CADMUS

Energy Efficiency Kits Program Impact and Process Evaluation

PROGRAM YEAR 2018

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Ameren Missouri

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Executive Summary

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

Program Description

As in the previous year, the PY18 program provided energy efficiency kits through two separate delivery channels:

- **School-Based Delivery Channel.** Ameren Missouri offered this delivery channel for a third year. Participating teachers received classroom curriculum and energy-saving school kits (school kits) to distribute to their students. In PY18, the Energy Efficiency Kits program co-delivered the school-based delivery channel with natural gas providers, Ameren Missouri Natural Gas and Spire, which serves Eastern and Western Missouri.
- **Multifamily Delivery Channel.** Ameren Missouri offered this delivery channel in PY15 through the Efficient Products program, then transitioned it to the Energy Efficiency Kits program in PY16. This delivery channel partnered with Ameren Missouri Natural Gas in PY18 to provide energy-saving multifamily kits (multifamily kits) to property managers of eligible multifamily homes. In PY18, the program enrolled multifamily properties that were Ameren Missouri electric customers with electric hot water heating, or gas hot water heating if they were also Ameren Missouri Natural Gas customers. The property manager (or staff) installed multifamily kit items in each of the property's units.

School kits contained the following:

- One energy-efficient showerhead
- One energy-efficient kitchen faucet aerator
- One energy-efficient bathroom faucet aerator
- One furnace filter alarm
- Three feet of water heater pipe wrap
- Four LEDs

Multifamily kits contained the following:

- Up to two energy-efficient showerheads (one per bathroom)
- One energy-efficient kitchen faucet aerator
- Up to two energy-efficient bathroom faucet aerator per bathroom (one per bathroom)
- One furnace filter alarm

- Up to six feet of water heater pipe wrap
- Six LEDs

For PY2016–2018, Ameren Missouri contracted with ICF International (ICF) to implement the program. ICF implemented the multifamily and school-based delivery channels, with support from National Energy Foundation (NEF, a nonprofit educational organization dedicated to developing and implementing supplementary educational materials and programs) for delivery of the school-based delivery channel. Starting in PY17, ICF co-delivered the school kits with Spire, a gas provider. In PY18, ICF partnered with Ameren Missouri Natural Gas for both delivery channels.

For the multifamily kit delivery channel, ICF developed marketing materials, delivered and tracked multifamily kit items, and managed enrollment. For the school-based delivery channel, NEF developed the school kit curriculum, marketed the program to eligible schools, delivered and tracked the school kits and program materials, enrolled teachers, and conducted day-to-day management. NEF wrote the curriculum materials for a sixth-grade level and confirmed their appropriateness with the Missouri Department of Education.

Key Impact Evaluation Findings

This section describes Cadmus' key findings for the PY18 evaluation period.

Program Data

The Cadmus team reviewed the tracking data as part of the impact evaluation. In PY18, the implementation team tracked program data using the Vision database, which was designed to make program data accessible to program administrators and evaluators in real time.

For the school-based delivery channel, the Vision database tracked shipments of school kits from the NEF implementer to teachers. Through the tracking data, Ameren Missouri claimed electric savings for a subset of water heating measures (15% of measures in co-branded school kits and 17% of measures from Ameren Missouri-only kits, aimed at Ameren Missouri Natural Gas customers), for which they anticipated electric water heating savings. To verify these school kits, Cadmus compared the number of school kits tracked in the Vision database to NEF's shipment data, which included the number of school kits shipped to each school. As this was a school delivery channel and with private student contact data, tracking data did not include account numbers or customer-level information. Cadmus verified that the number of school kits tracked in the Vision database was consistent with NEF's shipment data.

For the multifamily delivery channel, the Vison database tracked shipments of multifamily kits from Ameren Missouri to participating property managers.

Program Data Adjustments

Following review of the tracking data, Cadmus used participant surveys to conduct additional verification of assumptions. Cadmus surveyed participating property managers receiving multifamily kits as well as families receiving school kits and providing contact information. From survey responses, the

team estimated in service rates (ISR), electric water heating saturations, and proportions of Ameren Missouri customers. The analysis used the information to adjust gross savings calculations.

Gross Impacts

Table 1 summarizes PY18 participation, *ex post* gross per-unit savings, realization rates, installation rates, and *ex post* total gross savings. Cadmus estimated per-unit gross realization rates for all Energy Efficiency Kit measures as the ratio of Ameren Missouri's *ex ante* savings from its 2018 Technical Resource Manual (TRM) and the evaluated (*ex post*) savings.

The evaluation team found the following measures achieved the highest realization rates for the school kits:

- Energy-efficient bathroom faucet aerators (128%)
- Energy-efficient showerheads (116%)
- Energy-efficient kitchen faucet aerators (114%)

For school kits, the team attributed higher PY18 realization rates among these water heating measures to higher-than-expected electric water heating saturations and utility provider proportions. Water heater pipe wrap appeared to have the per-unit lowest realization rate, but Cadmus attributed this to the lack of adjustment for electric water heating saturations in the per-unit *ex ante* calculations (in contrast to the other school kit water heating measures). With this adjustment added to the *ex ante*, the realization rate rose to 110%, similar to the other water heating measures. For furnace filter whistles and LEDs, Cadmus observed lower-than-assumed ISRs (and reduced hours of use, based on updated estimates for lighting). Households that received more than one kit had lower LED installation rates (77%) than households that had received just one kit (91%).

For multifamily kits, energy-efficient showerheads exhibited the highest realization rate (102%). Overall, realization rates for water heating measures in multifamily kits were negatively affected by lower-than-assumed numbers of people per household, and showerheads and bathroom faucets per home, based on values from Cadmus' survey results. The low water heater pipe wrap realization rate (86%) reflected differences in calculations of *ex ante* savings inputs (e.g., R-value, temperature differences between the water and air temperature, and the thickness of the pipe insulation). This also moderated the high realization rates for school kits pipe wrap.

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

Measure	PY18 Participation[1]	Per-Unit *Ex Post* Savings (kWh/yr)	Realization Rate	Saturation	Ameren Missouri Customers	Percent Installed and Operating	Total *Ex Post* Gross Savings (MWh/yr)
School Kits							
Energy-Efficient Showerhead	16,366	85.23	116%	46%	92%	59%	1,394.94
Energy-Efficient Kitchen Faucet Aerator	16,366	52.47	114%	46%	92%	51%	858.77
Energy-Efficient Bathroom Faucet Aerator	16,366	10.22	128%	46%	92%	57%	167.29
LEDs	65,464	27.59	93%	100%	92%	90%	1,806.47
Water Heater Pipe Wrap (feet)	49,098	4.08	37%	46%	92%	64%	200.51
Furnace Filter Alarm	16,366	61.06	89%	100%	92%	39%	999.34
Multifamily Kits							
Energy-Efficient Showerhead	784	209.97	102%	100%	100%	100%	164.62
Energy-Efficient Kitchen Faucet Aerator	579	99.45	86%	100%	100%	100%	57.58
Energy-Efficient Bathroom Faucet Aerator	775	30.07	90%	100%	100%	100%	23.31
LEDs	3,546	33.54	90%	100%	100%	100%	118.93
Water Heater Pipe Wrap (feet)	1,245	15.00	86%	100%	100%	100%	18.68
Furnace Filter Alarm	591	177.38	91%	100%	100%	100%	104.83

[1] Verified measures.

[2] The Ameren Missouri TRM value for water heater pipe wrap did not adjust for electric water heating saturations, as this was accounted for through the amount of pipe wrap Ameren Missouri paid for under the program, 34% (Spire paid for the remaining 66%). Without the electric water heating saturation adjustment, the adjusted *ex post* savings value for pipe wrap was 8.8 kWh/yr.

Net Savings

The evaluation team used participant surveys to inform net-to-gross (NTG) calculations for both the school-based and multifamily delivery channels. As shown in Table 2, the school-based delivery channel had an overall, savings-weighted, NTG ratio (excluding nonparticipant spillover [NPSO]) of 83.7%, and the multifamily delivery channel had an overall, savings-weighted NTG ratio (excluding NPSO) of 100.0%. The team accounted for NPSO separately due to its different load shape and, therefore, different demand impacts from direct program savings. Appendix A shows end-use load shapes and coincidence factors.

Table 2. PY18 Net Impact Results Summary

Delivery Channel	*Ex Post* Gross Savings (MWh/yr)	Free Ridership	Participant Spillover	NTG (w/o NPSO)	Net Energy Savings (MWh/yr)	Net Demand Savings (kW/yr)
School Kit	5,427	18.6%	2.3%	83.7%	4,542	836
Multifamily Kit	488	0.0%	0.0%	100.0%	488	90
Nonparticipant Spillover	**–**	**–**	**–**	**–**	**1**	**0.59**
Total	**5,915**	**17.1%**	**2.1%**	**85.0%**	**5,031**	**927**

As shown in Table 3, the PY18 program achieved 81% of its net energy savings target of 6,228 MWh, as specified in Ameren Missouri's residential filing.[1] The table presents coincidence factors used to calculate demand savings for this program.

Table 3. PY18 Energy Efficiency Kits 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]
Energy (MWh)	6,228	5,915	5,031	81%
Demand (kW)	1,046	1,058	927	89%

[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.

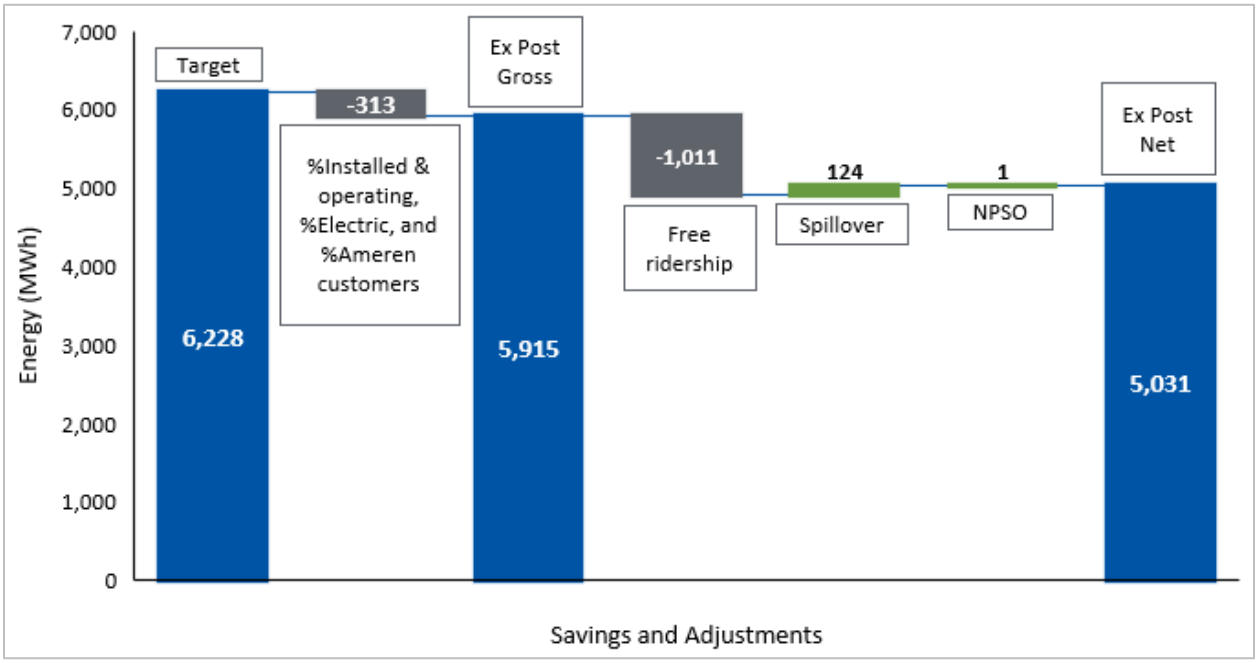
[2] Calculated by multiplying Cadmus' evaluated gross savings and evaluated NTG ratio and adding the appropriate program-level allocation of NPSO savings.

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

Figure 1 illustrates the program's energy impacts—from the target to the ex post net savings. The blue bars represent total savings (targets, ex ante, etc.), gray bars represent factors that decreased savings, and the green bars represent factors that increased savings.

