respondent found at least one element "very important" or "important" in deciding to adopt the measure.

Table 36. Ameren Missouri Marketing and Outreach Elements for Criterion B

Statement
Information about energy savings from Ameren Missouri's marketing or bill-inserts
Ameren Missouri's marketing information from a contractor or retailer
Information from colleagues or friends who installed energy-efficient equipment and received a rebate from Ameren Missouri
If applicable, past participation in an Ameren Missouri rebate program
If applicable, information from a home energy assessment conducted through Ameren Missouri

Criterion c helped ensure that measures actually generated energy savings. For all measures except air conditioning and heat pump tune ups, the team asked respondents how they knew their product was energy-efficient. Responses passing criterion c included: "It's ENERGY STAR rated" or "the retailer/dealer/contractor told me it was." Responses such as "personal knowledge" or "new unit" did not pass the criterion.

The team asked whether respondents received a rebate from Ameren Missouri (to double-check that respondents truly did not participate in the program). The team then asked why respondents, or their contractors, did not apply for a rebate through Ameren Missouri. If respondents reported that they applied for a rebate but did not receive it or that their product or tune up did not qualify, their adopted measure did not pass criterion d. Responses such as "did not know about rebate" or "not worth the trouble" passed the criterion.

For criterion e, the team asked respondents why they decided to adopt the measure. If the response did not relate to saving energy or saving money, the measure did not pass criterion e. For example, one respondent reported installing a "learning or 'smart' thermostat" because it could be "[controlled] remotely." As this response did not relate to energy efficiency, the measure did not qualify as NPSO.

As the PY18 evaluation covered only electric savings generated by Ameren Missouri's programs, the team asked respondents for their water heater and heating system fuel types. Reported measures with water heating and heating end uses satisfied criterion f if the measures had a corresponding electric water heater or electric heat.

Results

Of 2,380 verified nonparticipant respondents, 29 respondents adopted a total of 36 measures that were not incentivized and passed all six NPSO criteria (see Appendix D). None of these 29 respondents received an incentive from Ameren Missouri for any measure. They were influenced by Ameren Missouri program marketing and outreach and adopted NPSO measures on their own.

NPSO Measures

Table 37 shows measures and gross evaluated kWh savings attributed to Ameren Missouri, achieving average savings of 242 kWh per measure (Variable A).

Table 37. PY18 NPSO Response Summary

Individual Reported Measures	Importance of Ameren Missouri Influence on Adoption	Measure Savings (kWh)	Allocated Savings	Quantity	Total Allocated kWh Savings	Avg kWh Per Spillover Measure
Bathroom faucet aerator	Somewhat	36	50%	2	36	Variable A
Bathroom faucet aerator	Very	36	100%	2	72	
Central air conditioner	Somewhat	321	50%	3	482	
Central air conditioner	Very	321	100%	2	642	
Furnace fan with ECM (Electronically Commutated Motor)	Very	574	100%	1	574	
Hot water pipe insulation	Very	15	100%	8	120	
Kitchen faucet aerator	Somewhat	171	50%	1	86	
Kitchen faucet aerator	Very	171	100%	1	171	
Learning or "smart" thermostat	Somewhat	326	50%	3	488	
Pool pump	Very	2,029	100%	1	2,029	
Room air conditioner	Very	50	100%	1	50	
Room air purifier	Somewhat	608	50%	2	608	
Room air purifier	Very	608	100%	1	608	
Showerhead	Somewhat	276	50%	3	414	
Showerhead	Very	276	100%	1	276	
Air conditioner tune-up	Somewhat	244	50%	3	365	
Air conditioner tune-up	Very	244	100%	7	1,705	
Total (n=36)					**8,726**	**242**

NPSO Confidence Precision Analysis

As shown in Table 38, the absolute precision—with 90% confidence—for nine of 11 qualified measure types was within ±10%. With 90% confidence. The absolute precision for central air conditioners and for air conditioner tune-ups was ±12% and ±15%, respectively. For some measure types where the percentage of respondents adopting the measure was 3% or less, Cadmus could not accurately estimate the incidence of these measures within the population. However, we are confident with the proportion of nonparticipants reporting some type of measure (1.22% or 29/2,380), which has an absolute precision of ±0.37% with 90% confidence.

Table 38. PY18 Confidence/Precision Results

Measure	Number of respondents	Percentage of respondents	Absolute Precision with 90% confidence
Bathroom faucet aerator	2	7%	8%
Central air conditioner	5	17%	12%
Furnace fan with ECM (Electronically Commutated Motor)	1	3%	6%
Hot water pipe insulation	2	7%	8%
Kitchen faucet aerator	2	7%	8%
Learning or "smart" thermostat	3	10%	10%
Pool pump	1	3%	6%
Room air conditioner	1	3%	6%
Room air purifier	3	10%	10%
Showerhead	3	10%	10%
Air conditioner tune-up	10	34%	15%
Total of Respondents Who Reported Measures	**29**	**1.22%**	**0.37%**

*Note that 1.22% is the proportion of all survey respondents (n = 2,380) who reported measures, whereas the proportions for the measure types are out of the respondents who reported measures (n = 29).

NPSO Extrapolation to Nonparticipant Population

To determine total NPSO generated by Ameren Missouri's marketing in PY18, Cadmus extrapolated NPSO savings per measure (Table 37) to the entire PY18 residential nonparticipant population. Table 39 presents the NPSO analysis, resulting in NPSO total evaluated savings of 2,852 MWh portfolio level.

Table 39. PY18 NPSO Analysis

Variable	Metric	Value	Source
A	Average kWh Savings per Measure	242	Survey Data; PY18 Impact Evaluation
B	Number of Measures	36	Survey Data
C	Number of Nonparticipant Respondents	2,380	Survey Disposition
D	Total Residential Population Minus PY18 Participants	777,931	Customer Database
E	Total NPSO MWh Savings Applied to Population	2,852	(((B ÷ C) × A) × D)/1000

NPSO savings in PY18 (2,852 MWh) are less than savings reported in PY17 (6,212 MWh). This is primarily due to the average measure per nonparticipant decreased from 0.035 in PY17 to 0.015 in PY18.

NPSO Allocation to Individual Programs

The observed 2,852 MWh of NPSO equates to 3.8% of the total portfolio evaluated gross savings. As in previous years, the team allocated the NPSO based on marketing budget and savings for each program. This approach remained consistent with the theory that NPSO resulted from the cumulative effects of energy conservation marketing, program-specific marketing, and program activity over a period—not necessarily by a single, program-specific marketing effort. In addition, while NPSO was most commonly associated with mass media marketing campaigns, the scale of program activity also counted as a factor.

For example, even without a significant marketing campaign, a program's size can drive NPSO through word-of-mouth and in-store program messaging. The team found this approach accurately reflected and

attributed NSPO to programs, ensuring those total costs (including marketing) and total benefits (net savings including NPSO) were properly accounted for when assessing overall program cost-effectiveness.

The allocation approach is based on the combined savings and marketing budget and illustrated in Table 40.

Table 40. PY18 Combined Savings and Marketing Allocation

Program	Program *Ex Post* Gross Savings (MWh)	Percentage of Portfolio Savings	Program Marketing	Percentage of Total Marketing	Combined Savings & Marketing (AxB)	Percentage of Combined Savings & Marketing
Lighting	8,383	11.15%	$40,316	5.55%	0.62%	0.95%
Efficient Products	**4,270**	**5.68%**	**$18,434**	**2.54%**	**0.14%**	**0.22%**
Heating and Cooling	**54,444**	72.42%	$643,897	88.59%	64.16%	98.65%
Smart Thermostats	**2,163**	**2.88%**	**$21,574**	**2.97%**	**0.09%**	**0.13%**
Energy Efficiency Kits	5,915	7.87%	$2,624	0.36%	0.03%	0.04%
Total	**75,175**	**100%**	**$726,844**	**100%**	**65%**	**100%**

Using the allocation method based on marketing budget and program size, the team distributed the portfolio-level result of 2,852 MWh NPSO to each of Ameren Missouri's residential programs. As shown in Table 35, the results of this approach reflected each program's impact on the nonparticipant population, proxied by the combined effect of marketing expenditures and program savings. Including smart thermostats, the Efficient Products program achieved 0.35% of the total NPSO, at about 10 MWh.

Table 41. PY18 NPSO by Program

Program	Program Gross Savings (MWh)	Total NPSO (MWH)	Percentage of Combined Savings/ Marketing	Program-Specific NPSO (MWh)
Lighting	8,383	2,852	0.95%	27
Efficient Products	**4,270**		**0.22%**	**6**
Heating and Cooling	54,444		98.65%	2,814
Smart Thermostats	**2,163**		**0.13%**	**4**
Energy Efficiency Kits	5,915		0.04%	1
Total	**75,175**		**100%**	**2,852**

Three-Year Net Savings Comparison

Figure 9 and Figure 10 show the Efficient Products subtotal energy and demand savings summaries—MPSC-approved target, *ex post* gross, and *ex post* net—for PY16, PY17, and PY18. Likewise, Figure 11 and Figure 12 show the Smart Thermostats subtotal energy and demand savings summaries for PY16, PY17, and PY18.

Figure 9. Three-Year Energy Savings Comparison—Efficient Products Subtotal

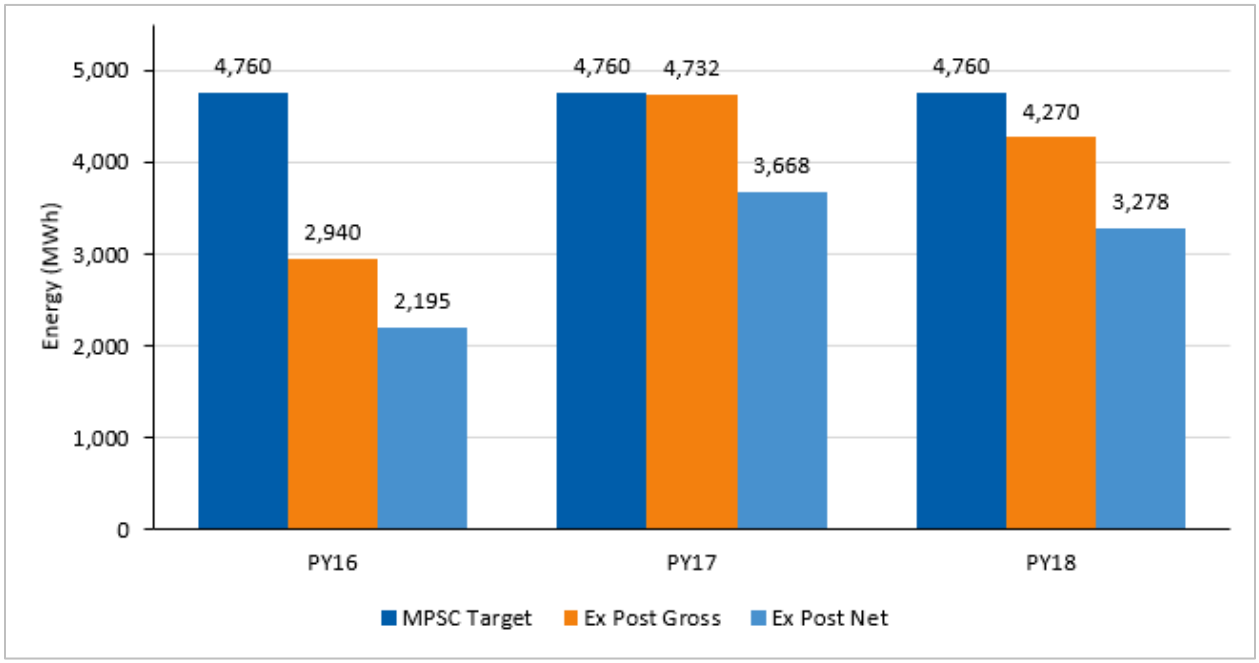


Figure 10. Three-Year Demand Savings Comparison—Efficient Products Subtotal

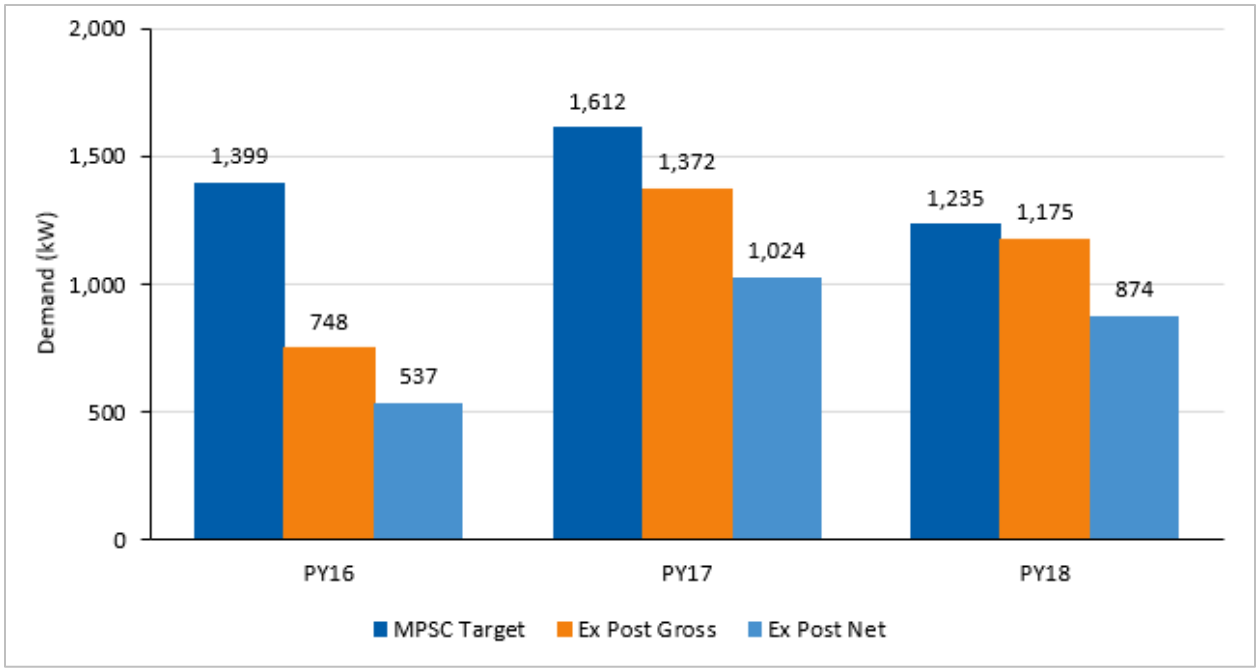


Figure 11. Three-Year Energy Savings Comparison—Smart Thermostats Subtotal

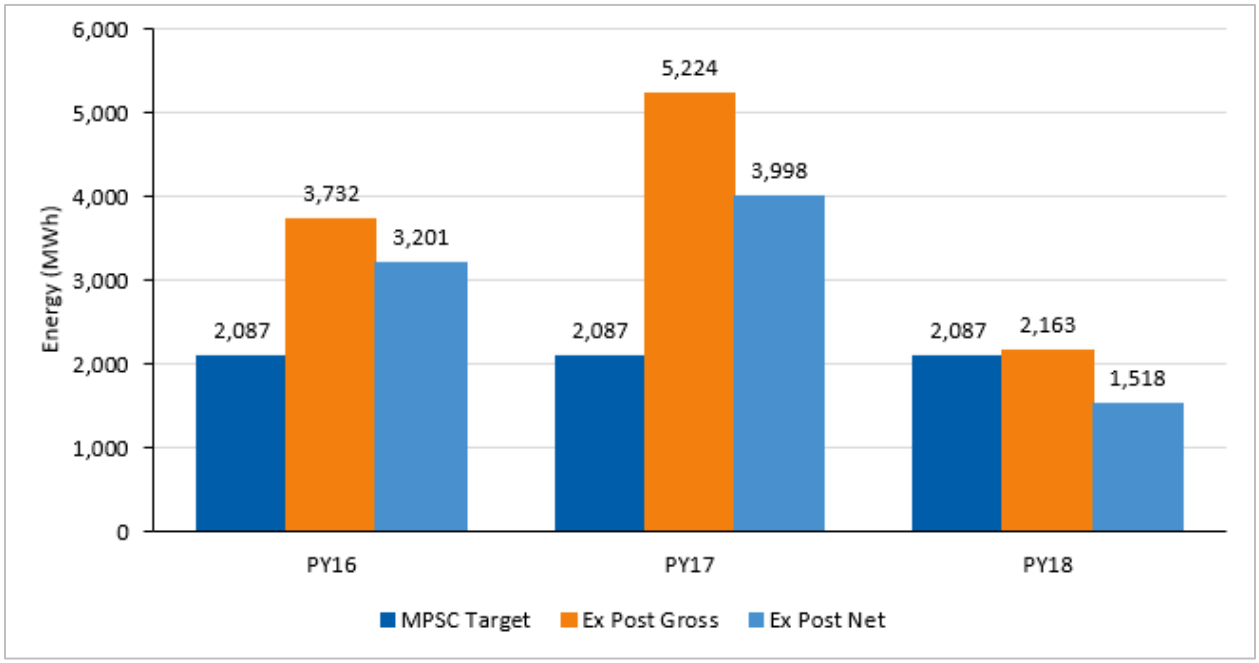
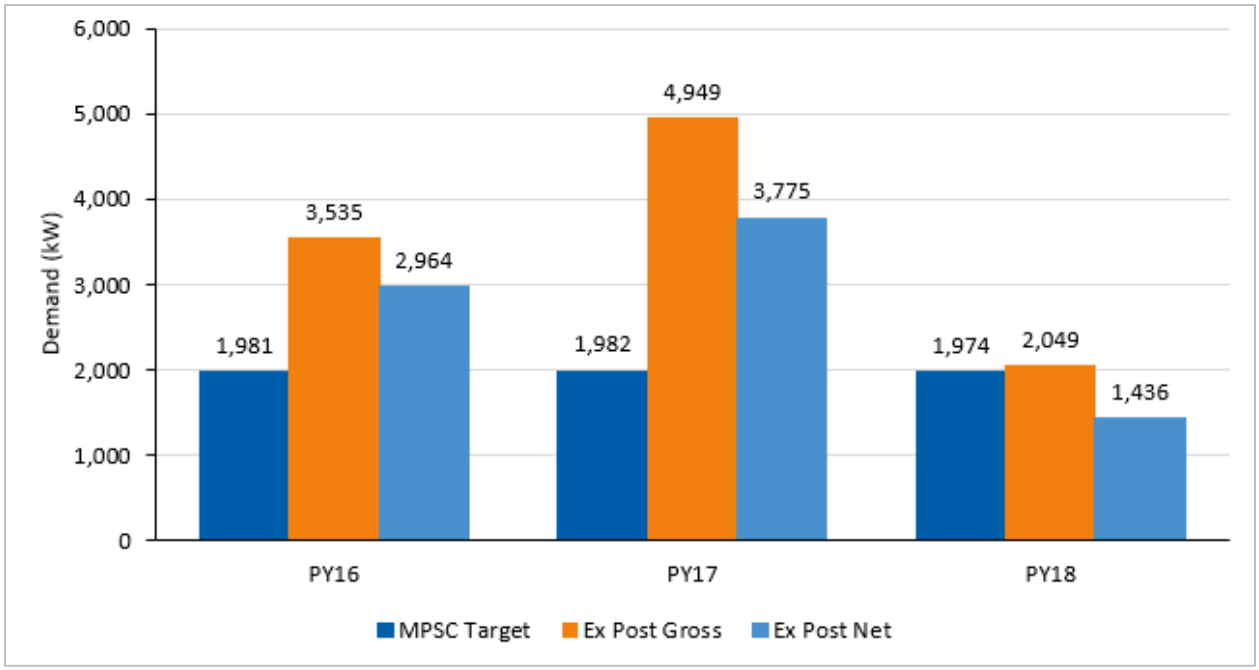


Figure 12. Three-Year Demand Savings Comparison—Smart Thermostats Subtotal



Benchmarking

For the PY16 evaluation, Cadmus researched 12 other utilities offering measures similar to those from Ameren Missouri's Efficient Products Program. The team conducted secondary research using its benchmarking database, E-Source, along with publicly available information to identify programs with the most recent available evaluations and those containing information regarding metrics and topics planned for benchmarking (these sources are listed in Appendix B). Cadmus updated this analysis with results from the PY17 and PY18 Efficient Products program evaluations. Table 42 compares the following:

- Measure incentive levels
- Program participation
- *Ex post* per-kit savings (kWh)
- *Ex post* per-kit savings (kW)
- NTG

Table 42. Efficient Product Program Measure Comparisons

Utility	Program	Incentive Amount	Participation	*Ex Post* Per Unit Savings (kWh/yr)	*Ex Post* Per Unit Savings (kW/yr)	NTG
HPWHs						
Ameren Missouri	2018 Efficient Products Program	$500	287	2,284	0.203	0.81
Ameren Missouri	2017 Efficient Products Program	$500	358	2,526	0.224	0.92
Ameren Missouri	2016 Efficient Products Program	$500	341	2,531	0.225	0.848
Baltimore Gas and Electric	2015 Appliance Rebate Program	$500	226	1,889	N/A	0.86
Delmarva Power	2015 Appliance Rebate Program	$500	37	1,892	N/A	0.86
Dayton Power and Light	2015 Heating and Cooling Rebate	$800	4	1,297	0.25	N/A
Entergy Arkansas	2015 Residential Lighting and Appliances Program	$350	5	4,180	0.36	0.875
Indiana Michigan Power	2015 Residential Energy Efficient Products	$350	17	1,297	0.18	N/A
Potomac Edison	2015 Appliance Rebate Program	$500	80	1,888	N/A	0.86
PPL Electric Utilities	2016 Residential Retail Program	$300–$400	1,235	2,117	N/A	0.69
Southern Maryland Electric Cooperative	2015 Appliance Rebate Program	$500	70	1,900	N/A	0.86

Utility	Program	Incentive Amount	Participation	*Ex Post* Per Unit Savings (kWh/yr)	*Ex Post* Per Unit Savings (kW/yr)	NTG
Vectren Indiana	2015 Residential Efficient Products Program	$300	7	2,291	0.31	0.55
Pool Pumps						
Ameren Missouri	2018 Efficient Products Program	$350	1,146	Multispeed: 1,800, Variable-speed: 2,053	Multispeed: 0.424, Variable-speed: 0.483	0.75
Ameren Missouri	2017 Efficient Products Program	$350	1,133	Multispeed: 1,800, Variable-speed: 2,053	Multispeed: 0.424, Variable-speed: 0.483	0.81
Ameren Missouri	2016 Efficient Products Program	$350	699	Multispeed: 1,800, Variable-speed: 2,053	Multispeed: 0.424, Variable-speed: 0.483	0.678
Baltimore Gas and Electric	2015 Appliance Rebate Program	$400	415	595	N/A	0.53
Delmarva Power	2015 Appliance Rebate Program	$400	19	579	N/A	0.57
Indiana Michigan Power	2015 Residential Energy Efficient Products	$50	13	1,383	2.02	N/A
Southern Maryland Electric Cooperative	2015 Appliance Rebate Program	$400	17	588	N/A	0.56
Potomac Edison	2015 Appliance Rebate Program	$400	31	581	N/A	0.55
Public Service Company of New Mexico	2014 Residential Stay Cool Program	$300	74	1,041	0.40	1.00
Potomac Electric Power Company	2015 Appliance Rebate Program	$400	109	596	N/A	0.52
PPL Electric Utilities	PY7 Residential Home Comfort (Efficient Products component)	$150	248	1,190	1.05	0.72
Vectren Indiana	2015 Residential Efficient Products Program	$300	70	1,173	1.72	0.55
RACs						
Ameren Missouri	2018 Efficient Products Program	$50	980	50	0.047	0.60
Ameren Missouri	2017 Efficient Products Program	$50	1,399	50	0.047	0.38
Ameren Missouri	2016 Efficient Products Program	$20	346	45	0.042	0.598
Entergy Arkansas	2015 Residential Lighting and Appliances Program	$25	1	300	0.3	0.5

Utility	Program	Incentive Amount	Participation	*Ex Post* Per Unit Savings (kWh/yr)	*Ex Post* Per Unit Savings (kW/yr)	NTG
Public Service Company of New Mexico	2014 Residential Stay Cool Program	$25	316	80	0.14	0.4
Smart Thermostats						
Ameren Missouri	2018 Efficient Products Program	$50	6,453	289	0.273	0.68
Ameren Missouri	2017 Efficient Products Program	$100 through Dec. 2017, $50 since Jan. 2018	13,693	386	0.365	0.74
Ameren Missouri	2016 Efficient Products Program	$100	8,200	462	0.438	0.826
Dayton Power and Light	2015 Heating and Cooling Rebate	$75	18	218 [1]	0	N/A
Northern Indiana Public Service Company	2015 Energy Efficiency Rebate Program	$50	492	157 [2]	0.2	0.46
Vectren Indiana	2015 Residential Efficient Products Program	$100	1,462	412	N/A	0.55

[1] Dayton Power and Light's smart thermostat rebates were provided through an HVAC rebate program, accompanying the installation of an HVAC system. Therefore, smart thermostats would be expected to have lower savings than a standalone smart thermostat rebate.

[2] Northern Indiana Public Service Company's thermostat rebate program included models without a geolocation function, which would not qualify under Ameren Missouri's program. Therefore, lower savings would be expected for these smart thermostats than those from a smart thermostat rebate program with more stringent equipment qualifications.

Benchmarking results showed that Ameren Missouri's rebates were comparable to those of other utility programs. NTGs (by measure) generally were comparable to other programs, although Ameren Missouri's Efficient Products program had the highest NTGs observed for pool pumps and smart thermostats. For RACs, Ameren Missouri increased rebate amounts in PY17, making them larger than those offered by other utilities, and participation increased four-fold that year.

Cadmus could not find a program offering rebates for room air purifiers to compare to the Efficient Products program.

Additionally, the team reviewed eligible smart thermostats offered by four other utilities. All five utilities (including Ameren Missouri) offered rebates for Allure Energy, Ecobee, Honeywell, and Nest smart thermostats, and four of the five offered rebates for Lennox and Radio Thermostat models (Ameren Missouri's Efficient Products program included the former but not the latter).

During PY17, Ameren Missouri added models from four manufacturers to the list of thermostats that qualified for rebates. Notably, Ameren Missouri's program only rebated units with a geolocation

function as well as Wi-Fi and Internet capabilities, whereas some other programs included units without geolocation. Table 43 shows smart thermostat brands rebated by these utilities.

Table 43. Smart Thermostat Brands Offered by Utility

Brand	Utility				
	Ameren Missouri	Consumers Energy	Dayton Power and Light	Northern Indiana Public Service Company	Vectren Indiana
Allure Energy	•	•	•	•	•
Ecobee	•	•	•	•	•
Honeywell	•	•	•	•	•
Lennox	•	•	•		•
Nest	•	•	•	•	•
Allure Energy (added by Ameren Missouri in PY17)	•				
Amana					•
American Standard (added by Ameren Missouri in PY17)	•	•			
Bryant Housewise			•		
Carrier			•		
Coleman				•	
ComfortNet				•	
Emerson (added by Ameren Missouri in PY17)	•			•	
Home Automation				•	
Lux		•			
Luxaire				•	
Observer				•	
Radio Thermostat		•	•	•	•
Trane (added by Ameren Missouri in PY17)	•	•		•	
White Rogers				•	
York				•	

Key Performance Indicators

Cadmus tracked the following key performance indicators for the Efficient Products program:

- Program electric savings
- Participation by measure
- Free ridership by measure
- Satisfaction with upgrades
- Satisfaction with incentive amounts
- Satisfaction with the Efficient Products program
- Satisfaction with Ameren Missouri

Table 44 shows the Efficient Products program's key performance metrics for PY16, PY17, and PY18.

Table 44. Key Performance Indicators

Metric	PY16	PY17	PY18
Gross Evaluated Electric Savings (MWh)	6,671	9,956	6,433
Participation by measure: HPWHs	341	358	331
Participation by measure: RACs	346	1,399	990
Participation by measure: pool pumps	699	1,133	1,196
Participation by measure: air purifiers	1,300	2,588	1,872
Participation by measure: smart thermostats	8,200	13,693	6,771
Free ridership by measure: HPWHs	15%	10%	20%
Free ridership by measure: RACs	73%	62%	41%
Free ridership by measure: pool pumps	32%	19%	22%
Free ridership by measure: air purifiers	50%	45%	32%
Free ridership by measure: smart thermostats	23%	27%	31%
Percentage of participants expressing that they are "very satisfied" with their upgrades	87%	84%	87%
Percentage of participants expressing that they are "very satisfied" with program incentives	83%	85%	79%
Percentage of participants expressing that they are "very satisfied" with the Efficient Products program	86%	87%	82%
Percentage of participants expressing that they are "very satisfied" with Ameren Missouri	70%	71%	68%

Cost-Effectiveness

The Cadmus Team assessed cost-effectiveness using the following five tests, as defined by the California Standard Practice Manual (except where modified as noted in this report):[17]

- Total Resource Cost Test (TRC)
- Utility Cost Test (UCT)
- Ratepayer Impact Measure Test (RIM)
- Participant Cost Test (PART)
- Societal Cost Test (SCT)

DSMore takes hourly prices and hourly energy savings from specific measures installed through the Efficient Products program and correlates them to 33 years of historic weather data. Using long-term weather ensures that the model captures low-probability, high-consequence weather events, and appropriately values these. As a result, the model produces an accurate evaluation of the demand-side efficiency measure relative to other alternative supply options.

Key assumptions include the following:

- Discount Rate of 6.46% for all tests except the SCT, which used a 3.0% discount rate
- Line Losses of 5.72% for residential customers and 4.84% for business customers
- Summer peak occurring during the 16th hour of a July weekday, on average
- Avoided costs from the 2017 IRP, filed October 1, 2017
- Escalation rates for different costs occurring at the component level, with separate escalation rates for fuel, capacity, generation, T&D, and customer rates carried out over 25 years

The Cadmus team used evaluation results as model inputs (e.g., PY18-specific Lighting program participation counts, per-unit gross savings, NTG, NPSO). All PY18 inputs were entered into the model as "Year 3" values, and the model discounted all costs back to 2016 values; so results are comparable across program years.

The team used measure-specific load shapes provided by Ameren Missouri to inform the model when to apply savings for each measure over any given day. This ensured that the load shape for an end use matched the system peak impacts of that end use and provided the correct summer coincident savings. The team used measure lifetime assumptions and incremental costs from the Ameren Missouri TRM or from the original Batch Tool provided with the Cycle 2 MEEIA filing.

The model also applied actual PY18 Ameren Missouri program costs. For the PY18 Efficient Products program, Ameren Missouri's costs included direct expenses for Efficient Products program administration and incentives, in addition to a percentage of portfolio-level costs. Portfolio costs—

[17] *California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects*. October 2001.

including research and development, EM&V, Educational Outreach, Portfolio Administration, Potential Study, and Data Tracking—were allocated to each program based on the relative program benefits. The Cadmus team used cost data through March 2019, as provided by Ameren Missouri.

For all programs, the team included NPSO savings on a measure-by-measure basis (instead of as a percentage incorporated in the NTG) which allowed DSMore to apply the correct load shape, incremental cost, and useful life to each spillover measure.

The team analyzed cost-effectiveness for Efficient Products as two programs – the first included all measures except smart thermostats (labelled Efficient Products), and the second included only smart thermostats. Any benefit-cost score above 1.0 passed the test as cost-effective. As shown in Table 45, the core Efficient Products program was cost-effective only under the SCT and PART. The smart thermostats portion of the program was cost-effective under the UCT, SCT and PART.