[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.

Figure 1. Waterfall Chart of PY18 Energy Efficiency Kits Program Energy Savings



Code of State Regulations Impact Evaluation Requirements

According to the Missouri Code of State Regulations (CSR), demand-side programs functioning as part of a utility's preferred resource plan become subject to ongoing process and impact evaluations that meet certain criteria. Specifically, the CSR requires that impact evaluations of demand-side programs satisfy requirements listed in Table 4. The table also shows data that the team used to satisfy these impact CSR evaluation requirements for the Energy Efficiency Kits 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's 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.
Comparisons between loads for program participants and an appropriate control group over the same period		

CSR Requirement[1]	Method Used	Description of Program Method
Data: The evaluation must use one or more of the following data types to assess program impact:		
Monthly billing data		
Hourly load data		
Load research data		
End-use load metered data	✓	The evaluator used the following to determine Equivalent Full Load Hours for furnace filter alarm savings calculations: PY16 Heating and Cooling metering study (heating) and PY13 central air conditioner monitoring study (cooling).
Building and equipment simulation models	✓	The evaluator used PY16 building simulation modeling, adjusted for heating and cooling saturations, to determine the waste-heat factor of efficient lighting.
Survey responses	✓	The evaluator relied on the following: PY18 participating student family and property manager surveys to determine installation rates; the number of people per household; the number of kitchen faucets (for the school-based delivery channel); the number of bathroom faucets and showerheads per household; and electric water heating saturations.
Audit and survey data on equipment type/size efficiency		
Audit and survey data on household or business characteristics	✓	The evaluator relied on PY18 participant/property manager surveys to determine: the number of household occupants; the number of kitchen faucets (for the school-based delivery channel) and bathroom faucets; and the number of showerheads.
Audit and survey data on energy-related building characteristics	✓	For the school-based delivery channel, the evaluator relied on PY18 participant surveys to determine electric water heating saturations. For the multifamily kit delivery channel, the evaluator referred to the program requirements.

[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 marketing materials, and surveyed recipients of multifamily and school kits to inform the PY18 process evaluation. Key research findings follow.

Benchmarking

Of five benchmarked school kit programs, Ameren Missouri's school-based delivery channel sent out the greatest number of school kits. In comparison to other programs, which relied on direct-installation, the multifamily delivery channel used property managers to install kit items in each unit and achieved higher installation rates than other programs. Appendix B presents the sources used for benchmarking.

Participant Satisfaction

Participating families expressed enthusiasm about the school-based delivery channel. All surveyed families strongly agreed that "[they] are satisfied with [their] child's experience in the Ameren Missouri Energy Efficiency Kits School Program" (100%, n=205).

Participating property managers felt positively about their experiences with the multifamily delivery channel. All responding property managers agreed that "[they were] satisfied with [their] experience in the Ameren Missouri Multifamily Efficient Kits Program." High-efficiency bathroom faucet aerators, water heater pipe insulation, high-efficiency kitchen faucet aerators, and furnace filter alarms received the highest possible satisfaction ratings, followed by LEDs. Respondents gave lower ratings to the showerhead.

CSR Process Evaluation Requirements

As previously addressed, the Missouri CSR requires that demand-side programs serving as part of a utility's preferred resource plan are subject to ongoing process and impact evaluations that meet certain criteria. Process evaluations must address, at a minimum, the five questions listed in Table 5. The table also provides a summary response for each specified CSR process requirement. Cadmus previously offered a summary of data used to meet with impact CSR requirements (shown in Table 4).

Table 5. Summary Responses to CSR Process Evaluation Requirements

CSR Process Evaluation Requirement Number[1]	CSR Requirement Description	Summary Response
1	What are the primary market imperfections common to the target market segment?	The Energy Efficiency Kits Program target market segments did not change in PY18. First, the school-based kit delivery channel targeted Ameren Missouri electric customers, specifically those with electric water heating; however, inefficiencies resulted from the disconnect between school enrollment areas, Ameren Missouri's service territory, and households having electric water heating. For PY18, Cadmus identified that 13% of school kits were sent to households that received a kit in a previous year, and 2% of kits reached the same households in PY18 alone, due to more than one household member attending a participating school. Next, participants did not opt-in to the school-based kit delivery channel and may have lacked sufficient knowledge of the energy-saving benefits of measures provided through the school kits. Lastly, for the multifamily kit delivery channel, which targeted residential units in multifamily properties, there was a higher likelihood (than for single-family housing) that property owners would be responsible for paying the electricity bill; this may prevent tenants, who would use the high-efficiency household items, from experiencing direct benefits through their electricity bills.
2	Is the target market segment appropriately defined, or should it be further subdivided or	The school-based delivery channel's target market segment is appropriately defined. The multifamily delivery channel target market segment may benefit from becoming more broad. The school-based delivery channel's target market segment consists of schools within Ameren Missouri's service territory. For the multifamily delivery channel, the target market segment consists of Ameren Missouri customers living in multifamily units that use electric water heating or are Ameren Missouri Natural Gas customers. The school-based delivery channel's educational component is designed

CSR Process Evaluation Requirement Number[1]	CSR Requirement Description	Summary Response
	merged with other market segments?	to lessen the market imperfection of inadequate information or knowledge regarding energy-savings benefits from high-efficiency household items. To reduce the market imperfection of paying for gas saving measures of non-Ameren Missouri customers, Ameren Missouri co-delivered school kits with a natural gas provider in PY17, and then expanded this approach to include it Ameren Missouri Natural Gas in PY18. This improved Ameren Missouri's ability to better target its customers. Similarly, the multifamily kits delivery channel became co-delivered with Ameren Missouri Natural Gas in PY18, but its limited natural gas service area did not overlap with sufficient numbers of new multifamily properties. At the same time, co-delivery with the natural gas provider having a more applicable service territory was abandoned, and identifying additional qualified properties continued to limit program participation. These considerations suggest that the program may benefit from redefining the target market segment to be more inclusive.
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?	The two kit delivery channels appropriately identified a range of easily installed, low-cost measures that serve as the core of kit programs. Cadmus compared the school-based kit delivery channel and the multifamily-kit delivery channel to similar utility programs to establish whether the kit contents represented standard practice or if other measures could be considered. The Ameren Missouri school kits included a range of lightweight measures that students could bring home and easily install. Compared to five other school kit programs, Ameren Missouri's school kits contained all of the most common measures (e.g., light bulbs, showerheads, aerators, a filter alarm), with the exception of an LED night light, which five other benchmarked programs offered. Compared to other programs, Ameren Missouri's multifamily kit delivery channel contained most of the common measures provided by utilities (all four benchmarked programs offered LED or CFL bulbs, showerheads, and kitchen and bathroom aerators to multifamily units), along with measures typically not offered by other similar programs (e.g., LED bulbs, pipe wrap). In PY18, the multifamily kits were customized to include additional showerheads and bathroom faucet aerators for one additional bathroom, which better reflected the diversity of needs.
4	Are the communication channels and delivery mechanisms appropriate for the target market segment?	For school kits, communication flowed to and from Ameren Missouri, the implementers (ICF and NEF), school administrators and teachers, and students and families. Communication between these groups was clear and appropriate for the delivery channel. For the multifamily kits, communication flowed to and from Ameren Missouri, ICF, the property managers, and their tenants. According to Cadmus' interviews with stakeholders, communication channels and delivery mechanisms for the multifamily delivery channel were appropriate.

CSR Process Evaluation Requirement Number[1]	CSR Requirement Description	Summary Response
5	What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation of each end-use measure included in the program?	For the school delivery channel, the evaluation analysis found that school kits' distribution may experience inefficiencies due to households with more than one eligible child receiving more than one kit. Adding further gas partnership to the school kits delivery channel continued to reduce the inefficiency of providing kits to households not using electricity from Ameren Missouri to heat their water. For the multifamily delivery channel, the delivery channel reduced the problem of incentivizing property managers to install energy-efficient measures by providing free measures. In PY18, the program maintained 100% installation for measures distributed to property managers for multifamily properties. The multifamily delivery channel further maximized the participation of qualified properties by offering additional showerheads and bathroom faucet aerators for units having two bathrooms.

[1] State of Missouri. *Administrative Rules: Missouri Code of State Regulations*. Missouri 4 CSR 240-22.070(8) (A) requirements 1 through 5. Revised May 2011. Available online: https://www.sos.mo.gov/cmsimages/adrules/csr/current/4csr/4c240-22.pdf

Key Conclusions and Recommendations

In PY18, the Energy Efficiency Kits program successfully extended its gas provider partnerships to co-deliver the school-based delivery channel and improved kit delivery in the multifamily delivery channel, including additional measures for units with more than one bathroom. Cadmus offers the following conclusions and recommendations for improving the program.

Conclusion 1. School kits distribution may be redundant in some households with more than one school-aged child. Based on Home Energy Worksheet (HEW) responses, 13% of school kits in PY18 were sent to households that received a school kit in a previous year, and nearly 2% of school kits were sent to households that received a school kit in the current year. Installation rates, however, remained unchanged between PY17 and PY18. Households that received more than one kit had lower LED installation rates (77%) than households that had received just one kit (91%). Cadmus observed a similar trend for bathroom aerators and water pipe insulation, but the differences were not statistically significant. The rising saturation of kits among households with school-aged children supports investigating extending kit eligibility beyond schools. Stakeholders said, under the next incarnation of the kits program, single-family homes may be under consideration for eligibility to receive kits.

Recommendation 1. Increase distribution of school kits to a wider pool of schools or an alternative population. Continue to monitor prior participation in the school kits delivery channel through HEW responses. Consider varying schools and areas to reduce sibling participation without excessively limiting Ameren Missouri electric customers. Alternatively, investigate options for providing more kit items that participants could install multiple times in the home—for example, smart power strips or night lights.

Conclusion 2. The multifamily delivery channel benefited from customizing multifamily kit contents to available properties. Multifamily kit delivery for this delivery channel became more customized to

individual properties in PY18. Where apartment units included two bathrooms, one showerhead and bathroom faucet aerator were added to multifamily kits. Based on this change, the delivery channel delivered and installed an additional 193 showerheads and 184 bathroom faucet aerators compared to what it would have delivered with the prior multifamily kit measure configuration.

Recommendation 2. Build on the concept of altering the program to maximize participation of qualifying multifamily properties. Given this delivery channel has struggled to find qualified properties (despite efforts to expand qualification criteria through adding gas co-delivery), the program may benefit from focusing on maximizing participation of properties that qualify and offering more services to the qualified multifamily properties. Stakeholders discussed the possibility of the multifamily channel further expanding to provide a more holistic suite of services to properties, such as complete retrofits.

PY17 Recommendation Tracking

During the PY17 evaluation, the evaluation team provided recommendations for improving delivery of the Energy Efficiency Kits Program, and these recommendations were taken under consideration for PY18's program implementation. Table 6 summarizes the status of each recommendation.

Table 6. PY17 Recommendation Tracking

PY17 Recommendations	Recommendation Status	Ameren Missouri Explanation
Evaluate school kit showerhead performance and increase education on measure benefits.	Completed	Teachers were encouraged to emphasize the showerhead benefits in their curriculum discussions and to remind students about video instructions available online. In the next cycle, the Energy Efficiency Kits program has a new vendor and a different showerhead. The material promotes the showerhead in the following terms "...and still enjoy a full and satisfying shower."
Modify PY18 Home Energy Worksheets to gauge repeat participation.	Completed	PY18 Home Energy Worksheets included the question, "Has your household received more than one Ameren Missouri efficiency kit?" Response options included: "No, we only received one Ameren Missouri efficiency school kit"; "Yes, we received one in a previous year [please explain]"; or "Yes, we received more than one this fall [please explain]."
Review *ex ante* calculations for water heater pipe wrap.	Completed	Ameren Missouri updated the TRM in January 2018 to include a new algorithm agreed to through the settlement of PY16 results. In the review of the PY17 gross savings results, Ameren Missouri found an incorrect thickness had been used in the calculations. The final PY17 settlement included an update of these values. The PY18 evaluation uses the correct thickness.
Reassess efforts to communicate with teachers, particularly through developing online resources.	In Progress	The new school kits vendor for the next program cycle offers more online communication options for teachers (including email).
Extend gas co-delivery partnerships.	Completed	School kits were co-delivered with Ameren Missouri Natural Gas and Spire gas during the past cycle

PY17 Recommendations	Recommendation Status	Ameren Missouri Explanation
Establish a gas company partnership to co-deliver multifamily kits or have a kit version with only light bulbs.	Completed	The Market Rate Kit program now partners with Ameren Missouri Natural Gas. The light-bulb-only kit proposal was discussed with Ameren Missouri and stakeholders in previous years but was not pursued.
Evaluate furnace filter alarm performance.	Competed	Discussions between Ameren Missouri and the implementer showed that filter whistles were installed, but often did not "go off" before the filter was changed in the course of routine management. In some cases, the filter whistle was not reinstalled when a new filter was placed into service. The program already began to educate property managers that filter whistles would only "go off" when routine maintenance was neglected. The program will consider whether filter alarms are redundant, given routine filter checks.
Promote available informational materials for property managers' use.	Completed	Properties received door hangers and pre-and post-installation letters. In some cases, the program assisted the property in distributing the materials. The program will continue to review the steps, including material distribution with the properties during the application process.

Introduction

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In PY18, the program provided energy efficiency kits through two separate delivery channels:

- **School-based delivery channel.** Ameren Missouri offered this delivery channel for a third year. Participating teachers received classroom curriculum and energy-saving school kits (school kits) to distribute to their students. Each school kit contained: one energy-efficient showerhead; one energy-efficient kitchen faucet aerator; one energy-efficient bathroom faucet aerator; one furnace filter alarm; three feet of water heater pipe wrap; and four LEDs. In PY18, the Energy Efficiency Kits program co-delivered the school-based delivery channel with natural gas providers, Ameren Missouri Natural Gas and Spire, which serves Eastern and Western Missouri.
- **Multifamily delivery channel.** Ameren Missouri offered this delivery channel in PY15 through the Efficient Products program, then moved it to the Energy Efficiency Kits program in PY16. This delivery channel partnered with Ameren Missouri Natural Gas in PY18 to provide energy-saving multifamily kits (multifamily kits) to property managers of eligible multifamily homes. In PY18, the program enrolled multifamily properties that were Ameren Missouri electric customers having electric hot water heating, or gas hot water heating if they were also Ameren Missouri Natural Gas customers. To become eligible in prior years, properties had to have three or more rental units with electric water heaters. The property manager (or staff) installed multifamily kit items in each of the property's units. Property managers (or staff) installed multifamily kit items in each property's units. The multifamily kit delivery channel offered the following for each apartment unit: one energy-efficient showerhead for up to two bathrooms; one energy-efficient kitchen faucet aerator; one energy-efficient bathroom faucet aerator for up to two bathrooms; one furnace filter alarm; up to six feet of water heater pipe wrap; and six LEDs. This provided two more LEDs than in the PY16 kit.

As shown in Table 7, kit items differed by delivery channel.

Table 7. PY18 Energy Kit Contents

Measure	School Kit Quantity	Multifamily Kit Quantity
Energy-Efficient Showerhead	1	1 per bathroom
Energy-Efficient Kitchen Faucet Aerator	1	1
Energy-Efficient Bathroom Faucet Aerator	1	1 per bathroom
LEDs	4 bulbs	6 bulbs
Water Heater Pipe Wrap*	3 feet	As needed, up to 6 feet
Furnace Filter Alarm	1	1

*Each school kit contained 3 feet of pipe wrap, and each multifamily kit contained up to 6 feet.

For PY16–PY18, Ameren Missouri contracted with ICF International (ICF) as the program implementer. ICF implemented the multifamily and school-based delivery channels, with support from the National Energy Foundation (NEF) in delivering the school-based delivery channel. NEF is a nonprofit educational organization that promotes energy literacy and provides energy efficiency curriculum development and materials distribution to teachers.

For the multifamily kit delivery channel, ICF created property manager marketing material and collateral for tenants; delivered and tracked multifamily kit items and program materials; and managed property manager eligibility and enrollment. For the school-based delivery channel, NEF developed the school kit curriculum; built program awareness through eligible schools; delivered and tracked school kits and program materials; enrolled teachers; and conducted day-to-day management. NEF wrote the curriculum materials at a sixth-grade level and confirmed their appropriateness with the Missouri Department of Education.

The program continued to jointly deliver the program with Spire, delivering co-branded or Ameren Missouri branded school kits depending on the school's location within utility territories.

Program Activity

In PY18, the Energy Efficiency Kits program delivered 16,366 school kits and 591 multifamily kit measures (the number of measures per kit varied, depending on the number of bathrooms and need for the given units). In total, 187,546 energy efficiency kit measures were distributed to Ameren Missouri participants, as shown in Table 8. To account for shared energy savings from co-delivering school kits with Spire, Ameren Missouri estimated the percentage of measures installed with electrical water heaters and applied this percentage to total school kits distributed.

Table 8. PY18 Energy Efficiency Kits Program Activity

Measure	PY18 Total Participation	PY18 Reported
School Kits[1]		
Energy-Efficient Showerhead	16,366	5,573
Energy-Efficient Kitchen Faucet Aerator	16,366	5,573
Energy-Efficient Bathroom Faucet Aerator	16,366	5,573
LEDs	65,464	65,464
Water Heater Pipe Wrap (ft)	49,098	16,719
Furnace Filter Alarm	16,366	16,366
Subtotal	**180,026**	**115,268**
Multifamily Kits		
Energy-Efficient Showerhead	784	784
Energy-Efficient Kitchen Faucet Aerator	579	579
Energy-Efficient Bathroom Faucet Aerator	775	775
LEDs	3,546	3,546
Water Heater Pipe Wrap (ft)	1,245	1,245
Furnace Filter Alarm	591	591
Subtotal	**7520**	**7520**
Total	**187,546**	**122,788**

[1]For the school kits delivery channel, co-delivered with a local gas company, Ameren Missouri reported a subset (34%) of the total water heating measures delivered, which it anticipated would provide electric water heater savings. As a result, the reported number of water heating measures is smaller than the quantity of measures delivered.

Evaluation Methodology

In evaluating Ameren Missouri's Energy Efficiency Kits program, Cadmus identified the following objectives for PY18.

Impact Evaluation Priorities

- Verify program tracking data
- Verify the number of installations to calculate gross energy and demand impacts
- Estimate net-to-gross (NTG) estimates, including spillover
- Assess coincident peak net demand savings using Ameren Missouri's load shapes and estimation method

Process Evaluation Priorities

- Assess customers' satisfaction levels and participation motivations
- Assess program design and implementation
- Track changes in key progress indicators

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

Table 9. PY18 Process and Impact Evaluation Activities and Rationale

Evaluation Activity	Process	Impact	Rationale
Data Tracking Review		✓	Cadmus reviewed program tracking data recorded in the Vision database to determine the data's completeness and to identify any variables necessary for impact calculations.
Engineering Analysis		✓	Cadmus estimated measure-specific savings using a set of algorithms and inputs.
Stakeholder Interviews	✓		Cadmus interviewed program managers and implementers to understand their perspectives on program effectiveness.
Property Manager Surveys	✓	✓	For the multifamily kit delivery channel, Cadmus interviewed corporate and site-level property managers to gather information to inform the NTG assessment, installation rates, and program processes.
Student Family Participant Surveys	✓	✓	For the school-based delivery channel, Cadmus surveyed student family participants receiving school kits to gather information to inform the NTG assessment, installation rates, and program processes.
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.

Evaluation Activity	Process	Impact	Rationale
Benchmarking	✓	✓	Cadmus benchmarked Ameren Missouri's Energy Efficiency Kits program against similar programs to assess program design and implementation, and to identify opportunities for program delivery improvements.
Track Key Progress Indicators	✓	✓	Cadmus tracked key progress indicators for the third program year.
Cost-Effectiveness Review		✓	Ameren Missouri determined the Energy Efficiency Kits program's cost-effectiveness.

Data Tracking Review

Cadmus reviewed the program tracking data, recorded in the Vision database, to determine completeness and to identify variables necessary for impact calculations. The evaluation team received final school-based delivery channel and multifamily delivery channel Vision data in March 2019.

Engineering Analysis

To estimate per-unit gross savings for each Energy Efficiency Kit program measure, Cadmus used engineering algorithms, assumptions, and all available Ameren Missouri- and participant-specific inputs. This report's Gross Impact Evaluation Results section presents each algorithm and input assumption.

Stakeholder Interviews

In September 2018, Cadmus interviewed Ameren Missouri Program Management to gather information on program design and on planned changes to inform the survey's content. In February 2019, Cadmus interviewed program stakeholders to gather further information on program changes, identify challenges encountered by program staff or implementers, and determine appropriate solutions.

As shown in Table 10, the team spoke with five Ameren Missouri program stakeholders, including two program implementers; Appendix E provides the stakeholder interview guide.

Table 10. PY18 Completed Stakeholder Interviews

Stakeholder Group	Interviews Conducted
Ameren Missouri Program Management	2
ICF International Management	1
National Energy Foundation Management	2
Total	**5**

In addition, Cadmus conducted an interview with the Ameren Missouri Marketing Manager, addressing marketing strategies and messaging for all programs, including Energy Efficiency Kits.

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

Participant Surveys

In PY18, Cadmus conducted an online survey of participating families who received the school kit (shown in Appendix G). The survey covered topics required for the impact and process evaluations, including measure verification, free ridership, spillover, participant decision-making, and satisfaction.

The evaluation team fielded the survey in March 2019. As ICF included an HEW in the school kits that requested contact information necessary for the survey, the team timed the survey for approximately 16 weeks after students received school kits. The survey asked participants about the quantity of school kit items they installed, their satisfaction with the program, and the features of the participant's home, including the number of occupants. To avoid duplicating efforts, the online survey did not ask for information ICF already gathered on HEWs.

Table 11. Participant Survey Summary

Target Audience	Survey Method	Field Dates	Population	Completed Surveys
School Kit Participants	Online	March 2019	2,986*	178
Multifamily Corporate- and Site-Level Property Managers	Phone	March 2019	9	5

*Cadmus surveyed all HEW respondents with a valid email address.

As the team had to procure email addresses to deliver the survey, the evaluation offered a drawing for three $100 prizes for participants providing their email address on HEWs returned by each school. Out of 7,946 HEWs returned, 2,986 provided an email address (shown in Table 11). Following distribution of the email survey invitation, 520 emails bounced, for an adjusted population of 2,466. About 218 respondents began the survey and, after taking into account incomplete responses, the survey produced 178 completed responses for a response rate of 8.8%, slightly lower than PY17.

Cadmus also surveyed participating property managers, including one corporate-level property manager and four site-level property managers, who answered survey questions appropriate to their roles. Administered in March 2019, by phone, the survey covered impact and the process evaluation topics (shown in Appendix F). The survey asked the corporate-level property manager about motivations for participating and assessed free ridership. Site-level property manager questions verified measures and satisfaction with the measures. Both types of property managers received questions about the process, satisfaction with the program and Ameren Missouri, and spillover. The evaluation offered a random drawing for four $50 prizes for completing the survey.

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 measures and about

the influence of Ameren Missouri's efficiency program's marketing campaign on their decisions to adopt the measures.

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[2] (IL TRM) for NTG evaluation of a residential kits program for LEDs and following the recommendations to the Illinois Stakeholder Advisory Group, to apply at NTG of 1.0 for non-LED measures.[3] A flow chart demonstrating the Illinois NTG process is presented in Appendix J.

Benchmarking

Cadmus updated the PY17 benchmarking analysis, comparing Ameren Missouri's Energy Efficiency Kits Program with four multifamily kit programs and five school kit programs. The team based its analysis on secondary research, using its benchmarking database and publicly available information to identify programs with the most recent evaluations available that contained information regarding metrics and topics planned for benchmarking. In PY17, Cadmus extended the benchmarking analysis for the multifamily channel to include installation rates and savings.