Table 45. Cost-Effectiveness Results (PY18)

Program	UCT	TRC	RIM	SCT	PART
Efficient Products	1.16	1.07	0.33	1.47	5.15
Smart Thermostats	2.43	1.19	0.55	1.55	2.58

List of Appendices

Following are the appendices for the Energy Efficient Products Program Evaluation.

Appendix A. End-Use Load Shapes and Coincidence Factors

Appendix E

End-Use Category Energy Load Shapes

% Energy by Month

	Residential End-Use Category Load Shape								
Month	**Building Shell**	**Cooling**	**Freezer**	**HVAC**	**Lighting**	**Miscellaneous**	**Pool Spa**	**Refrigeration**	**Water Heating**
January	11.1297%	0.1200%	7.9579%	11.1297%	10.1182%	8.4893%	8.6451%	7.7053%	10.3527%
February	9.3077%	0.1100%	7.2518%	9.3077%	8.8441%	7.7366%	7.1145%	7.2169%	9.0720%
March	7.0042%	0.3130%	8.1080%	7.0042%	9.2879%	8.4863%	8.6052%	8.0272%	9.5543%
April	3.7116%	1.5047%	7.9918%	3.7116%	8.4645%	8.2144%	8.0702%	7.8752%	8.4799%
May	4.0888%	6.5410%	8.4083%	4.0888%	7.9393%	8.4847%	8.6052%	8.5646%	8.3600%
June	10.3973%	21.0823%	8.5730%	10.3973%	6.8508%	8.2122%	8.0702%	8.9112%	7.7065%
July	14.0100%	28.4780%	9.6095%	14.0100%	6.7864%	8.4883%	8.6451%	9.4239%	6.7712%
August	13.3207%	27.0766%	9.6095%	13.3207%	7.0565%	8.4840%	8.5653%	9.4212%	6.3688%
September	6.6759%	12.6605%	8.4277%	6.6759%	7.3792%	8.2136%	8.3032%	8.4971%	6.9373%
October	3.7011%	1.8472%	8.2582%	3.7011%	8.4539%	8.4869%	8.6052%	8.5653%	7.9644%
November	5.9593%	0.1444%	7.8465%	5.9593%	8.9880%	8.2122%	8.1088%	7.8717%	8.4752%
December	10.6937%	0.1222%	7.9579%	10.6937%	9.8312%	8.4915%	8.6619%	7.9204%	9.9577%

End-Use Category Energy to Coincident Peak Demand Factors

	Building Shell	**Cooling**	**Freezer**	**HVAC**	**Lighting**	**Miscellaneous**	**Pool Spa**	**Refrigeration**	**Water Heating**
	0.0004660805	0.0009474181	0.0001685722	0.0004660805	0.0001492529	0.0001148238	0.0002354459	0.0001285253	0.0000887318

Source: Ameren Missouri 2016-2018 Energy Efficiency Plan. MPSC file number EO-2015-0055 Appendix E to evaluated energy saving

Appendix B. Benchmarking Sources

Cadmus used the following reports in conducting the benchmarking research:

ADM Associates, Inc. *Evaluation of Residential Incentive Program Portfolio*. Prepared for Indiana Michigan Power. 2015.

ADM Associates, Inc., and Research & Polling, Inc. *Evaluation of 2014 Public Service Company of New Mexico Energy Efficiency & Demand Response Portfolio*. Prepared for New Mexico Energy Efficiency Evaluation Committee. 2015.

Cadmus. *ENERGY STAR Appliances Rebate Program Evaluation Report*. Presented to Consumers Energy Company. 2015.

Cadmus. *Entergy Final Energy Efficiency Portfolio Evaluation Report 2015 Program Year*. Prepared for Entergy Arkansas, Inc. 2016.

Cadmus. *Pennsylvania Act 129 of 2008 Energy Efficiency and Conservation Plan*. Prepared for PPL Electric Utilities. 2016.

Cadmus. *2015 Demand-Side Management Programs Evaluation Report*. Prepared for Indianapolis Power & Light. 2016.

Cadmus. *2015 DSM Portfolio Evaluation Report*. Prepared for Vectren Energy Delivery of Indiana. 2016.

Cadmus. *2015 Evaluation, Measurement, and Verification Report*. Prepared for Dayton Power and Light. 2016.

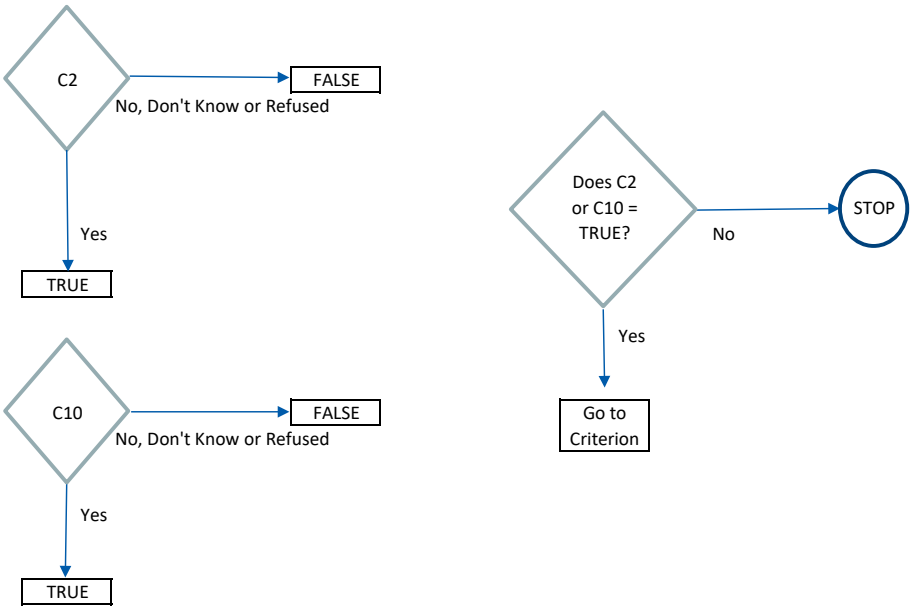
Cadmus and Navigant. *Appliance Rebate Program, EY6 Impact Results Memo.* Presented to EmPOWER Maryland Utilities. 2016.

Appendix C. Nonparticipant Spillover Qualification Flow Charts

FLOWCHARTS FOR DETERMINING LIKE NPSO

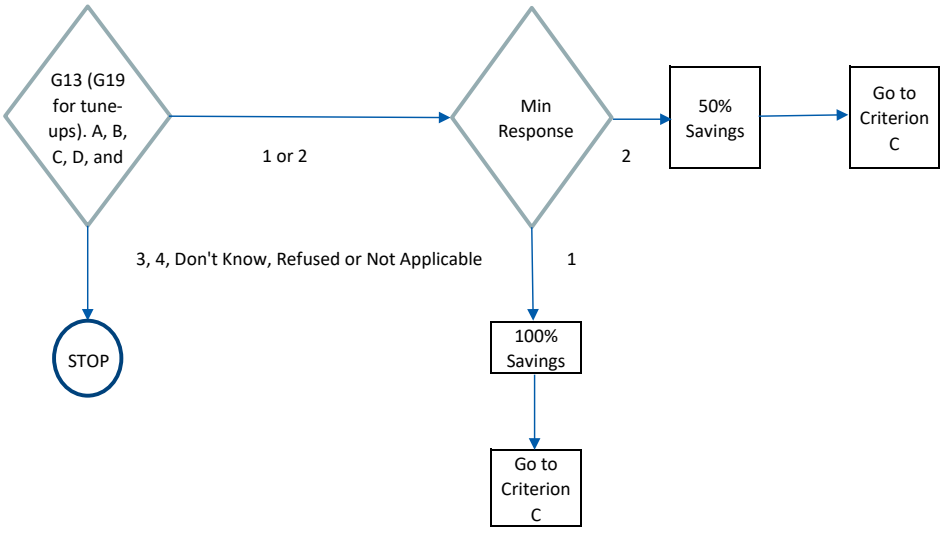
Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount

C2. Have you ever seen or heard of the Ameren Missouri's energy efficiency programs?
C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home?



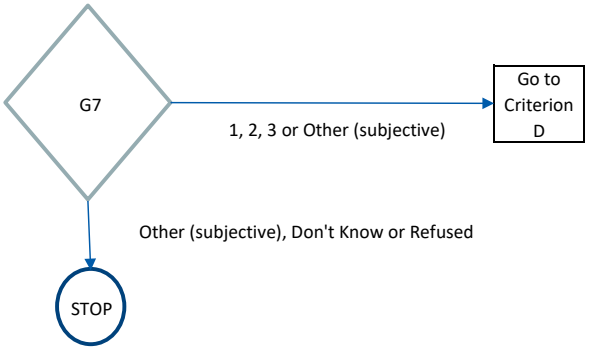
Criterion B: At least one element of Ameren Missouri's program marketing and outreach motivated them to adopt the measure

G13 (G19 for tune-ups). On a 1 to 4 scale, with 1 meaning "very important", and 4 meaning "not at all important", how important was each of the following elements in your decision to purchase and install the measure?
A. Information about energy savings from Ameren Missouri's marketing or bill insert
B. Ameren Missouri's marketing information from a contractor or retailer
C. Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri
D. Past participation in an Ameren Missouri energy efficiency program
E. Information from the energy assessment conducted at your home through Ameren Missouri



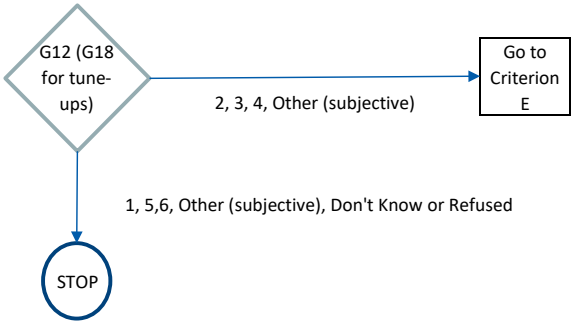
Criterion C: They had a valid reason for considering the adopted measure energy efficient (not for tune-ups)

G7. How do you know the measure is energy efficient?
1 = It's ENERGY STAR-certified, 2 = The retailer/dealer/contractor told me it was, 3 = Information about the product from packaging, websites, etc., 4 = Other (please specify)



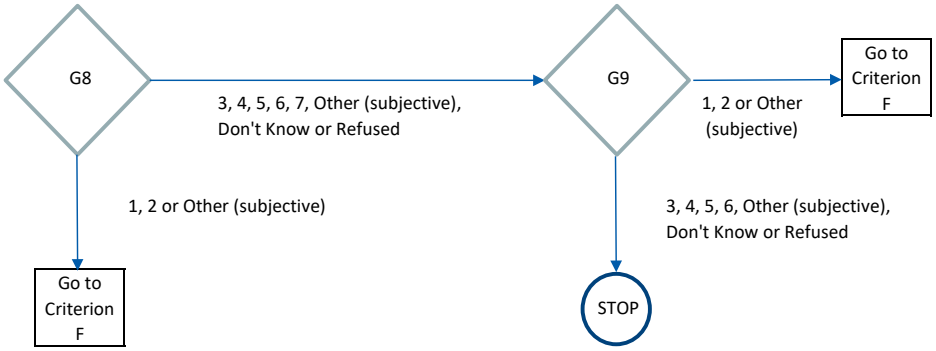
Criterion D: They had not received a rebate from Ameren Missouri, had not tried to receive a rebate from Ameren Missouri, and stated a valid reason for not applying for an Ameren Missouri measure rebate.

G12 (G18 for tune-ups). Why didn't you or your contractor apply for a rebate through Ameren Missouri for the measure?
1 = I am still planning to apply, 2 = It was confusing, 3 = Just forgot about it, 4 = I wasn't sure my equipment qualified, 5 = I wanted a different model that did not qualify, 6 = I applied but I did not receive a rebate, 7 = Other (please specify)

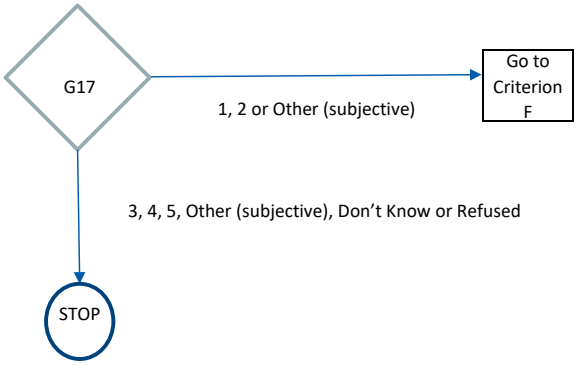


Criterion E: They had a valid reason for deciding to install the measure

G8. Which of the following reasons best describe why you decided to install the measure?
1 = To save energy, 2 = To save money, 3 = To replace failing equipment, 4 = Needed to replace anyway, 5 = Liked the style, 6 = Was ready to update,
G9. Which of the following reasons best describe why you chose an energy efficient version of the measure?
1 = To save energy, 2 = To save money, 3 = Liked the style, 4 = It had other features that I liked, 5 = It was the cheapest product available, 6 = It was the only option available, 7 = Other (please specify)

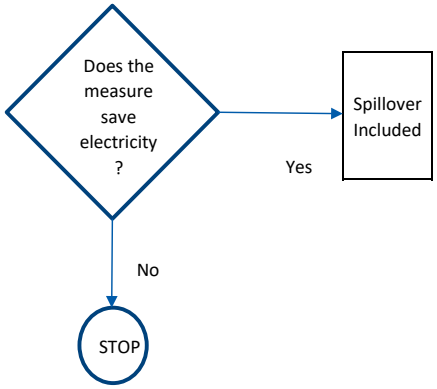


G17 (for tune-ups). Which of the following reasons best describe why you decided to install have the tune-up?
1 = To save energy, 2 = To save money, 3 = To improve home comfort, 4 = It was part of routine maintenance, 5 = To make repairs or replacements, 6 = Other (please specify)



Criterion F: The adopted measure generated electric savings, not gas savings

F1. What type of heating equipment do you have in your home?
F4. Is your home heating electric or gas?
G1. Is your hot water heater electric or gas?



Appendix D. Nonparticipant Spillover Data

Measure Information				Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure								Criterion C: They had a valid reason for considering the adopted measure energy efficient		Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate			Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings				Meeting all criteria	
Account	Cadmus Disposition	Measure	Measure Number	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	C7. How do you know the [measure] is energy efficient?	Criterion C met? (qualitative assessment)	G10. Did you receive a rebate, discount, or tax credit for installing the [measure]?	G11. Did you get a rebate from Ameren Missouri?	G12. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the [measure]?	Criterion D met? (qualitative assessment)	G8. Which of the following reasons best describe why you decided to install a [measure]?	Which of the following reasons best describe why you chose an energy efficient version of a [measure]?	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Water Heating Fuel	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	
GP220	Eligible Complete	Bathroom faucet aerator	19	Yes	No	TRUE	1	1	1	N	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No		Didn't know you had rebate	TRUE	To replace failing equipment	To save energy	TRUE	Window or wall air conditioner	Electric furnace	Electric	TRUE	FALSE	TRUE	
HQ319	Eligible Complete	Room air purifier	2	Yes	Yes	TRUE	1	1	2	1	2	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No		Just forgot about it	TRUE	To improve comfort	health	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
HO319	Eligible Complete	Furnace fan with ECM (Electronically Commutated Motor)	9	Yes	Yes	TRUE	1	2	3	1	2	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	Yes	Yes	0	FALSE	To replace failing equipment	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
HQ319	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	1	2	3	2	2	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	Yes	Yes	0	FALSE	Needed to replace anyway	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
HZ948	Eligible Complete	Learning or "smart" thermostat	12	No	Yes	TRUE	1	3	4	N	2	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No		0	Was not aware	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
LS526	Eligible Complete	Ground-source or geothermal heat pump	24	Yes	Yes	TRUE	3	3	1	4	4	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No		0	I have tried for rebate but have been told I didn't use a certified contractor to install my system	FALSE	To save money	0	TRUE	Ground-source or geothermal heat pump	Ground-source or geothermal heat pump	Electric	TRUE	FALSE	FALSE	
DD775	Eligible Complete	Room air purifier	2	Yes	Yes	TRUE	1	0	2	2	0	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No		0	Don't know	FALSE	Wife has copd	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
DD775	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	2	0	2	N	2	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No		0	Don't know	FALSE	To improve comfort	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
DD775	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	2	2	2	2	N	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No		0	Don't know	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
LG594	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	2	2	3	2	N	TRUE	FALSE	The retailer/dealer/contractor told me it was	TRUE	No		0	I wasn't sure my equipment qualified	TRUE	Was ready to update	To save energy	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	TRUE	FALSE	
LG594	Eligible Complete	Bathroom faucet aerator	19	Yes	Yes	TRUE	2	3	4	2	N	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No		0	Just forgot about it	TRUE	Was ready to update	Liked the style	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
LG594	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	2	2	3	N	2	TRUE	FALSE	The retailer/dealer/contractor told me it was	TRUE	No		0	I wasn't sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	TRUE	FALSE	
ME113	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	1	1	1	N	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No		0	I wasn't sure my equipment qualified	TRUE	Was ready to update	It had other features that I liked	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
KR706	Eligible Complete	Central air conditioner	25	No	Yes	TRUE	1	1	2	2	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	Yes	No	out of state	FALSE	new construction	new construction	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
HH866	Eligible Complete	Hot water pipe insulation for your hot water heater	20	No	Yes	TRUE	2	2	1	0	0	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No		0	It was confusing	TRUE	To replace failing equipment	To save energy	TRUE	Central air conditioner	Air-source heat pump	Electric	TRUE	FALSE	TRUE	
HH866	Eligible Complete	Heat pump water heater	11	No	Yes	TRUE	1	N	2	N	0	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No		0	It was confusing	TRUE	Needed to replace anyway	It had other features that I liked	FALSE	Central air conditioner	Air-source heat pump	Electric	TRUE	FALSE	FALSE	
HE892	Eligible Complete	Central air conditioner	25	No	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No		0	Don't know	FALSE	To replace failing equipment	To save money	TRUE	Central air conditioner	Don't know Electric	Gas	TRUE	FALSE	FALSE	
LV388	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	2	2	N	N	N	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No		0	I wasn't sure my equipment qualified	TRUE	Was ready to update	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
CN474	Eligible Complete	Room air purifier	2	Yes	Yes	TRUE	1	1	1	2	4	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No		0	Just forgot about it	TRUE	To improve comfort	It had other features that I liked	FALSE	Central air conditioner	None	Gas	TRUE	FALSE	FALSE	
CN474	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	2	2	1	4	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No		0	Just forgot about it	TRUE	To replace failing equipment	To save money	TRUE	Central air conditioner	None	Gas	FALSE	FALSE	FALSE	
MB566	Eligible Complete	Pool pump	3	Yes	Yes	TRUE	3	2	2	1	2	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	Yes	No	I wasn't sure my equipment qualified	TRUE	Was ready to update	To save energy	TRUE	Central air conditioner,Air-source heat pump	Air-source heat pump ,Electric furnace	Electric	TRUE	FALSE	TRUE	
MB566	Eligible Complete	Kitchen faucet aerator	18	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No		0	I wasn't sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner,Air-source heat pump	Air-source heat pump ,Electric furnace	Electric	TRUE	TRUE	FALSE	
MB566	Eligible Complete	Furnace fan with ECM (Electronically Commutated Motor)	9	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Yes	Don't know	0	FALSE	To save money	0	TRUE	Central air conditioner,Air-source heat pump	Air-source heat pump ,Electric furnace	Electric	TRUE	FALSE	FALSE	
KC540	Eligible Complete	Furnace fan with ECM (Electronically Commutated Motor)	9	Don't know	Yes	TRUE	2	2	2	3	2	TRUE	FALSE	The retailer/dealer/contractor told me it was	TRUE	Don't know	0	0	FALSE	Needed to replace anyway	To save energy	TRUE	Central air conditioner,Other (please specify): attic fan for mild days	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
LG156	Eligible Complete	Bathroom faucet aerator	19	Yes	Yes	TRUE	2	2	N	3	N	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No		0	Didn't know I could	TRUE	To save money	0	TRUE	Central air conditioner,Air-source heat pump	Air-source heat pump ,Electric Baseboard heating system	Electric	TRUE	TRUE	FALSE	
LG156	Eligible Complete	Air-source heat pump	21	Yes	Yes	TRUE	3	3	2	3	N	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Don't know	0	0	FALSE	To save money	0	TRUE	Central air conditioner,Air-source heat pump	Air-source heat pump ,Electric Baseboard heating system	Electric	TRUE	FALSE	FALSE	
AM582	Eligible Complete	Learning or "smart" thermostat	12	Don't know	Yes	TRUE	2	3	1	3	2	FALSE	TRUE	Historical energy bills compared to current	TRUE	Yes	Yes	0	FALSE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
KN880	Eligible Complete	Central air conditioner	25	Don't know	Yes	TRUE	2	4	N	4	N	TRUE	FALSE	Don't know	FALSE	No		0	I applied, but I did not receive a rebate	FALSE	To replace failing equipment	Don't know	FALSE	Central air conditioner	Electric furnace	Gas	TRUE	FALSE	FALSE	
AT737	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	1	1	2	N	1	FALSE	TRUE	Landlord installed it	FALSE	No		0	Landlord replaced broken one	TRUE	To replace failing equipment	Landlord bought it	FALSE	Window or wall air conditioner	Electric baseboard heating system	Electric	TRUE	FALSE	FALSE	
KC536	Eligible Complete	Showerhead	17	Yes	No	TRUE	4	4	1	4	N	FALSE	TRUE	Information about the product from packaging, websites. etc.	TRUE	No		0	I wanted a different model that did not qualify	FALSE	Was ready to update	It had other features that I liked	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
KX743	Eligible Complete	Kitchen faucet aerator	18	Yes	Yes	TRUE	2	2	2	2	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No		0	Don't know	FALSE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
KX743	Eligible Complete	Bathroom faucet aerator	19	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No		0	Don't know	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
HT597	Eligible Complete	Kitchen faucet aerator	18	Yes	Don't know	TRUE	3	2	2	0	1	FALSE	TRUE	Don't know	FALSE	No		0	Don't know	FALSE	Don't know	It was the only option available	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
HT597	Eligible Complete	Bathroom faucet aerator	19	Yes	Don't know	TRUE	1	2	2	3	2	FALSE	TRUE	Don't know	FALSE	No		0	Don't know	FALSE	Don't know	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
HT597	Eligible Complete	Learning or "smart" thermostat	12	Yes	Don't know	TRUE	2	1	3	N	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No		0	Don't know	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
FN584	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes	Yes	TRUE	3	2	2	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No		0	Just forgot about it	TRUE	They insulated with the roof and upper room insulation	To make our home more efficiently cool and warm	FALSE	Central air conditioner	Gas furnace/boiler ,Other (please specify): out door wood boiler Gas	Electric	TRUE	FALSE	FALSE	
HW784	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	2	3	3	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No		0	I wasn't sure my equipment qualified	TRUE	Needed to replace anyway	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
HW784	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	2	3	3	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Yes	No	I wasn't sure my equipment qualified	TRUE	Was ready to update	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
HW399	Eligible Complete	Learning or "smart" thermostat	12	Don't know	Yes	TRUE	2	N	2	N	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Yes	Yes	0	FALSE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
KU700	Eligible Complete	Kitchen faucet aerator	18	No	Yes	TRUE	2	0	0	2	0	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No		0	Don't know	FALSE	To replace failing equipment	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	

Measure Information				Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure								Criterion C: They had a valid reason for considering the adopted measure energy efficient		Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings				Meeting all criteria	
Account	Cadmus Disposition	Measure	Measure Number	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marketing or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	C7. How do you know the [measure] is energy efficient?	Criterion C met? (qualitative assessment)	G10. Did you receive a rebate, discount, or tax credit for installing the [measure]?	G11. Did you get a rebate from Ameren Missouri?	G12. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the [measure]?	Criterion D met? (qualitative assessment)	G8. Which of the following reasons best describe why you decided to install a [measure]?	Which of the following reasons best describe why you chose an energy efficient version of a [measure]?	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Water Heating Fuel	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	
GS293	Eligible Complete	Learning or "smart" thermostat	12	Yes		TRUE	N	N	1	N	N	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	No		I wasnâ€™t sure my equipment qualified	TRUE	Was ready to update	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
CF885	Eligible Complete	Kitchen faucet aerator	18	Yes		TRUE	0	N	0	2	0	TRUE	FALSE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	Was ready to update	It had other features that I liked	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
CF885	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes		TRUE	1	N	1	1	N	FALSE	TRUE	Information about the product from packaging, websites. etc.	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	Needed to replace anyway	It was the cheapest product available	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
CF885	Eligible Complete	Furnace fan with ECM (Electronically Commutated Motor)	9	Yes		TRUE	1	N	D	2	D	FALSE	TRUE	The retailer/dealer/ contractor told me it was	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	TRUE	
AM977	Eligible Complete	Room air purifier	2	Yes		TRUE	2	2	2	2	2	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No	0	Don't know	FALSE	To improve comfort	Liked the style	FALSE	Air-source heat pumo	Air-source heat pump ,Electric furnace	Electric	TRUE	FALSE	FALSE	
AM977	Eligible Complete	Air-source heat pumo	21	Yes		TRUE	2	2	2	2	2	TRUE	FALSE	The retailer/dealer/ contractor told me it was	TRUE	No	0	contractor said it didn't qualify	FALSE	Needed to replace anyway	To save monev	TRUE	Air-source heat pumo	Air-source heat pump ,Electric furnace	Electric	TRUE	FALSE	FALSE	
HE674	Eligible Complete	Showerhead	17	Yes		TRUE	1	1	1	1	1	FALSE	TRUE	aot it from you	FALSE	No	0	aot it from you	FALSE	To replace failing equipment	To save enerev	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
HE674	Eligible Complete	Kitchen faucet aerator	18	Yes		TRUE	1	1	1	1	1	FALSE	TRUE	Information about the product from packaging, websites. etc.	TRUE	No		I wasnâ€™t sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	TRUE	
HE674	Eligible Complete	Bathroom faucet aerator	19	Yes		TRUE	1	1	1	1	2	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	Needed to replace anyway	It was the only option available	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
CN740	Eligible Complete	Room air conditioner	1	Yes		No	1	2	3	2	2	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	To replace failing equipment	It was the only option available	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
CN740	Eligible Complete	Showerhead	17	Yes		No	1	2	3	2	2	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	To save monev	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
CN740	Eligible Complete	Kitchen faucet aerator	18	Yes		No	1	2	3	2	1	FALSE	TRUE	Information about the product from packaging, websites. etc.	TRUE	No	0	Don't know	FALSE	To save money	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
FN596	Eligible Complete	Kitchen faucet aerator	18	Yes		TRUE	2	4	4	1	4	FALSE	TRUE	Information about the product from packaging, websites. etc.	TRUE	No	0	Just forgot about it	TRUE	To replace failing equipment	functionality	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
FN596	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes		TRUE	2	2	4	1	4	FALSE	TRUE	The retailer/dealer/ contractor told me it was	TRUE	No	0	Just forgot about it	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
FN596	Eligible Complete	Learning or "smart" thermostat	12	Yes		TRUE	2	1	D	2	3	FALSE	TRUE	Information about the product from packaging, websites. etc.	TRUE	Don't know	0	0	FALSE	To improve comfort	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
ET174	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes		TRUE	2	2	D	N	D	TRUE	FALSE	The retailer/dealer/ contractor told me it was	TRUE	No	0	Did not know I could	TRUE	To replace failing equipment	To save enerev	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
LS917	Eligible Complete	Room air purifier	2	Yes		TRUE	3	3	2	4	N	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No	0	Just forgot about it	TRUE	health reasons	Liked the style	FALSE	Central air conditioner,Air-source heat pump	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
LS917	Eligible Complete	Showerhead	17	Yes		TRUE	3	3	2	N	N	TRUE	FALSE	The retailer/dealer/ contractor told me it was	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	Needed to replace anyway	To save money	TRUE	Central air conditioner,Air-source heat pump	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
GP243	Eligible Complete	Room air conditioner	1	Yes		TRUE	2	4	3	N	2	TRUE	FALSE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To improve comfort	It was the cheapest product available	FALSE	Window or wall air conditioner	Other (please specify): Space heatersElectric	Electric	TRUE	FALSE	FALSE	
DG739	Eligible Complete	Learning or "smart" thermostat	12	Yes		TRUE	2	2	2	4	3	TRUE	FALSE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	Needed to replace anyway	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
DG739	Eligible Complete	Central air conditioner	25	Yes		TRUE	2	2	3	2	3	TRUE	FALSE	The retailer/dealer/ contractor told me it was	TRUE	Yes	Yes	0	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
DV192	Eligible Complete	Showerhead	17	Yes		TRUE	D	D	1	D	N	FALSE	TRUE	Information about the product from packaging, websites. etc.	TRUE	No	0	Just forgot about it	TRUE	To save enerev	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
LS916	Eligible Complete	Room air conditioner	1	Yes		TRUE	2	N	N	N	2	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No	0	Landlord purchased the equipment	FALSE	To replace failing equipment	To save energy	TRUE	Window or wall air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
AW742	Eligible Complete	Showerhead	17	Yes		TRUE	2	3	3	4	2	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No	0	Don't know	FALSE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
AW742	Eligible Complete	Bathroom faucet aerator	19	Yes		TRUE	2	4	3	3	2	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No	0	Don't know	FALSE	To save enerev	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
AW742	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes		TRUE	2	3	3	4	N	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No	0	Don't know	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
GP505	Eligible Complete	Showerhead	17	No		TRUE	3	3	2	3	3	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To replace failing equipment	To save enerev	TRUE	Central air conditioner	Electric furnace ,Other (please specify): Wood burning stoveElectric	Electric	TRUE	TRUE	FALSE	
DG290	Eligible Complete	Kitchen faucet aerator	18	No		TRUE	1	1	1	1	1	FALSE	TRUE	you sent it to my house	FALSE	No	0	Don't know	FALSE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
DG290	Eligible Complete	Hot water pipe insulation for your hot water heater	20	No		TRUE	1	1	1	1	1	FALSE	TRUE	I got a package for Amaren on this	FALSE	No	0	Don't know	FALSE	To save enerev	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
DG290	Eligible Complete	Learning or "smart" thermostat	12	No		TRUE	1	2	1	1	1	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	To save money	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE	
EC997	Eligible Complete	Central air conditioner	25	No		TRUE	1	2	2	N	2	FALSE	TRUE	Information about the product from packaging, websites. etc.	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	Was ready to update	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	TRUE	
CF378	Eligible Complete	Room air purifier	2	Yes		TRUE	2	3	2	2	2	TRUE	FALSE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To improve comfort	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
CF378	Eligible Complete	Showerhead	17	Yes		TRUE	2	3	2	2	2	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	No		I wasnâ€™t sure my equipment qualified	TRUE	To replace failing equipment	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
EH359	Eligible Complete	Showerhead	17	Yes		No	2	4	N	2	2	TRUE	FALSE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	still updating	FALSE	Needed to replace anyway	It had other features that I liked	FALSE	Central air conditioner	Other (please specify): forced hot airGas	Gas	FALSE	FALSE	FALSE	
EH359	Eligible Complete	Kitchen faucet aerator	18	Yes		No	2	3	2	N	2	TRUE	FALSE	ITâ€™s ENERGY STAR-certified	TRUE	Don't know	0	0	FALSE	Was ready to update	Liked the style	FALSE	Central air conditioner	Other (please specify): forced hot airGas	Gas	FALSE	FALSE	FALSE	
DD586	Eligible Complete	Learning or "smart" thermostat	12	No		TRUE	1	1	1	2	1	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	Don't know	0	0	FALSE	Needed to replace anyway	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	
HM816	Eligible Complete	Showerhead	17	No		TRUE	3	4	D	2	N	TRUE	FALSE	Information about the product from packaging, websites. etc.	TRUE	Don't know	0	0	FALSE	To save monev	0	TRUE	Window or wall air conditioner	Electric baseboard heating system	Electric	TRUE	FALSE	FALSE	
LA560	Eligible Complete	Furnace fan with ECM (Electronically Commutated Motor)	9	Yes		TRUE	1	N	2	1	2	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Installed myself didn't qualify	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
LA560	Eligible Complete	Central air conditioner	25	Yes		TRUE	2	N	1	N	2	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Installed myself not by a contractor	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE	
LA605	Eligible Complete	Showerhead	17	Yes		No	1	1	1	1	1	FALSE	TRUE	ITâ€™s ENERGY STAR-certified	TRUE	No	0	Just forgot about it	TRUE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE	

Measure Information				Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion C: They had a valid reason for considering the adopted measure energy efficient		Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings				Meeting all criteria	
Account	Cadmus Disposition	Measure	Measure Number	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marketing or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings ? (Max rating was 1)	C7. How do you know the [measure] is energy efficient?	Criterion C met? (qualitative assessment)	G10. Did you receive a rebate, discount, or tax credit for installing the [measure]?	G11. Did you get a rebate from Ameren Missouri?	G12. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the [measure]?	Criterion D met? (qualitative assessment)	G8. Which of the following reasons best describe why you decided to install a [measure]?	Which of the following reasons best describe why you chose an energy efficient version of a [measure]?	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Water Heating Fuel	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	
LA605	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes	No	TRUE	1	1	1	1	1	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	Just forgot about it	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		
LA605	Eligible Complete	Learning or "smart" thermostat	12	Yes	No	TRUE	1	1	1	1	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	Yes	No	It was confusing	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		
EC114	Eligible Complete	Furnace fan with ECM (Electronically Commutated Motor)	9	Yes	No	TRUE	2	2	3	3	3	TRUE	FALSE	Don't know	FALSE	No	0	Don't know	FALSE	Don't know	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
EC114	Eligible Complete	Central air conditioner	25	Yes	No	TRUE	2	3	4	3	3	TRUE	FALSE	now unit	FALSE	No	0	Don't know	FALSE	To replace failing equipment	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
DA605	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Yes	Yes	0	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		
DA605	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	The retailer/dealer/contractor told me it was	TRUE	Yes	Yes	0	FALSE	Needed to replace anyway	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
KX886	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	2	1	1	3	3	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	Yes	Yes	0	FALSE	To replace failing equipment	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
EM682	Eligible Complete	Ground-source or geothermal heat pump	24	Yes	Yes	TRUE	N	1	1	N	N	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	Yes	Don't know	0	FALSE	To replace failing equipment	To save money	TRUE	Central air conditioner,Air-source heat pump	Air-source heat pump	Gas	TRUE	FALSE	FALSE		
EM682	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	N	1	1	N	N	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	Don't know	0	0	FALSE	To replace failing equipment	To save money	TRUE	Central air conditioner,Air-source heat pump	Air-source heat pump	Gas	TRUE	FALSE	FALSE		
EH356	Eligible Complete	Furnace fan with ECM (Electronically Commutated Motor)	9	Yes	Yes	TRUE	2	3	3	4	4	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	Contractor may have	FALSE	Needed to replace anyway	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
EH356	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	3	1	4	3	N	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	Contractor may have	FALSE	Needed to replace anyway	It was the only option available	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		
EH356	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	2	2	3	4	4	TRUE	FALSE	The retailer/dealer/contractor told me it was	TRUE	No	0	Contractor may have	FALSE	Needed to replace anyway	It was the only option available	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
KX795	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	N	N	N	N	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No	0	I wanted a different model that did not qualify	FALSE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE		
MO332	Eligible Complete	Learning or "smart" thermostat	12	No	Yes	TRUE	N	1	N	3	N	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	Don't know	0	0	FALSE	To save money	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE		
MO332	Eligible Complete	Central air conditioner	25	No	Yes	TRUE	N	1	N	3	N	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	Yes	Don't know	0	FALSE	To replace failing equipment	Dealer recommendation	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE		
GV432	Eligible Complete	Air-source heat pump	21	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No	0	I wanted a different model that did not qualify	FALSE	To replace failing equipment	To save money	TRUE	Air-source heat pump	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		
MM775	Eligible Complete	Central air conditioner	25	Yes	No	TRUE	1	1	2	1	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	To save energy	0	TRUE	Central air conditioner	Air-source heat pump	Gas	TRUE	FALSE	FALSE		
LV647	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	Just forgot about it	TRUE	Was ready to update	To save energy	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	TRUE		
LD740	Eligible Complete	Pool pump	3	Yes	Yes	TRUE	N	4	1	3	4	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No	0	My favorite contractor is not one of your special contractors. Just some small company	FALSE	Hobby of mine. It will never pay for itself	To save energy	TRUE	Central air conditioner,Ductless or mini-split heat pump ,Other (please specify): I put 3 new Mitsubishi hyper heat pumps in to have zoned comfort and efficiency and still have my working central air and resistance heat forced air system	Ductless or mini-split heat pump ,Electric furnace	Electric	TRUE	FALSE	FALSE		
LD740	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	4	D	1	D	D	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	I use Fire and Ice heating and cooling because I like them and they are not an approved dealer. Basically BS they have to be in a special group of preferred companies. Spent $10,000 for 30 plus SEER and got NOTHING !!!	FALSE	To save energy	0	TRUE	Central air conditioner,Ductless or mini-split heat pump ,Other (please specify): I put 3 new Mitsubishi hyper heat pumps in to have zoned comfort and efficiency and still have my working central air and resistance heat forced air system	Ductless or mini-split heat pump ,Electric furnace	Electric	TRUE	FALSE	FALSE		
KC774	Eligible Complete	Pool pump	3	Yes	Yes	TRUE	2	N	N	N	N	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasn't sure my equipment qualified	TRUE	To replace failing equipment	It was the cheapest product available	FALSE	Central air conditioner	Gas furnace/boiler	Electric	TRUE	FALSE	FALSE		
GS439	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	Don't know	FALSE	To save money	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE		
KF535	Eligible Complete	Furnace fan with ECM (Electronically Commutated Motor)	9	Yes	Don't know	TRUE	2	1	2	2	2	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	Don't know	FALSE	To replace failing equipment	It was the only option available	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
KF535	Eligible Complete	Learning or "smart" thermostat	12	Yes	Don't know	TRUE	2	2	2	2	2	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	Don't know	FALSE	To replace failing equipment	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		
KF535	Eligible Complete	Central air conditioner	25	Yes	Don't know	TRUE	2	2	2	2	2	TRUE	FALSE	The retailer/dealer/contractor told me it was	TRUE	No	0	Don't know	FALSE	To replace failing equipment	Don't know	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
FW322	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	3	3	2	3	3	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasn't sure my equipment qualified	TRUE	Needed to replace anyway	It was the only option available	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
EE669	Eligible Complete	Kitchen faucet aerator	18	Yes	Yes	TRUE	2	2	D	D	N	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	Don't know	FALSE	Was ready to update	Liked the style	FALSE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE		
EE659	Eligible Complete	Central air conditioner	25	Don't know	Yes	TRUE	2	2	2	N	N	TRUE	FALSE	The retailer/dealer/contractor told me it was	TRUE	Yes	Yes	0	FALSE	Needed to replace anyway	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE		
DS888	Eligible Complete	Showerhead	17	Don't know	Yes	TRUE	3	1	N	N	N	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	Just forgot about it	TRUE	Was ready to update	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		
HM619	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	2	2	4	2	4	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wanted a different model that did not qualify	FALSE	To replace failing equipment	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Electric	FALSE	FALSE	FALSE		
DY321	Eligible Complete	Central air conditioner	25	Yes	No	TRUE	2	2	1	D	1	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	Didn't know we could	TRUE	To replace failing equipment	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	TRUE		
HT935	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	2	2	2	2	3	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Yes	No	I wasn't sure my equipment qualified	TRUE	Needed to replace anyway	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		
HT935	Eligible Complete	Bathroom faucet aerator	19	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Yes	No	I wasn't sure my equipment qualified	TRUE	Needed to replace anyway	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE		

Measure Information				Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion C: They had a valid reason for considering the adopted measure energy efficient		Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate			Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings				Meeting all criteria	
Account	Cadmus Disposition	Measure	Measure Number	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	C7. How do you know the [measure] is energy efficient?	Criterion C met? (qualitative assessment)	G10. Did you receive a rebate, discount, or tax credit for installing the [measure]?	G11. Did you get a rebate from Ameren Missouri?	G12. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the [measure]?	Criterion D met? (qualitative assessment)	G8. Which of the following reasons best describe why you decided to install a [measure]?	Which of the following reasons best describe why you chose an energy efficient version of a [measure]?	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Water Heating Fuel	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
FK656	Eligible Complete	Room air purifier	2	Yes	Yes	TRUE	2	2	1	3	3	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No	0	Just forgot about it	TRUE	To improve comfort	It had other features that I liked	FALSE	Central air conditioner	Electric furnace ,Other (please specify): Wood fireplaceElectric	Electric	TRUE	FALSE	FALSE
FK656	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes	Yes	TRUE	2	3	2	3	2	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	House had flooded	FALSE	To save money	0	TRUE	Central air conditioner	Electric furnace ,Other (please specify): Wood fireplaceElectric	Electric	TRUE	FALSE	FALSE
FK656	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	2	3	2	3	4	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No	0	Just forgot about it	TRUE	To save money	0	TRUE	Central air conditioner	Electric furnace ,Other (please specify): Wood fireplaceElectric	Electric	TRUE	TRUE	FALSE
HZ272	Eligible Complete	Learning or "smart" thermostat	12	Don't know	Yes	TRUE	3	3	2	N	2	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	Don't know	0	0	FALSE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
FN458	Eligible Complete	Showerhead	17	Yes	No	TRUE	2	2	2	2	2	TRUE	FALSE	Don't know	FALSE	Don't know	0	0	FALSE	Don't know	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
FN458	Eligible Complete	Bathroom faucet aerator	19	Yes	No	TRUE	2	2	2	2	2	TRUE	FALSE	Don't know	FALSE	Don't know	0	0	FALSE	Don't know	Don't know	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
HW194	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	3	2	3	3	N	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	Yes	Yes	0	FALSE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LV969	Eligible Complete	Showerhead	17	No	Yes	TRUE	4	2	2	3	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasn't sure my equipment qualified	TRUE	To replace failing equipment	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LV969	Eligible Complete	Kitchen faucet aerator	18	No	Yes	TRUE	2	2	2	3	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasn't sure my equipment qualified	TRUE	Needed to replace anyway	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LD629	Eligible Complete	Room air conditioner	1	Yes	No	TRUE	1	1	1	1	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No	0	Just forgot about it	TRUE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	TRUE
LD629	Eligible Complete	Room air purifier	2	Yes	No	TRUE	1	1	1	1	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No	0	I wasn't sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	TRUE
LD629	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes	No	TRUE	1	1	1	2	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasn't sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	TRUE
DA846	Eligible Complete	Room air purifier	2	No	Yes	TRUE	4	2	2	D	2	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	Just forgot about it	TRUE	Do clean the air quility in the house.	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	TRUE	FALSE
DA846	Eligible Complete	Showerhead	17	No	Yes	TRUE	2	2	D	1	D	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	Don't know	FALSE	Was ready to update	Did some home improvements	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
DA846	Eligible Complete	Heat pump water heater	11	No	Yes	TRUE	1	1	2	1	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	To replace failing equipment	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
CK636	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	1	1	2	2	1	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	Don't know	0	0	FALSE	To replace failing equipment	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE
CK787	Eligible Complete	Kitchen faucet aerator	18	Don't know	Yes	TRUE	2	D	N	N	D	TRUE	FALSE	Don't know	FALSE	No	0	Landlord got it	FALSE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Electric	TRUE	FALSE	FALSE
CK787	Eligible Complete	Bathroom faucet aerator	19	Don't know	Yes	TRUE	2	D	2	D	D	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Electric	TRUE	FALSE	FALSE
LD594	Eligible Complete	Central air conditioner	25	No	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	Yes	Yes	0	FALSE	To replace failing equipment	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Don't know	TRUE	FALSE	FALSE
EQ563	Eligible Complete	Room air purifier	2	No	Yes	TRUE	N	N	1	N	N	FALSE	TRUE	Don't know	FALSE	No	0	Don't know	FALSE	allergies	Don't know	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE
EQ563	Eligible Complete	Learning or "smart" thermostat	12	No	Yes	TRUE	2	3	3	3	D	TRUE	FALSE	Don't know	FALSE	Don't know	0	0	FALSE	Needed to replace anyway	Don't know	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LL681	Eligible Complete	Central air conditioner	25	No	Yes	TRUE	4	4	2	N	N	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No	0	It was confusing	TRUE	Needed to replace anyway	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Electric	TRUE	TRUE	FALSE
DD635	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	N	N	2	N	N	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasn't sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner	Air-source heat pump	Gas	TRUE	TRUE	FALSE
GV447	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	2	1	2	3	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	Yes	No	I wanted a different model that did not qualify	FALSE	Was ready to update	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
GV447	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	1	1	1	2	2	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasn't sure my equipment qualified	TRUE	Was ready to update	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
MH474	Eligible Complete	Showerhead	17	No	Yes	TRUE	2	2	2	4	2	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	Just forgot about it	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
MH474	Eligible Complete	Learning or "smart" thermostat	12	No	Yes	TRUE	2	3	2	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No	0	Just forgot about it	TRUE	Was ready to update	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
CU944	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	2	N	4	N	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	No	0	not qualified	FALSE	To replace failing equipment	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE
FK470	Eligible Complete	Learning or "smart" thermostat	12	No	Yes	TRUE	2	N	1	N	2	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	Yes	Yes	0	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LP888	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	3	2	3	D	3	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wanted a different model that did not qualify	FALSE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE
LP888	Eligible Complete	Kitchen faucet aerator	18	Yes	Yes	TRUE	3	4	3	1	4	FALSE	TRUE	It's ENERGY STAR-certified	TRUE	No	0	Got it from Amreren	FALSE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE
LP888	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	4	3	4	2	2	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	It was confusing	TRUE	To replace failing equipment	To save money	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	TRUE	FALSE
MB634	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes	Yes	TRUE	1	1	N	N	N	FALSE	TRUE	from Ameren	FALSE	No	0	received as part of plac	FALSE	To save energy	0	TRUE	Air-source heat pump	Air-source heat pump	Electric	TRUE	FALSE	FALSE
HM562	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	1	2	3	1	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	Don't know	FALSE	Needed to replace anyway	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
HM562	Eligible Complete	Kitchen faucet aerator	18	Yes	Yes	TRUE	1	1	2	2	3	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	Don't know	FALSE	To improve comfort	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
HM562	Eligible Complete	Bathroom faucet aerator	19	Yes	Yes	TRUE	1	1	3	2	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	Don't know	FALSE	Was ready to update	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
DL184	Eligible Complete	Heat pump water heater	11	No	Yes	TRUE	2	4	2	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Don't know	0	0	FALSE	To improve comfort	Don't know	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
HW621	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes	Yes	TRUE	1	1	2	1	1	FALSE	TRUE	Don't know	FALSE	No	0	I applied, but I did not receive a rebate	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
CU550	Eligible Complete	Room air purifier	2	Yes	Yes	TRUE	N	D	D	2	D	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	Just forgot about it	TRUE	To improve comfort	To save energy	TRUE	Ground-source or geothermal heat pump	Ground-source or geothermal heat pump	Electric	TRUE	TRUE	FALSE
FC834	Eligible Complete	Central air conditioner	25	Yes	No	TRUE	1	2	2	2	2	TRUE	FALSE	It's ENERGY STAR-certified	TRUE	Yes	Don't know	0	FALSE	To replace failing equipment	To save energy	TRUE	Central air conditioner	Gas furnace/boiler	Electric	TRUE	FALSE	FALSE

Measure Information				Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion C: They had a valid reason for considering the adopted measure energy efficient		Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate			Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings				Meeting all criteria	
Account	Cadmus Disposition	Measure	Measure Number	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	C7. How do you know the [measure] is energy efficient?	Criterion C met? (qualitative assesment)	G10. Did you receive a rebate, discount, or tax credit for installing the [measure]?	G11. Did you get a rebate from Ameren Missouri?	G12. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the [measure]?	Criterion D met? (qualitative assesment)	G8. Which of the following reasons best describe why you decided to install a [measure]?	Which of the following reasons best describe why you chose an energy efficient version of a [measure]?	Criterion E met? (qualitative assesment)	Cooling System	Heating System	Water Heating Fuel	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
FW714	Eligible Complete	Kitchen faucet aerator	18	Yes	Yes	TRUE	4	2	4	4	4	TRUE	FALSE	contractor suggestion	TRUE	Don't know	0	0	FALSE	doing kitchen update	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
GL892	Eligible Complete	Pool pump	3	No	Yes	TRUE	N	1	N	N	N	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	Yes	Yes	0	FALSE	To improve comfort	To save money	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE
DL663	Eligible Complete	Central air conditioner	25	Yes	Yes	TRUE	3	3	2	4	4	TRUE	FALSE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	Needed to replace anyway	To save money	TRUE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	TRUE	FALSE
FN321	Eligible Complete	Kitchen faucet aerator	18	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	Just forgot about it	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
FN321	Eligible Complete	Bathroom faucet aerator	19	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	Just forgot about it	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
FN321	Eligible Complete	Learning or "smart" thermostat	12	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	Itâ€™s ENERGY STAR-certified	TRUE	Yes	No	Went through Spire	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
HB400	Eligible Complete	Central air conditioner	25	Yes	No	TRUE	2	3	2	2	3	TRUE	FALSE	Landlord information	FALSE	Don't know	0	0	FALSE	Needed to replace anyway	Landlord picked it out	FALSE	Central air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE
EC945	Eligible Complete	Room air conditioner	1	No	Yes	TRUE	1	N	1	2	0	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	Don't know	FALSE	Don't know	To save money	TRUE	Central air conditioner	Electric baseboard heating system	Gas	TRUE	FALSE	FALSE
EM809	Eligible Complete	Learning or "smart" thermostat	12	Don't know	Yes	TRUE	2	3	3	4	N	TRUE	FALSE	Itâ€™s ENERGY STAR-certified	TRUE	Don't know	0	0	FALSE	To replace failing equipment	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
GV445	Eligible Complete	Showerhead	17	Don't know	Yes	TRUE	1	0	1	1	N	FALSE	TRUE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	I applied, but I did not receive a rebate	FALSE	Was ready to update	To save energy	TRUE	Air-source heat pump	Air-source heat pump	Electric	TRUE	FALSE	FALSE
CR510	Eligible Complete	Room air purifier	2	Yes	No	TRUE	4	2	2	4	0	TRUE	FALSE	The retailer/dealer/contractor told me it was	TRUE	No	0	Don't know	FALSE	To improve comfort	Liked the style	FALSE	Central air conditioner,Ductless or mini-split heat pump	Ductless or mini-split heat pump ,Air-source heat pump ,Gas furnace/boiler ,Other (please specify): ventless gasElectric	Gas	TRUE	FALSE	FALSE
CR510	Eligible Complete	Bathroom faucet aerator	19	Yes	No	TRUE	0	1	N	N	N	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner,Ductless or mini-split heat pump	Ductless or mini-split heat pump ,Air-source heat pump ,Gas furnace/boiler ,Other (please specify): ventless gasElectric	Gas	FALSE	FALSE	FALSE
CR510	Eligible Complete	Ductless or mini-split heat pump	22	Yes	No	TRUE	4	1	N	2	N	FALSE	TRUE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To improve comfort	It had other features that I liked	FALSE	Central air conditioner,Ductless or mini-split heat pump	Ductless or mini-split heat pump ,Air-source heat pump ,Gas furnace/boiler ,Other (please specify): ventless gasElectric	Gas	FALSE	FALSE	FALSE
DV399	Eligible Complete	Bathroom faucet aerator	19	Don't know	Yes	TRUE	2	1	3	2	3	FALSE	TRUE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	Don't know	FALSE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Gas	FALSE	FALSE	FALSE
DV399	Eligible Complete	Learning or "smart" thermostat	12	Don't know	Yes	TRUE	2	3	4	2	2	TRUE	FALSE	Itâ€™s ENERGY STAR-certified	TRUE	Don't know	0	0	FALSE	To save energy	0	TRUE	Central air conditioner	Electric furnace	Gas	TRUE	FALSE	FALSE
DS490	Eligible Complete	Heat pump water heater	11	Yes	No	TRUE	2	0	1	N	2	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	Don't know	FALSE	Needed to replace anyway	To save money	TRUE	Central air conditioner	Electric furnace	Electric	TRUE	FALSE	FALSE
FC753	Eligible Complete	Hot water pipe insulation for your hot water heater	20	Yes	Yes	TRUE	1	3	N	1	1	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	I was not aware it was available.	TRUE	I replaced the water heater and the contractor installed the insulation.	The contractor chose.	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LS336	Eligible Complete	Hot water pipe insulation for your hot water heater	20	No	Yes	TRUE	2	3	3	3	3	TRUE	FALSE	personal knowledge	FALSE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LS336	Eligible Complete	Learning or "smart" thermostat	12	No	Yes	TRUE	3	3	2	3	3	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To save money	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
GY984	Eligible Complete	Room air conditioner	1	Yes	Yes	TRUE	2	0	2	2	0	TRUE	FALSE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	I am still planning to apply	FALSE	To replace failing equipment	It was the only option available	FALSE	Central air conditioner,Window or wall air conditioner	Gas furnace/boiler ,Other (please specify): Electric Wall units	Gas	TRUE	FALSE	FALSE
GA702	Eligible Complete	Kitchen faucet aerator	18	Yes	Yes	TRUE	1	0	2	N	N	FALSE	TRUE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	Just forgot about it	TRUE	To replace failing equipment	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
KR656	Eligible Complete	Room air conditioner	1	Yes	Yes	TRUE	N	2	4	3	N	TRUE	FALSE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	I applied, but I did not receive a rebate	FALSE	To improve comfort	To save money	TRUE	Central air conditioner,Window or wall air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE
AW714	Eligible Complete	Room air conditioner	1	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	Information about the product from packaging, websites, etc.	TRUE	No	0	Just forgot about it	TRUE	To improve comfort	It was the only option available	FALSE	Central air conditioner,Portable air conditioner	Gas furnace/boiler	Gas	TRUE	FALSE	FALSE
AW714	Eligible Complete	Showerhead	17	Yes	Yes	TRUE	1	2	1	1	1	FALSE	TRUE	Itâ€™s ENERGY STAR-certified	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To replace failing equipment	Liked the style	FALSE	Central air conditioner,Portable air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LS931	Eligible Complete	Learning or "smart" thermostat	12	No	Yes	TRUE	1	1	1	2	1	FALSE	TRUE	Information about the product from packaging, websites, etc.	TRUE	No	0	I wasnâ€™t sure my equipment qualified	TRUE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
EM621	Eligible Complete	Showerhead	17	Yes	No	TRUE	2	1	0	0	2	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	I didnâ€™t know I had the option to do so.	TRUE	To improve comfort	Liked the style	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
EM621	Eligible Complete	Bathroom faucet aerator	19	Yes	No	TRUE	0	0	2	1	0	FALSE	TRUE	The retailer/dealer/contractor told me it was	TRUE	No	0	I didnâ€™t know it was an option to do so.	TRUE	Didnâ€™t have one prior	It had other features that I liked	FALSE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE
LG782	Eligible Complete	Learning or "smart" thermostat	12	No	Yes	TRUE	1	0	0	1	0	FALSE	TRUE	Itâ€™s ENERGY STAR-certified	TRUE	Yes	Yes	0	FALSE	To save energy	0	TRUE	Central air conditioner	Gas furnace/boiler	Gas	FALSE	FALSE	FALSE

Measure Information			Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings			Meeting all criteria	
Account	Cadmus Disposition	Measure	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	G18. Did you receive a rebate, discount, or tax credit for the tune-up?	G19. Did you get a rebate from Ameren Missouri?	G20. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the tune-up?	Criterion D met? (qualitative assessment)	G17. Which of the following reasons best describe why you decided to install have the tune-up?	G17. Other categories	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
MH230	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	3	N	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
EQ805	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	N	N	3	N	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
HZ466	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	2	2	2	2	TRUE	FALSE	No		I am still planning to apply	FALSE	To save energy		TRUE	Portable air conditioner	Air-source heat pump	FALSE	FALSE	FALSE
KU900	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	1	1	2	FALSE	TRUE	No		Don't know	FALSE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EC307	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	1	2	2	2	2	FALSE	TRUE	No		Did not know about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LA504	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	2	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Don't know Gas	TRUE	FALSE	FALSE
LP856	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	1	D	2	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HZ948	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	3	3	N	3	FALSE	TRUE	Yes	No	Was not aware	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HE709	Eligible Complete	Heat Pump Tune-Up	No	Yes	TRUE	1	2	2	3	3	FALSE	TRUE	No		Just forgot about it	TRUE	To make repairs or replacements		FALSE	Ground-source or geothermal heat pump	Ground-source or geothermal heat pump	TRUE	FALSE	FALSE
HT983	Eligible Complete	Heat Pump Tune-Up	No	Yes	TRUE	2	1	1	D	D	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To save money		TRUE	Don't know	Gas furnace/boiler ,Electric furnace	FALSE	FALSE	FALSE
AZ138	Eligible Complete	Heat Pump Tune-Up	No	Yes	TRUE	1	2	2	2	3	FALSE	TRUE	Yes	No	Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
CC347	Eligible Complete	Heat Pump Tune-Up	Don't know	Yes	TRUE	2	2	3	D	3	TRUE	FALSE	No		never heard of a rebate	TRUE	It was part of routine maintenance		FALSE	Air-source heat pump	Gas furnace/boiler	FALSE	FALSE	FALSE
CU402	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
AM444	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	1	2	2	3	2	FALSE	TRUE	No		Donâ€™t know about program	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
KC273	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	2	2	4	FALSE	TRUE	No		Did not know	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HZ575	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	3	N	N	FALSE	TRUE	No		I am a service tech	FALSE	It was part of routine maintenance		FALSE	Central air conditioner,Window or wall	Gas furnace/boiler ,Electric	TRUE	FALSE	FALSE
FF200	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	D	D	2	D	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	to save energy which saves money	To save energy	TRUE	Central air conditioner	Electric furnace	TRUE	TRUE	FALSE
LG594	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	N	2	3	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
HB963	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	D	3	2	2	D	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Air-source heat pump	Air-source heat pump	TRUE	FALSE	FALSE
GS751	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	D	N	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AZ682	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	Don't know		0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EM824	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KR706	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	2	2	1	1	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CK709	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	2	2	N	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DG643	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	3	2	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AQ956	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	D	1	N	N	D	FALSE	TRUE	No		did not know about rebate	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HQ756	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	3	2	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CF580	Eligible Complete	Heat Pump Tune-Up	No	Yes	TRUE	2	N	N	N	2	TRUE	FALSE	No		it came with the house when we buy it	FALSE	It was part of routine maintenance		FALSE	Central air conditioner,Window or wall air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
FF714	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	1	4	1	1	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace	FALSE	FALSE	FALSE
EC611	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	N	2	D	1	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
EC924	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	2	4	3	3	TRUE	FALSE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CN474	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	1	2	3	3	FALSE	TRUE	No		Just forgot about it	TRUE	To save energy		TRUE	Central air conditioner	None	TRUE	FALSE	TRUE
KK523	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	3	3	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Air-source heat	Air-source heat pump	TRUE	FALSE	FALSE
AW844	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	1	2	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
MB566	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner,Air-source heat	Air-source heat pump ,Electric furnace	TRUE	FALSE	FALSE
FC626	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	D	4	3	2	3	TRUE	FALSE	Yes	No	Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KC540	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	2	3	3	3	TRUE	FALSE	Don't know		0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner,Other (please	Gas furnace/boiler	TRUE	FALSE	FALSE
FC923	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	2	2	1	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
CR908	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	3	3	2	3	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DV615	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	N	N	N	N	TRUE	FALSE	No		Didn't know	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace	FALSE	FALSE	FALSE
AW773	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	3	2	4	2	TRUE	FALSE	Don't know		0	FALSE	To make repairs or replacements		FALSE	Central air conditioner,Window or wall	Gas furnace/boiler	TRUE	FALSE	FALSE
MQ357	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	2	3	1	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To save money		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	TRUE
DA758	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	D	1	1	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To save energy		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	TRUE
LY193	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	3	D	N	D	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AZ719	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HT597	Eligible Complete	Air Conditioner Tune-Up	Yes	Don't know	TRUE	1	1	1	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KF345	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE

Measure Information			Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings			Meeting all criteria	
Account	Cadmus Disposition	Measure	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	G18. Did you receive a rebate, discount, or tax credit for the tune-up?	G19. Did you get a rebate from Ameren Missouri?	G20. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the tune-up?	Criterion D met? (qualitative assessment)	G17. Which of the following reasons best describe why you decided to install have the tune-up?	G17. Other categories	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
DA769	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	3	2	N	2	2	TRUE	FALSE	No		did not know i could	TRUE	To make repairs or replacements		FALSE	Central air conditioner,Air-source heat	Air-source heat pump ,Electric furnace	TRUE	FALSE	FALSE
LY519	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	N	1	N	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Ground-source or geothermal heat pump	FALSE	FALSE	FALSE
KK264	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	4	2	D	2	2	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LP768	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	2	3	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Air-source heat pump ,Electric furnace	TRUE	FALSE	FALSE
ME728	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FN865	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	3	4	2	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HH386	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	3	N	2	N	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EQ874	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	N	FALSE	TRUE	No		Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KK133	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	D	2	D	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CR503	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	2	4	4	4	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	To save money		TRUE	Central air conditioner,Air-source heat	Air-source heat pump ,Electric furnace	TRUE	TRUE	FALSE
LY806	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	1	1	1	1	1	FALSE	TRUE	No		Don't know	FALSE	To save money		TRUE	Air-source heat pump	Air-source heat pump	FALSE	FALSE	FALSE
LV897	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	D	2	2	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To save energy		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	TRUE
DG449	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	4	N	N	N	TRUE	FALSE	Yes	No	I wasn't aware that existed	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
MB658	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Window or wall air conditioner	Gas furnace/boiler ,Electric furnace	FALSE	FALSE	FALSE
AZ614	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	2	3	2	2	TRUE	FALSE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KN821	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	4	4	N	4	TRUE	FALSE	No		Didnâ€™t have to pay bill	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HE674	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
FN804	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	4	2	3	2	FALSE	TRUE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
EM326	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
AT281	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	1	1	2	1	1	FALSE	TRUE	No		warranty	FALSE	To make repairs or replacements		FALSE	Air-source heat pump	Air-source heat pump ,Electric furnace	TRUE	FALSE	FALSE
CC985	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	D	D	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
MB218	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	1	N	N	N	N	FALSE	TRUE	No		Nothing was said	TRUE	To make repairs or replacements		FALSE	Central air conditioner,Window or wall	Electric furnace	FALSE	FALSE	FALSE
LD421	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	3	3	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Air-source heat pump	Air-source heat pump ,Gas furnace/boiler	TRUE	FALSE	FALSE
HM766	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	3	3	3	4	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AZ612	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	N	N	N	1	N	FALSE	TRUE	No		Rent	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
MH877	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	4	1	1	1	FALSE	TRUE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FN596	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	4	4	3	1	4	FALSE	TRUE	No		I did not know I could get a rebate	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FK731	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	N	N	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
ET174	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	N	N	N	2	N	TRUE	FALSE	No		Did not know about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GA803	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	1	2	1	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KN605	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	4	4	4	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GG846	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	1	3	3	1	3	FALSE	TRUE	Yes	Yes	0	FALSE	To save money		TRUE	Central air conditioner,Air-source heat	Air-source heat pump	TRUE	FALSE	FALSE
DL469	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Portable air	Gas furnace/boiler	TRUE	FALSE	FALSE
AM426	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	4	1	N	2	FALSE	TRUE	Don't know		0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FX382	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	1	2	1	4	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CC997	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	4	4	4	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FN707	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	2	2	2	TRUE	FALSE	No		Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
GD625	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	3	D	D	D	TRUE	FALSE	No		Don't know	FALSE	To save money		TRUE	Air-source heat pump	Air-source heat pump	TRUE	FALSE	FALSE
FC411	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	N	N	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KN412	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AT538	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	3	D	TRUE	FALSE	No		DIDN'T QUALIFY	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DY838	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	1	1	2	3	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner,Other (please	Electric furnace	TRUE	FALSE	FALSE
GL405	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	4	4	4	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To save energy		TRUE	Central air conditioner	Don't know Gas	FALSE	FALSE	FALSE
CU459	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	2	2	D	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner,Other (please	Gas furnace/boiler	TRUE	FALSE	FALSE
GL524	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	N	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner,Air-source heat	Air-source heat pump	TRUE	FALSE	FALSE
FK566	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	4	2	3	2	FALSE	TRUE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Ground-source or geothermal heat pump	Ground-source or geothermal heat pump	TRUE	FALSE	FALSE
CF378	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	4	2	2	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CC579	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	3	2	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE

Measure Information			Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings			Meeting all criteria	
Account	Cadmus Disposition	Measure	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	G18. Did you receive a rebate, discount, or tax credit for the tune-up?	G19. Did you get a rebate from Ameren Missouri?	G20. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the tune-up?	Criterion D met? (qualitative assessment)	G17. Which of the following reasons best describe why you decided to install have the tune-up?	G17. Other categories	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
FR434	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	4	2	N	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FW475	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	4	2	2	3	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EH359	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	4	2	N	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Other (please specify): forced hot airGas	FALSE	FALSE	FALSE
KX200	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	N	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DA179	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	D	D	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KX804	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	3	3	2	2	TRUE	FALSE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
LL794	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	N	3	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KX380	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	1	2	1	1	FALSE	TRUE	No		I AM A RENTER	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
KC323	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	3	4	3	4	2	TRUE	FALSE	No		I DIDN'TKNOW	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AQ926	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	2	2	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric baseboard heating system	FALSE	FALSE	FALSE
HT221	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	1	1	2	1	FALSE	TRUE	No		DID WORK MYSELF	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LA605	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	1	1	1	1	1	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KX183	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	4	2	4	TRUE	FALSE	No		didn't know	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
MH620	Eligible Complete	Heat Pump Tune-Up	No	Yes	TRUE	2	3	2	4	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Window or wall	Gas furnace/boiler	FALSE	FALSE	FALSE
HQ162	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	2	4	TRUE	FALSE	No		Didnt know about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Other (please	Gas furnace/boiler	TRUE	FALSE	FALSE
DD710	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	4	N	2	TRUE	FALSE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KC625	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	3	2	2	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	FALSE	FALSE	FALSE
DL283	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	4	2	4	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HH998	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Air-source heat	Electric furnace	FALSE	FALSE	FALSE
HM667	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	3	2	2	TRUE	FALSE	No		Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner,Window or wall	Gas furnace/boiler	FALSE	FALSE	FALSE
DV867	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	3	2	2	4	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AW934	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	D	D	D	D	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Ground-source or geothermal heat pump	Ground-source or geothermal heat pump	TRUE	FALSE	FALSE
HT280	Eligible Complete	Heat Pump Tune-Up	Don't know	Yes	TRUE	2	N	1	N	N	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
CK138	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	2	2	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To save money		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	TRUE
KF402	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	D	D	D	D	TRUE	FALSE	Yes	No	Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GV432	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		Not a Ameren contractor	FALSE	To make repairs or replacements		FALSE	Air-source heat pump	Gas furnace/boiler	FALSE	FALSE	FALSE
DL471	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	D	2	N	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FW142	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	N	N	N	N	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
ME654	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	4	1	1	3	3	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	FALSE	FALSE	FALSE
LV647	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	Yes	Yes	0	FALSE	To save money		TRUE	Central air conditioner	Electric furnace	FALSE	FALSE	FALSE
HT389	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	2	3	3	3	TRUE	FALSE	No		rebate on A-coil	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CR214	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	3	2	2	4	3	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LD740	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	D	D	D	D	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Ductless or mini-	Ductless or mini-split heat pump ,Electric	TRUE	FALSE	FALSE
KX429	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Other (please specify): gas furnaceGas	TRUE	FALSE	FALSE
EC510	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	3	3	TRUE	FALSE	No		Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KC209	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	3	3	3	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CF385	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	N	1	N	N	N	FALSE	TRUE	Yes	Yes	0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HQ172	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HZ674	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	2	N	2	TRUE	FALSE	No		dont know about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GV549	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	1	4	4	3	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
DL786	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	3	3	3	3	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HT637	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	1	2	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Air-source heat pump ,Other (please	TRUE	FALSE	FALSE
AW310	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DD188	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	1	1	D	1	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HZ812	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	2	2	2	1	FALSE	TRUE	No		Didnâ€™t know you could	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KF535	Eligible Complete	Air Conditioner Tune-Up	Yes	Don't know	TRUE	2	1	2	2	2	FALSE	TRUE	No		Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CK483	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	3	2	2	3	TRUE	FALSE	No		didn't know about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HM916	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	2	D	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE

Measure Information			Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings			Meeting all criteria	
Account	Cadmus Disposition	Measure	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	G18. Did you receive a rebate, discount, or tax credit for the tune-up?	G19. Did you get a rebate from Ameren Missouri?	G20. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the tune-up?	Criterion D met? (qualitative assessment)	G17. Which of the following reasons best describe why you decided to install have the tune-up?	G17. Other categories	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
DL956	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	2	N	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DG687	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	4	2	4	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
EC163	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	4	2	3	1	FALSE	TRUE	No		NOT SURE IF APARTMENT MANAGEMENT WOULD 0	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
KU536	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	N	N	2	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Evaporative	Electric furnace	TRUE	FALSE	FALSE
HW501	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	N	N	N	N	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DA645	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	3	4	4	1	FALSE	TRUE	No		This is an apartment 0	FALSE	Stopped Working	To make repairs or replacements	FALSE	Central air conditioner	Air-source heat pump ,Electric furnace	TRUE	FALSE	FALSE
HB229	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	2	3	3	2	TRUE	FALSE	No		Just forgot about it 0	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
KU935	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	3	3	3	2	TRUE	FALSE	No		DYI 0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HH536	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	1	2	2	FALSE	TRUE	No		Just forgot about it 0	TRUE	To save money		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	TRUE
DP576	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	3	4	3	2	TRUE	FALSE	No		Don't know 0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DG456	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	3	4	2	2	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HH835	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	D	1	D	D	FALSE	TRUE	Yes	No	Don't know	FALSE	It was part of routine maintenance		FALSE	Don't know	Don't know Gas	FALSE	FALSE	FALSE
KF448	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	2	FALSE	TRUE	No		Don't know 0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KC997	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	D	D	D	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DG686	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	N	1	FALSE	TRUE	No		Don't know 0	FALSE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EE345	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	1	2	N	N	FALSE	TRUE	Yes	Yes	0	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KX908	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	4	4	2	4	4	TRUE	FALSE	No		did'nt know about rebate 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KF482	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	2	2	N	2	TRUE	FALSE	No		Don't know 0	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AT686	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	N	4	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LS483	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	2	N	D	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DS888	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	2	4	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AQ339	Eligible Complete	Heat Pump Tune-Up	No	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		Don't know 0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Air-source heat pump	FALSE	FALSE	FALSE
MH343	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	2	2	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DP207	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	1	2	1	2	1	FALSE	TRUE	Don't know		0	FALSE	To save energy		TRUE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
LG889	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	3	2	3	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DA916	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	2	3	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
DY321	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	2	2	2	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
FC841	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	1	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AQ553	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	D	N	N	N	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	To save money		TRUE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
DD535	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	Don't know		0	FALSE	To save money		TRUE	Don't know	Don't know Electric	FALSE	FALSE	FALSE
FC336	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	1	1	1	2	1	FALSE	TRUE	No		Don't know 0	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Air-source heat pump	FALSE	FALSE	FALSE
HW199	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	3	1	3	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
MB428	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	2	2	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler ,Electric furnace	TRUE	FALSE	FALSE
GS273	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	N	N	N	N	TRUE	FALSE	Yes	No	Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KU826	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	D	3	2	D	2	TRUE	FALSE	No		Don't know 0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
ME336	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	D	2	3	2	N	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CF336	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	Don't know		0	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GP525	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	4	4	D	3	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
LP903	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	3	2	TRUE	FALSE	Yes	Don't know	0	FALSE	I am going to say it was part of routine maintenace. it was just the annual furnace and air conditionin checkup	It was part of routine maintenance	FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FK656	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	2	4	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace ,Other (please specify): Wood	TRUE	FALSE	FALSE
GL511	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	D	3	D	1	FALSE	TRUE	No		Just forgot about it 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
MQ155	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	2	N	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
CX587	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	4	4	N	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
CX453	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	N	N	N	N	TRUE	FALSE	No		Don't know 0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner,Window or wall	Electric furnace	TRUE	FALSE	FALSE
EE823	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	D	D	1	D	N	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified 0	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE

Measure Information			Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings			Meeting all criteria	
Account	Cadmus Disposition	Measure	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	G18. Did you receive a rebate, discount, or tax credit for the tune-up?	G19. Did you get a rebate from Ameren Missouri?	G20. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the tune-up?	Criterion D met? (qualitative assessment)	G17. Which of the following reasons best describe why you decided to install have the tune-up?	G17. Other categories	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
HZ272	Eligible Complete	Heat Pump Tune-Up	Don't know	Yes	TRUE	4	4	2	N	4	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
CF180	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	2	2	2	2	TRUE	FALSE	No		Don't know	FALSE	To save money		TRUE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
KK562	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	N	D	3	3	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FF193	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	2	3	3	3	TRUE	FALSE	Don't know			FALSE	To make repairs or replacements		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
AM359	Eligible Complete	Heat Pump Tune-Up	Don't know	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Air-source heat pump ,Electric furnace	FALSE	FALSE	FALSE
DL180	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	D	3	N	1	FALSE	TRUE	No		did not know about it	TRUE	It was part of routine maintenance		FALSE	Air-source heat pump	Gas furnace/boiler	FALSE	FALSE	FALSE
CF125	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	4	4	N	4	TRUE	FALSE	No		friend did it	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FN458	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	2	2	2	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CK413	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	2	1	2	1	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Air-source heat pump	FALSE	FALSE	FALSE
CN931	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	3	1	FALSE	TRUE	No		did not know there was a rebate for a tune-up	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HE850	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	4	4	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LV969	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	2	2	3	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LL303	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	N	N	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KU355	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	D	2	N	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Ductless or mini-	Ductless or mini-split heat pump ,Air-	TRUE	FALSE	FALSE
GP623	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	1	N	N	1	FALSE	TRUE	No		Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HM789	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	3	2	N	N	FALSE	TRUE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FC754	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	2	2	3	3	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HQ457	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GL897	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner,Portable air	Gas furnace/boiler	TRUE	FALSE	FALSE
HT177	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	1	2	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FW663	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	N	N	4	N	TRUE	FALSE	No		Did not know work was eligible for a rebate	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CU760	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	2	3	4	3	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Window or wall air conditioner	Electric baseboard heating	FALSE	FALSE	FALSE
KK888	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	3	2	2	2	TRUE	FALSE	No		Don't know	FALSE	To save money		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AQ657	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	1	1	4	1	1	FALSE	TRUE	No		Just forgot about it	TRUE	To save energy		TRUE	Central air conditioner	Electric furnace	FALSE	FALSE	FALSE
KR222	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	4	4	2	4	4	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CR119	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	N	N	N	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EH811	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	4	4	4	3	FALSE	TRUE	Yes	No	Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LY967	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	3	4	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EM446	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Air-source heat pump	FALSE	FALSE	FALSE
GA332	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	1	1	N	FALSE	TRUE	No		did not know about it	TRUE	It was part of routine maintenance		FALSE	Ground-source or geothermal heat pump	Ground-source or geothermal heat pump	TRUE	FALSE	FALSE
EE727	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	2	2	2	2	3	TRUE	FALSE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EM926	Eligible Complete	Air Conditioner Tune-Up	Yes	Don't know	TRUE	1	D	D	D	D	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FK608	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	2	N	3	2	TRUE	FALSE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GV447	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DG307	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	2	2	D	2	TRUE	FALSE	No		Don't know	FALSE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HQ857	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	4	3	3	2	TRUE	FALSE	No		Do not own the property	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Don't know Gas	TRUE	FALSE	FALSE
DP925	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	4	4	4	N	TRUE	FALSE	No		Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LP960	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	2	2	2	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DS832	Eligible Complete	Heat Pump Tune-Up	No	Yes	TRUE	2	3	2	2	2	TRUE	FALSE	No		self-employed/certified HVAC	FALSE	It was part of routine maintenance		FALSE	Air-source heat pump	Air-source heat pump	TRUE	FALSE	FALSE
GD772	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	2	3	2	TRUE	FALSE	No		Work was performed by family member who is HVAC professional	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GV763	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	2	1	FALSE	TRUE	No		Don't know	FALSE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
DY230	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	1	3	D	2	FALSE	TRUE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AM896	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	The unit would not come on.	To make repairs or replacements	FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
GG235	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	D	1	1	1	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HH389	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	3	2	2	3	FALSE	TRUE	No		I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AQ768	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	N	4	4	3	TRUE	FALSE	No		Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Air-source heat pump	FALSE	FALSE	FALSE

Measure Information			Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings			Meeting all criteria	
Account	Cadmus Disposition	Measure	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	G18. Did you receive a rebate, discount, or tax credit for the tune-up?	G19. Did you get a rebate from Ameren Missouri?	G20. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the tune-up?	Criterion D met? (qualitative assessment)	G17. Which of the following reasons best describe why you decided to install have the tune-up?	G17. Other categories	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
CN274	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	2	D	2	FALSE	TRUE	No		0 Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KX794	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	3	2	2	2	TRUE	FALSE	No		0 Just forgot about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Ductless or mini-split heat pump	FALSE	FALSE	FALSE
HQ615	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	D	2	2	D	TRUE	FALSE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GD541	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	N	D	1	D	D	FALSE	TRUE	No		0 rent	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AT892	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	N	1	2	1	D	FALSE	TRUE	No		0 no work was done	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CU239	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	3	4	4	4	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
MB865	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	N	N	2	N	N	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KU531	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	D	3	2	N	N	TRUE	FALSE	No		0 Didn't know about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EC663	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	2	1	N	FALSE	TRUE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GD413	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	1	1	3	3	1	FALSE	TRUE	No		0 Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FX971	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		0 Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CX974	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	3	D	3	D	TRUE	FALSE	No		0 Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
HW919	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	1	3	3	N	FALSE	TRUE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	To save energy		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	TRUE
FN321	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
GS780	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	D	D	TRUE	FALSE	No		0 Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
EH953	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	D	D	3	3	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FW615	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	3	2	D	2	TRUE	FALSE	Don't know		0 0	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LG501	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	1	2	2	1	FALSE	TRUE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
GP163	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	3	3	2	D	3	TRUE	FALSE	No		0 Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner,Air-source heat	Air-source heat pump	TRUE	FALSE	FALSE
EM272	Eligible Complete	Heat Pump Tune-Up	Yes	No	TRUE	2	3	2	2	2	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Air-source heat pump	FALSE	FALSE	FALSE
FW691	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	D	2	D	1	FALSE	TRUE	No		0 Didnt know about it	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AZ559	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	D	4	3	TRUE	FALSE	Don't know		0 0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
DD366	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	2	2	2	TRUE	FALSE	No		0 Just forgot about it	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
MM719	Eligible Complete	Heat Pump Tune-Up	Don't know	Yes	TRUE	2	2	N	2	D	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner,Window or wall	Air-source heat pump ,Gas furnace/boiler	FALSE	FALSE	FALSE
HE314	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	2	1	N	2	FALSE	TRUE	No		0 Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
LV754	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	D	4	D	2	TRUE	FALSE	No		0 Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
MM957	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	1	2	2	1	FALSE	TRUE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
KU655	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	1	2	2	1	2	FALSE	TRUE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
KF685	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	2	2	1	FALSE	TRUE	Yes	Yes	0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LS676	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	2	4	D	3	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FX734	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	N	2	D	N	TRUE	FALSE	No		0 Don't know	FALSE	To save money		TRUE	Air-source heat pump	Air-source heat pump	TRUE	FALSE	FALSE
FC753	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	N	N	1	1	FALSE	TRUE	No		0 I was not aware it was available	TRUE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LP596	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	2	4	2	2	4	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	Need new unit but cant afford one	To make repairs or replacements	FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FK383	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	2	2	N	1	FALSE	TRUE	Yes	No	Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE
HB867	Eligible Complete	Air Conditioner Tune-Up	Don't know	Yes	TRUE	1	N	N	1	N	FALSE	TRUE	Yes	No	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EM487	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	1	1	1	1	FALSE	TRUE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	FALSE	FALSE	FALSE
DG852	Eligible Complete	Heat Pump Tune-Up	No	Yes	TRUE	1	1	3	N	1	FALSE	TRUE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Air-source heat pump	Electric furnace	FALSE	FALSE	FALSE
LG337	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	2	1	1	2	FALSE	TRUE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Air-source heat pump	Air-source heat pump	TRUE	FALSE	FALSE
MM542	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	D	D	D	D	FALSE	TRUE	Don't know		0 0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Don't know Gas	FALSE	FALSE	FALSE
GD958	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	4	3	2	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EM179	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	4	3	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler ,Electric furnace	TRUE	FALSE	FALSE
GP317	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	2	D	2	N	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	To save energy		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	TRUE	FALSE
DA627	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	4	4	2	4	2	TRUE	FALSE	No		0 Don't know	FALSE	To save energy		TRUE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EC592	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	N	3	N	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CX916	Eligible Complete	Air Conditioner Tune-Up	Yes	No	TRUE	2	1	1	2	1	FALSE	TRUE	No		0 Don't know	FALSE	To improve home comfort		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
EE965	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	3	3	1	4	FALSE	TRUE	No		0 Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HW374	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	N	2	D	D	TRUE	FALSE	No		0 I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Electric furnace	TRUE	FALSE	FALSE
LD153	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	N	1	FALSE	TRUE	No		0 Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE

Measure Information			Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount			Criterion B: At least one element of Ameren's program marketing and outreach motivated them to adopt the measure							Criterion D: They had not received a rebate from Ameren, and had not already tried to receive a rebate from Ameren, and they stated a valid reason for not applying for an Ameren rebate				Criterion E: They had a valid reason for deciding to install the measure			Criterion F: The adopted measure generated electric savings, not gas savings			Meeting all criteria	
Account	Cadmus Disposition	Measure	C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs?	C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home ?	Criterion A met? (Yes to C2 or C10)	a) Information about energy savings from Ameren Missouri's marking or bill insert	b) Ameren Missouri's marketing information from a contractor or retailer	c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri	d) Past participation in an Ameren Missouri energy efficiency program	e) Information from the energy assessment conducted at your home through Ameren Missouri	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)	G18. Did you receive a rebate, discount, or tax credit for the tune-up?	G19. Did you get a rebate from Ameren Missouri?	G20. Why didn't you or your contractor apply for a rebate through Ameren Missouri for the tune-up?	Criterion D met? (qualitative assessment)	G17. Which of the following reasons best describe why you decided to install have the tune-up?	G17. Other categories	Criterion E met? (qualitative assessment)	Cooling System	Heating System	Criterion F met? (depends on the measure)	Criterion B met for 50% savings? (Max rating was 2)	Criterion B met for 100% savings? (Max rating was 1)
HH693	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	2	N	D	2	FALSE	TRUE	No	0	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AM901	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	3	3	2	D	TRUE	FALSE	No	0	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CR481	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	2	1	2	N	N	FALSE	TRUE	No	0	Don't know	FALSE	To make repairs or replacements		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
AT118	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	2	N	N	N	N	TRUE	FALSE	No	0	I wasnâ€™t sure the tune-up qualified	TRUE	To improve home comfort		FALSE	Air-source heat pump	Air-source heat pump	TRUE	FALSE	FALSE
LL890	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	D	4	D	D	FALSE	TRUE	No	0	Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
LA400	Eligible Complete	Air Conditioner Tune-Up	Yes	Don't know	TRUE	2	2	2	1	2	FALSE	TRUE	No	0	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
FF910	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	3	3	2	N	D	TRUE	FALSE	Don't know	0	0	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
HW559	Eligible Complete	Air Conditioner Tune-Up	No	Yes	TRUE	1	4	2	2	3	FALSE	TRUE	No	0	Don't know	FALSE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler ,Electric	TRUE	FALSE	FALSE
DS347	Eligible Complete	Heat Pump Tune-Up	Yes	Yes	TRUE	1	N	N	N	N	FALSE	TRUE	No	0	I wasnâ€™t sure the tune-up qualified	TRUE	It was part of routine maintenance		FALSE	Air-source heat pump	Air-source heat pump	TRUE	FALSE	FALSE
HB425	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	1	1	1	D	FALSE	TRUE	No	0	He doesn't think the check that he has done would qualify	TRUE	It was part of routine maintenance		FALSE	Central air conditioner	Gas furnace/boiler	TRUE	FALSE	FALSE
CN442	Eligible Complete	Air Conditioner Tune-Up	Yes	Yes	TRUE	1	N	1	N	N	FALSE	TRUE	No	0	I wasnâ€™t sure the tune-up qualified	TRUE	To make repairs or replacements		FALSE	Window or wall air conditioner	Gas furnace/boiler	FALSE	FALSE	FALSE

Appendix E. Stakeholder Interview Guide

Ameren Missouri Efficient Products Program
Stakeholder Interview Guide PY18

Respondent name: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

For the PY18 evaluation, Cadmus will interview stakeholders (Ameren Missouri and ICF program managers). The interview will focus on program changes since PY17, assess the program at year end, and identify recommendations for improving subsequent programs.

A. Introduction

1) Please state your title and explain your company's role in Ameren Missouri's Efficient Products Program.

2) What are your main roles and responsibilities for Ameren Missouri's Efficient Products Program? Has this changed since PY17?

3) Who do you coordinate with regarding the program? [Probe: internal and external program stakeholders]

   a. What types of communication do you have with these program stakeholders (i.e., formal or informal)? [Probe: frequency, satisfaction, challenges, etc.]

4) Have there been any changes in how the program handles communications with participating retailers and contractors? [Probe: Crossmark's role, meeting frequency, who is included]

B. Program Goals

5) Appendix B[1] showed that you anticipated installation of 31,459 measures plus 5,444 learning thermostats, with an estimated annual savings of 2,087 MWh for thermostats and 4,760 for the other products, and demand reductions of 1.9744 MW for the thermostats and 1.2351 MW for the other products.]

[1] State of Missouri. "In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA." File No. EO-2015-0055. February 5, 2016. Refer to Appendix B.

a. Are these the correct PY18 program goals?

b. If goals changed, how were changes determined?

6) In your opinion, how has the program performed so far in PY18 (in general, as well as savings/participation goals)?

a. Why do you think this is?

7) Are there benchmarks in place to monitor progress throughout the year?

a. Have you identified triggers for contingency plans in case goals are not being met?

C. Program Design and Implementation

8) Since we talked last year, have there been any changes to the objectives of the Efficient Products Program, or critical factors for achieving those objectives? If so, what is driving these changes?

9) How else has the program changed since PY17?

a. Current status of the online store? (Fewer smart thermostats were sold in PY18 than the year before, but it sounds like the plan is to continue and expand the store into PY19-PY21? How well would you say this channel is working?)

b. Any delivery changes to equipment rebates?

c. Did these changes have the desired outcomes?

10) Does the program have any process or non-impact goals for PY18? [Probe: increased awareness, market transformation, spillover measures such as duct sealing or insulation]

D. Measures

11) When you updated the list of qualifying thermostats this year, how did you determine which new ones to include (or exclude)?

a. Do you have any thoughts on the benefits of, or concerns about, current eligibility requirements for thermostats or any other measures?

b. Are you considering any further changes to eligibility requirements for thermostats or other measures? (If so, how and why?)

12) In your opinion, should any additional measures be considered for inclusion in future programs? If so, what measures?

13) Conversely, should any current measures be excluded?

14) Are you considering changes to the incentive levels for any measures? (If so, what changes and why?)

720 SW Washington Street
Suite 400
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Voice: 503.467.7100
Fax: 503.228.3696

E. Marketing Efforts

15) Have there been any significant changes to marketing materials or channels this year? (If there are notable new materials, can you share copies?)

16) Have there been any changes in roles or procedures for developing and placing marketing materials? (Utility, implementer, Crossmark, anyone else?)

17) What types of in-store marketing does the program use? Do you customize in-store marketing for different retailers in anyway?

18) Do you track the effectiveness of any of those marketing techniques? (In-store, Coupons, online codes, etc.)

19) Can you describe what you perceive as the impact of the program on the overall efficient products market so far, over the past eight years of implementation? What evidence do you have to support your views?

F. Retailer Participation

20) Has the program made any changes in efforts to recruit retailers, contractors, or manufacturers and encourage their participation? (Any new relationships added, being pursued, or previous relationships terminated in the last year?)

21) Have you tracked or analyzed online sales (in addition to Ameren Missouri's online store) compared to storefront sales?

    a. Are there different barriers and opportunities associated with online retailers compared to "brick and mortar" stores?

G. Rebate Processing and Data Management

22) Has anything changed since last year on your rebate processing?

23) Do you have a goal for rebate processing times?

24) Have there been any issues or difficulties with rebate processing so far?

25) How is the Vision database working? (Any issues?)

H. Quality Control

26) In your own words, please explain how the program's quality control process works.

27) Has anything changed in your processes since last years?

720 SW Washington Street
Suite 400
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Fax: 503.228.3696

I. Summary and Conclusion

28) What would you say is working particularly well so far in PY18? Why is that?

29) Conversely, what is not working as well as anticipated? Why is that?

30) From your perspective, what are the biggest challenges facing the program in PY19?

    a. Do you have any suggestions for how to improve the program (that we haven't already discussed)?

    b. What changes are being planned or considered for PY19 (that we haven't already discussed)?

31) Are there any issues you would like the evaluation to help solve?

32) Do you have any feedback about last year's evaluation or anything you would like to be different?

33) Is there anything else you'd like us to know?

RECO TRACKER

PY17 Recommendation - Efficient Products	Recommendation Status	Ameren MO Explanation
Recommendation 1. Continue to offer smart thermostats through the Ameren Missouri online store and consider offering more products through this channel when practical to do so. The Efficient Products program measures with the highest free ridership in PY17 were RACs and air purifiers. Consider offering these measures for sale through the online store if the program can sell them at a cost-effective price point, including shipping costs.	Complete	Ameren Missouri 2019-21 Products plan is to expand the Online Marketplace store to include both rebated measures (Smart Thermostats, Tier 2 Advanced Power Strips, LEDs, etc.) and also include other energy saving products.
Recommendation 2. Consider initiating a RAC early retirement program that provides coupons for new units, when old, but operating, units are turned in. This could be designed in concert with an appliance recycling program, or with special "turn-in" events at convenient locations across the service territory or through the retail partners already in the program. This change would increase the gross savings for this measure and could also reduce free ridership.	Complete	Ameren Missouri 2019-21 includes Appliance Recycling program which will allow for recycling of RACs.

720 SW Washington Street
Suite 400
Portland, OR 97205
Voice: 503.467.7100
Fax: 503.228.3696

PY17 Recommendation - Efficient Products	Recommendation Status	Ameren MO Explanation
Recommendation 3. Monitor new product offerings in the “smart” and “interactive” technology space that offer the potential to save energy through occupancy sensing, programmable schedules, remote access, and interconnectivity with other devices and systems. These technologies have proven popular with customers, as seen with the rapid adoption of smart thermostats, in part because of their energy-saving potential, but also because customers are enthusiastic about the interactive features of these devices.	Ongoing	Ameren Missouri and implementation contractors are continuing to review and analyze new measures and innovative technologies as it pertains to EE measures.

720 SW Washington Street
Suite 400
Portland, OR 97205
Voice: 503.467.7100
Fax: 503.228.3696

Appendix F. Immediate Participant Survey

Ameren Missouri 2018 Efficient Products

Immediate Online Survey

Researchable Questions	Survey Question Mapping
How satisfied were participants with the incentives and products?	B1, B2, B3
How satisfied are participants with the program?	B4, B5
What is the installation rate?	Section C (all measures except thermostats), Section E (thermostats)
Would the participant have purchased the product without the program? (Free ridership)	Section D (all measures except thermostats), Section F (thermostats)
How satisfied are participants with their utility?	G1
Participant Demographics	Section H

Cadmus tracks the following **key performance indicators** for the Efficient Products program through results from participant surveys:

- Free ridership by measure
- Satisfaction with upgrades
- Satisfaction with incentive amounts
- Satisfaction with the Efficient Products program
- Satisfaction with Ameren Missouri

Red text = programming instructions (not visible to respondents)

***[MEASURENAME]* = full descriptive name of measure, imported from panel data**

***[MEASURETYPE]* = short version of measure to be surveyed, imported from panel data**

***[QTY]* = quantity installed of survey measure, imported from panel data**

***[THERMOSTAT BRAND]* = make/model of rebated thermostat, imported from panel data**

***[ONLINE]* = flag for smart thermostats purchased through the Ameren Missouri online store, imported from panel data (1=purchased at online store, 0=submitted a regular rebate application)**

Green text = open-ended responses

(Skipped) responses are not visible (99 = code for nothing selected / skipped question)

Measure types to be surveyed (import data from panel file – **[MEASURETYPE]** will be replaced with the text in parentheses):

- Smart thermostat (smart thermostat)
- Heat pump water heater (water heater)
- ENERGY STAR room air conditioner (room air conditioner)
- ENERGY STAR room air purifier (room air purifier)
- Pool pump (pool pump) – *for both multiple speed and variable speed*

A. Verification and Program Awareness

A1. **[WORDING IF ONLINE=0]** Thank you for participating in Ameren Missouri's Efficient Products rebate program. We would like to know more about your experience with the program. Our records indicate that you received a rebate for purchasing ***[MEASURENAME]***(s). Is this correct? **[WORDING IF ONLINE=1]** Thank you for participating in Ameren Missouri's Efficient Products rebate program. We would like to know more about your experience with the program. Our records indicate that you received an instant rebate (discounted price) when you **purchased smart thermostat(s) from the Ameren Missouri Online Store**. Is this correct? **[FORCED RESPONSE (NO SKIP)]**

1. Yes
2. No

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

A2. **[ASK IF A1=2]** Why did you not receive a rebate?