For both delivery channels, benchmarking research compared the following:

- Kit contents
- Measure installation rates
- Program participation
- *Ex post* per-kit savings (kWh)
- *Ex post* per-kit savings (kW)

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[2] 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

[3] Ameren Illinois Company Energy Efficiency Portfolio 2019 Net-to-Gross Ratios. Section 1.7. Direct Distribution of Efficient Products Initiative. http://ilsagfiles.org/SAG_files/NTG/2019_NTG_Meetings/Final_Values/AIC_2019_NTGR_Recommendations_Summary_FINAL_2018-09-25.pdf

Key Progress Indicators

Cadmus tracked the following key progress indicators for the Energy Efficiency Kits program:

- Program year electric savings
- The number of energy efficiency kit recipients
- Changes to energy efficiency kit's contents
- Recipients' satisfaction with energy efficiency kits and with Ameren Missouri

In the PY18 evaluation, the team compared these key progress indicators to new results.

Cost-Effectiveness

Using final PY18 Energy Efficiency Kits program participation and implementation data, as well as *ex post* gross and net savings estimates presented in this report, Cadmus and Apex Analytics 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 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' process evaluation findings, organized into five sections:

1. Program Design
2. Program Delivery
3. Marketing and Outreach
4. Teacher Interviews
5. Student Family Survey Results

As program delivery did not change significantly for school kits, this report does not include detailed process evaluation results, unless the team identified significant areas of concern or differences. The multifamily kits program is less well-established, therefore results from the property manager survey have been included in this report. Appendix I provides school kit participant survey results.

Program Design

The Energy Efficiency Kits program's design seeks to achieve energy savings through promotion of energy efficiency awareness and installation of household energy-saving products, supplied through two distinct delivery channels: school-based and multifamily.

The school-based delivery channel seeks to achieve long-term energy savings by increasing awareness of energy efficiency among youth within Ameren Missouri's service territory. In doing so, the program distributes energy efficiency curriculum and school kits. This delivery channel centers on the concept that educating young people about the benefits from saving energy results in long-term behaviors that reduce consumption. Ameren Missouri's program uses a specific curriculum, correlated to Missouri state standards. Installing and monitoring new energy efficiency kit items helps in reinforcing the curriculum.

Participating sixth-grade teachers taught the energy efficiency curriculum and distributed school kits to their students. At home, students—with their families' help—installed the kit measures. Following kit measure installations, students and their families answered questions on a HEW, either through a form that they returned to their teachers or online at AmerenMissouri.com/education.

If a family completed the form online, they received a confirmation code to put on the paper forms and were asked to return the form to the students' teachers. To encourage worksheet completion, teachers sending in at least 80% of their classroom's HEW data received a $50 gift card, on the program's behalf. For completing the form, students received a Think! Talk! Take Action! wristband.

The multifamily delivery channel sought to achieve long-term energy savings by increasing multifamily property managers' awareness of low-cost energy efficiency items. Energy-saving items were distributed to market-rate multifamily properties for direct installation by the properties' facility managers. The program distributed one kit's worth of items for each eligible market-rate unit. Eligible participants included Ameren Missouri electric account holders that owned or managed non-low-income,

multifamily properties with rental units that used electric water heaters, or, if they had gas hot water heaters, that were also Ameren Missouri Natural Gas account holders.

Table 12 shows energy efficiency kit contents for school and multifamily kits.

Table 12. PY18 Energy Efficiency Kit Contents

Measure	School Kit Quantity	Multifamily Kit Quantity
Energy-Efficient Showerhead	1	1 per bathroom
Energy-Efficient Kitchen Faucet Aerator	1	1
Energy-Efficient Bathroom Faucet Aerator	1	1 per bathroom
LEDs	4 bulbs	6 bulbs
Water Heater Pipe Wrap	3 feet	As needed, up to 6 feet
Furnace Filter Alarm	1	1

As shown in Table 13, the kits also included supplemental material, which varied by delivery channel.

Table 13. PY18 Energy Kit Supplemental Materials by Delivery Channel

School Kit	Multifamily Kit
Teacher materials: • Teacher Guide • DVD • Posters • Program Evaluation • Rewarding Results flier • Interactive website Student materials: • Shower Timer • Student Guide • Parent Letter • "Turn it Off" Stickers • Flow Test Bag • HEW • *Think! Talk! Take Action* wristbands	Door hanger Pre- and post-installation letters

Program Delivery

This section discusses responses that program staff and implementers supplied during Cadmus' interviews, which primarily focused on roles and responsibilities, program implementation, program changes, delivery successes and program achievements, program implementation challenges, and potential changes beyond PY18.

Roles and Responsibilities

Ameren Missouri program staff provided overall strategic direction, program management, and oversaw evaluation activities.

As in prior years, ICF continued to implement the multifamily and school-based delivery channels in PY18, with NEF's support for delivering the school-based delivery channel. For the multifamily kit delivery channel, ICF accomplished the following: created the property manager marketing material and collateral for tenants; delivered and tracked multifamily kit items and program materials; and managed property manager eligibility and enrollment.

For the school-based delivery channel, NEF developed the school kit curriculum, built eligible schools' awareness of the program, delivered and tracked school kits and program materials, maintained teacher enrollment, and provided day-to-day management. NEF wrote the curriculum materials for a sixth-grade level and confirmed their appropriateness with the Missouri Department of Education.

Program Implementation

For PY18, Ameren Missouri targeted a school kit distribution goal of 16,000 school kits and a multifamily kit distribution soft target of 1,250 multifamily kits. Though the program exceeded its school kits goal by distributing 16,366 school kits; it distributed 591 multifamily kits to six participating properties in PY18, falling below target goals.

School-Based Delivery Channel Implementation

Implementers worked with Ameren Missouri to identify and receive approval for schools' participation in the school-based delivery channel. Schools were selected based on location, Ameren Missouri's and Spire's service territories, and information from prior year HEW data, where available. Cadmus' survey found 92% of surveyed participants were Ameren Missouri electric customers (n=209)—an amount slightly more than in PY16 and PY17. Overall, 46% of survey respondents and 46% of survey respondents who were Ameren Missouri customers used electric water heating (n=163), an increase from PY17. According to survey results, Spire provided gas to 49% of households receiving school kits in PY18, and Ameren Missouri was the second-most common gas provider (11%).

As in the prior year, teachers registered online for the number of school kits they would need, based on numbers of students in their classes. After verifying that teachers were from eligible schools, NEF confirmed the number of school kits with teachers prior to shipping kits directly to the school. As NEF tracked kits at the teacher level (rather than by student) to preserve student privacy, more than one kit could go to a home if teachers distributed extras, or if a family had more than one child in the same grade in participating schools.

Multifamily Delivery Channel Implementation

In PY18, the multifamily delivery channel continued with a soft target of 1,250 kits (compared to 3,600 in PY17). Ameren Missouri lowered the program's target based on better-than-expected performance of other programs in the portfolio. Kit items remained the same as in PY17, but units with more than one bathroom could receive up to one additional bathroom faucet aerator and showerhead. PY18 participation decreased for the multifamily kit delivery channel relative to PY17 and was insufficient to meet program goals. In PY18, the overall enrollment process did not change: after property managers completed the application, implementers assigned them to the low-income or market-rate delivery channels. Program staff determined the number of multifamily kits needed for each property using data

collected during site visits. Implementation staff then sent multifamily kit items. Property managers or their staff then established a timeline for installing the multifamily kit items. ICF staff reported that they checked on multifamily kit item installations by sampling a number of units from each building to determine whether installations occurred.

PY18 Program Changes

Ameren Missouri continued the school-based and multifamily delivery channels in PY18, though with some refinements.

In PY18, Ameren Missouri co-delivered the school-based delivery channel with Ameren Missouri Gas, in addition to continuing with its Spire co-deliveries. As the new co-delivery development was still under Ameren Missouri's branding, no need existed to expand the existing two kit types (Ameren Missouri-only and Ameren Missouri-Spire).

NEF continued to improve the school kits delivery channel's online portal in PY18, updating the portal's look and adding educational activities for students (including a word find and crossword puzzle). The HEW was also updated to gather information about repeat and duplicate participation.

In PY18 Ameren Missouri began co-delivering multifamily kits with Ameren Missouri Gas. Consequently, the qualification criteria changed from requiring all-electric properties to allowing properties receiving electric service from Ameren Missouri and gas service from Ameren Missouri Natural Gas.

Additionally, the Multifamily delivery channel increased the number of measures provided to properties with two bathroom units. In addition to these measure changes, an update in the initial site visit process included an inspection of the property's heating and cooling system to determine whether filter whistles were appropriate for the site.

Delivery Successes and Program Achievements

Stakeholders reported the following successes and achievements:

- **Surpassed the participation goal for the school-based delivery channel.** The school-based delivery channel achieved its participation goal for the third program year in a row. According to NEF, program customer service established strong relationships with participating teachers and the program filled quickly.
- **Positive school kit stakeholder feedback.** Per NEF implementer staff, the program continued to receive positive feedback from teachers (through their evaluation forms), and from students' parents and guardians (through the home energy worksheet comments). Specifically, respondents positively recalled the efficiency tip video series included online and in the DVD, as well as the games added to the online portal.
- **Successful co-delivery of school kits with Ameren Missouri Natural Gas**. Adding Ameren Missouri Natural gas as a co-delivery partner enabled Ameren Missouri to share program delivery costs and Ameren Missouri Natural Gas to claim savings for water-saving measures in homes with gas water heating.

- **Positive multifamily kit feedback.** Property managers reported appreciating the program and the initial site visits to ensure measures would work for their properties.
- **Successful customization of multifamily kits.** Property managers expressed gratitude for the additional showerheads and aerators for two-bathroom apartments. Based on this change, the delivery channel delivered an additional 193 showerheads and 184 bathroom faucet aerators than it would have prior to increasing the number of measures.
- **Improved efficiency of program delivery.** To address the challenge of larger properties experiencing participation delays due to scheduling a large number of measure installations and having to store large quantities of equipment, the multifamily kit delivery channel started delivering kits in smaller batches. Once participants established an installation date, program staff sent sufficient kit measures to cover 40 to 50 apartment units. Program staff then conducted follow-up inspections on a sample of units from each building after installation of each batch.

Program Implementation Challenges and Potential Changes

Stakeholders reported the following challenges and changes under consideration:

- **Redundant school kit participation.** Based on PY18 HEW responses, 13% of school kits were sent to households that received a kit in PY16 or PY17, and nearly 2% of kits were sent to households that had already received a kit in PY18. NEF reported that 79% of schools receiving Ameren Missouri-Spire kits, and 77% receiving Ameren Missouri kits, in PY18 had participated in a prior year. The program does not have a mechanism for recovering unused kit items; instead, it encourages participants to give items to a neighbor or someone local to maximize the chance of keeping items within Ameren Missouri's service territory.
- **Low enrollment in the multifamily kit delivery channel.** As in PY17, the multifamily delivery channel did not reach soft program targets despite the added partnership with Ameren Missouri Natural Gas. This is primarily due to challenges in finding qualified properties. The Ameren Missouri Natural Gas territory is small and not concentrated in urban areas with significant multifamily property presence. ICF observed that the biggest opportunity for multifamily properties would be in the St. Louis area—Spire's natural gas service area.
- **Re-envisioning the kits program.** Stakeholders mentioned possible broad changes for the next incarnation of the Energy Efficiency Kits program, including considering kit distributions to single-family households. Similarly, the multifamily channel could expand to provide a broader set of services to properties, such as complete retrofits.

Marketing

As in PY16 and PY17, program marketing and outreach differed between school-based and multifamily delivery channels.

For the school-based delivery channel, NEF led marketing efforts, sending emails to teachers about the program and mailing letters to school principals. Marketing efforts were limited to the first part of the year as the program quickly became subscribed.

In PY18, marketing efforts for the multifamily delivery channel continued as in PY17. The program marketed this channel to multifamily property owners in tandem with the Low-Income program to efficiently provide a one-stop shop for property managers. Joint market rate and low-income multifamily marketing efforts included Apartment Association outreach to generate contacts and build relationships with property management companies overseeing a suite of properties. Ameren Missouri account managers marketed the multifamily kits to property managers through direct-mail postcards, followed by phone calls, emails, and other outreach.

Due to limited availability and specific customer eligibility requirements, the kits delivery channels were not included in mass media campaigns used for other residential portfolio programs.