1. I did not participate in the Ameren Missouri Efficient Products rebate program **[TERMINATE]**
2. I participated in the Ameren Missouri Efficient Products rebate program, but my rebate has not arrived yet **[TERMINATE]**
3. **[SHOW RESPONSE IF ONLINE=1]** I did not receive a rebate; I received a discounted price when I purchased smart thermostat(s) through the Ameren Missouri Online Store
4. Some other reason, please specify: **[SPECIFY: _____]** **[TERMINATE]**

98. Don't know **[TERMINATE]**
99. (Skipped) **[TERMINATE]**

A3. Are you or any members of your household employed by Ameren Missouri? **[FORCED RESPONSE (NO SKIP OR DK)]**

1. Yes, I or someone in my household works for Ameren Missouri [**TERMINATE**]
2. No one in my household works for Ameren Missouri

A4. **[ASK IF ONLINE=0]** Prior to this survey, were you aware that the rebate you received after you purchased your new ***[MEASURETYPE]***(s) was provided by Ameren Missouri?

1. Yes
2. No

98. Don't know
99. (Skipped)

A5. **[ASK IF MEASURETYPE IS NOT "AIR PURIFIER"]** Did you or someone else in your household install the ***[MEASURETYPE]***, or did you have a contractor install it?

1. I installed it myself OR someone else in the household installed it
2. A contractor installed it
3. Not installed yet

98. Don't know
99. (Skipped)

A6. **[WORDING IF ONLINE=0]** How did you hear about Ameren Missouri's Efficient Products rebate program? (check all that apply) **[WORDING IF ONLINE=1]** How did you hear about discounted smart thermostats for sale through the Ameren Missouri Online Store? (check all that apply) **[RANDOMIZE ORDER, CHECK ALL THAT APPLY]**

1. From my contractor or installer
2. Ameren's Web site
3. Other Web site
   A6a. Which site? **[SPECIFY:_____]**
4. On my Monthly Energy Statement (bill)
5. A brochure
   A6b. Where did you find this brochure, or who gave or sent it to you? **[SPECIFY:_____]**
6. **[SHOW RESPONSE IF ONLINE=0]** When my rebate check arrived
7. Door hanger
8. Family, friend or co-worker
9. Newspaper
10. Radio
11. Television
12. Ameren Missouri representative
13. Ameren Missouri Home Energy Report
14. Email from Ameren Missouri
15. **[SHOW RESPONSE IF ONLINE=0]** The rebate form was attached to the product when I bought it
16. **[SHOW RESPONSE IF ONLINE=0]** Signs or displays in a store
17. **[SHOW RESPONSE IF ONLINE=1]** While shopping or browsing at the Ameren Missouri Online Store
18. Store representative or salesperson
19. Social Media (Facebook, Twitter)
20. Some other way
    A6c. Please specify: **[SPECIFY:_____]**

98. Don't know
99. (Skipped)

B. Participant Satisfaction

B1. **[WORDING IF ONLINE=0]** How satisfied are you with the amount of the rebate you received? **[WORDING IF ONLINE=1]** How satisfied are you with the amount of the instant rebate (discount) you received?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not satisfied at all

98. Don't know
99. (Skipped)

B2. How satisfied are you with the performance of your new ***[MEASURETYPE***]?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not satisfied at all

98. Don't know (Skipped)

B3. **[ASK IF B2 = 1, 2, 3 or 4]** Why are you "[**RATING FROM B2**]" with your new ***[*MEASURETYPE**](s)? Please give us further details on what you like or dislike about the performance of your new ***[*MEASURETYPE**](s). (check all that apply) ***[ALLOW MULTIPLE RESONSES; SHOW ALL RESPONSE OPTIONS IF B2=2 OR 3, SHOW RESPONSE OPTIONS 1-6 & 13, 98 IF B2=1, SHOW RESPONES OPTIONS 7-13 & 98 IF B2=4.*** **RANDOMIZE ORDER EXCEPT FOR OTHER AND DON'T KNOW*]***

1. Satisfied with energy/cost savings experienced after installation
2. Satisfied with overall operation and performance of the equipment
3. Satisfied with the price of the equipment including the rebate
4. Satisfied with features of the new equipment
5. Quiet operation of the equipment
6. My home is more comfortable with this equipment installed
7. Noisy operation of the equipment
8. Did not notice energy/cost savings after installation
9. Poor performance of equipment
10. Features did not perform as expected
11. Difficulty with installation
12. High cost of equipment
13. Other reasons or comments, please specify **[SPECIFY:_____]**

98. Don't know
99. (Skipped)

B4. Thinking about your overall satisfaction with Ameren Missouri's Efficient Products rebate program, would you say you are:

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not satisfied at all

98. Don't know
99. (Skipped)

B5. **[ASK IF B4 = 3 or 4]** Why are you "[**RATING FROM B4**]" with Ameren Missouri's Efficient Products rebate program? Please give us further details on what you like or dislike about this rebate program. (check all that apply) ***[ALLOW MULTIPLE RESONSES; SHOW ALL RESPONSE OPTIONS IF B4= 2 OR 3, SHOW RESPONSE OPTIONS 1-5 & 12, 98 IF B4= 1, SHOW RESPONSE OPTIONS 6-11 & 98 IF B4= 4.*** **RANDOMIZE ORDER EXCEPT FOR OTHER AND DON'T KNOW*]***

1. **[WORDING FOR ONLINE=0]** Satisfied with the amount of the rebate **[WORDING FOR ONLINE=1]** Satisfied with the amount of the instant rebate (discounted price)
2. Participating in this rebate program was convenient/easy
3. Satisfied with energy/cost savings experienced after installation
4. Satisfied with the performance and operation of the equipment
5. **[APPEARS IF A5=2]** Satisfied with the contractor who did the installation
6. **[WORDING FOR ONLINE=0]** Dissatisfied with the amount of the rebate **[WORDING FOR ONLINE=1]** Dissatisfied with the amount of the instant rebate (discounted price)
7. Dissatisfied with communications about the rebate program
8. Dissatisfied by the limits on equipment covered by the rebate program
9. **[APPEARS IF ONLINE=0]** Dissatisfied with the rebate application process
10. **[APPEARS IF ONLINE=0]** Dissatisfied with delays in rebate processing
11. **[APPEARS IF A5=2]** Dissatisfied with the contractor who did the installation
12. Other reasons or comments, please specify **[SPECIFY:_____]**

98. Don't know
99. (Skipped)

C. Measure Installation (Except for Thermostats)

ASK THIS SECTION OF PARTICIPANTS WHO HAVE INSTALLED MEASURES OTHER THAN SMART THERMOSTATS

Next, we have a few questions about the [***MEASURETYPE***](s) that you purchased. The answers to these questions are important because they will help Ameren Missouri determine how much energy is being saved as a direct result of their energy efficiency program.

C1. **[IF QTY=1 AND A5 ≠ 3:** "Is the [***MEASURETYPE***] currently installed?" **IF QTY =2 AND A5 3:** "Are both of the [***MEASURETYPE***]s currently installed?" **IF QTY =3 AND A5 ≠ 3:** "Are all three of the [***MEASURETYPE***]s currently installed?"

1. Yes [***SKIP TO C6***]
2. No

98. Don't know [***SKIP TO G1***]
99. (Skipped) [***SKIP TO G1***]

C2. [***ASK IF QTY >1 AND C1 =2***] How many of your new [***MEASURETYPE***]s are currently installed?

1. None
2. One
3. **[IF QTY=3]:** Two

98. Don't know

99. (Skipped)

C3. [***ASK IF QTY =1 AND C1 =2***] Why isn't the [***MEASURETYPE***] currently installed? [***ASK IF QTY =2 AND C1 =2***] Why aren't both of the [***MEASURETYPE***]s currently installed? [***ASK IF QTY =3 AND C1 =2***] Why aren't all three of the [***MEASURETYPE***]s currently installed? [***RANDOMIZE ORDER, ALLOW UP TO 3 RESPONSES***]

1. [***MEASURETYPE***] failed or is broken
2. **[IF MEASURETYPE IS NOT "WATER HEATER"]:** I plan to install the [***MEASURETYPE***] during the appropriate season
3. We installed the [***MEASURETYPE***] at one time, but then removed it
4. Have not had time to install [***MEASURETYPE***] yet
5. [***MEASURETYPE***] is in storage
6. [***MEASURETYPE***] is back up equipment to install when other equipment fails
7. Some other reason

   Please specify **[SPECIFY:_____]**

98. Don't know
99. (Skipped)

C4. [***ASK IF C3 =3***] Why did you remove the [***MEASURETYPE***]?

[RECORD RESPONSE:_____]

98. (Skipped)

C5. [***ASK IF MEASURETYPE ="ROOM AC" AND C1 =2AND C3<>3, 4***] Was the room air conditioner you purchased installed at any point this summer?

1. Yes
2. No

98. Don't know
99. (Skipped)

C6. [***ASK IF MEASURETYPE ="ROOM AC" AND (C1 =1 OR C2=2, 3) OR C5=1***] Where were the air conditoners that you purchased installed? [***CHECK UP TO QTY OF RESPONSES***]

1. My primary residence
2. A vacation property or part-year residence
3. Property that I own but rent to someone else
4. Someone else's residence (such as a relative)
5. Some other situation, please specify: **[SPECIFY:_____]**

98. Don't know
99. (Skipped)

C7. [***ASK IF MEASURETYPE =”ROOM AC” AND C6 = 2,3,4,5]*** Is Ameren Missouri the electricity provider for the property where your room air conditioner(s) were installed?

1. Yes
2. No
98. Don’t know
99. (Skipped)

C8. ***[ASK IF MEASURETYPE ≠”ROOM AC” AND (C1 =1 OR C2=2,3)]*** Where were the [***MEASURETYPE***](s) that you purchased installed?

1. My primary residence
2. A vacation property or part-year residence
3. Property that I own but rent to someone else
4. Someone else’s residence (such as a relative)
5. Some other situation, please specify: **[SPECIFY:_____]**

98. Don’t know
99. (Skipped)

C9. [***ASK IF MEASURETYPE ≠”ROOM AC” AND C8 =2,3,4,5***] Is Ameren Missouri the electricity provider for the property where your [***MEASURETYPE***](s) were installed?

13. Yes
14. No

98. Don’t know
99. (Skipped)

C10. ***[ASK IF MEASURETYPE =”ROOM AC”]*** Please check all of the heating and cooling equipment that is currently installed in your home in addition to room or window air conditioners. [**MARK ALL THAT APPLY**]

1. High-efficiency central air conditioner
2. Standard-efficiency central air conditioner
3. Air Source Heat Pump
4. Ground Source Heat Pump
5. Ductless Heat Pump
6. High-efficiency gas furnace
7. Standard-efficiency gas furnace
8. High-efficiency electric furnace
9. Standard-efficiency electric furnace
10. Baseboard electric system
11. Some other heating or cooling system

Please specify **[SPECIFY:_____]**

98. Don’t know
99. (Skipped)

C11. *[ASK IF MEASURETYPE =" WATER HEATER" AND C1 =1]* Please check all of the heating and cooling equipment that is currently installed in your home. [**MARK ALL THAT APPLY**]

1. High-efficiency central air conditioner
2. Standard-efficiency central air conditioner
3. Room or window air conditioners
4. Air Source Heat Pump
5. Ground Source Heat Pump
6. Ductless Heat Pump
7. High-efficiency gas furnace
8. Standard-efficiency gas furnace
9. High-efficiency electric furnace
10. Standard-efficiency electric furnace
11. Baseboard electric system
12. Some other heating or cooling system

Please specify **[SPECIFY:_____]**

98. Don't know
99. (Skipped)

[IF (QTY = 1 AND C1= 2) OR (QTY > 1 AND C2 = 1) AND C5 ≠ 1 THEN SKIP TO G1 NOW]

D. Free Ridership (Measures Except for Thermostats)

ASK THIS SECTION OF PARTICIPANTS WHO HAVE INSTALLED MEASURES OTHER THAN SMART THERMOSTATS

D1. Without the Ameren Missouri Efficient Products program, what is the likelihood you would have purchased a new ***[MEASURETYPE]*** within 12 months? Please answer using a scale from 0 to 10, with 0 being not at all likely and 10 being very likely. ***[FORCED RESPONSE – NO SKIP]***

Not at all likely . . . . . Not very likely . . . . . Somewhat Likely . . . . . Very likely

0 1 2 3 4 5 6 7 8 9 10

1. **[RECORD 0 TO 10 RATING]**

D2. Without the Ameren Missouri Efficient Products program, what is the likelihood you would have purchased the same exact ***[MEASURENAME]*** model as the one(s) you purchased? ***[FORCED RESPONSE – NO SKIP]***

Not at all likely . . . . . Not very likely . . . . . Somewhat Likely . . . . . Very likely

0 1 2 3 4 5 6 7 8 9 10

1. **[RECORD 0 TO 10 RATING:___]**

D3. **[*IF QUANTITY > 1*]** Without the Ameren Missouri Efficient Products program, what is the likelihood you would have purchased fewer ***[MEASURENAME]***s? ***[FORCED RESPONSE – NO SKIP]***

Not at all likely . . . . . Not very likely . . . . . Somewhat Likely . . . . . Very likely

0 1 2 3 4 5 6 7 8 9 10

1. **[RECORD 0 TO 10 RATING:___]**

D4. Did you first learn about the Ameren Missouri Efficient Products program before or after you decided how energy efficient your new ***[MEASURETYPE]*** would be? [**FORCED RESPONSE – NO SKIP**]

1. Before
2. After

D5. On a scale from 0 to 10, with 0 being not at all important and 10 being very important, how important were each of the following factors in your decision to purchase a high-efficiency ***[MEASURETYPE]***? If a factor is not applicable to you, please select "not applicable". ***[FORCED RESPONSE – NO SKIP]***

1. Ameren Missouri rebate **[DROP DOWN SELECTION 0-10 OR NA]**
2. Contractor recommendation **[DROP DOWN SELECTION 0-10 OR NA]**
3. Information about energy efficiency provided by Ameren Missouri **[DROP DOWN SELECTION 0-10 OR NA]**
4. Interaction with Ameren Missouri program staff **[DROP DOWN SELECTION 0-10 OR NA]**
5. Previous participation in an Ameren Missouri rebate program **[DROP DOWN SELECTION 0-10 OR NA]**

D6. In your own words, what influence did the Ameren Missouri Efficient Products program have on your decision to purchase a high-efficiency [***MEASURETYPE***]? ***[FORCED RESPONSE – NO SKIP]***

[RECORD RESPONSE:_____]

E. Smart Thermostat Installation

ASK THIS SECTION IF MEASURETYPE = "SMART THERMOSTAT".

Next, we have a few questions about the Smart Thermostat(s) that you purchased and installed. The answers to these questions are important because they will help Ameren Missouri determine how much energy is being saved as a direct result of their energy efficiency program.

E1. ***[ASK IF ONLINE=0]*** **[IF QTY=1:** Our records indicate that you purchased a [***THERMOSTAT BRAND***] "smart" thermostat, is this correct? **IF QTY > 1:** Our records indicate that you purchased **[*QTY*]** [***THERMOSTAT BRAND***] "smart" thermostats, is this correct?

1. Yes
2. No, purchased another kind or number of thermostats (please specify): [**SPECIFY:_____**]

98. Don't know
99. (Skipped)

E2. **[IF QTY=1 AND A5 ≠ 3:** Is the smart thermostat currently installed in your home? **[IF QTY>1 AND A5 ≠ 3:** Are all of the smart thermostats that you purchased currently installed in your home?

1. Yes
2. **[INCLUDE OPTION IF QTY> 1:** Only one is installed
3. **[INCLUDE OPTION IF QTY> 2:** Only two are installed
4. **[IF QTY=1:** No **[IF QTY>1:** None are installed

98. Don't know
99. (Skipped)

E3. ***[ASK IF E2 = 4 AND QTY =1***] Was the smart thermostat . . . ? [***OR ASK IF E2 = 3 AND QTY =3 OR IF E2 = 2 AND QTY =2***] Was your smart thermostat that is not currently installed . . . ? ***[ASK IF E2 = 4 AND QTY >1 OR IF E2 = 2 AND QTY =3]*** Were any of these smart thermostats installed and then removed, or have some of them not been installed yet?

1. **[IF QTY=1 OR IF E2 = 3 AND QTY =3 OR IF E2 = 2 AND QTY =2:** Installed and removed **[IF E2 = 4 AND QTY >1 OR IF E2 = 2 AND QTY =3:** Installed and then removed all (other) thermostats
2. **[INCLUDE OPTION IF E2 = 4 AND QTY> 1:** Installed and removed one thermostat
3. **[INCLUDE OPTION IF E2 = 2 OR 4 AND QTY =3:** Installed and removed two thermostats
4. **[IF QTY=1 OR IF E2 = 3 AND QTY =3 OR IF E2 = 2 AND QTY =2:** Not installed yet **[IF E2 = 4 AND QTY >1 OR IF E2 = 2 AND QTY =3:** None have been installed yet
5. Given to someone else / installed at another property

-98. Don't know
-99. (Skipped)

E4. ***[ASK IF E3= 1, 2, 3]*** Why did you install and then remove the smart thermostat(s)? [**RANDOMIZE RESPONSE ORDER, MARK ALL THAT APPLY**]

1. Too difficult to use
2. Did not adjust temperatures correctly
3. Thermostat broke
4. Did not think it was saving energy
5. I preferred my previous thermostat(s)
6. Other (please specify) [**RECORD RESPONSE _____**]

-98. Don't know
-99. (Skipped)

E5. [***ASK IF E3 = 4 AND QTY=1* OR E4= 3, AND A5 ≠ 3**] Why has the smart thermostat not been installed in your home yet? [***OR IF (E3 = 4* OR E4 = 3) *AND QTY>1, OR E3 = 2 ,3***] Why have your smart thermostats not all been installed in your home yet?

1. Haven't had time
2. Don't know how to install it
3. Installed in someone else's home / a different property
4. Other reason (please specify), [**SPECIFY: _____**]

-98. Don't know

-99. (Skipped)

E6. ***[ASK IF E2=1,2,3 OR E3 DISPLAYED AND E3≠4]*** Where were the smart thermostat(s) that you purchased installed?

1. My primary residence
2. A vacation property or part-year residence
3. Property that I own but rent to someone else
4. Someone else's residence (such as a relative)
5. Some other situation, please specify: **[SPECIFY:_____]**

98. Don't know

99. (Skipped)

E7. [***ASK IF E6 = 2,3,4,5 OR IF E5=3***] Is Ameren Missouri the electricity provider for this property?

1. Yes
2. No

98. Don't know

99. (Skipped)

[IF E2 = 4 THEN SKIP TO G1 NOW]

E8. Is the function on your smart thermostat that senses when you are home or away working? (This function is also called "geofencing" or "occupancy sensing")?

1. Yes
2. No

98. Don't know

99. (Skipped)

E9. Is your smart thermostat connected to the internet?

1. Yes
2. No

98. Don't know

99. (Skipped)

E10. [***ASK IF E2 = 1 AND QTY=1]*** What types of heating and cooling system is the smart thermostat currently connected to? [***OR IF E2 = 1, 2, 3 AND QTY>1]*** What types of heating and cooling system are your smart thermostats connected to? [**MARK ALL THAT APPLY**]

1. High-efficiency central air conditioner
2. Standard-efficiency central air conditioner
3. Air Source Heat Pump
4. Ground Source Heat Pump
5. Ductless Heat Pump
6. High-efficiency gas furnace
7. Standard-efficiency gas furnace
8. High-efficiency electric furnace
9. Standard-efficiency electric furnace
10. Some other heating or cooling system

    Please specify **[SPECIFY:_____]**

98. Don't know
99. (Skipped)

E11. ***[ASK IF E10 = 1, 2]*** About what year was your central air conditioning installed?

1. Installed at the same time as the new smart thermostat(s)
2. Installed previously, in the year: **[RECORD RESPONSE:_____]**

98. Don't know
99. (Skipped)

E12. ***[ASK IF E10 = 7, 8, 9, 10]*** About what year was your furnace installed?

1. Installed at the same time as the new smart thermostat(s)
2. Installed previously, in the year: **[RECORD RESPONSE:_____]**

98. Don't know
99. (Skipped)

E13. ***[ASK IF E10 = 4, 5, 6]*** About what year was your heat pump installed?

1. Installed at the same time as the new smart thermostat(s)
2. Installed previously, in the year: **[RECORD RESPONSE:_____]**

98. Don't know
99. (Skipped)

E14. ***[ASK IF E2 = 1 AND QTY=1]*** What type of thermostat did you replace with the smart thermostat? [**SELECT ONE**] [***OR IF E2 = 1, 2, 3 AND QTY>1]*** What type of thermostats did you replace with the smart thermostats? [**SELECT UP TO 2 IF QTY=2, SELECT UP TO 3 IF QTY=3**]

1. My new smart thermostat(s) are installed in a newly-constructed home
2. My new smart thermostat(s) replaced other smart thermostats (may also be called "learning" thermostats)
3. Replaced a programmable thermostat (a thermostat that can be programmed, but is not "smart" or connected to communication devices)

4. Replaced a traditional/manual thermostat
99. Don't know (Skipped)

F. Free Ridership for Smart Thermostats

ASK THIS SECTION OF PARTICIPANTS WHO HAVE INSTALLED SMART THERMOSTATS.

F1. Without the Ameren Missouri Efficient Products program, what is the likelihood you would have purchased a new thermostat within 12 months? Please answer using a scale from 0 to 10, with 0 being not at all likely and 10 being very likely. ***[FORCED RESPONSE – NO SKIP]***

Not at all likely . . . . . Not very likely . . . . . Somewhat Likely . . . . . Very likely

1. **0 1 2 3 4 5 6 7 8 9 10**

[RECORD 0 TO 10 RATING:___]

F2. Without the Ameren Missouri Efficient Products program, what is the likelihood you would have purchased the same exact thermostat model as the one(s) you purchased? ***[FORCED RESPONSE – NO SKIP]***

Not at all likely . . . . . Not very likely . . . . . Somewhat Likely . . . . . Very likely

1. **0 1 2 3 4 5 6 7 8 9 10**

[RECORD 0 TO 10 RATING:___]

F3. **[*IF QUANTITY > 1*]** Without the Ameren Missouri Efficient Products program what is the likelihood you would have purchased fewer thermostats? ***[FORCED RESPONSE – NO SKIP]***

Not at all likely . . . . . Not very likely . . . . . Somewhat Likely . . . . . Very likely

1. **0 1 2 3 4 5 6 7 8 9 10**

[RECORD 0 TO 10 RATING:___]

F4. Did you first learn about the Ameren Missouri Efficient Products program before or after you decided which model of thermostat you would purchase? [**FORCED RESPONSE – NO SKIP**]

1. Before
2. After

F5. On a scale from 0 to 10, with 0 being not at all important and 10 being very important, how important were each of the following factors in deciding which thermostat to purchase. If a factor is not applicable to you, please select "not applicable". ***[NOTE: RESPONDENTS CAN ALSO STATE THAT A PARTICULAR FACTOR IS NOT APPLICABLE, PLEASE CODE AS 'NA'] [FORCED RESPONSE – NO SKIP]***

1. Ameren Missouri rebate
2. Contractor recommendation
3. Information about energy efficiency provided by Ameren Missouri
4. Interaction with Ameren Missouri program staff
5. Previous participation in an Ameren Missouri rebate program

F6. In your own words, what influence did the Ameren Missouri Efficient Products program have on your decision to purchase a smart thermostat? ***[FORCED RESPONSE – NO SKIP]***

[RECORD RESPONSE:_____]

G. Satisfaction with Ameren Missouri

G1. Thinking about your overall experiences with Ameren Missouri as your utility, how satisfied would you say you are with Ameren Missouri?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not satisfied at all
98. Don't know
99. (Skipped)

G2. **[ASK IF G1 = 1, 2, 3 or 4]** Why are you "[**RATING FROM G1**]" with Ameren Missouri as your utility? Please give us further details on what you like or dislike about Ameren Missouri (check all that apply). **[ALLOW MULTIPLE RESPONSE; show all response options if G1=2 or 3, show response options 1-4 & 9, 98 if G1=1, show response options 5-9 & 98 if G1=4. RANDOMIZE ORDER EXCEPT FOR OTHER AND DON'T KNOW]**

1. Satisfied with reliable and dependable service (outages are rare/brief)
2. Satisfied with Ameren Missouri's Efficient Products rebate program
3. Satisfied with customer service / interactions with Ameren Missouri staff
4. Satisfied with utility rates
5. Dissatisfied with utility rates or rate increases
6. Dissatisfied with the reliability of service (outages)
7. Dissatisfied with lack of choice in utility providers
8. Dissatisfied with customer service / interactions with Ameren Missouri staff
9. Other reasons or comments, please specify: [**SPECIFY:** _____]

98. Don't know **[EXCLUSIVE RESPONSE]**
99. (Skipped)

G3. Based on your experience with the Efficient Products rebate program, would you say your satisfaction with Ameren Missouri has:

1. Increased
2. Stayed about the same
3. Decreased

98. Don't know

99. (Skipped)

H. Customer Demographics

We are almost finished! There are just a few final questions about your home that will help us with our analysis.

H1. Is the energy used in your home . . .

1. All electric
2. Natural gas and electric
3. Or some other combination of energy sources

98. Don't know

99. (Skipped)

H2. Which of the following best describes your home or residence? **[SELECT ONE RESPONSE]**

1. Single-family home (not a duplex, townhome, or apartment)
2. Manufactured or modular home
3. Mobile home
4. Row house or townhome
5. Two or three family attached residence
6. Apartment with four or more units
7. Condominium
8. Other
   a. Please specify: [**SPECIFY:** _____]

98. Don't know

99. (Skipped)

H3. Do you own or rent this residence?

1. Own
2. Rent

98. Don't know

99. (Skipped)

H4. Approximately how many square feet of living space does your home have? Don't include the basement unless it is a space that you consider "lived in".

1. Less than 1,000 square feet
2. 1,000 to less than 1,500 square feet
3. 1,500 to less than 2,000 square feet
4. 2,000 to less than 2,500 square feet
5. 2,500 to less than 3,000 square feet
6. 3,000 or more square feet

98. Don't know
99. (Skipped)

H5. When was your home built?
1. After 2008
2. 2005-2008
3. 2001-2004
4. 1980-2000
5. Before 1980
98. Don't know
99. (Skipped)

H6. Counting yourself, how many people normally live in your household on a full-time basis? Please include everyone who lives in your home, whether or not they are related to you, and exclude anyone just visiting or children who may be away at college or in the military.
1. Please enter a number: [**RECORD NUMERIC RESPONSE:**_____]
2. I prefer not to answer this question
99. (SKIPPED)

CLOSING

This completes the survey. We appreciate your participation and thank you for your time.

Appendix G. Follow-up Participant Survey

Ameren Missouri 2018 Efficient Products Spillover Online Survey

Researchable Questions	Survey Question Mapping
How satisfied were participants with the process, products and program?	Section B
Has the program influenced participants to install additional measures on their own? (Spillover)	Section C
What is the installation rate for each measure (six months after participation)?	Section D (all measures except thermostats), Section E(thermostats)
How are participants using their smart thermostats (six months after participation)?	Section E
How satisfied are participants with their utility?	Section F
Participant Demographics	Section G

Red text = programming instructions (not visible to respondents)

***[MEASURETYPE]* = measure to be surveyed, imported from panel data**

***[MEASURENAME]* = long name of measure, imported from panel data**

***[QTY]* = quantity installed of survey measure, imported from panel data**

[*THERMOSTAT BRAND*] = make/model of rebated thermostat, imported from panel data

***[ONLINE]* = flag for smart thermostats purchased through the Ameren Missouri online store (1=purchased at online store, 0=submitted a regular rebate application)**

(Skipped) responses are not visible (99 = code for nothing selected / skipped question)

Measure names and types to be surveyed (import data from panel file – ***[MEASURETYPE]*** will be replaced with the text in parentheses):

- Smart thermostat (smart thermostat)
- Heat pump water heater (water heater)
- ENERGY STAR room air conditioner (room air conditioner)
- ENERGY STAR room air purifier (room air purifier)
- Pool pump (pool pump) – *for both multiple speed and variable speed*

A. *Verification and Program Awareness*

A1. **[WORDING IF ONLINE=0]** Thank you for participating in Ameren Missouri's Efficient Products rebate program. We would like to know more about your experience with the program. Our records indicate that you received a rebate for purchasing ***[MEASURENAME]***(s). Is this correct? **[WORDING IF ONLINE=1]** Thank you for participating in Ameren Missouri's Efficient Products rebate program. We would like to know more about your experience with the program. Our records indicate that you received an instant rebate (discounted price) when you purchased smart thermostat(s) from the Ameren Missouri Online Store. Is this correct? **[FORCED RESPONSE (NO SKIP)]**

1. Yes
2. No
98. Don't Know **[TERMINATE]**

A2. **[ASK IF A1=2]** Why did you not receive a rebate?

1. I did not participate in the Ameren Missouri Efficient Products rebate program **[TERMINATE]**
2. I participated in the Ameren Missouri Efficient Products rebate program, but my rebate has not arrived yet **[TERMINATE]**
3. **[SHOW RESPONSE IF ONLINE=1]** I did not receive a rebate, I received a discounted price when I purchased smart thermostat(s) through the Ameren Missouri Online Store.
4. Some other reason, please specify: **[SPECIFY: _____]** **[TERMINATE]**
98. Don't Know **[TERMINATE]**
99. (Skipped) **[TERMINATE]**

A3. Are you or any members of your household employed by Ameren Missouri? **[FORCED RESPONSE (NO SKIP OR DK)]**

1. Yes, I or someone in my household works for Ameren Missouri [**TERMINATE**]
2. No one in my household works for Ameren Missouri

B. *Participant Satisfaction*

B1. How satisfied are you with the performance of your new [***MEASURETYPE***]?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not satisfied at all
98. Don't Know
99. (Skipped)

B2. **[ASK IF B1= 1, 2, 3 or 4]** Why are you "[**RATING FROM B1**]" with your new ***[*MEASURETYPE**](s)? Please give us further details on what you like or dislike about the performance of your new ***[*MEASURETYPE**](s) (check all that apply). ***[ALLOW MULTIPLE RESONSES; SHOW ALL RESPONSE OPTIONS IF B1=2 OR 3, SHOW RESPONSE OPTIONS 1-6 & 13, 98 IF B1=1, SHOW RESPONES OPTIONS 7-13 & 98 IF B1=4.*** **RANDOMIZE ORDER EXCEPT FOR OTHER AND DON'T KNOW*]***

1. Satisfied with energy/cost savings experienced after installation
2. Satisfied with overall operation and performance of the equipment
3. Satisfied with the price of the equipment including the rebate
4. Satisfied with features of the new equipment
5. Quiet operation of the equipment
6. My home is more comfortable with this equipment installed
7. Noisy operation of the equipment
8. Did not notice energy/cost savings after installation
9. Poor performance of equipment
10. Features did not perform as expected
11. Difficulty with installation
12. High cost of equipment
13. Other reasons or comments, please specify **[SPECIFY:_____]**

98. Don't Know
99. (Skipped)

B3. Thinking about your overall satisfaction with Ameren Missouri's Efficient Products rebate program, would you say you are:

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not satisfied at all

98. Don't Know
99. (Skipped)

B4. **[ASK IF B3 = 1,2,3 or 4]** Why are you "[**RATING FROM B3**]" with Ameren Missouri's Efficient Products rebate program? Please give us further details on what you like or dislike about this rebate program (check all that apply). ***[ALLOW MULTIPLE RESONSES; SHOW ALL RESPONSE OPTIONS IF B3= 2 OR 3, SHOW RESPONSE OPTIONS 1-5 & 12, 98 IF B3= 2, SHOW RESPONSE OPTIONS 6-11 & 98 IF B3= 4.*** **RANDOMIZE ORDER EXCEPT FOR OTHER AND DON'T KNOW*]***

1. **[WORDING FOR ONLINE=0]** Satisfied with the amount of the rebate **[WORDING FOR ONLINE=1]** Satisfied with the amount of the instant rebate (discounted price)
2. Participating in this rebate program was convenient/easy
3. Satisfied with energy/cost savings experienced after installation
4. Satisfied with the performance and operation of the equipment
5. Satisfied with the contractor who did the installation
6. **[WORDING FOR ONLINE=0]** Dissatisfied with the amount of the rebate **[WORDING FOR ONLINE=1]** Dissatisfied with the amount of the instant rebate (discounted price)
7. Dissatisfied with communications about the rebate program

8. Dissatisfied by the limits on equipment covered by the rebate program
9. **[APPEARS IF ONLINE=0]** Dissatisfied with the rebate application process
10. **[APPEARS IF ONLINE=0]** Dissatisfied with delays in rebate processing
11. Dissatisfied with the contractor who did the installation
12. Other reasons or comments, please specify **[SPECIFY:_____]**

98. Don't Know
99. (Skipped)

C. Spillover Questions

C1. Since participating in the Efficient Products rebate program, have you added any other energy-efficient products in your home or had any other energy-related services performed that were not discounted through Ameren Missouri? ***[FORCED RESPONSE]***

14. Yes
15. No [***SKIP TO NEXT SECTION***]
98. Don't Know [***SKIP TO NEXT SECTION***]

C2. **[IF C1=1]** Please select the energy-efficient products or services that you purchased (and installed, if applicable) since your experience with Ameren Missouri's Efficient Products rebate program. [**CHECK ALL THAT APPLY**]

1. Home/building audit
2. Recycled a refrigerator
3. Recycled a freezer
4. Constructed an ENERGY STAR New Home
5. ENERGY STAR refrigerator
6. ENERGY STAR freezer
7. ENERGY STAR clothes washer
8. ENERGY STAR dishwasher
9. ENERGY STAR room air conditioner
   a. How many ENERGY STAR room air conditioners are currently installed in your home? [**SPECIFY:** _____]
10. ENERGY STAR room air purifier
    A1a. How many ENERGY STAR room air purifiers are currently installed in your home? [**SPECIFY:** _____]
11. Variable speed pool pump
12. ENERGY STAR dehumidifier
13. Efficient water heater (other than heat pump water heater)
14. Efficient showerheads
    b. How many of these efficient showerheads are currently installed in your home? [**SPECIFY:** _____]
15. Efficient faucet aerators

c. How many of these efficient faucet aerators are currently installed in your home? [**SPECIFY:** _____]

16. Efficient central air conditioner
17. Air source heat pump
18. Geothermal heat pump
19. Ductless heat pump
20. Dual-fuel heat pump
21. Efficient furnace fan
22. Heat pump water heater
23. Programmable (but not "smart") thermostat
24. Learning or "smart" thermostat
25. Insulation
26. Windows
27. Solar panels
28. Other items

d. Please specify: [**SPECIFY:** _____]

98. Don't Know [***SKIP TO NEXT SECTION***]
99. (Skipped)

[PRESENT THIS MESSAGE IF C1=1 AND NOTHING SELECTED IN C2]

You did not check any products or services for the last question.

If you did purchase and install any energy-efficient products or services, please use the back arrow below to return to that question and select one or more answers (select "other items" if you do not see your products or services on the list).

If you did NOT purchase and install any energy-efficient products or services, please use the forward arrow below to continue the survey.

C3. **[Ask if C2=1]** What kind of changes did you make to your home as a result of the audit?

1. [**RECORD RESPONSE:**_____]
99. (Skipped)

C4. **[Ask if C2=23 or 24]** Did you install your new **[INSERT RESPONSE from C2]**when you installed your **[MeasureType]**?

1. Yes
2. No
98. Don't Know
99. (Skipped)

C5. **[Ask if C2=23 or 24]** What kind of thermostat did you replace with the **["programmable thermostat" or "smart thermostat" from C2]**?

1. ***[IF C2=24 "ANOTHER"]*** Smart thermostat
2. ***[IF C2=23 "ANOTHER"]*** Programmable (but not "smart") thermostat
3. Manual thermostat

98. Don't Know

99. (Skipped)

C6. **[Ask if C2=13, 14, 15, 16, 17, 18, 19, 20, 22, 25, 26 – ask for each]** How do you know that the **[C2 RESPONSE]** is energy efficient? Please enter the efficiency rating if you know it. **[ALLOW MULTIPLE RESPONSE]**

1. Efficiency rating [**RECORD NUMERIC RESPONSE:**_____]

If C2=13 then display 'Energy Factor (EF) rating'
If C2=14 or 15 then display 'Gallons per minute (GPM)'
If C2=16 or 19 then display 'Seasonal Energy Efficiency Ratio (SEER)'
If C2=17 then display 'Heat Season Performance Factor (HSPF)'
If C2=18 then display 'Energy Efficiency Ratio (EER)'
If C2=19 then display 'Heat Season Performance Factor (HSPF)'
If C2=20 then display 'Energy Efficiency Ratio (EER)' and 'Coefficient of Performance (COP)'
If C2=22 then display 'Energy Factor (EF) rating'
If C2=25 then display 'R-Value (thermal resistance)'
If C2=26 then display 'U-Factor'

2. Other [**RECORD RESPONSE:**_____]

98. Don't Know

99. (Skipped)

C7. **[ASK if C2 = 25]** How many square feet of insulation did you have installed?

1. [**RECORD NUMERIC RESPONSE:**_____]

99. (Skipped)

C8. **[ASK if C2 = 26]** How many square feet of windows did you have installed?

1. [**RECORD NUMERIC RESPONSE:**_____]

99. (Skipped)

C9. **[ASK if C2 = 25]** In what location in your home was the insulation installed?

1. [**RECORD RESPONSE:**_____]

99. (Skipped)

C10. **[ASK if C2 = 26]** In what location in your home were the windows installed?

1. [**RECORD RESPONSE:**_____]

99. (Skipped)

C11. **[ASK ONCE FOR EACH ITEM CHECKED IN C2]** Why did you choose to purchase or install the items listed below? **[INSERT TABLE OF CHECKED RESPONSES FROM C2]**

1. **[RECORD RESPONSE]**:_____
99. (Skipped)

C12. Did you receive a rebate, discount, or tax credit for any of the items listed below? **(If yes, check all that apply.) [INSERT TABLE OF CHECKED RESPONSES FROM C2 – ALLOW MULTIPLE RESPONSE]**

1. Yes, from Ameren Missouri
2. Yes, from another organization
3. No
98. Don't Know
99. (Skipped)

C13. **[ASK FOR EACH ITEM WHERE C12 = 2]** What organizations besides Ameren Missouri paid the rebates, or provided discounts or tax credits for the items listed below? **[INSERT TABLE OF CHECKED RESPONSES FROM C2]**

1. [**RECORD RESPONSE:**_____]
99. (Skipped)

C14. **[FOR MEASURES for which Ameren provides incentives (9, 10, 11, 16, 17, 18, 19, 20, 21, 22, 24), ASK FOR EACH ITEM WHERE C12= 2 or 3]** Why didn't you apply for a rebate from Ameren Missouri for the purchase of your **[C2 RESPONSE]**?

1. **[RECORD RESPONSE]**:_____
99. (Skipped)

C15. How important was your rebate in the Ameren Missouri program on your decision to purchase or install the **[C2 RESPONSE]**? **[INSERT TABLE OF CHECKED RESPONSES FROM C2]**

1. Not at all important
2. Not too important
3. Somewhat important
4. Very important
98. Don't Know
99. (Skipped)

C16. **[ASK FOR EACH CHECKED ITEM FROM C2]** Prior to purchasing or installing the items listed below, had you heard or read about the benefits of installing this equipment from your contractor, Ameren Missouri, or Ameren Missouri's Act on Energy campaign?

	Yes (1)	No (2)	Don't know (98)
[INSERT 1st CHECKED RESPONSE FROM *C2*]			
[INSERT 2nd CHECKED RESPONSE FROM *C2*]			
[INSERT 3rd CHECKED RESPONSE FROM *C2*]			
[INSERT 4th CHECKED RESPONSE FROM *C2*]			

C17. **[ASK FOR EACH YES RESPONSE IN C16]** How important was the information the contractor or Ameren Missouri provided about the energy efficiency or money saving benefits of your decision to purchase or install the items listed below? **[INSERT TABLE OF ALL "YES" RESPONSES FROM C16]**

1. Not at all important
2. Not too important
3. Somewhat important
4. Very important

98. Don't know
99. (Skipped)

Measure Installation (Except for Thermostats)

ASK THIS SECTION OF PARTICIPANTS WHO HAVE INSTALLED MEASURES OTHER THAN SMART THERMOSTATS

Next, we have a few questions about the **[MEASURETYPE]**(s) that you purchased. The answers to these questions are important because they will help Ameren Missouri determine how much energy is being saved as a direct result of their energy efficiency program.

D1. **[IF QTY=1]** Is the **[MEASURETYPE]** currently installed? **[IF QTY =2]** Are both of the **[MEASURETYPE]**s currently installed? **[IF QTY >=3]** Are all of the **[MEASURETYPE]**s currently installed? **[FORCED RESPONSE – NO SKIPPING]**

1. Yes **[SKIP TO *D6*]**
2. No

98. Don't Know **[SKIP TO F1]**

D2. **[ASK IF QTY >1 AND D1 =2]** How many of your new **[MEASURETYPE]**s are currently installed?

1. None
2. One
3. **[IF QTY=3]:** Two

98. Don't Know
99. (Skipped)

D3. **[ASK IF QTY =1 AND D1 =2]** Why isn't the **[MEASURETYPE]** currently installed? **[ASK IF QTY =2 AND D1 =2]** Why aren't both of the **[MEASURETYPE]**s currently installed? **[ASK IF QTY >=3 AND D1 =2]** Why aren't all of the **[MEASURETYPE]**s currently installed? **[RANDOMIZE ORDER, ALLOW UP TO 3 RESPONSES]**

1. **[MEASURETYPE]** failed or is broken
2. **[IF MEASURETYPE IS NOT "WATER HEATER"]:** I plan to install the **[MEASURETYPE]** during the appropriate season
3. We installed the **[MEASURETYPE]** at one time, but then removed it
4. Have not had time to install **[MEASURETYPE]** yet
5. **[MEASURETYPE]** is in storage
6. **[MEASURETYPE]** is back up equipment to install when other equipment fails
7. Some other reason

   Please specify **[SPECIFY:_____]**

98. Don't Know
99. (Skipped)

D4. **[ASK IF D3 =3]** Why did you remove the **[MEASURETYPE]**?

1. **[RECORD RESPONSE:_____]**

99. (Skipped)

D5. **[ASK IF MEASURETYPE ="ROOM AC" AND D1 =2 AND (D3<> 4 OR D3=99)]** Was the room air conditioner you purchased installed at any point this summer?

1. Yes
2. No

98. Don't Know
99. (Skipped)

D6. [***ASK IF MEASURETYPE ="ROOM AC" AND (D1 =1 OR D2=2, 3) OR D5=1***] Where were the air conditoners that you purchased installed? [***CHECK UP TO QTY OF RESPONSES***]

1. My primary residence
2. A vacation property or part-year residence
3. Property that I own but rent to someone else
4. Someone else's residence (such as a relative)
5. Some other situation, please specify: **[SPECIFY:_____]**

98. Don't Know
99. (Skipped)

D7. [***ASK IF MEASURETYPE =”ROOM AC” AND D6 = 2, 3, 4 OR 5***] Is Ameren Missouri the electricity provider for the property where your room air conditioner(s) were installed?

1. Yes
2. No

98. Don’t Know
99. (Skipped)

D8. ***[ASK IF MEASURETYPE ≠”ROOM AC” AND (D1 =1 OR D2=2,3)]*** Where were the [***MEASURETYPE***](s) that you purchased installed?

1. My primary residence
2. A vacation property or part-year residence
3. Property that I own but rent to someone else
4. Someone else’s residence (such as a relative)
5. Some other situation, please specify: **[SPECIFY:_____]**

98. Don’t Know
99. (Skipped)

D9. ***ASK IF MEASURETYPE ≠”ROOM AC” AND D8 DISPLAYED AND D8≠1***] Is Ameren Missouri the electricity provider for the property where your [***MEASURETYPE***](s) were installed?

1. Yes
2. No

98. Don’t Know
99. (Skipped)

E. Smart Thermostat Installation

ASK THIS SECTION IF MEASURETYPE = “SMART THERMOSTAT”.

Next, we have a few questions about the Smart Thermostat(s) that you purchased and installed. The answers to these questions are important because they will help Ameren Missouri determine how much energy is being saved as a direct result of their energy efficiency program.

E1. ***[ASK IF ONLINE=0]*** **[IF QTY=1]** Our records indicate that you purchased a **[THERMOSTAT BRAND]** “smart” thermostat, is this correct? **[IF QTY > 1]** Our records indicate that you purchased **[QTY] [THERMOSTAT BRAND]** “smart” thermostats, is this correct?

1. Yes
2. No, purchased another kind or number of thermostats (please specify):
   [SPECIFY:_____]

98. Don’t Know
99. (Skipped)

E2. **[IF QTY=1]** Is the smart thermostat currently installed in your home? **[IF QTY>1]** Are all of the smart thermostats that you purchased currently installed in your home? **[FORCED RESPONSE – NO SKIPPING]**

1. Yes **[SKIP to E6]**
2. **[INCLUDE OPTION IF QTY> 1]** Only one is installed
3. **[INCLUDE OPTION IF QTY> 2]** Only two are installed
4. **[IF QTY=1]** No **[IF QTY>1]** None are installed

98. Don't Know

E3. **[ASK IF E2 = 4 AND QTY =1]** Was the smart thermostat . . . ? **[OR ASK IF E2 = 3 AND QTY =3 OR IF E2 = 2 AND QTY =2]** Was your smart thermostat that is not currently installed . . . ? **[ASK IF E2 = 4 AND QTY >1 OR IF E2 = 2 AND QTY =3]** Were any of these smart thermostats installed and then removed, or have some of them not been installed yet?

1. **[IF QTY=1 OR IF E2 = 3 AND QTY =3 OR IF E2 = 2 AND QTY =2:** Installed and removed **[IF E2 = 4 AND QTY >1 OR IF E2 = 2 AND QTY =3:** Installed and then removed all (other) thermostats
2. **[INCLUDE OPTION IF E2 = 4 AND QTY=2:** Installed and removed one thermostat
3. **[INCLUDE OPTION IF E2 = 4 AND QTY=3:** Installed and removed one or two thermostats, the rest have not been installed yet
4. **[INCLUDE OPTION IF E2 = 2 AND QTY =3:** Installed and removed two thermostats
5. **[IF QTY=1 OR IF E2 = 3 AND QTY =3 OR IF E2 = 2 AND QTY =2:** Not installed yet **[IF E2 = 4 AND QTY >1 OR IF E2 = 2 AND QTY =3:** None have been installed yet
6. Given to someone else / installed at another property

98. Don't Know
99. (Skipped)

E4. **[ASK IF E3= 1, 2, 3, 4]** Why did you install and then remove the smart thermostat(s)? **[RANDOMIZE RESPONSE ORDER, MARK ALL THAT APPLY]**

1. Too difficult to use
2. Did not adjust temperatures correctly
3. Thermostat broke
4. Did not think it was saving energy
5. I preferred my previous thermostat(s)
6. Other (please specify) [**RECORD RESPONSE _____**]

98. Don't Know
99. (Skipped)

E5. **[ASK IF E3 = 5 AND QTY=1]** Why has the smart thermostat not been installed in your home yet? **[OR IF E3 = 5 AND QTY>1, OR E3 = 2 ,3, 4]** Why have your smart thermostats not all been installed in your home yet?

1. Haven't had time
2. Don't know how to install it
3. Installed in someone else's home / a different property
4. Other reason (please specify), [**SPECIFY: _____**]

98. Don't Know
99. (Skipped)

E6. *[ASK IF E2=1,2,3 OR E3 DISPLAYED AND E3≠5]* Where did you install the smart thermostat(s) that you purchased?

1. My primary residence
2. A vacation property or part-year residence
3. Property that I own but rent to someone else
4. Someone else's residence (such as a relative)
5. Some other situation, please specify: **[SPECIFY:_____]**

98. Don't Know
99. (Skipped)

E7. [***ASK IF E6 = 2, 3, 4 OR 5 / OR IF E5=3***] Is Ameren Missouri the electricity provider for this property?

1. Yes
2. No

98. Don't Know
99. (Skipped)

E8. *[ASK IF AT LEAST ONE THERMOSTAT INSTALLED IN HOME OR AMEREN MISSOURI TERRITORY: E2= 1, 2, 3 OR E6 = 1 OR E7 = 1]* Is the function on your smart thermostat that senses when you are home or away working? (This function is also called "geofencing" or "occupancy sensing")?

1. Yes
2. No
98. Don't Know
99. (Skipped)

E9. *[ASK IF AT LEAST ONE THERMOSTAT INSTALLED IN HOME OR AMEREN MISSOURI TERRITORY: E2= 1, 2, 3 OR E6 = 1 OR E7 = 1]* Is your smart thermostat connected to the internet?

1. Yes
2. No
98. Don't Know
99. (Skipped)

F. Satisfaction with Ameren Missouri

F1. Thinking about your overall experiences with Ameren Missouri as your utility, how satisfied would you say you are with Ameren Missouri?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not satisfied at all
98. Don't Know
99. (Skipped)

F2. **[ASK IF F1= 1, 2, 3 OR 4]** Why are you **[RATING FROMF1]** with Ameren Missouri as your utility? Please give us further details on what you like or dislike about Ameren Missouri (check all that apply). **[ALLOW MULTIPLE RESPONSE; show all response options if D=2 or 3, show response options 1-4 & 9, 98 if F1=1, show response options 5-9 & 98 if F1=4. RANDOMIZE ORDER EXCEPT FOR OTHER AND DON'T KNOW]**

1. Satisfied with reliable and dependable service (outages are rare/brief)
2. Satisfied with Ameren Missouri's Efficient Products rebate program
3. Satisfied with customer service / interactions with Ameren Missouri staff
4. Satisfied with utility rates
5. Dissatisfied with utility rates or rate increases
6. Dissatisfied with the reliability of service (outages)
7. Dissatisfied with lack of choice in utility providers
8. Dissatisfied with customer service / interactions with Ameren Missouri staff
9. Other reasons or comments, please specify: [**SPECIFY:** _____]

98. Don't know **[EXCLUSIVE RESPONSE]**
99. (Skipped)

F3. Based on your experience with the Efficient Products rebate program, would you say your satisfaction with Ameren Missouri has:

1. Increased
2. Stayed about the same
3. Decreased
98. Don't know
99. (Skipped)

G. Customer Demographics

G1. Is the energy used to heat your home . . .

1. All electric
2. All natural gas
3. Natural gas and electric
4. Some other combination of energy sources

98. Don't Know
99. (Skipped)

G2. Is your hot water heater electric or gas?

1. Electric
2. Gas

98. Don't Know
99. (Skipped)

CLOSING

This completes the survey. We appreciate your participation and thank you for your time.

Appendix H. General Population Survey

General Population Survey

January 2019

A. Introduction

[DISPLAY AMEREN MISSOURI STYLE]

Please enter the 5-digit code from the postcard invitation: ☐

[IF CODE IS INVALID, DISPLAY THE FOLLOWING MESSAGE AND DISPAY THE FIVE-DIGIT CODE BOX AGAIN; CLOSE SURVEY AFTER FIVE FAILED ATTEMPTS.]

Sorry, the code you have entered is invalid. Please try again or contact Romi Jones at romi.jones@cadmusgroup.com or (971) 712-7431.

[IF CODE IS VALID, DISPLAY THE FOLLOWING MESSAGE AND CONTINUE SURVEY]

Welcome! Ameren Missouri is conducting its annual study to learn more about how households throughout Missouri use energy. Your responses are very important to us and we will keep them confidential. Complete the survey by **February 22, 2019**, and we will enter you into a drawing for one of five **$100 VISA gift cards**.

The survey will take you about 15 minutes and is intended for the person primarily responsible for your household's energy-related decisions (i.e., the person who is responsible for paying the utility bills or selecting new lighting and appliances).

This survey saves your responses automatically and responses will be submitted when you complete the survey. You can stop and then return to the survey at any time by accessing the survey link provided to you on the postcard. Please access the survey from the same device.

B. Energy Efficiency Attitudes and Barriers

B1. How much energy do you use in your home now compared to five years ago? Would you say…

1. More
2. About the same
3. Less

-98. Don't know

B2. How important is energy efficiency in your daily activities and when making purchasing decisions? Would you say…

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
-98. DON'T KNOW

B3. Please rate your home's energy efficiency. Would you say it is…

1. Very efficient
2. Somewhat efficient
3. Not too efficient
4. Not at all efficient
-98. DON'T KNOW

B4. Please rate whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with each of the following statements: **[RANDOMIZE ORDER] [DROP DOWN SELECTION MENU WITH RESPONSE CHOICES: 1= STRONGLY AGREE; 2=SOMEWHAT AGREE; 3=SOMEWHAT DISAGREE; 4=STRONGLY DISAGREE; -98= DON'T KNOW]**

a) It is important to conserve energy as much as possible
b) Using energy to keep the home comfortable is my top priority
c) I would like to save more energy but do not know where to start
d) I always shop for the lowest prices, even if it takes more time
e) I have already done as much as possible to save energy in my home
f) I have tried a few things to save energy, but have not seen any real savings on my utility bills

B5. What are the main reasons you might decide to conserve energy? Selection up to three options. **[RANDOMIZE ORDER; ACCEPT UP TO THREE RESPONSES]**

1. Reduce energy costs
2. Increase home comfort
3. Protect the environment
4. Increase value of home
5. Other (please specify): _____
-98. Don't know

B6. What are the main reasons you might decide NOT to conserve energy? Selection up to three options. **[RANDOMIZE ORDER; ACCEPT UP TO THREE RESPONSES]**

1. Already saving as much as possible
2. No need to save on energy cost
3. Equipment is too expensive
4. Equipment is hard to find
5. Equipment doesn't work as well
6. Don't think about it much
7. Don't have time
8. Other family members don't turn off lights/equipment
9. Other (please specify):_____
-98. Don't know

B7. What challenges, if any, do you face in saving energy in your home? Selection up to three options. **[RANDOMIZE ORDER; ACCEPT UP TO THREE RESPONSES]**

1. Can't afford it/too expensive
2. Too hard to install/implement
3. Inconvenient/don't have time/too busy
4. Not confident it will save energy/be worth it
5. Afraid it will make home uncomfortable
6. Disruption to home/mess involved with installing improvements
7. Challenges with contractors
8. Don't know where to start
9. No challenges/None
10. Challenges with home construction or age
11. Home is already pretty efficient
12. Other family members are not trying to conserve
13. Other [**SPECIFY:** _____]
-98. DON'T KNOW

C. Energy Efficiency and Program Awareness

C1. If you wanted to know more about energy saving opportunities, where would you look for information? Selection up to three options. **[RANDOMIZE ORDER; ACCEPT UP TO THREE RESPONSES]**

1. TV or radio programs or ads
2. Online articles or ads

3. Print articles or ads (e.g., newspapers or magazines)
4. At a retail location
5. Utility bill or other utility direct mail
6. Email from the utility
7. Discussion with a contractor
8. Word of mouth (family, friends, colleagues)
9. Social media
10. Internet searches by you
11. Utility website
12. Other (please specify):_____
13. I don't want information about ways to save energy

-98. Don't know

C2. Have you ever seen or heard of Ameren Missouri's energy efficiency programs? **[RESPONSE REQUIRED]**

1. Yes
2. No

-98. DON'T KNOW

C3. **[IF C2 = 1]** How familiar are you with Ameren Missouri's energy efficiency programs?

1. Very familiar
2. Somewhat familiar
3. Not too familiar
4. Not at all familiar

-98. DON'T KNOW

C4. **[IF C3 = 1, 2, or 3]** Where do you recall having seen or heard about the Ameren Missouri energy efficiency programs? Select up to three options. **[RANDOMIZE ORDER; ACCEPT UP TO THREE RESPONSES]**

1. TV or radio programs or ads
2. Online articles or ads
3. Print articles or ads (e.g., newspapers or magazines)
4. At a retail location
5. Utility bill or other utility direct mail
6. Email from the utility
7. Discussion with a contractor
8. Word of mouth (family, friends, colleagues)
9. Social media
10. Internet searches by you
11. Utility website
12. Other (please specify):_____

-98. Don't know

C5. **[IF C2 = 1]** Are you familiar with the following programs? **[RANDOMIZE ORDER] [DROP DOWN SELECTION MENU WITH RESPONSE CHOICES: 1= YES; 2=NO; -98= DON'T KNOW]**

1. CommunitySavers Program
2. Efficient Products Program
3. Multifamily Efficient Kits Program
4. School Kits Program
5. Heating and Cooling Program
6. Home Energy Report Program
7. Lighting Program

C6. **[IF YES TO ANY OF C5]** Did you participate in any of these programs in the past year? **[RESPONSE REQUIRED]**

1. Yes
2. No

-98. Don't know

C7. Have you visited any of the Ameren Missouri energy efficiency program websites within the past year, such as the Efficient Products or Heating and Cooling websites?

1. Yes
2. No

-98. Don't know

C8. **[IF C7 = 1]** What information were you looking for on the website? Selection up to three options. **[RANDOMIZE ORDER; ACCEPT UP TO THREE RESPONSES]**

1. Energy saving tips
2. Rebates or incentives
3. Participating contractor or builder
4. Participating retailers
5. Where to recycle my CFLs or non-working LEDs
6. Other (please specify):_____

-98. Don't know

C9. **[IF C7 = 1]** Was the information on the website useful to you?

1. Yes
2. No (please elaborate why):_____

-98. DON'T KNOW

C10. Are you aware that Ameren Missouri offers rebates and discounts for energy-saving equipment in your home? **[RESPONSE REQUIRED]**

1. Yes
2. No **[SKIP TO D1]**

-98. Don't know **[SKIP TO D1]**

C11. From what sources did you hear or read about the Ameren Missouri energy-efficiency rebate opportunities? Selection up to three options. **[RANDOMIZE ORDER; ACCEPT UP TO THREE RESPONSES]**

1. TV or radio programs or ads
2. Online articles or ads
3. Print articles or ads (e.g., newspapers or magazines)
4. At a retail location
5. Utility bill or other utility direct mail
6. Email from the utility
7. Discussion with a contractor
8. Word of mouth (family, friends, colleagues)
9. Social media
10. Internet searches by you
11. Utility website
12. Other (please specify):_____

-98. Don't know

D. Lighting

D1. Have you purchased any CFLs in the last year?

1. Yes
2. No

-98. Don't know

a. **[ASK IF D1 = 1]** How many CFLs did you purchase?

D2. **[ASK IF D1 = 1]** What store or stores did you make your purchase from?

D3. Have you purchased any LEDs in the last year? The kind of LED that can replace a traditional screw-in bulb, not LED nightlights, holiday lights, or flashlights.

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

a. **[ASK IF D4 = 1]** How many LEDs did you purchase?

☐

D4. **[ASK IF D4 = 1]** What store or stores did you make your purchase from?

☐

E. Cooling

E1. What type of cooling equipment do you have in your home? **[ACCEPT MULTIPLE RESPONSES; RESPONSE REQUIRED]**

1. Central air conditioner
2. Ductless or mini-split heat pump
3. Air-source heat pump
4. Ground-source or geothermal heat pump
5. Portable air conditioner
6. Window or wall air conditioner
7. Evaporative (swamp) cooler
8. Other (please specify): _____
9. None **[SKIP TO SECTION F]**
-98. DON'T KNOW **[SKIP TO SECTION F]**

E2. **[IF E1 ≠ 9 or -98]** How old is the cooling equipment you previously selected? Please indicate the number of years**.**

[Carry forward selected choices] Years ☐

F. Heating

F1. What type of heating equipment do you have in your home? **[ACCEPT MULTIPLE RESPONSES; RESPONSE REQUIRED]**

1. Ductless or mini-split heat pump
2. Air-source heat pump
3. Ground-source or geothermal heat pump
4. Gas furnace/boiler
5. Electric baseboard heating system
6. Electric furnace
7. Other (please specify):_____
8. None **[SKIP TO SECTION G]**

-98. Don't know **[SKIP TO F3]**

F2. How old is the heating equipment you previously selected? Please indicate in number of years.

[Carry forward selected choices] Years ☐

F4. **[If F1 = 7 OR -98]** Is your home heating electric or gas? **[RESPONSE REQUIRED]**

1. Electric
2. Gas

-98. DON'T KNOW

G. Potential Spillover

[IF C6 = 1, SKIP TO SECTION H]

G1. Is your hot water heater electric or gas? **[RESPONSE REQUIRED]**

1. Electric
2. Gas

-98. Don't know

G2. Have you or anyone in your household purchased and installed any energy efficient equipment **in the past year**?

1. Yes
2. No **[SKIP TO G13]**

-98. Don't know

G3. Have you or anyone in your household purchased and installed **energy efficient** versions of the following equipment **in the past year**? **[RANDOMIZE ORDER; ACCEPT MULTIPLE RESPONSES; RESPONSE REQUIRED]**

1. Room air conditioner
2. Room air purifier
3. Pool pump

4. Showerhead
5. Kitchen faucet aerator
6. Bathroom faucet aerator
7. Hot water pipe insulation for your hot water heater
8. Furnace fan with ECM (Electronically Commutated Motor)
9. Filter whistle
10. Heat pump water heater
11. Learning or "smart" thermostat
12. Air-source heat pump
13. Ductless or mini-split heat pump
14. Duel-fuel heat pump
15. Ground-source or geothermal heat pump
16. Central air conditioner
17. Other (please specify): _____
18. None

-98. Don't know

G4. How many pieces of each equipment did you install? If you selected *hot water pipe insulation*, please indicate the length in feet. **[RESPONSE REQUIRED]**

[Carry down selected responses] Amount ☐

[IF G3 = 12 OR -98 SKIP TO G15]

[RESPONSES TO G3 COMBINED MAKE UP THE 'CONSIDERATION SET' FOR THE "SPILLOVER QUESTIONS" (G7–G13). IF RESPONSES ARE MORE THAN THREE, THEN THE CONSIDERATION SET BECOMES A SET OF THREE RANDOMLY SELECTED RESPONSES]

G7. **[FOR EACH PRODUCT IN "CONSIDERATION SET"]** How do you know the **[INSERT PRODUCT FROM 'CONSIDERATION SET']** is energy efficient? **[RANDOMIZE ORDER; CHOOSE ONLY ONE RESPONSE; RESPONSE REQUIRED]**

1. It's ENERGY STAR-certified
2. The retailer/dealer/contractor told me it was
3. Information about the product from packaging, websites, etc.
4. Other (please specify):_____

-98. Don't know **[NOTE: FAIL]**

G8. **[FOR EACH PRODUCT IN "CONSIDERATION SET"]** Which of the following reasons best describe why you decided to install a **[INSERT PRODUCT FROM 'CONSIDERATION SET']**? **[RANDOMIZE ORDER; CHOOSE ONLY ONE RESPONSE; RESPONSE REQUIRED]**

1. To save energy **[NOTE: PASS]** **[SKIP TO G8]**
2. To save money **[NOTE: PASS]** **[SKIP TO G8]**
3. To replace failing equipment
4. Needed to replace anyway
5. Liked the style
6. Was ready to update
7. To improve comfort
8. Other (please specify): _____

-98. Don't know

G9. **[If G6 ≠ 1 OR 2]** Which of the following reasons best describe why you chose an energy efficient version of a **[INSERT PRODUCT FROM 'CONSIDERATION SET']** **[RANDOMIZE ORDER; CHOOSE ONLY ONE RESPONSE; RESPONSE REQUIRED]**

1. To save energy **[NOTE: PASS]**
2. To save money **[NOTE: PASS]**
3. Liked the style **[NOTE: FAIL]**
4. It had other features that I liked **[NOTE: FAIL]**
5. It was the cheapest product available **[NOTE: FAIL]**
6. It was the only option available **[NOTE: FAIL]**
7. Other (please specify):_____

-98. Don't know **[NOTE: FAIL]**

G10. **[FOR EACH PRODUCT IN THE "CONSIDERATION SET"]** Did you receive a rebate, discount, or tax credit for installing the **[INSERT PRODUCT IN "CONSIDERATION SET"]**? **[RESPONSE REQUIRED]**

1. Yes
2. No **[NOTE: PASS]** **[SKIP TO G10]**

-98. Don't know **[NOTE: FAIL]** **[SKIP TO G12]**

G11. **[ASK FOR EACH PRODUCT IN "CONSIDERATION SET" IF G8 = 1]** Did you get a rebate from Ameren Missouri? **[RESPONSE REQUIRED]**

1. Yes **[NOTE: FAIL]** **[SKIP TO G12]**
2. No **[NOTE: PASS]**

-98. Don't know **[NOTE: FAIL]** **[SKIP TO G12]**

G12. **[ASK FOR EACH PRODUCT IN "CONSIDERATION SET" IF C2 = 1 OR C10 = 1]** Why didn't you or your contractor apply for a rebate through Ameren Missouri for the **[INSERT PRODUCT IN "CONSIDERATION SET"]**? **[RANDOMIZE ORDER; CHOOSE ONLY ONE RESPONSE; RESPONSE REQUIRED]**

1. I am still planning to apply **[NOTE: FAIL]**
2. It was confusing **[NOTE: PASS]**
3. Just forgot about it **[NOTE: PASS]**
4. I wasn't sure my equipment qualified **[NOTE: PASS]**
5. I wanted a different model that did not qualify **[NOTE: FAIL]**
6. I applied, but I did not receive a rebate **[NOTE: FAIL]**
7. Other (please specify):_____

-98. Don't know **[NOTE: FAIL]**

G13. **[ASK FOR EACH PRODUCT IN "CONSIDERATION SET" IF G8 = 1 AND G9 = 2]** Which organization did you get a rebate, discount or tax credit from?