Property Manager Surveys

This section discusses responses from the PY18 phone survey of five property managers who participated in the multifamily delivery channel. To inform the process evaluation, the property manager survey covered topics such as the participation process and satisfaction with the program, kit items, and Ameren Missouri; it further gathered data to calculate kit item installation rates, free ridership, and spillover.

In PY18, program participants included one corporate-level property manager who acted as the decision-maker for participating in the program, along with four site-level property managers who implemented the program at their sites. Accordingly, the survey targeted decision-making, free ridership, and spillover questions to the corporate-level property manager and installation and measure-specific satisfaction to the site-level property managers.

Program Participation

As in PY17, the corporate-level property manager expressed a variety of reasons for participating in the program, including providing a beneficial service to tenants, reducing tenant energy bills, reducing maintenance costs, benefitting the environment, and the program's free cost.

An improvement from PY17, all property managers recalled receiving the Ameren Missouri door hangers and pre- and post-installation letters.

Program Satisfaction

Participating property managers felt positively about their program experience and offered feedback on how that perception could be improved. Three out of five strongly agreed (one somewhat agreed and one agreed) that "[they were] satisfied with [their] experience in the Ameren Missouri Multifamily

Efficient Kits Program." Those who did not strongly agree with the program satisfaction statement mentioned time pressures and the need for additional lighting measures.

Measure Satisfaction

The evaluation team asked site-level multifamily property managers about their experiences with the various kit measures. Similar to PY17, all property managers provided the highest possible satisfaction rating for high-efficiency bathroom faucet aerators and water pipe insulation. Ratings for the other kitchen aerators, LEDs, and furnace whistled improved from PY17 levels, with all respondents also providing the highest satisfaction rating for these items, with the exception of LEDs (three property managers rated themselves as *very satisfied,* and one rated themselves as *somewhat satisfied*). Respondents gave lower ratings to the showerhead (two said they were *very satisfied* and two said they were *somewhat satisfied*).

A few respondents volunteered reasons for satisfaction ratings they assigned each measure. Table 14 lists this feedback. Showerheads provoked the most criticism, specifically about water pressure (similar to PY17). In contrast to PY17, however, one property manager reported some tenants' reported the LEDs were too bright; otherwise property manager feedback on the LEDs was enthusiastic.

Table 14. Reasons for Liking or Disliking Kit Measures

Measure	Reasons for Rating
High-Efficiency Showerhead (n=3)	"The majority of complaints we received were about the showerheads. Most complained that the water pressure went way down. I live here too, I live on-site and I noticed a significant difference. I also got to hear 162 other people complain about it." "We have had several complaints about less water pressure."
High-Efficiency Kitchen Faucet Aerator (n=3)	"People liked those! At first, they didn't really understand what they were. We see most of the residents on the 1st of the month when they pay rent, so what we did is we took them into the kitchen in our office, which is really another unit, and explained and showed them how they work. Once we did that, we got a lot of positive feedback."
High-Efficiency Bathroom Faucet Aerator (n=3)	"These weren't as confusing as the kitchen aerators. Since they didn't seem to make an impact one way or the other, I assume they are well liked."
LED Light Bulbs (n=3)	"Honestly, people will complain about anything. That being said, we had several complaints about the LEDs being too bright. I personally love them, but we did have a few who did not." "They love these! We still have residents tell us how much they love their bulbs." "We do get complaints, but just that there is not enough of them! They all love them so much, they want more."
Dirty Furnace Filter Alarm (n=3)	-
Water Pipe Insulation (n=3)	"This was fine. I do want to note that we were sent way too much of that. I think whoever we were working with came out and picked it up. But, just so you are aware…way too much."

Satisfaction with Ameren Missouri

Cadmus asked participating multifamily property managers about their satisfaction levels with Ameren Missouri as a utility. Similar to PY17, four out of five respondents were *very satisfied* with Ameren Missouri as an electric provider overall, and one was *somewhat satisfied*. Moreover, the multifamily delivery channel experience positively affected satisfaction with Ameren Missouri for all five respondents.

The team asked participating multifamily property managers about reasons for their satisfaction levels with Ameren Missouri. The most important satisfaction driver was the service reliability offered by the utility.

Student Family Surveys

This section addresses the PY18 online survey of participating families receiving the school kit. To augment the process evaluation, the student family survey covered topics such as satisfaction with the program, kit items, and Ameren Missouri, and it gathered data to calculate kit item installation rates, free ridership, and spillover. About 218 respondents started the survey; after accounting for incomplete responses, the team received 178 completed online student family surveys, and omitted blanks, "don't know," and "refused" from the total number of responses. As program delivery did not change significantly, this evaluation does not report detailed process evaluation results unless the team identified significant areas of difference or concerns. Responses did not differ significantly from PY17. Appendix I includes results of the school kit participant survey.

Gross Impact Evaluation Results

This section details Cadmus's determination of each measure's installation rate and calculations of per-unit savings for Ameren Missouri's Energy Efficiency Kits program.

Measure Installation Verification

As shown in Table 15, this section includes installation rates of energy efficiency kit items. Installation rates derived from PY18 student family surveys for the school delivery channel and from PY18 property manager surveys for the multifamily delivery channel, both fielded in March. Based on PY18 survey results, in-service rates (ISR) for school kits measures remained similar compared to PY17 for showerheads, kitchen faucet aerators, bathroom faucet aerators, LED bulbs, and water heater pipe wrap, while the ISR for furnace filter alarms declined slightly.

Participating school kits households reported in the HEW whether they had received another kit in the same or previous year. Households that received more than one kit had lower LED installation rates (77%) than households that had received just one kit (91%). Cadmus observed a similar trend for bathroom aerators and water pipe insulation, but the differences were not statistically significant.

Table 15. Measure Installation

Delivery Channel and Measure	PY18 Percentage Installed and Operating	PY17 Percentage Installed and Operating	*Ex Ante* Assumption
School Kit			
Energy-Efficient Showerhead	59%	57%	65%
Energy-Efficient Kitchen Faucet Aerator	51%	53%	53%
Energy-Efficient Bathroom Faucet Aerator	57%	56%	57%
LEDs	90%	92%	92%
Water Heater Pipe Wrap	64%	66%	74%
Furnace Filter Alarm	39%	45%	47%
Multifamily Kit			
Energy-Efficient Showerhead	100%	100%	100%
Energy-Efficient Kitchen Faucet Aerator	100%	100%	100%
Energy-Efficient Bathroom Faucet Aerator	100%	100%	100%
LEDs	100%	100%	98%
Water Heater Pipe Wrap	100%	100%	100%
Furnace Filter Alarm	100%	100%	100%

As shown in Table 16, the team used PY18 survey results to adjust gross savings for the school-based delivery channel. The team adjusted school savings using survey inputs to account for the percentage of survey respondents that were Ameren Missouri customers and the proportion of Ameren Missouri customers who used electric water heating (see Appendix I). The *ex ante* assumptions reflect per-unit savings. Program-level *ex ante* savings reflected electric hot water heating saturation by claiming 34% of the total quantity of hot water heating measures distributed.

Program requirements for the multifamily delivery channel required participating properties to be Ameren Missouri customers with electric water heating, therefore no adjustments were required.

Table 16. Saturation Adjustments

Delivery Channel and Measure	Electric Saturation	Ameren Missouri Customers	*Ex Ante* Electric Saturation Assumption (per-unit)	*Ex Ante* Ameren Missouri Customer Assumption
School Kits				
Energy-Efficient Showerhead	46%	92%	40%	86%
Energy-Efficient Kitchen Faucet Aerator	46%	92%	40%	86%
Energy-Efficient Bathroom Faucet Aerator	46%	92%	40%	86%
LEDs	100%	92%	100%	86%
Water Heater Pipe Wrap	46%	92%	100%	86%
Furnace Filter Alarm	100%	92%	n/a	86%
Multifamily Kits				
Energy-Efficient Showerhead	100%	100%	100%	100%
Energy-Efficient Kitchen Faucet Aerator	100%	100%	100%	100%
Energy-Efficient Bathroom Faucet Aerator	100%	100%	100%	100%
LEDs	100%	100%	100%	100%
Water Heater Pipe Wrap	100%	100%	100%	100%
Furnace Filter Alarm	100%	100%	n/a	100%

Measure-Specific Gross Savings

Cadmus estimated gross savings for the program measures using engineering algorithms established in the Energy Efficiency Kits Evaluation Plan and outlined in the following sections.

For each calculation in this section, Cadmus provides a realization rate comparing the *Ex Ante* Savings/Unit (or the deemed per-unit TRM savings per unit) and the *Ex Post* Savings/Unit, which equals the team's estimated savings per-unit. Calculations in this section provide per-unit savings estimates and include adjustments for kit item installation rates items and for saturations of applicable electric heating and cooling equipment.

Showerheads

Cadmus estimated energy-efficient showerhead savings using the following algorithm:

$$Energy\ Savings\ \left(\frac{kWh}{Year}\right) = \frac{People \times Shower\ Time \times Days \times \%Days \times \Delta GPM \times (T_{SHOWER} - T_{IN}) \times C_P \times Den \times ISR \times Sat \times Util}{3{,}413 \times RE \times Showerheads}$$

Where:

People = Number of people taking showers (ppl/household)

Shower Time =	Average shower length (min/shower)	
Days	=	Number of days per year (day/yr)
%Days	=	Number of showers per day, per person (shower/day-ppl)
ΔGPM	=	Difference in rated gallons per minute for the base showerhead and the new showerhead (gal/min)
T_{SHOWER}	=	Average water temperature at the showerhead (°F)
T_{IN}	=	Average inlet water temperature (°F)
C_P	=	Specific heat of water (Btu/lb-°F)
Den	=	Water density (lbs/gal)
3,413	=	Conversion rate from Btu to kWh (Btu/kWh)
RE	=	Water heater's recovery efficiency
Showerheads	=	Number of showerheads used per home
ISR	=	Percent of measures installed and operating
Sat	=	Electric water heater saturation
Util	=	Percent of measures delivered to Ameren Missouri customers

Table 17 shows engineering algorithm inputs used to determine savings from showerheads, delivered through both the school kits and multifamily kits delivery channels. Inputs for numbers of people per home and numbers of showerheads per home differed between the two delivery channels. For both delivery channels, Cadmus updated these values based on PY18 survey data.

Table 17. Showerhead Savings Assumptions

Term	Value: School	Source: School	Value: Multifamily	Source: Multifamily
People	4.2	PY18 Energy Efficiency Kits School Survey Results	1.8	PY18 Energy Efficiency Kits Property Manager Survey Results
Shower Time	7.8	Secondary Source[1]	7.8	Secondary Source[1]
Days	365	Conversion Factor (day/yr)	365	Conversion Factor (day/yr)
%Days	0.6	Secondary Source[2]	0.6	Secondary Source[2]
ΔGPM	0.85	PY18 Program Data[3]	0.85	PY18 Program Data[3]
T_{SHOWER}	105	Illinois TRM[4]	105	Illinois TRM[4]
T_{IN}	61.3	Ameren Missouri 2012 TRM[5]	61.3	Ameren Missouri 2012 TRM[5]
C_P	1	Specific Heat of Water (Btu/lb-°F)	1	Specific Heat of Water (Btu/lb-°F)
Den	8.33	Density (lb/gal)	8.33	Density (lb/gal)
3,413	3,413	Conversion Factor (Btu/kWh)	3,413	Conversion Factor (Btu/kWh)
RE	0.98	Secondary Source[6]	0.98	Secondary Source[6]
Showerheads	2.0	PY18 Energy Efficiency Kits School Survey Results	1.34	PY18 Program Data
ISR	59%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
SAT	46%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
Util	92%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data

[1] Cadmus and Opinion Dynamics Evaluation Team. *Showerhead and Faucet Aerator Meter Study*. Memorandum prepared for Michigan Evaluation Working Group. pp 10. 2013.

[2] Ibid. pp. 11.

[3] The rated gallons per minute (gpm) for the new showerhead is 1.5, and the rated gpm for the base showerhead is 2.35, which came from the Illinois Statewide TRM for Energy Efficiency Version 5.0. pp. 184. 2016. Available Online: http://ilsagfiles.org/SAG_files/Technical_Reference_Manual/Version_5/Final/IL-TRM_Version_5.0_dated_February-11-2016_Final_Compiled_Volumes_1-4.pdf

[4] Ibid. pp. 103.