[Text response]

[ASK FOR EACH PRODUCT AND ACTION IN "CONSIDERATION SET"] On a 1 to 4 scale, with 1 meaning "very important", and 4 meaning "not at all important", how important was each of the following elements in your decision to purchase and install a **[INSERT PRODUCT IN "CONSIDERATION SET"]**? **[ADD "Don't know" AND "Not applicable" AS RESPONSE OPTIONS; RANDOMIZE ORDER; RESPONSE REQUIRED]**

a) Information about energy savings from Ameren Missouri's marking or bill insert
b) Ameren Missouri's marketing information from a contractor or retailer
c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri
d) Past participation in an Ameren Missouri energy efficiency program
e) Information from the energy assessment conducted at your home through Ameren Missouri

G15. Have you or anyone in your household had a tune-up of your heating or cooling equipment **in the past year**? **[RESPONSE REQUIRED]**

1. Yes
2. No **[SKIP TO H1]**
-98. DON'T KNOW **[SKIP TO H1]**

G16. What equipment was tuned up? **[CHOOSE ONLY ONE RESPONSE; RESPONSE REQUIRED]**

1. My heat pump (which provides both central heating and cooling)
2. My central air conditioner
3. Other (please specify): _____

-98. Don't know **[SKIP TO H1]**

G17. Which of the following reasons best describe why you decided to have the tune-up? **[CHOOSE ONLY ONE RESPONSE; RESPONSE REQUIRED; RANDOMIZE ORDER]**

1. To save energy **[NOTE: PASS]**
2. To save money **[NOTE: PASS]**
3. To improve home comfort **[NOTE: FAIL]**
4. It was part of routine maintenance **[NOTE: FAIL]**
5. To make repairs or replacements **[NOTE: FAIL]**
6. Other (please specify): _____

-98. DON'T KNOW **[NOTE: FAIL]**

G18. Did you receive a rebate, discount, or tax credit for the tune-up? **[RESPONSE REQUIRED]**

1. Yes
2. No **[NOTE: PASS]** **[SKIP TO G18]**

-98. DON'T KNOW **[NOTE: FAIL]** **[SKIP TO G19]**

G19. **[IF G16=1]** Did you get a rebate from Ameren Missouri? **[RESPONSE REQUIRED]**

1. Yes **[NOTE: FAIL]** **[SKIP TO G19]**
2. No **[NOTE: PASS]**

-98. Don't know **[NOTE: FAIL]** **[SKIP TO G19]**

G20. **[ASK IF C2 = 1 OR C10 = 1]** Why didn't you or your contractor apply for a rebate through Ameren Missouri for the tune-up? **[RANDOMIZE ORDER; CHOOSE ONLY ONE RESPONSE; RESPONSE REQUIRED]**

1. I am still planning to apply **[NOTE: FAIL]**
2. It was confusing **[NOTE: PASS]**
3. Just forgot about it **[NOTE: PASS]**
4. I wasn't sure the tune-up qualified **[NOTE: PASS]**
5. I applied, but I did not receive a rebate **[NOTE: FAIL]**
6. Other (please specify): _____

-98. Don't know **[NOTE: FAIL]**

G19. a)–e). On a 1 to 4 scale, with 1 meaning "very important", and 4, meaning "not at all important", how important was each of the following elements in your decision to get a tune-up? **[ADD "Don't know" and "Not applicable" AS RESPONSE OPTIONS; RANDOMIZE ORDER; RESPONSE REQUIRED]**

a) Information about energy savings from Ameren Missouri's marking or bill insert
b) Ameren Missouri's marketing information from a contractor or retailer
c) Information from colleagues or friends who installed energy efficient equipment and received a rebate from Ameren Missouri
d) Past participation in an Ameren Missouri energy efficiency program
e) Information from the energy assessment conducted at your home through Ameren Missouri

H. Customer Demographics

H1. Thinking about your overall experiences with Ameren Missouri as your utility, how satisfied would you say you are with Ameren Missouri?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not at all satisfied
-98. Don't know

H2. How satisfied are you with the energy efficiency information and the rebates available to you by Ameren Missouri?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not at all satisfied

-98. Don't know

H3. What type of home do you live in?

1. Single-family home
2. Manufactured or modular
3. Mobile home
4. Row house/townhome
5. Two or three family attached residence
6. Apartment with 4 units or greater
7. Condominium
8. Other (please specify): _____

-98. Don't know

H4. Approximately how many square feet of living space does your home have? Don't include the basement unless it is a space that you consider lived in.

1. Less than 1,000 square feet
2. 1,000 to less than 1,500 square feet
3. 1,500 to less than 2,000 square feet
4. 2,000 to less than 2,500 square feet
5. 2,500 to less than 3,000 square feet
6. 3,000 or more square feet

-98. Don't know

H5. What year was your home built?

1. After 2012
2. 2009-2012
3. 2005-2008
4. 2001-2004
5. 1980-2000
6. Before 1980

-98. Don't know

H6. Do you own or rent this residence?

1. Own
2. Rent

-98. Don't know

H7. Is your home occupied…

1. Year round
2. On a seasonal basis/vacation home

-98. Don't know

H8. What is the highest level of education that you have completed?

1. Less than a high school degree
2. High school degree
3. Technical/trade school program
4. Associates degree or some college
5. Bachelor's degree
6. Graduate/ professional degree, e.g. J.D., MBA, MD, etc.
7. Professional certification, e.g. CPA, CNP, etc.

-98. Don't know

H9. Which of the following categories includes your household's total annual income before taxes?

1. Less than $10,000
2. $10,000 – $14,999
3. $15,000 – $19,999
4. $20,000 – $29,999
5. $30,000 – $39,999
6. $40,000 –$49,999
7. $50,000 – $59,999
8. $60,000 – $74,999
9. $75,000 – $99,999
10. $100,000 – $124,999
11. $125,000 – $149,999
12. $150,000 or more
13. Prefer not to say

Thank you for taking the survey. Your response has been recorded and we have entered you into the drawing for one of five $100 VISA gift cards.

If you are selected to receive one of the five gift cards in the drawing, the gift card will be mailed to you at the same address written on the postcard you received, by March 15, 2019.

Appendix I. Immediate Survey Responses

This appendix provides the responses to questions in the Efficient Products Immediate Survey. This survey was sent by email to PY18 participants approximately one month after receiving their rebates. In PY18, 606 respondents completed this survey.

The tables below provide the number of responses to answers to the survey questions. They also provide the percentage of the various responses, where the denominator is the total number of respondents who gave valid answers to the question. Respondents who replied "don't know" are not included in the base of valid responses, except for awareness questions.

The Cadmus team did not report initial screening questions that would have disqualified respondents from taking the survey, or open-ended responses. Free ridership questions are not reported because the analysis is done in a dynamic function and not based on raw frequencies.

Verification and Program Awareness

Table 1. Survey Question A4 Responses

Prior to this survey, were you aware that the rebate you received after you purchased your new [MEASURETYPE](s) was provided by Ameren Missouri?												
	Pool Pumps (n=103)		RACs (n=75)		Air Purifiers (n=126)		Smart thermostats (n=229)		HPWHs (n=42)		Total (n=575)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes	94	91%	64	85%	102	81%	211	92%	40	95%	511	89%
No	9	9%	11	15%	24	19%	18	8%	2	5%	64	11%
Don't Know	0		0		0		0		0		0	

Table 2. Survey Question A5 Responses

Did you or someone else in your household install the [MEASURETYPE], or did you have a contractor install it?												
	Pool Pumps (n=103)		RACs (n=75)		Air Purifiers (n=0)		Smart thermostats (n=257)		HPWHs (n=41)		Total (n=476)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
I installed it myself OR someone else in the household installed it	14	14%	66	88%			204	79%	19	46%	303	64%
A contractor installed it	86	83%	7	9%			43	17%	20	49%	156	33%
Not installed yet	3	3%	2	3%			10	4%	2	5%	17	4%
Don't know	0		0				1		0		1	

Table 3. Survey Question A6 Responses

How did you hear about discounted smart thermostats for sale through the Ameren Missouri Online Store? (check all that apply)												
	Pool Pumps (n=103)		RACs (n=75)		Air Purifiers (n=128)		Smart thermostats (n=253)		HPWHs (n=41)		Total (n=600)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Ameren's Web site	18	17%	8	11%	19	15%	79	31%	12	29%	136	23%
Family, friend or co-worker	4	4%	4	5%	15	12%	75	30%	3	7%	101	17%
The rebate form was attached to the product when I bought it	5	5%	32	43%	51	40%	8	3%	1	2%	97	16%
From my contractor or installer	52	50%	1	1%	0	0%	24	9%	4	10%	81	14%
Signs or displays in a store	6	6%	16	21%	34	27%	14	6%	6	15%	76	13%
Store representative or salesperson	30	29%	5	7%	7	5%	17	7%	10	24%	69	12%
On my Monthly Energy Statement (bill)	7	7%	7	9%	8	6%	19	8%	4	10%	45	8%
Other Web site (Which site?)	2	2%	4	5%	6	5%	25	10%	4	10%	41	7%
Ameren Missouri Home Energy Report	4	4%	6	8%	3	2%	16	6%	2	5%	31	5%
A brochure	5	5%	5	7%	10	8%	5	2%	4	10%	29	5%
Email from Ameren Missouri	1	1%	4	5%	1	1%	7	3%	0	0%	13	2%
Social Media (Facebook, Twitter)	0	0%	2	3%	0	0%	5	2%	0	0%	7	1%

How did you hear about discounted smart thermostats for sale through the Ameren Missouri Online Store? (check all that apply)												
	Pool Pumps (n=103)		RACs (n=75)		Air Purifiers (n=128)		Smart thermostats (n=253)		HPWHs (n=41)		Total (n=600)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
When my rebate check arrived	1	1%	0	0%	3	2%	1	0%	1	2%	6	1%
Television	0	0%	1	1%	0	0%	4	2%	0	0%	5	1%
While shopping or browsing at the Ameren Missouri Online Store	0	0%	0	0%	0	0%	4	2%	0	0%	4	1%
Ameren Missouri representative	0	0%	1	1%	1	1%	1	0%	1	2%	4	1%
Radio	1	1%	0	0%	1	1%	1	0%	0	0%	3	1%
Newspaper	0	0%	0	0%	1	1%	0	0%	0	0%	1	0%
Some other way (Please specify)	5	5%	1	1%	3	2%	17	7%	2	5%	28	5%
Don't know	0		2		4		5		1		12	

Participant Satisfaction

Table 4. Survey Question B1 Responses

How satisfied are you with the amount of the rebate you received?												
	Pool Pumps (n=103)		RACs (n=75)		Air Purifiers (n=127)		Smart thermostats (n=255)		HPWHs (n=42)		Total (n=574)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Very satisfied	88	85%	58	77%	119	94%	165	65%	39	93%	455	79%
Somewhat satisfied	15	15%	16	21%	8	6%	77	30%	3	7%	107	19%
Not too satisfied	0	0%	1	1%	0	0%	11	4%	0	0%	10	2%
Not satisfied at all	0	0%	0	0%	0	0%	2	1%	0	0%	2	0%
Don't know	0		0		1		2		0		2	

Table 5. Survey Question B2 Responses

How satisfied are you with the performance of your new [MEASURETYPE]?												
	Pool Pumps (n=95)		RACs (n=71)		Air Purifiers (n=127)		Smart thermostats (n=249)		HPWHs (n=38)		Total (n=580)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Very satisfied	86	91%	62	87%	106	83%	217	87%	34	89%	505	87%
Somewhat satisfied	6	6%	8	11%	21	17%	27	11%	4	11%	66	11%
Not too satisfied	2	2%	0	0%	0	0%	3	1%	0	0%	5	1%
Not satisfied at all	1	1%	1	1%	0	0%	2	1%	0	0%	4	1%
Don't Know	8		3		1		9		4		25	

Table 6. Survey Question B3 Responses

Why are you "[RATING FROM B2]" with your new [MEASURETYPE](s)? Please give us further details on what you like or dislike about the performance of your new [MEASURETYPE](s) (check all that apply).												
	Pool Pumps (n=103)		RACs (n=73)		Air Purifiers (n=125)		Smart thermostats (n=258)		HPWHs (n=42)		Total (n=601)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Satisfied with energy/cost savings experienced after installation	66	64%	20	27%	20	16%	119	46%	20	48%	245	41%
Satisfied with overall operation and performance of the equipment	70	68%	43	59%	80	64%	170	66%	26	62%	389	65%
Satisfied with the price of the equipment including the rebate	39	38%	37	51%	70	56%	96	37%	15	36%	257	43%
Satisfied with features of the new equipment	55	53%	22	30%	46	37%	161	62%	19	45%	303	50%
Quiet operation of the equipment	69	67%	25	34%	48	38%	56	22%	11	26%	209	35%
My home is more comfortable with this equipment installed	3	3%	37	51%	64	51%	93	36%	4	10%	201	33%
Noisy operation of the equipment	0	0%	3	4%	6	5%	0	0%	2	5%	11	2%
Did not notice energy/cost savings after installation	4	4%	1	1%	3	2%	9	3%	0	0%	17	3%
Poor performance of equipment	1	1%	1	1%	1	1%	0	0%	0	0%	3	0%
Features did not perform as expected	2	2%	1	1%	2	2%	10	4%	0	0%	15	2%
Difficulty with installation	0	0%	0	0%	0	0%	3	1%	0	0%	3	0%
High cost of equipment	1	1%	0	0%	0	0%	3	1%	2	5%	6	1%
Other reasons or comments, please specify:	7	7%	4	5%	12	10%	13	5%	4	10%	40	7%
Don't know	0		2		3		0		0		5	

Table 7. Survey Question B4 Responses

Thinking about your overall satisfaction with Ameren Missouri's Efficient Products rebate program, would you say you are:												
	Pool Pumps (n=102)		RACs (n=75)		Air Purifiers (n=125)		Smart thermostats (n=257)		HPWHs (n=42)		Total (n=601)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Very satisfied	93	91%	60	80%	110	88%	191	74%	36	86%	490	82%
Somewhat satisfied	9	9%	13	17%	12	10%	54	21%	6	14%	94	16%
Not too satisfied	0	0%	2	3%	3	2%	8	3%	0	0%	13	2%
Not satisfied at all	0	0%	0	0%	0	0%	4	2%	0	0%	4	1%
Don't Know	0		0		2		1		0		3	

Table 8. Survey Question B5 Responses

[WORDING FOR ONLINE=0] Satisfied with the amount of the rebate [WORDING FOR ONLINE=1] Satisfied with the amount of the instant rebate (discounted price)												
	Pool Pumps (n=103)		RACs (n=72)		Air Purifiers (n=128)		Smart thermostats (n=254)		HPWHs (n=42)		Total (n=599)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Satisfied with the amount of the rebate/instant discount	74	72%	40	56%	95	74%	126	50%	32	76%	367	61%
Participating in this rebate program was convenient/easy	76	74%	52	72%	93	73%	164	65%	33	79%	418	70%
Satisfied with energy/cost savings experienced after installation	65	63%	26	36%	34	27%	101	40%	24	57%	250	42%
Satisfied with the performance and operation of the equipment	63	61%	36	50%	79	62%	101	40%	27	64%	306	51%
Satisfied with the contractor who did the installation	55	53%	2	3%	0	0%	20	8%	7	17%	84	14%
Dissatisfied with the amount of the rebate	2	2%	4	6%	4	3%	20	8%	1	2%	31	5%
Dissatisfied with the amount of the instant rebate (discounted price)	0	0%	0	0%	0	0%	2	1%	0	0%	2	0%
Dissatisfied with communications about the rebate program	1	1%	3	4%	0	0%	11	4%	0	0%	15	3%

[WORDING FOR ONLINE=0] Satisfied with the amount of the rebate [WORDING FOR ONLINE=1] Satisfied with the amount of the instant rebate (discounted price)												
	Pool Pumps (n=103)		RACs (n=72)		Air Purifiers (n=128)		Smart thermostats (n=254)		HPWHs (n=42)		Total (n=599)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Dissatisfied by the limits on equipment covered by the rebate program	2	2%	1	1%	3	2%	9	4%	1	2%	16	3%
Dissatisfied with the rebate application process	3	3%	4	6%	1	1%	6	2%	2	5%	16	3%
Dissatisfied with delays in rebate processing	2	2%	4	6%	2	2%	7	3%	2	5%	17	3%
Dissatisfied with the contractor who did the installation	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other reasons or comments, please specify:	7	7%	5	7%	11	9%	25	10%	4	10%	52	9%
Don't know	0		3		0		4		0		7	

Measure Installation (except Smart Thermostats)

Table 9. Survey Question C1 Responses

"Is the [MEASURETYPE] currently installed?" "Are both of the [MEASURETYPE]s currently installed?" "Are all three of the [MEASURETYPE]s currently installed?"												
	Pool Pumps (n=100)		RACs (n=73)		Air Purifiers (n=128)		Smart thermostats (n=0)		HPWHs (n=40)		Total (n=341)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes	100	100%	52	71%	125	98%			40	100%	317	93%
No	0	0%	21	29%	3	2%			0	0%	24	7%
Don't Know	0		0		0				0		0	

Table 10. Survey Question C2 Responses

How many of your new [MEASURETYPE]s are currently installed?												
	Pool Pumps (n=0)		RACs (n=5)		Air Purifiers (n=1)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=6)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
None			4	80%	0	0%					4	67%
One			1	20%	1	100%					2	33%
Two			0	0%	0						0	0%
Don't know			0		0						0	

Table 11. Survey Question C3 Responses

Why isn't the [MEASURETYPE] currently installed? Why aren't both of the [MEASURETYPE]s currently installed? Why aren't all three of the [MEASURETYPE]s currently installed?												
	Pool Pumps (n=3)		RACs (n=23)		Air Purifiers (n=3)		Smart thermostats (n=0)		HPWHs (n=2)		Total (n=41)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
I plan to install the [MEASURE] during the appropriate season	3	100%	12	52%	1	33%			0	0%	16	39%
We installed the [MEASURE] at one time, but then removed it	0	0%	7	30%	0	0%			0	0%	7	17%
Have not had time to install [MEASURE] yet	0	0%	0	0%	0	0%			1	50%	1	2%
[MEASURE] is in storage	0	0%	10	43%	2	67%			0	0%	12	29%
[MEASURE] is back up equipment to install when other equipment fails	0	0%	4	17%	0	0%			0	0%	4	10%
Some other reason (Please specify)	0	0%	7	30%	1	33%			1	50%	9	22%
Don't Know	0		0		0				0		0	

Table 12. Survey Question C5 Responses

Was the room air conditioner you purchased installed at any point this summer?												
	Pool Pumps (n=0)		RACs (n=14)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=14)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes			13	93%							13	93%
No			1	7%							1	7%
Don't Know			0								0	

Table 13. Survey Question C6 Responses

Where were the air conditioners that you purchased installed?												
	Pool Pumps (n=0)		RACs (n=65)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=65)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
My primary residence			56	86%							56	86%
A vacation property or part-year residence			1	2%							1	2%
Property that I own but rent to someone else			4	6%							4	6%
Someone else's residence (such as a relative)			3	5%							3	5%
Some other situation, please specify:			1	2%							1	2%
Don't know			0								0	

Table 14. Survey Question C7 Responses

Is Ameren Missouri the electricity provider for the property where your room air conditioner(s) were installed?												
	Pool Pumps (n=0)		RACs (n=9)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=9)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes			8	89%							8	89%
No			1	11%							1	11%
Don't know			0								0	

Table 15. Survey Question C8 Responses

Where were the [MEASURETYPE](s) that you purchased installed?												
	Pool Pumps (n=98)		RACs (n=0)		Air Purifiers (n=126)		Smart thermostats (n=0)		HPWHs (n=40)		Total (n=264)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
My primary residence	95	97%			123	98%			39	98%	257	97%
A vacation property or part-year residence	1	1%			0	0%			1	3%	2	1%
Property that I own but rent to someone else	1	1%			1	1%			0	0%	2	1%
Someone else's residence (such as a relative)	0	0%			2	2%			0	0%	2	1%
Some other situation, please specify:	1	1%			0	0%			0	0%	1	0%
Don't know	1				0				0		1	

Table 16. Survey Question C9 Responses

Is Ameren Missouri the electricity provider for the property where your [MEASURETYPE](s) were installed?												
	Pool Pumps (n=3)		RACs (n=0)		Air Purifiers (n=3)		Smart thermostats (n=0)		HPWHs (n=1)		Total (n=7)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes	3	100%			3	100%			1	100%	7	100%
No	0	0%			0	0%			0	0%	0	0%
Don't know	0				0				0		0	

Table 17. Survey Question C10 Responses

Please check all of the heating and cooling equipment that is currently installed in your home in addition to room or window air conditioners.												
	Pool Pumps (n=0)		RACs (n=68)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=68)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
High-efficiency central air conditioner			14	21%							14	21%
Standard-efficiency central air conditioner			25	37%							25	37%
Air source heat pump			4	6%							4	6%
Ground source heat pump			0	0%							0	0%
Ductless heat pump			1	1%							1	1%
High-efficiency gas furnace			15	22%							15	22%
Standard-efficiency gas furnace			21	31%							21	31%
High-efficiency electric furnace			5	7%							5	7%
Standard-efficiency electric furnace			9	13%							9	13%
Baseboard electric system			4	6%							4	6%
Some other heating or cooling system (Please specify)			12	18%							12	18%
Don't know			3								3	

Table 18. Survey Question C11 Responses

Please check all of the heating and cooling equipment that is currently installed in your home.												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=38)		Total (n=38)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
High-efficiency central air conditioner									14	37%	14	37%
Standard-efficiency central air conditioner									16	42%	16	42%
Room or window air conditioners									1	3%	1	3%
Air source heat pump									16	42%	16	42%
Ground source heat pump									3	8%	3	8%
Ductless heat pump									1	3%	1	3%
High-efficiency gas furnace									4	11%	4	11%
Standard-efficiency gas furnace									5	13%	5	13%
High-efficiency electric furnace									8	21%	8	21%
Standard-efficiency electric furnace									8	21%	8	21%
Baseboard electric system									0	0%	0	0%
Some other heating or cooling system (Please specify)									0	0%	0	0%
Don't know									0		0	

Free Ridership (Measures Except Smart Thermostats)

The Cadmus team did not report free ridership questions because the analysis is done in a dynamic function and not based on raw frequencies.

Smart Thermostat Installation

Table 19. Survey Question E1 Responses

Our records indicate that you purchased a [THERMOSTAT BRAND] "smart" thermostat, is this correct? IF QTY > 1: Our records indicate that you purchased [QTY] [THERMOSTAT BRAND] "smart" thermostats, is this correct?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=229)		HPWHs (n=0)		Total (n=229)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							228	100%			228	100%
No, purchased another kind or number of thermostats (please specify)							1	0%			1	0%
Don't know							0				0	

Table 20. Survey Question E2 Responses

Is the smart thermostat currently installed in your home? Are all of the smart thermostats that you purchased currently installed in your home?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=248)		HPWHs (n=0)		Total (n=248)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							244	98%			244	98%
Only one is installed							2	1%			2	1%
Only two are installed							0	0%			0	0%
No/None are installed							2	1%			2	1%
Don't Know							0				0	

Table 21. Survey Question E3 Responses

Was the smart thermostat . . . ? Was your smart thermostat that is not currently installed . . . ? Were any of these smart thermostats installed and then removed, or have some of them not been installed yet?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=3)		HPWHs (n=0)		Total (n=3)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Installed and removed							1	33%			1	33%
Installed and removed one thermostat, the rest have not been installed yet							0	0%			0	0%
Not installed yet							2	67%			2	67%
Given to someone else / installed at another property							1	33%			1	33%
Don't Know							0				0	

Table 22. Survey Question E4 Responses

Why did you install and then remove the smart thermostat(s)?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=1)		HPWHs (n=0)		Total (n=1)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
I preferred my previous thermostat(s)							0	0%			0	0%
Too difficult to use							0	0%			0	0%
Did not adjust temperatures correctly							0	0%			0	0%
Thermostat broke							0	0%			0	0%
Did not think it was energy saving							0	0%			0	0%
Other (Please specify)							1	100%			1	100%
Don't Know							0				0	

Table 23. Survey Question E6 Responses

Where were the smart thermostat(s) that you purchased installed?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=245)		HPWHs (n=0)		Total (n=245)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
My primary residence							237	97%			237	97%
A vacation property or part-year residence							8	3%			8	3%
Property that I own but rent to someone else							2	1%			2	1%
Someone else's residence (such as a relative)							1	0%			1	0%
Some other situation, please specify:							3	1%			3	1%
Don't know							0				0	

Table 24. Survey Question E7 Responses

Is Ameren Missouri the electricity provider for this property?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=12)		HPWHs (n=0)		Total (n=12)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							11	92%			11	92%
No							1	8%			1	8%
Don't know							1				1	

Table 25. Survey Question E8 Responses

Is the function on your smart thermostat that senses when you are home or away working?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=241)		HPWHs (n=0)		Total (n=241)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							180	75%			180	75%
No							35	15%			35	15%
Don't Know							26	11%			26	11%

Table 26. Survey Question E9 Responses

Is your smart thermostat connected to the internet?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=241)		HPWHs (n=0)		Total (n=241)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							230	95%			230	95%
No							7	3%			7	3%
Don't Know							4	2%			4	2%

Table 27. Survey Question E10 Responses

What types of heating and cooling system is the smart thermostat currently connected to? What types of heating and cooling system are your smart thermostats connected to?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=229)		HPWHs (n=0)		Total (n=229)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
High-efficiency central air conditioner							66	29%			66	29%
Standard-efficiency central air conditioner							139	61%			139	61%
Air source heat pump							17	7%			17	7%
Ground source heat pump							0	0%			0	0%
Ductless heat pump							0	0%			0	0%
High-efficiency gas furnace							54	24%			54	24%
Standard-efficiency gas furnace							98	43%			98	43%
High-efficiency electric furnace							12	5%			12	5%
Standard-efficiency electric furnace							28	12%			28	12%
Some other heating or cooling system (Specify)							1	0%			1	0%
Don't Know							11				11	

Table 28. Survey Question E11 Responses

About what year was your central air conditioning installed?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=202)		HPWHs (n=0)		Total (n=202)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Installed at the same time as the new thermostat(s)							24	12%			24	12%
Installed previously, in the year:							99	49%			99	49%
Don't Know							79	39%			79	39%

Table 29. Survey Question E12 Responses

About what year was your furnace installed?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=187)		HPWHs (n=0)		Total (n=187)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Installed at the same time as the new thermostat(s)							20	11%			20	11%
Installed previously, in the year:							95	51%			95	51%
Don't Know							72	39%			72	39%

Table 30. Survey Question E13 Responses

About what year was your heat pump installed?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=17)		HPWHs (n=0)		Total (n=17)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Installed at the same time as the new thermostat(s)							4	24%			4	24%
Installed previously, in the year:							9	53%			9	53%
Don't Know							4	24%			4	24%

Table 31. Survey Question E14 Responses

What type of thermostat did you replace with the smart thermostat? What type of thermostats did you replace with the smart thermostats?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=240)		HPWHs (n=0)		Total (n=240)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Newly constructed home							6	3%			6	3%
Other smart thermostats (may also be called "learning" thermostats)							7	3%			7	3%
Replaced a programmable thermostat							114	48%			114	48%
Replaced a traditional/manual thermostat							113	47%			113	47%
Don't Know							2				2	

Free Ridership (Smart Thermostats)

The Cadmus team did not report free ridership questions because the analysis is done in a dynamic function and not based on raw frequencies.