[5] *Ameren Missouri 2012 Technical Resource Manual.* Appendix A. pp. 43. Available online: https://www.efis.psc.mo.gov/mpsc/commoncomponents/viewdocument.asp?DocId=935658483

[6] National Renewable Energy Laboratory, Building America Research. *Recovery Efficiency for Electric Water Heater.* Benchmark definition, pp. 12. 2009. Available online: http://www.nrel.gov/docs/fy10osti/47246.pdf

Using this engineering algorithm, the team determined an adjusted *ex post* energy savings value of 85.2 kWh/year for each showerhead included in a school kit—a value approximately 116% of the program's *ex ante* value (73.6 kWh/year), as shown in Table 18. Cadmus attributes the difference in estimates to a combination of higher-than assumed electric water heating saturations, ISRs, and utility provider proportions, based on values from Cadmus's survey results.

Table 18. *Ex Ante* and *Ex Post* Comparison for School Kit Showerheads

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
73.6 kWh/yr	85.2 kWh/yr	116%

The team determined an *ex post* energy savings value of 210.0 kWh/year for each showerhead included in a multifamily kit. This value was approximately 102% of the program's *ex ante* value (206.2 kWh/year), as shown in Table 19. Despite the similarity in estimates, *ex post* energy savings reflected higher-than-assumed efficiency improvements, based on updated program data (difference in rated gallons per minute for the base showerhead and the new showerhead), moderated by lower-than-assumed numbers of people per household and showerheads per home, based on values from Cadmus' survey results.

Table 19. *Ex Ante* and *Ex Post* Comparison for Multifamily Showerheads

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
206.2 kWh/yr	210.0 kWh/yr	102%

Kitchen Faucet Aerators

Cadmus evaluated kitchen and bathroom faucet aerators separately. The team estimated per-unit savings for kitchen faucet aerators using the following algorithm:

$$Energy\ Savings\ \left(\frac{kWh}{Year}\right) = \frac{People \times Faucet\ Time \times Days \times \Delta GPM \times (T_{FAUCET} - T_{IN}) \times C_P \times Den\ \times\ DF \times ISR \times Sat \times Util}{3{,}413 \times RE \times Number\ of\ Faucets}$$

Where:

People = Number of people using faucet aerators (people/household)

Faucet Time = Average length of faucet use per day (minutes/day)

Days = Number of days per year (day/yr)

ΔGPM = Difference in rated gallons per minute between the base unit and the new unit (gal/min)

ΔT = Temperature at the tap minus the temperature at the water main

T_{FAUCET} = Average water temperature out of the faucet (°F)

T_{IN} = Average inlet water temperature (°F)

C_P = Specific water heat (Btu/lb-°F)

Den = Water density (lb/gal)

DF = Drain factor

3,413 = Conversion rate from Btu to kWh (Btu/kWh)

RE = Water heater's recovery efficiency

Number of faucets = Number of used faucets per home

ISR = Percent of measures installed and operating

Sat = Electric water heater saturation

Util = Percent of measures delivered to Ameren Missouri customers

Table 20 shows engineering algorithm inputs used to determine savings from kitchen faucet aerators, delivered through both the school kits and multifamily kits delivery channels. The inputs for the number of people per home and the number of faucets per home differed between the two channels. For both channels, Cadmus updated these values based on PY18 survey data. Additionally, faucet time values varied for the School versus Multifamily channels, per different secondary sources applicable to each type.

Table 20. Kitchen Faucet Aerator Savings Assumptions

Term	Value: School	Source: School	Value: Multifamily	Source: Multifamily
People	4.2	PY18 Energy Efficiency Kits School Survey Results	1.8	PY18 Energy Efficiency Kits Property Manager Survey Results
Faucet Time	4.5	Secondary Source[1]	3.7	Secondary Source[2]
Days	365	Conversion Factor (day/yr)	365	Conversion Factor (day/yr)
ΔGPM	0.7	PY18 Program Data[3]	0.7	PY18 Program Data[3]
T_{FAUCET}	93	Illinois TRM[4]	93	Illinois TRM[4]
T_{IN}	61.3	Ameren Missouri 2012 TRM[5]	61.3	Ameren Missouri 2012 TRM[5]
CP	1	Specific Heat of Water (Btu/lb-°F)	1	Specific Heat of Water (Btu/lb-°F)
Den	8.33	Density (lb/gal)	8.33	Density (lb/gal)
DF	0.75	Drain Factor[6]	0.75	Drain Factor[6]
3,413	3,413	Conversion Factor (Btu/kWh)	3,413	Conversion Factor (Btu/kWh)
RE	0.98	Secondary Source[7]	0.98	Secondary Source[7]
Number of Faucets	1.2	PY18 Energy Efficiency Kits School Survey Results	1.00	PY18 Program Data
ISR	51%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
SAT	46%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
Util	92%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data

[1] Cadmus and Opinion Dynamics Evaluation Team 2013. pp. 10.

[2] PY11 MFIQ Metering Study.

[3] The new faucet aerator is rated at 1.5 gpm, and the base faucet aerator is rated at 2.2 gpm, which is the federal-rated maximum flow rate for faucets (10CFR430.32 (p) (DOE 1998).

[4] *Illinois Statewide Technical Reference Manual for Energy Efficiency Version 5.0.* pp. 178. 2016. Available online: http://ilsagfiles.org/SAG_files/Technical_Reference_Manual/Version_5/Final/IL-TRM_Version_5.0_dated_February-11-2016_Final_Compiled_Volumes_1-4.pdf

[5] *Ameren Missouri 2018 Technical Resource Manual.* Appendix A. pp. 43. Available online: https://www.efis.psc.mo.gov/mpsc/commoncomponents/viewdocument.asp?DocId=935658483

[6] Illinois Statewide Technical Reference Manual for Energy Efficiency Version 5.0. pp. 175. 2016. Available online: http://ilsagfiles.org/SAG_files/Technical_Reference_Manual/Version_5/Final/IL-TRM_Version_5.0_dated_February-11-2016_Final_Compiled_Volumes_1-4.pdf

[7] NREL 2009. pp. 12.

Using the engineering algorithm, the team determined an *ex post* energy savings value of 52.5 kWh/year for each kitchen faucet aerator included in a school kit. This value was approximately 114% of the program's *ex ante* value (45.9 kWh/year), as shown in Table 21. The estimates differed primarily due to higher-than assumed electric water heating saturations and utility provider proportions, based on values from Cadmus's survey results.

Table 21. *Ex Ante* and *Ex Post* Comparison for School Kit Kitchen Faucet Aerators

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
45.9 kWh/yr	52.5 kWh/yr	114%

The team determined an *ex post* energy savings value of 99.5 kWh/year for each kitchen faucet aerator included in a multifamily kit. This value was approximately 86% of the program's *ex ante* value (115.9 kWh/year), as shown in Table 22. Based on PY18 survey results, Cadmus made a downward adjustment to the number of people per household.

Table 22. *Ex Ante* and *Ex Post* Comparison for Multifamily Kitchen Faucet Aerators

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
115.9 kWh/yr	99.5 kWh/yr	86%

Bathroom Faucet Aerators

The team estimated per-unit savings for bathroom faucet aerators using the following algorithm:

$$Energy\ Savings\ \left(\frac{kWh}{Year}\right) = \frac{People \times Faucet\ Time \times Days \times \Delta GPM \times (T_{FAUCET} - T_{IN}) \times C_P \times Den\ \times\ DF \times ISR \times Sat \times Util}{3{,}413 \times RE \times Number\ of\ Faucets}$$

Where:

People = Number of people using faucet aerators (people/household)

Faucet Time = Average length of faucet use per day (minutes/day)

Days = Number of days per year (day/yr)

ΔGPM = Difference in rated gpm between the base unit and the new unit (gal/min)

ΔT = Temperature at the tap minus the temperature at the water main

T_{FAUCET} = Average water temperature out of the faucet (°F)

T_{IN} = Average inlet water temperature (°F)

C_P = Specific heat of water (Btu/lb-°F)

Den = Water density (lb/gal)

DF = Drain Factor

3,413 = Conversion rate from Btu to kWh (Btu/kWh)

RE = Water heater's recovery efficiency

Number of faucets = Number of used faucets per home

ISR = Percent of measures installed and operating

Sat = Electric water heater saturation

Util = Percent of measures delivered to Ameren Missouri customers

Table 23 shows the engineering algorithm inputs used to determine savings from bathroom faucet aerators, delivered through the school kits and multifamily kits delivery channels. Inputs for the number of people per home and the number of faucets per home differed between the two delivery channels. For both, the team updated these values based on PY18 survey data.

Table 23. Bathroom Faucet Aerator Savings Assumptions

Term	Value: School	Source: School	Value: Multifamily	Source: Multifamily
People	4.2	PY18 Energy Efficiency Kits School Survey Results	1.8	PY18 Energy Efficiency Kits Property Manager Survey Results
Faucet Time	1.6	Secondary Source[1]	1.6	Secondary Source[1]
Days	365	Conversion Factor (day/yr)	365	Conversion Factor (day/yr)
ΔGPM	0.7	PY18 Program Data[2]	0.7	PY18 Program Data[2]
T_{FAUCET}	86	Illinois TRM[3]	86	Illinois TRM [3]
T_{IN}	61.3	Ameren Missouri 2012 TRM[4]	61.3	Ameren Missouri 2012 TRM[4]
CP	1	Specific Heat of Water (Btu/lb-°F)	1	Specific Heat of Water (Btu/lb-oF)
Den	8.33	Density (lb/gal)	8.33	Density (lb/gal)
DF	0.9	Drain Factor[5]	0.9	Drain Factor[5]
3,413	3,413	Conversion Factor (Btu/kWh)	3,413	Conversion Factor (Btu/kWh)
RE	0.98	Secondary Source[6]	0.98	Secondary Source[6]
Number of Faucets	2.3	PY18 Energy Efficiency Kits School Survey Results	1.34	PY18 Program Data
ISR	57%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
SAT	46%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
Util	92%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data

[1] Cadmus and Opinion Dynamics Evaluation Team. *Showerhead and Faucet Aerator Meter Study*. Memorandum prepared for Michigan Evaluation Working Group. 2013. pp. 10.

[2] The rated gpm for the new faucet aerator is based on PY18 program data and the rated gpm for the base faucet aerator will be 2.2 gpm, which is the federal rated maximum flow rate for faucets (DOE 1998).

[3] *Illinois Statewide Technical Reference Manual for Energy Efficiency Version 5.0.* pp. 178. 2016. Available online: http://ilsagfiles.org/SAG_files/Technical_Reference_Manual/Version_5/Final/IL-TRM_Version_5.0_dated_February-11-2016_Final_Compiled_Volumes_1-4.pdf

[4] *Ameren Missouri 2018Technical Resource Manual.* Appendix A. pp. 43. Available online: https://www.efis.psc.mo.gov/mpsc/commoncomponents/viewdocument.asp?DocId=935658483

[5] Illinois Statewide Technical Reference Manual for Energy Efficiency Version 5.0. pp. 175. 2016. Available online: http://ilsagfiles.org/SAG_files/Technical_Reference_Manual/Version_5/Final/IL-TRM_Version_5.0_dated_February-11-2016_Final_Compiled_Volumes_1-4.pdf

[6] NREL 2009. pp. 12.

Using this engineering algorithm, the team determined an *ex post* energy savings value of 10.2 kWh/year for each bathroom faucet aerator included in a school kit. This value was approximately 128% of the program's *ex ante* value (7.96 kWh/year), as shown in Table 24. Cadmus attributes the difference in estimates to higher-than assumed electric water heating saturation and utility provider proportions, based on values from Cadmus's survey results.

Table 24. *Ex Ante* and *Ex Post* Comparison for School Kit Bathroom Faucet Aerators

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
7.96 kWh/yr	10.2 kWh/yr	128%

The team determined an *ex post* energy savings value of 30.1 kWh/year for each bathroom faucet aerator included in a multifamily kit. This value was approximately 90% of the program's *ex ante* value (33.5 kWh/year), as shown in Table 25. Differences stemmed from PY18 survey results that indicated fewer people and slightly fewer faucets used per home than assumed.