Satisfaction with Ameren Missouri

Table 32. Survey Question G1 Responses

Thinking about your overall experiences with Ameren Missouri as your utility, how satisfied would you say you are with Ameren Missouri?												
	Pool Pumps (n=99)		RACs (n=65)		Air Purifiers (n=121)		Smart thermostats (n=244)		HPWHs (n=40)		Total (n=569)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Very satisfied	76	77%	42	65%	77	64%	159	65%	27	68%	381	67%
Somewhat satisfied	23	23%	23	35%	41	34%	75	31%	11	28%	173	30%
Not too satisfied	0	0%	0	0%	3	2%	8	3%	1	3%	12	2%
Not satisfied at all	0	0%	0	0%	0	0%	2	1%	1	3%	3	1%
Don't Know	2		0		1		1		0		4	

Table 33. Survey Question G2 Responses

Why are you "[RATING FROM G1]" with Ameren Missouri as your utility?												
	Pool Pumps (n=99)		RACs (n=65)		Air Purifiers (n=121)		Smart thermostats (n=244)		HPWHs (n=40)		Total (n=569)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Satisfied with reliable and dependable service (outages are rare/brief)	62	63%	42	65%	81	67%	139	57%	30	75%	354	62%
Satisfied with Ameren Missouri's Efficient Products rebate program	72	73%	39	60%	73	60%	142	58%	27	68%	353	62%
Satisfied with customer service / interactions with Ameren Missouri staff	34	34%	29	45%	43	36%	76	31%	19	48%	201	35%
Satisfied with utility rates	21	21%	12	18%	24	20%	50	20%	9	23%	116	20%
Dissatisfied with utility rates or rate increases	14	14%	10	15%	29	24%	39	16%	6	15%	98	17%
Dissatisfied with the reliability of service (outages)	1	1%	1	2%	3	2%	7	3%	1	3%	13	2%
Dissatisfied with lack of choice in utility provider	4	4%	7	11%	16	13%	21	9%	4	10%	52	9%
Dissatisfied with customer service / interactions with Ameren Missouri staff	0	0%	3	5%	3	2%	5	2%	0	0%	11	2%
Other reasons or comments, please specify:	8	8%	6	9%	12	10%	10	4%	7	18%	43	8%
Don't know	1		1		3		9		2		16	

Table 34. Survey Question G3 Responses

Based on your experience with the Efficient Products rebate program, would you say your satisfaction with Ameren Missouri has:												
	Pool Pumps (n=98)		RACs (n=63)		Air Purifiers (n=121)		Smart thermostats (n=237)		HPWHs (n=40)		Total (n=559)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Increased	64	65%	30	48%	75	62%	112	47%	29	73%	310	55%
Stayed about the same	34	35%	32	51%	46	38%	118	50%	11	28%	241	43%
Decreased	0	0%	1	2%	0	0%	7	3%	0	0%	8	1%
Don't Know	1		1		1		5		0		8	

Customer Demographics

Table 35. Survey Question H1 Responses

Is the energy used in your home . . .												
	Pool Pumps (n=99)		RACs (n=63)		Air Purifiers (n=121)		Smart thermostats (n=238)		HPWHs (n=40)		Total (n=561)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
All electric	18	18%	18	29%	34	28%	51	21%	28	70%	149	27%
Natural gas and electric	74	75%	43	68%	83	69%	184	77%	11	28%	395	70%
Or some other combination of energy sources	7	7%	2	3%	4	3%	3	1%	1	3%	17	3%
Don't Know	0		1		1		2		0		4	

Table 36. Survey Question H2 Responses

Which of the following best describes your home or residence?												
	Pool Pumps (n=98)		RACs (n=64)		Air Purifiers (n=122)		Smart thermostats (n=239)		HPWHs (n=40)		Total (n=563)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Single-family home (not a duplex, townhome, or apartment)	97	99%	53	83%	93	76%	206	86%	35	88%	484	86%
Manufactured or modular home	0	0%	2	3%	1	1%	0	0%	1	3%	4	1%
Mobile home	0	0%	3	5%	2	2%	1	0%	1	3%	7	1%
Row house or townhome	0	0%	2	3%	2	2%	4	2%	0	0%	8	1%
Two or three family attached residence	1	1%	3	5%	5	4%	6	3%	2	5%	17	3%
Apartment with four or more units	0	0%	1	2%	10	8%	9	4%	0	0%	20	4%
Condominium	0	0%	0	0%	3	2%	9	4%	1	3%	13	2%
Other (Please specify)	0	0%	0	0%	6	5%	4	2%	0	0%	10	2%
Don't Know	0		0		0		1		0		1	

Table 37. Survey Question H3 Responses

Do you own or rent this residence?												
	Pool Pumps (n=98)		RACs (n=64)		Air Purifiers (n=119)		Smart thermostats (n=239)		HPWHs (n=40)		Total (n=560)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Own	98	100%	56	88%	99	83%	223	93%	40	100%	516	92%
Rent	0	0%	8	13%	20	17%	16	7%	0	0%	44	8%
Don't Know	0		0		1		1		0		2	

Table 38. Survey Question H4 Responses

Approximately how many square feet of living space does your home have? Don't include the basement unless it is a space that you consider "lived in".												
	Pool Pumps (n=98)		RACs (n=61)		Air Purifiers (n=113)		Smart thermostats (n=234)		HPWHs (n=38)		Total (n=544)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Less than 1,000 square feet	1	1%	11	18%	14	12%	16	7%	1	3%	43	8%
1,000 to less than 1,500 square feet	8	8%	24	39%	34	30%	52	22%	8	21%	126	23%
1,500 to less than 2,000 square feet	23	23%	11	18%	32	28%	63	27%	9	24%	138	25%
2,000 to less than 2,500 square feet	14	14%	9	15%	18	16%	37	16%	3	8%	81	15%
2,500 to less than 3,000 square feet	18	18%	4	7%	6	5%	35	15%	7	18%	70	13%
3,000 or more square feet	34	35%	2	3%	9	8%	31	13%	10	26%	86	16%
Don't Know	2		2		9		6		1		20	

Table 39. Survey Question H5 Responses

When was your home built?												
	Pool Pumps (n=97)		RACs (n=63)		Air Purifiers (n=113)		Smart thermostats (n=233)		HPWHs (n=39)		Total (n=545)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
After 2008	5	5%	1	2%	9	8%	38	16%	9	23%	62	11%
2005-2008	5	5%	1	2%	4	4%	12	5%	4	10%	26	5%
2001-2004	8	8%	2	3%	11	10%	20	9%	2	5%	43	8%
1980-2000	39	40%	12	19%	35	31%	67	29%	12	31%	165	30%
Before 1980	40	41%	47	75%	54	48%	96	41%	12	31%	249	46%
Don't Know	1		1		9		7		1		19	

Table 40. Survey Question H6 Responses

Counting yourself, how many people normally live in your household on a full-time basis? Please include everyone who lives in your home, whether or not they are related to you, and exclude anyone just visiting or children who may be away at college or in the military.												
	Pool Pumps (n=100)		RACs (n=64)		Air Purifiers (n=122)		Smart thermostats (n=239)		HPWHs (n=40)		Total (n=565)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Please enter a number:	89	89%	55	86%	101	83%	216	90%	37	93%	498	88%
I prefer not to answer this question	11	11%	9	14%	21	17%	23	10%	3	8%	67	12%

Table 41. Survey Question H7 Responses

Counting yourself, how many people normally live in your household on a full-time basis? Please include everyone who lives in your home, whether or not they are related to you, and exclude anyone just visiting or children who may be away at college or in the military.												
	Pool Pumps (n=89)		RACs (n=55)		Air Purifiers (n=101)		Smart thermostats (n=216)		HPWHs (n=37)		Total (n=498)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
One	5	6%	15	27%	18	18%	25	12%	1	3%	64	13%
Two	46	52%	23	42%	45	45%	99	46%	21	57%	234	47%
Three-five	36	40%	16	29%	36	36%	88	41%	15	41%	191	38%
Six or more	2	2%	1	2%	2	2%	4	2%	0	0%	9	2%

Appendix J. Follow-up Survey Responses

This appendix provides the responses to questions in the Efficient Products Follow-up Survey. This survey was sent by email to PY18 participants six months after receiving their rebates. In PY18, 553 respondents completed this survey.

The tables below provide the number of responses to answers to the survey questions. They also provide the percentage of the various responses, where the denominator is the total number of respondents who gave valid answers to the question. Respondents who replied "don't know" are not included in the base of valid responses, except for awareness questions.

The Cadmus Team did not report initial screening questions that would have disqualified respondents from taking the survey, or open-ended responses. We do not report spillover questions because the analysis is done in a dynamic function and not based on raw frequencies.

Participant Satisfaction

Table 1. Survey Question B1 Responses

How satisfied are you with the performance of your new [MEASURETYPE]?												
	Pool Pumps (n=132)		RACs (n=73)		Air Purifiers (n=71)		Smart thermostats (n=255)		HPWHs (n=22)		Total (n=553)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Very satisfied	118	89%	58	82%	54	76%	193	76%	17	77%	440	80%
Somewhat satisfied	14	11%	12	17%	15	21%	57	22%	4	18%	102	19%
Not too satisfied	0	0%	1	1%	2	3%	2	1%	1	5%	6	1%
Not satisfied at all	0	0%	0	0%	0	0%	2	1%	0	0%	2	0%
Don't Know	0		2		0		1		0		3	

Table 2. Survey Question B2 Responses

Why are you "[RATING FROM B1]" with your new [MEASURETYPE](s)? Please give us further details on what you like or dislike about the performance of your new [MEASURETYPE](s) (check all that apply).												
	Pool Pumps (n=132)		RACs (n=71)		Air Purifiers (n=71)		Smart thermostats (n=254)		HPWHs (n=22)		Total (n=550)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Satisfied with energy/cost savings experienced after installation	69	52%	31	44%	17	24%	117	46%	11	50%	245	45%
Satisfied with overall operation and performance of the equipment	92	70%	44	62%	38	54%	167	66%	15	68%	356	65%
Satisfied with the price of the equipment including the rebate	58	44%	40	56%	42	59%	123	48%	9	41%	272	49%
Satisfied with features of the new equipment	70	53%	21	30%	24	34%	166	65%	12	55%	293	53%
Quiet operation of the equipment	88	67%	26	37%	36	51%	74	29%	8	36%	232	42%
My home is more comfortable with this equipment installed	3	2%	34	48%	34	48%	100	39%	3	14%	174	32%
Noisy operation of the equipment	1	1%	5	7%	3	4%	1	0%	0	0%	10	2%
Did not notice energy/cost savings after installation	4	3%	4	6%	3	4%	20	8%	2	9%	33	6%
Poor performance of equipment	2	2%	2	3%	2	3%	4	2%	1	5%	11	2%
Features did not perform as expected	3	2%	1	1%	4	6%	21	8%	1	5%	30	5%
Difficulty with installation	1	1%	1	1%	0	0%	3	1%	0	0%	5	1%
High cost of equipment	5	4%	0	0%	0	0%	2	1%	1	5%	8	1%
Other reasons or comments, please specify:	8	6%	2	3%	9	13%	22	9%	2	9%	43	8%
Don't know	2		0		2		3		1		8	

Table 3. Survey Question B3 Responses

Thinking about your overall satisfaction with Ameren Missouri's Efficient Products rebate program, would you say you are:												
	Pool Pumps (n=131)		RACs (n=73)		Air Purifiers (n=70)		Smart thermostats (n=254)		HPWHs (n=21)		Total (n=549)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Very satisfied	117	89%	65	89%	58	83%	209	82%	18	86%	467	85%
Somewhat satisfied	12	9%	7	10%	9	13%	37	15%	2	10%	67	12%
Not too satisfied	2	2%	0	0%	1	1%	5	2%	0	0%	8	1%
Not satisfied at all	0	0%	1	1%	2	3%	3	1%	1	5%	7	1%
Don't Know	1		0		1		0		0		2	

Table 4. Survey Question B4 Responses

Why are you "[RATING FROM B3]" with Ameren Missouri's Efficient Products rebate program? Please give us further details on what you like or dislike about this rebate program (check all that apply).	Pool Pumps (n=131)		RACs (n=73)		Air Purifiers (n=70)		Smart thermostats (n=254)		HPWHs (n=21)		Total (n=549)	
Response	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**
Satisfied with the amount of the rebate	91	69%	44	60%	42	60%	147	58%	14	67%	338	62%
Participating in this rebate program was convenient/easy	95	73%	58	79%	45	64%	180	71%	16	76%	394	72%
Satisfied with energy/cost savings experienced after installation	77	59%	22	30%	18	26%	99	39%	10	48%	226	41%
Satisfied with the performance and operation of the equipment	81	62%	28	38%	29	41%	97	38%	8	38%	243	44%
Satisfied with the contractor who did the installation	58	44%	2	3%	2	3%	19	7%	4	19%	85	15%
Dissatisfied with the amount of the rebate	3	2%	1	1%	4	6%	17	7%	0	0%	25	5%
Dissatisfied with communications about the rebate program	1	1%	2	3%	3	4%	6	2%	1	5%	13	2%
Dissatisfied by the limits on equipment covered by the rebate program	3	2%	0	0%	2	3%	5	2%	1	5%	11	2%
Dissatisfied with the rebate application process	3	2%	1	1%	3	4%	10	4%	1	5%	18	3%
Other reasons or comments, please specify:	2	2%	2	3%	9	13%	9	4%	1	5%	23	4%
Dissatisfied with delays in rebate processing	6	5%	2	3%	3	4%	9	4%	2	10%	22	4%
Dissatisfied with the contractor who did the installation	0	0%	0	0%	0	0%	1	0%	0	0%	1	0%
Don't know	2		0		1		2		0		5	

Spillover Questions

The Cadmus team does not report spillover questions because the analysis is done in a dynamic function and not based on raw frequencies.

Measure Installation (Except for Thermostats)

Table 5. Survey Question D1 Responses

Is the [MEASURETYPE] currently installed?												
	Pool Pumps (n=132)		RACs (n=72)		Air Purifiers (n=69)		Smart thermostats (n=0)		HPWHs (n=22)		Total (n=295)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes	131	99%	50	69%	65	94%			22	100%	268	91%
No	1	1%	22	31%	4	6%			0	0%	27	9%
Don't know	0		1		2				0		3	

Table 6. Survey Question D2 Responses

How many of your new [MEASURETYPE]s are currently installed?												
	Pool Pumps (n=0)		RACs (n=2)		Air Purifiers (n=3)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=5)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
None			1	50%	1	33%					2	40%
One			1	50%	1	33%					2	40%
Two			0	0%	1	33%					1	20%
Don't know			0		0						0	

Table 7. Survey Question D3 Responses

Why isn't the [MEASURETYPE] currently installed?	Pool Pumps (n=1)		RACs (n=22)		Air Purifiers (n=4)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=27)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
[MEASURE] failed or is broken	0	0%	0	0%	1	25%					1	4%
I plan to install the [MEASURE] during the appropriate season	0	0%	12	55%	0	0%					12	44%
We installed the [MEASURE] at one time, but then removed it	1	100%	6	27%	0	0%					7	26%
[MEASURE] is in storage	0	0%	10	45%	1	25%					11	41%
[MEASURE] is back up equipment to install when other equipment fails	0	0%	3	14%	0	0%					3	11%
Some other reason (Please specify)	0	0%	5	23%	2	50%					7	26%
Don't know	0		0		0						0	

Table 8. Survey Question D5 Responses

Was the room air conditioner you purchased installed at any point this summer?	Pool Pumps (n=0)		RACs (n=22)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=22)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes			22	100%							22	100%
No			0	0%							0	0%
Don't know			0								0	

Table 9. Survey Question D6 Responses

Where were the air conditioners that you purchased installed? [CHECK UP TO QTY OF RESPONSES]												
	Pool Pumps (n=0)		RACs (n=72)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=72)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
My primary residence			59	82%							59	0%
A vacation property or part-year residence			2	3%							2	0%
Property that I own but rent to someone else			8	11%							8	0%
Someone else's residence (such as a relative)			3	4%							3	0%
Some other situation, please specify:			1	1%							1	0%
Don't know			0								0	

Table 10. Survey Question D7 Responses

Is Ameren Missouri the electricity provider for the property where your room air conditioner(s) were installed?												
	Pool Pumps (n=0)		RACs (n=13)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=13)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes			12	92%							12	92%
No			1	8%							1	8%
Don't know			1								1	

Table 11. Survey Question D8 Responses

Where were the [MEASURETYPE](s) that you purchased installed?	Pool Pumps (n=131)		RACs (n=0)		Air Purifiers (n=64)		Smart thermostats (n=0)		HPWHs (n=22)		Total (n=217)	
Response	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**
My primary residence	126	96%			62	97%			22	100%	210	97%
A vacation property or part-year residence	4	3%			1	2%			0	0%	5	2%
Property that I own but rent to someone else	0	0%			0	0%			0	0%	0	0%
Someone else's residence (such as a relative)	1	1%			0	0%			0	0%	1	0%
Some other situation, please specify:	0	0%			1	2%			0	0%	1	0%
Don't know	0				0				0		0	

Table 12. Survey Question D9 Responses

Is Ameren Missouri the electricity provider for the property where your [MEASURETYPE](s) were installed?	Pool Pumps (n=5)		RACs (n=0)		Air Purifiers (n=2)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=7)	
Response	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**	**Count**	**Valid Percent**
Yes	4	80%			1	50%					5	71%
No	1	20%			1	50%					2	29%
Don't know	0				0						0	

Smart Thermostat Installation

Table 13. Survey Question E1 Responses

Our records indicate that you purchased a [THERMOSTAT BRAND] "smart" thermostat, is this correct?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=252)		HPWHs (n=0)		Total (n=252)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							251	100%			251	100%
No, purchased another kind of thermostat (please specify):							1	0%			1	0%
Don't know							0				0	

Table 14. Survey Question E2 Responses

Is the smart thermostat currently installed in your home?												
	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=255)		HPWHs (n=0)		Total (n=255)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							247	97%			247	97%
Only one is installed							2	1%			2	1%
Only two are installed							0	0%			0	0%
No/None are installed							6	2%			6	2%
Don't know							0				0	

Table 15. Survey Question E3 Responses

Was your smart thermostat that is not currently installed . . . ?	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=8)		HPWHs (n=0)		Total (n=8)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Installed and removed							5	63%			5	63%
Not installed yet							0	0%			0	0%
Given to someone else / installed at another property							3	38%			3	38%
Don't know							0				0	

Table 16. Survey Question E4 Responses

Why did you install and then remove the smart thermostat(s)?	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=5)		HPWHs (n=0)		Total (n=5)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Too difficult to use							0	0%			0	0%
Did not adjust temperatures correctly							1	20%			1	20%
Thermostat broke							0	0%			0	0%
Did not think it was saving energy							0	0%			0	0%
I preferred my previous thermostat(s)							0	0%			0	0%
Other (Please specify)							4	80%			4	80%
Don’t Know							0				0	

Table 17. Survey Question E5 Responses

Why has the smart thermostat not been installed in your home yet?	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=0)		HPWHs (n=0)		Total (n=0)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Haven't had time							NA	NA				
Don’t know how to install it							NA	NA				
Installed in someone else’s home / a different property							NA	NA				
Other reason (Please specify)							NA	NA				
Don’t Know							NA					

Table 18. Survey Question E6 Responses

Where did you install the smart thermostat(s) that you purchased?	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=253)		HPWHs (n=0)		Total (n=253)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
My primary residence							234	92%			234	92%
A vacation property or part-year residence							15	6%			15	6%
Property that I own but rent to someone else							0	0%			0	0%
Someone else’s residence (such as a relative)							2	1%			2	1%
Some other situation, please specify:							2	1%			2	1%
Don't know							0				0	

Table 19. Survey Question E7 Responses

Is Ameren Missouri the electricity provider for this property?	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=19)		HPWHs (n=0)		Total (n=19)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							19	100%			19	100%
No							0	0%			0	0%
Don't know							0				0	

Table 20. Survey Question E8 Responses

Is the function on your smart thermostat that senses when you are home or away working?	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=252)		HPWHs (n=0)		Total (n=252)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							204	81%			204	81%
No							34	13%			34	13%
Don't Know							14	6%			14	6%

Table 21. Survey Question E9 Responses

Is your smart thermostat connected to the internet?	Pool Pumps (n=0)		RACs (n=0)		Air Purifiers (n=0)		Smart thermostats (n=251)		HPWHs (n=0)		Total (n=251)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Yes							239	95%			239	95%
No							8	3%			8	3%
Don't Know							4	2%			4	2%

Satisfaction with Ameren Missouri

Table 22. Survey Question F1 Responses

Thinking about your overall experiences with Ameren Missouri as your utility, how satisfied would you say you are with Ameren Missouri?												
	Pool Pumps (n=132)		RACs (n=72)		Air Purifiers (n=68)		Smart thermostats (n=249)		HPWHs (n=22)		Total (n=543)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Very satisfied	90	68%	48	67%	43	63%	172	69%	14	64%	367	68%
Somewhat satisfied	40	30%	21	29%	23	34%	70	28%	8	36%	162	30%
Not too satisfied	1	1%	2	3%	2	3%	4	2%	0	0%	9	2%
Not satisfied at all	1	1%	1	1%	0	0%	3	1%	0	0%	5	1%
Don't Know	0		1		3		4		0		8	

Table 23. Survey Question F2 Responses

Why are you [RATING FROM F1] with Ameren Missouri as your utility? Please give us further details on what you like or dislike about Ameren Missouri (check all that apply).												
	Pool Pumps (n=130)		RACs (n=71)		Air Purifiers (n=63)		Smart thermostats (n=239)		HPWHs (n=21)		Total (n=524)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Satisfied with reliable and dependable service (outages are rare/brief)	36	28%	28	39%	21	33%	95	40%	8	38%	188	36%
Satisfied with Ameren Missouri's Efficient Products rebate program	47	36%	19	27%	16	25%	68	28%	5	24%	155	30%
Satisfied with customer service / interactions with Ameren Missouri staff	11	8%	6	8%	6	10%	15	6%	0	0%	38	7%
Satisfied with utility rates	4	3%	3	4%	3	5%	6	3%	1	5%	17	3%
Dissatisfied with utility rates or rate increases	14	11%	8	11%	7	11%	29	12%	1	5%	59	11%

Why are you [RATING FROM F1] with Ameren Missouri as your utility? Please give us further details on what you like or dislike about Ameren Missouri (check all that apply).												
	Pool Pumps (n=130)		RACs (n=71)		Air Purifiers (n=63)		Smart thermostats (n=239)		HPWHs (n=21)		Total (n=524)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Dissatisfied with the reliability of service (outages)	0	0%	0	0%	1	2%	3	1%	0	0%	4	1%
Dissatisfied with lack of choice in utility providers	2	2%	2	3%	0	0%	5	2%	2	10%	11	2%
Dissatisfied with customer service / interactions with Ameren Missouri staff	1	1%	0	0%	2	3%	2	1%	0	0%	5	1%
Other reasons or comments, please specify:	15	12%	5	7%	7	11%	16	7%	4	19%	47	9%
Don't know	1		1		3		7		1		13	

Table 24. Survey Question F3 Responses

Based on your experience with the Efficient Products rebate program, would you say your satisfaction with Ameren Missouri has:												
	Pool Pumps (n=131)		RACs (n=72)		Air Purifiers (n=68)		Smart thermostats (n=243)		HPWHs (n=21)		Total (n=535)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Increased	77	59%	28	39%	32	47%	116	48%	12	57%	265	50%
Stayed about the same	53	40%	42	58%	35	51%	118	49%	8	38%	256	48%
Decreased	1	1%	2	3%	1	1%	9	4%	1	5%	14	3%
Don't Know	0		1		2		7		1		11	

Customer Demographics

Table 25. Survey Question G1 Responses

Is the energy used to heat your home . . .												
	Pool Pumps (n=132)		RACs (n=73)		Air Purifiers (n=67)		Smart thermostats (n=248)		HPWHs (n=22)		Total (n=542)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
All electric	16	12%	17	23%	19	28%	48	19%	13	59%	113	21%
Natural gas and electric	109	83%	54	74%	46	69%	192	77%	6	27%	407	75%
Or some other combination of energy sources	7	5%	2	3%	2	3%	8	3%	3	14%	22	4%
Don't Know	0		0		2		2		0		4	

Table 26. Survey Question G2 Responses

Is your hot water heater electric or gas?												
	Pool Pumps (n=128)		RACs (n=70)		Air Purifiers (n=61)		Smart thermostats (n=237)		HPWHs (n=21)		Total (n=517)	
Response	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent	Count	Valid Percent
Electric	28	22%	23	33%	23	38%	70	30%	20	95%	164	32%
Gas	100	78%	47	67%	38	62%	167	70%	1	5%	353	68%
Don't Know	3		3		8		12		0		26	

Appendix K. Immediate HVAC Survey Responses – Smart Thermostats

This appendix provides the responses to questions in the Heating and Cooling Program Immediate Survey for customers who purchased smart thermostats. This survey was sent by email to PY18 Heating and Cooling Program participants between one and two months after installing their equipment. In PY18, 106 respondents completed the smart thermostat section of this survey.

The tables below provide the number of responses to answers to the survey questions. They also provide the percentage of the various responses, where the denominator is the total number of respondents who answered the question, not including respondents who replied "don't know".

The Cadmus team did not report initial screening questions that would have disqualified respondents from taking the survey. Free ridership questions are not reported because the analysis is done in a dynamic function and not based on raw frequencies.

Table 1. Survey Question H1 Responses (n=103)

Our records indicate that you purchased a "smart" thermostat, is this correct?		
Response	**Count of Response**	**Percent of Respondents**
Yes	100	97%
No, purchased another kind or number of thermostats (please specify):	3	3%
Don't know	3	

Table 2. Survey Question H2a Responses (n=85)

Is the smart thermostat currently installed in your home?		
Response	**Count of Response**	**Percent of Respondents**
Yes	85	100%
No	0	0%
Don't know	0	

Table 3. Survey Question H2b Responses (n=19)

Are all of the smart thermostats that you purchased currently installed in your home?		
Response	**Count of Response**	**Percent of Respondents**
Yes	15	79%
Only one is installed	3	16%
None are installed	1	5%
Don't know	1	

Table 4. Survey Question H3a1 Responses (n=85)

Where was the smart thermostat that you purchased installed?		
Response	**Count of Response**	**Percent of Respondents**
My primary residence	82	96%
A vacation property or part-year residence	2	2%
Someone else's residence (such as a relative)	1	1%
Don't know	0	

Table 5. Survey Question H3a2 Responses (n=18)

Where were the smart thermostats that you purchased installed?		
Response	**Count of Response**	**Percent of Respondents**
My primary residence	18	100%
A vacation property or part-year residence	0	0%
Someone else's residence (such as a relative)	0	0%
Don't know	0	

Table 6. Survey Question H3a3 Responses (n=3)

Is Ameren Missouri the electricity provider for this property?		
Response	**Count of Response**	**Percent of Respondents**
Yes	3	100%
No	0	0%
Don't know	0	

Table 7. Survey Question H3a Responses (n=0)

Was the smart thermostat installed and then removed, or has it not been installed yet?		
Response	**Count of Response**	**Percent of Respondents**
Installed and removed	NA	NA
Not installed yet	NA	NA
Some other situation, please describe:	NA	NA
Don't know	NA	

Table 8. Survey Question H3b Responses (n=4)

Were any of these thermostats installed and then removed, or have they not been installed yet?		
Response	**Count of Response**	**Percent of Respondents**
Installed and removed	1	25%
Not installed yet	2	50%
Some other situation, please describe:	1	25%
Don't know	0	

Table 9. Survey Question H4 Responses (n=0)

Why did you install and then remove the smart thermostat(s)?		
Response	**Count of Response**	**Percent of Respondents**
Too difficult to use	NA	NA
Did not adjust temperatures correctly	NA	NA
Thermostat broke	NA	NA
Did not think it was energy saving	NA	NA
I preferred my previous thermostat(s)	NA	NA
Other reason, please specify:	NA	NA
Don't know	1	

Table 10. Survey Question H16 Responses (n=69)

Is the function on your smart thermostat that senses when you are home or away working? (This function is also called "geofencing" or "occupancy sensing.")		
Response	**Count of Response**	**Percent of Respondents**
Yes	53	77%
No	16	23%
Don't Know	35	

Table 11. Survey Question H17 Responses (n=98)

Is your smart thermostat connected to the internet?		
Response	**Count of Response**	**Percent of Respondents**
Yes	88	90%
No	10	10%
Don't Know	6	

Table 12. Survey Question H6a Responses (n=84)

What types of heating and cooling systems is the smart thermostat connected to?		
Response	**Count of Response**	**Percent of Respondents**
High-efficiency central air conditioner	63	75%
Standard-efficiency central air conditioner	6	7%
Air source heat pump	8	10%
Ground source heat pump	0	0%
Ductless heat pump	0	0%
High-efficiency gas furnace	36	43%
Standard-efficiency gas furnace	17	20%
High-efficiency electric furnace	6	7%
Standard-efficiency electric furnace	2	2%
Some other heating or cooling system (Specify)	0	0%
Don't know	9	

Table 13. Survey Question H6b Responses (n=18)

What types of heating and cooling systems are your smart thermostats connected to?		
Response	**Count of Response**	**Percent of Respondents**
High-efficiency central air conditioner	16	89%
Standard-efficiency central air conditioner	1	6%
Air source heat pump	1	6%
Ground source heat pump	0	0%
Ductless heat pump	0	0%
High-efficiency gas furnace	13	72%
Standard-efficiency gas furnace	3	17%
High-efficiency electric furnace	2	11%
Standard-efficiency electric furnace	0	0%
Some other heating or cooling system (Specify)	0	0%
Don't know	0	

Table 14. Survey Question H7a Responses (n=83)

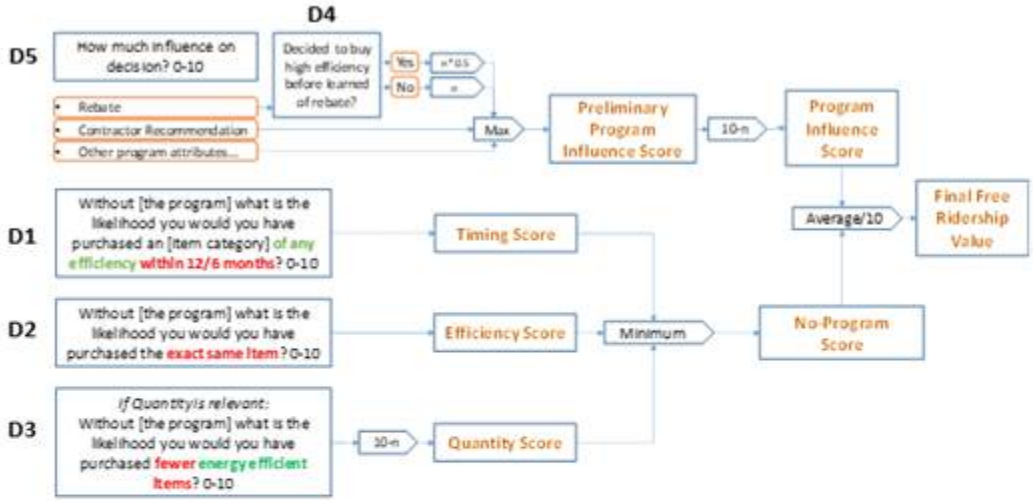
What type(s) of thermostat did you replace with the smart thermostats?		
Response	**Count of Response**	**Percent of Respondents**
Replaced a traditional/manual thermostat	30	36%
Replaced a programmable thermostat (a thermostat that can be programmed, but is not "smart" or connected	44	53%
My new thermostat replaced another smart thermostat (may also be called "learning" thermostats)	8	10%
My new thermostat is installed in a newly constructed home	1	1%
Don't know	1	

Table 15. Survey Question H7b Responses (n=16)

What type(s) of thermostat did you replace with the smart thermostats?		
Response	**Count of Response**	**Percent of Respondents**
Replaced a traditional/manual thermostat	5	31%
Replaced a programmable thermostat (a thermostat that can be programmed, but is not "smart" or connected	9	56%
My new thermostat replaced another smart thermostat (may also be called "learning" thermostats)	2	13%
My new thermostat is installed in a newly constructed home	0	0%
Don't know	2	

Appendix L. Illinois TRM NTG Flow Chart

Residential Prescriptive Rebate (With No Audit) Free Ridership



D6 In your own words, what influence did the Ameren Missouri Efficient Products program have on your decision to purchase a high-efficiency [*MEASURETYPE*]? *[FORCED RESPONSE – NO SKIP]*
[RECORD RESPONSE:_____]

Evaluation analyst will assess the response to the D6 open ended question and its consistency with the other questions, and, if warranted based on clear information, they will adjust either the preliminary score, timing score, efficiency score, or quantity score based on expert judgement. If an inconsistency exists and the open-ended response does not resolve the inconsistency, the respondent will be removed from the calculation. All instances of this occurring will be documented in the final report.

For example, if a respondent rated the influence of the Ameren rebate on their decision to purchase high-efficiency equipment as '10 – Very important' (D5) but also gave a rating of '10 – Very likely' to question D2, question D6 would be asked and the open ended response would be evaluated by the analyst to consider whether to apply an adjustment to the respondents freeridership component scores.