Table 25. *Ex Ante* and *Ex Post* Comparison for Multifamily Bathroom Faucet Aerators

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
33.5 kWh/yr	30.1 kWh/yr	90%

LEDs

Cadmus estimated per-unit savings for LEDs using the following algorithm:

$$Energy\ Savings\ (kWh/Year) = \frac{(Watt_{Base} - Watt_{EE}) \times Hours_{RES} \times Days}{1{,}000} \times WHF \times ISR \times Util$$

Where:

- $Watt_{Base}$ = Wattage of the original incandescent bulb replaced by LED
- WattEE = Wattage of new LED installed
- $Hours_{RES}$ = Average hours of use per day
- Days = Days used per year
- 1,000 = The conversion factor from Wh to kWh
- WHF = Waste heat factor (to account for interactive effects)
- ISR = Percent of measures installed and operating
- Util = Percent of measures delivered to Ameren Missouri customers

Table 26 provides assumptions for LED savings. The team used the same engineering algorithm and inputs for school and multifamily kits, but included different adjustments according to the delivery channel.

Table 26. LED Savings Assumptions

Term	Value: School	Source: School	Value: Multifamily	Source: Multifamily
$Watts_{Base}$	43	The lumen-equivalent halogen wattage for LEDs	43	The lumen-equivalent halogen wattage for LEDs
$Watts_{EE}$	9	9-watt ENERGY STAR LEDs with 800 lumen output	9	9-watt ENERGY STAR LEDs with 800 lumen output
$Hours_{RES}$	2.7	2017 Ameren Missouri Lighting study	2.7	2017 Ameren Missouri Lighting study
Days	365	Conversion Factor (day/yr)	365	Conversion Factor (day/yr)
1,000	1,000	Conversion Factor (Wh/kWh)	1,000	Conversion Factor (Wh/kWh)
WHF	0.99	2017 Ameren Missouri Lighting study	0.99	2017 Ameren Missouri Lighting study
ISR	90%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
Util	92%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data

Using this engineering algorithm, the team determined an *ex post* energy savings value of 27.6 kWh/year for each LED bulb distributed in the school kits. This value was approximately 93% of the program's *ex ante* value (29.8 kWh/year), as shown in Table 27. The team adopted updated hours-of-use values from the PY17 Lighting Study that were lower-than-assumed, which was combined with an increase in the utility saturation and slightly reduced ISR.

Table 27. *Ex Ante* and *Ex Post* Comparison for School Kit LEDs

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
29.8 kWh/yr	27.6 kWh/yr	93%

Using this engineering algorithm, the team determined an *ex post* energy savings value of 33.5 kWh/year for each LED bulb distributed in the multifamily kits. This value was approximately 90% of the program's *ex ante* value (37.2 kWh/year), as shown in Table 27. As in the school kits channel, the difference between values resulted from lower-than-assumed hours of use.

Table 28. *Ex Ante* and *Ex Post* Comparison for Multifamily Kit LEDs

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
37.2 kWh/yr	33.5 kWh/yr	90%

Water Heater Pipe Wrap

Cadmus estimated per-unit savings from pipe wrap using the following algorithm, updated in PY17:

$$\Delta kWh = ((C_{Base}/R_{Base} - C_{EE}/R_{EE}) * L * \Delta T * Hours)/(\eta DHW_{Elec} * 3{,}412) \times ISR \times Sat \times Util$$

Where:

C_{BASE}	=	Circumference (feet) of uninsulated pipe with 0.75-inch diameter
R_{BASE}	=	Thermal resistance coefficient (hr-°F-ft^2)/Btu) of uninsulated pipe
C_{EE}	=	Circumference (ft) of insulated pipe = diameter (in) * π/12
R_{EE}	=	Thermal resistance coefficient (hr-°F-ft^2)/Btu) of insulated pipe
L	=	Length of pipe from a water heating source covered by pipe wrap (in feet)
ΔT	=	Average temperature difference between supplied hot water and ambient air temperatures (°F)
Hours	=	Hours per year
ηDHWElec	=	Recovery efficiency of the electric water heater
3,412	=	The conversion rate from Btu to kWh (Btu/kWh)
ISR	=	Percent of measures installed and operating
Sat	=	Electric water heater saturation
Util	=	Percent of measures delivered to Ameren Missouri customers

Table 29 shows inputs for engineering algorithm used to determine savings for one foot of pipe wrap, delivered through the school kits and multifamily kits delivery channels.

Table 29. Pipe Wrap Savings Assumptions

Term	Value: School	Source: School	Value: Multifamily	Source: Multifamily
C_{BASE}	0.196	PY16 Energy Efficiency Kits Program: TRM Gross Savings Memo	0.196	PY16 Energy Efficiency Kits Program: TRM Gross Savings Memo
R_{BASE}	1	Illinois TRM[1]	1	Illinois TRM[1]
C_{EE}	0.458	PY18 Program Data	0.458	PY18 Program data
R_{EE}	4.54	PY18 Program Data	4.54	PY18 Program Data
L	1	PY18 Program Data	1	PY18 Program Data
ΔT	60	Illinois TRM[1]	60	Illinois TRM[1]
Hours	8760	Conversion Factor (hrs/yr)	8760	Conversion Factor (hrs/yr)
ηDHWElec	0.98	Illinois TRM[1]	0.98	Illinois TRM[1]
3,412	3,412	Conversion Factor (Btu to kWh)	3,412	Conversion Factor (Btu to kWh)[1]
ISR	65%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
SAT	46%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
Util	92%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data

[1] Illinois Statewide Technical Reference Manual for Energy Efficiency Version 6.0. pp. 168. 2017. Available online: http://www.ilsag.info/il_trm_version_6.html.

In contrast to other water heating measures, the Ameren Missouri TRM per-unit savings value for water heater pipe wrap did not include an adjustment for electric water heating saturations (although it did at the program level).

Using the engineering algorithm above and including adjustments for electric water heating saturations, the team determined an *ex post* energy savings value of 4.1 kWh/year per one foot of pipe wrap included in a school kit. To directly compare *ex post* energy savings with *ex ante* values, the team calculated per-unit savings without adjusting for water heating saturations. Without the water saturation adjustment, Cadmus estimated 8.8 kWh/yr for this measure—80% of the program's *ex ante* value (11.0 kWh/year), as shown in Table 30. The difference in estimates resulted from lower-than-expected rates of measures installed and operating and differences in calculating *ex ante* savings. Inputs varied for R-values, temperature differences between the water and air temperature, and for pipe insulation thickness. Whereas the gross savings calculations used an insulation thickness of 0.5 in, the *ex ante* assumed insulation thickness of 0.375 in.

Table 30. *Ex Ante* and *Ex Post* Comparison for School Kit Pipe Wrap

Ex Ante Savings/Unit[1]	*Ex Post* Savings/Unit	Realization Rate
Without Electric Water Heater Adjustment (Comparable *ex ante* and *ex post*)		
11.0 kWh/yr	8.8 kWh/yr	80%
Final Adjusted (*ex ante* includes electric water heater adjustment)		
11.0 kWh/yr	4.1 kWh/yr	37%

[1] The Ameren Missouri TRM value for water heater pipe wrap did not adjust for electric water heating saturations, specifically that Ameren Missouri only paid for 34% of pipe wrap. Adjusting *ex ante* estimates to account for the 34% that Ameren Missouri paid for, *ex ante* savings would be 3.74 kWh/year (34% of 11.0 kWh/yr), equivalent to a 110% realization rate (4.1 kWh/yr *ex post*, compared to 3.74 kWh/year *ex ante* with pipe wrap adjustment).

Cadmus determined an *ex post* energy savings value of 15.0 kWh/year for each foot of pipe wrap included in a multifamily kit. This value was approximately 86% of the program's *ex ante* value (17.4 kWh/year), as shown in Table 31. The difference between estimates resulted from calculations of *ex ante* savings values (not including electric water heater saturation, which did not apply for hot water heater measures in the multifamily delivery channel), described above.

Table 31. *Ex Ante* and *Ex Post* Comparison for Multifamily Kit Pipe Wrap

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
17.4 kWh/yr	15.0 kWh/yr	86%

Furnace Filter Alarms

The furnace filter alarm is designed to save energy at the heating or cooling equipment motor by alerting homeowners that the filter must be changed. Cadmus estimated furnace filter alarm savings using the following algorithm for alarms delivered through the school kits and multifamily kits delivery channels:

$$\Delta\text{kWh/yr} = \left(\frac{\Delta\text{kWh}}{yr_{heat}} + \frac{\Delta\text{kWh}}{yr_{cool}}\right) \times ISR \times Util$$

$$\frac{\Delta\text{kWh}}{yr_{heat}} = kW_{motor} \text{ x } EFLH_{heat} \text{ x EI x Equip}_{heat}$$

$$\frac{\Delta \text{kWh}}{yr_{cool}} = kW_{motor} \text{ x } EFLH_{cool} \text{ x EI x Equip}_{cool}$$

Where:

kW_{motor} = Average motor full load electric demand (kW)

$\text{EFLH}_{\text{heat}}$ = Estimated full-load heating hours for region (hours/year)

$\text{EFLH}_{\text{cool}}$ = Estimated full-load cooling hours for region (hours/year)

EI = Efficiency improvement (%)

$\text{Equip}_{\text{heat}}$ = Qualifying heating equipment (%)

$\text{Equip}_{\text{cool}}$ = Qualifying cooling equipment (%)

ISR = Percent of measures installed and operating

Util = Percent of measures delivered to Ameren Missouri customers

Table 32 shows input values used in the furnace filter alarm algorithm and their sources.

Table 32. Furnace Filter Alarm Savings Assumptions

Term	Value: School	Source: School	Value: Multifamily	Source: Multifamily
kW_{motor}	0.5	Pennsylvania TRM[1]	0.5	Pennsylvania TRM[1]
$\text{EFLH}_{\text{heat}}$	1,496	PY16 Heating and Cooling Metering Study	1,496	PY16 Heating and Cooling Metering Study
$\text{EFLH}_{\text{cool}}$	869	Ameren Missouri 2012 TRM[2]	869	Ameren Missouri 2012 TRM[2]
EI	15%	Pennsylvania TRM[1]	15%	Pennsylvania TRM[1]
$\text{Equip}_{\text{heat}}$	96%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Requirements
$\text{Equip}_{\text{cool}}$	96%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Requirements
ISR	39%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data
Util	92%	PY18 Energy Efficiency Kits School Survey Results	100%	PY18 Program Data

[1] Public Utilities Commission. *State of Pennsylvania Technical Reference Manual.* pp 73. 2016. Available online: http://www.puc.pa.gov/pcdocs/1370278.docx

[2] *Ameren Missouri 2012 Technical Resource Manual.* Appendix A. Available online: https://www.efis.psc.mo.gov/mpsc/commoncomponents/viewdocument.asp?DocId=935658483

Using the engineering algorithm above, the team determined an *ex post* energy savings value of 61.1 kWh/year for each furnace filter alarm distributed in the school kits. This value was approximately 89% of the program's *ex ante* value (68.5 kWh/year), as shown in Table 33. Differences between values resulted from lower-than-assumed ISR, based on values from Cadmus' survey results.

Table 33. *Ex Ante* and *Ex Post* Comparison for School Kit Furnace Filter Alarm

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
68.5 kWh/yr	61.1 kWh/yr	89%

Using this engineering algorithm, the team determined an *ex post* energy savings value of 177.4 kWh/year for each furnace filter alarm distributed in the multifamily kits—approximately 91% of the program's *ex ante* value (195.8 kWh/year), as shown in Table 34. Differences resulted from calculation differences of *ex ante* savings, stemming from Equivalent Full Load Hours for heating and cooling. In contrast to the gross savings assumptions listed in Table 32, the *ex ante* calculations assumed $EFLH_{heat}$ value of 2,009 and $EFLH_{cool}$ value of 602.

Table 34. *Ex Ante* and *Ex Post* Comparison for Multifamily Kit Furnace Filter Alarm

Ex Ante Savings/Unit	*Ex Post* Savings/Unit	Realization Rate
195.8 kWh/yr	177.4 kWh/yr	91%

Summary

Table 35 lists per-unit, *ex ante,* and *ex post* gross savings by measure.

Table 35. PY18 Summary: Comparison of *Ex Ante* and *Ex Post* Per-Unit Gross Savings

Measure	Per Unit *Ex Ante* (kWh/yr)	Per Unit *Ex Post* (kWh/yr)	Realization Rate
School Kit			
Energy-Efficient Showerhead	73.6	85.2	116%
Energy-Efficient Kitchen Faucet Aerator	45.9	52.5	114%
Energy-Efficient Bathroom Faucet Aerator	8.0	10.2	128%
LEDs	29.8	27.6	93%
Water Heater Pipe Wrap[1]	11.0	4.1	37%
Furnace Filter Alarm	68.5	61.1	89%
Multifamily Kit			
Energy-Efficient Showerhead	206.2	210.0	102%
Energy-Efficient Kitchen Faucet Aerator	115.9	99.5	86%
Energy-Efficient Bathroom Faucet Aerator	33.5	30.1	90%
LEDs	37.2	33.5	90%
Water Heater Pipe Wrap	17.4	15.0	86%
Furnace Filter Alarm	195.8	177.4	91%

[1] The Ameren Missouri TRM value for water heater pipe wrap did not adjust for electric water heating saturations. Without electric water heating saturation adjustments, the *ex post* savings value for pipe wrap was 8.8 kWh/yr, with a 81% realization rate.

To estimate the program's total gross energy savings, Cadmus applied the per-unit *ex post* values shown in Table 35 to the number of measures distributed. The per-unit *ex post* values already included adjustments for percentages installed and operating, electric water heating saturations, and whether school kits were installed by an Ameren Missouri Customer (as shown in Table 36).

Table 36. PY18 Summary: *Ex Post* Program Gross Savings Accounting for Installation Rates

Measure	PY18 Participation	Per-Unit *Ex Post* Savings (kWh/yr)*	Percent Installed and Operating	Saturation	Ameren Missouri Customers	Total *Ex Post* Savings (MWh/yr)
School Kit						
Energy-Efficient Showerhead	16,366	85.23	0.59	0.46	0.92	1,395
Energy-Efficient Kitchen Faucet Aerator	16,366	52.47	0.51	0.46	0.92	859
Energy-Efficient Bathroom Faucet Aerator	16,366	10.22	0.57	0.46	0.92	167
LEDs	65,464	27.59	0.90	1.00	0.92	1,806
Water Heater Pipe Wrap	49,098	4.08	0.64	0.46	0.92	201
Furnace Filter Alarm	16,366	61.06	0.39	1.00	0.92	999
Multifamily Kit						
Energy-Efficient Showerhead	784	209.97	1.00	1.00	1.00	165
Energy-Efficient Kitchen Faucet Aerator	579	99.45	1.00	1.00	1.00	58
Energy-Efficient Bathroom Faucet Aerator	775	30.07	1.00	1.00	1.00	23
LEDs	3,546	33.54	1.00	1.00	1.00	119
Water Heater Pipe Wrap	1,245	15.00	1.00	1.00	1.00	19
Furnace Filter Alarm	591	177.38	1.00	1.00	1.00	105
Total	**187,546**	**N/A**	**N/A**	**N/A**	**N/A**	**5,915**

*Adjusted to reflect ISR, saturation, and utility.

Net Impact Evaluation Results

Cadmus determined total program net impacts by calculating total gross savings and then applying the following:

- Participant Free Ridership
- Participant Spillover
- NPSO

Cadmus estimated participant LED free ridership and participant spillover ratio for school kit participants using 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[4] (IL TRM) for NTG evaluation of a residential kits program for LEDs and following the recommendations to the Illinois Stakeholder Advisory Group, to apply at NTG of 1.0 for non-LED measures. [5]

For the multifamily kits delivery channel, an LED free ridership and participant spillover ratio was estimated from an interview conducted with a corporate-level project manager who supervised installations of energy-efficient kit measures in the four properties participating in the program.

Free ridership equaled 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 equaled savings occurring 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 that increase net savings.

NPSO results from 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

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4 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

5 Ameren Illinois Company Energy Efficiency Portfolio 2019 Net-to-Gross Ratios. Section 1.7. Direct Distribution of Efficient Products Initiative. http://ilsagfiles.org/SAG_files/NTG/2019_NTG_Meetings/Final_Values/AIC_2019_NTGR_Recommendations_Summary_FINAL_2018-09-25.pdf

program's influence on their decisions to purchase or implement energy-efficient measures without a program incentive.

To calculate the Energy Efficiency Kit program's NTG, Cadmus used the following formula:

$$NTG = 1 - Freeridership + Participant\ Spillover$$

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

Table 37 presents PY18 program net impacts.

Table 37. 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)
School Kits					
Energy-Efficient Showerhead	1,395	0.0%	0.0%	100.0%	1,395
Energy-Efficient Kitchen Faucet Aerator	859	0.0%	0.0%	100.0%	859
Energy-Efficient Bathroom Faucet Aerator	167	0.0%	0.0%	100.0%	167
LEDs	1,806	56.0%	7.0%	51.0%	921
Water Heater Pipe Wrap	201	0.0%	0.0%	105.0%	201
Furnace Filter Alarm	999	0.0%	0.0%	104.0%	999
Subtotal	**5,427**	**18.6%**	**2.3%**	**83.7%**	**4,542**
Multifamily Kits					
Energy-Efficient Showerhead	165	0.0%	0.0%	100.0%	165
Energy-Efficient Kitchen Faucet Aerator	58	0.0%	0.0%	100.0%	58
Energy-Efficient Bathroom Faucet Aerator	23	0.0%	0.0%	100.0%	23
LEDs	119	0.0%	0.0%	100.0%	119
Water Heater Pipe Wrap	19	0.0%	0.0%	100.0%	19
Furnace Filter Alarm	105	0.0%	0.0%	100.0%	105
Subtotal	**488**	**0.0%**	**0.0%**	**100.0%**	**488**
NPSO					**1**
Program Total	**5,915**	**17.1%**	**2.1%**	**85.0%**	**5,031**

Free Ridership Results

Cadmus used a participant self-report approach to determine LED free ridership ratios for 163 School Kit participants and one Multifamily Kit participant. The free ridership methodology used for PY18 followed

the 2019 Illinois Statewide Technical Reference Manual[6] (IL TRM) for NTG evaluation of an energy savings kit program. Cadmus calculated free ridership for each measure 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 free ridership score:

- If you had not received the free LEDs from Ameren Missouri, what is the likelihood you would have purchased new light bulbs of any type within 6 months? (T)
- If you had not received the free LEDs from Ameren Missouri, what is the likelihood you would have purchased LEDs within 6 months? (E)
- [IF T > 5] If you had not received the free LEDs from Ameren Missouri, how many LEDs would you have purchased within 6 months? (Q)

If a participant responds to the quantity question (Q) with a number of LEDs equal to or greater than the amount they received from the Ameren Missouri program, their Quantity Score is set to '10'. If a participant responds to the quantity question (Q) with a number of LEDs less than the amount they received from the Ameren Missouri program, their Quantity Score is equal to the quantity question (Q) response divided by the number of LEDs they received through the program. The free ridership proportion is equal to the rating of the three questions divided by 10.

Cadmus estimated the LED free ridership for Multifamily Kits delivery channel from an interview conducted with a corporate-level project manager who supervised the installations of energy-efficient kit measures in the only four properties participating in the program. In absence of the Multifamily Kits delivery channel, the property manager reported they would not have removed any working light bulbs and replaced them with LEDs within 6 months of their original program participation. Free ridership was estimated at 0% for the Multifamily Kits delivery channel.

Cadmus then averaged individual free ridership scores (weighted by evaluated gross energy savings) to arrive at LED free ridership estimates for each delivery channel. Table 38 provides PY18 LED free ridership estimates for the School Kits and Multifamily Kits delivery channels.

Table 38. Energy Efficiency Kits LED Free Ridership Results

Program Measure	n	Total Weighted Free Ridership Estimate*
School Kits		
LEDs	163	56%
Multifamily Kits		
LEDs	1	0.0%

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

[6] 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

Participant Spillover Results

Cadmus asked school kit delivery channel participants whether they took additional energy-efficient actions since participating in the program. To calculate spillover, the team asked them to rate the importance of the following factors on their decisions to purchase additional energy-efficient equipment:

1. Receiving kit measures through Ameren Missouri's Energy Efficiency Kits program.
2. Information provided from Ameren Missouri or its Heating and Cooling contractor about the benefits of installing the additional equipment.

Survey respondents reported installing 30 additional energy-efficient measures after participating in the Energy Efficiency Kits program; further, they said their program experience was *very important* to the subsequent decision to purchase a high-efficiency appliance rather than a standard-efficiency model.

The team estimated energy savings for the participants' spillover responses, and then divided the total survey sample Energy Efficiency Kits program survey sample spillover savings by the survey sample gross program savings, drawn from the survey sample and described in the following equation:

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

Table 39 presents a summary of the spillover details for the School Kits delivery channel.

Table 39. School Kits Participant Spillover

Spillover Measure	Quantity	Participant Spillover kWh/year Savings*	Total Survey Sample Program kWh/year Savings
Efficient clothes washer	2	74.7*	149.3
Efficient dehumidifier	1	204.0**	204.0
Efficient room air conditioner	1	49.8***	49.8
Efficient water heater (other than heat pump water heater)	2	157.0†	314.0
Heat pump water heater	1	2,284.5***	2,284.5
Efficient Insulation	2	192.3††	384.6
Recycled a Refrigerator	1	1,027.5†††	1,027.5
Program Total			**4,413.7**

*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. Reduced by one half due to high market shares of ENERGY STAR clothes washers. https://energy.mo.gov/sites/energy/files/MOTRM2017Volume3.pdf.

**Weighted average of deemed savings scenarios 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.

† Based on deemed savings from Ameren Missouri 2012 Energy Efficiency Filing Appendix A TRM.

††Based on savings calculated for the PY15 Home Energy Analysis program.

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

The results yielded a 7% spillover estimate for the PY18 school kits delivery channel, as shown in Table 40.

Table 40. School Kits Participant Spillover Percentage

Survey Sample Spillover kWh Savings	Survey Sample Gross Program kWh Savings	Spillover %
4,413.7	60,105.5	7%

The interviewed multifamily kits delivery channel property manager did not report undertaking installations of additional energy efficiency measures or perform energy-efficient activities without receiving financial assistance due to their program participation experiences. Participant spillover for the multifamily kit delivery channel was estimated at 0%.

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).[7] 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 because we didn't collect it in contractor or distributor surveys as in the past. 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.

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 measures that qualified for NPSO. Based on this result, Cadmus estimated that 3% of all nonparticipants in the population adopted measures with ±0.58% absolute precision at 90% confidence. Additionally, the team analyzed confidence/precision

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

around NPSO savings for each type of measure. The absolute precision—with 90% confidence—for each of nine qualified 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.[8] 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.[9]

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 41). 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 Heating and Cooling program (in contrast to prior evaluations), the previously excluded Heating and Cooling products (denoted by an asterisk in Table 41) were added to the list of PY18 measures.

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

[9] 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.

Table 41. PY18 Measures

Measure	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.[10]

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.

For criterion b, the team asked respondents to rate the importance of several Ameren Missouri program marketing and outreach elements (shown in Table 42) in motivating them to adopt the measure, rating these "very important," "important," "not important," or "not important at all." For measures, the

[10] 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.

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 42. 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 contractor 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 43 shows measures and gross evaluated kWh savings attributed to Ameren Missouri, achieving average savings of 242 kWh per measure (Variable A).

Table 43. 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 44, 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 44. PY18 Confidence/Precision Results for Measures

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 43) to the entire PY18 residential nonparticipant population. Table 45 presents the NPSO analysis, resulting in NPSO total evaluated savings of 2,852 MWh portfolio level.

Table 45. 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 46.

Table 46. 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 47, 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. The Energy Efficiency Kits program achieved 0.04% of the total NPSO, at about 1 MWh.

Table 47. 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 Savings Comparison

Figure 2 and Figure 3 show the Energy Efficiency Kits program's energy and demand savings summaries—MPSC-approved target, *ex post* gross, and *ex post* net—in PY16, PY17, and PY18.

Figure 2. PY16-PY18 Energy Efficiency Kits Program Energy Savings Summary

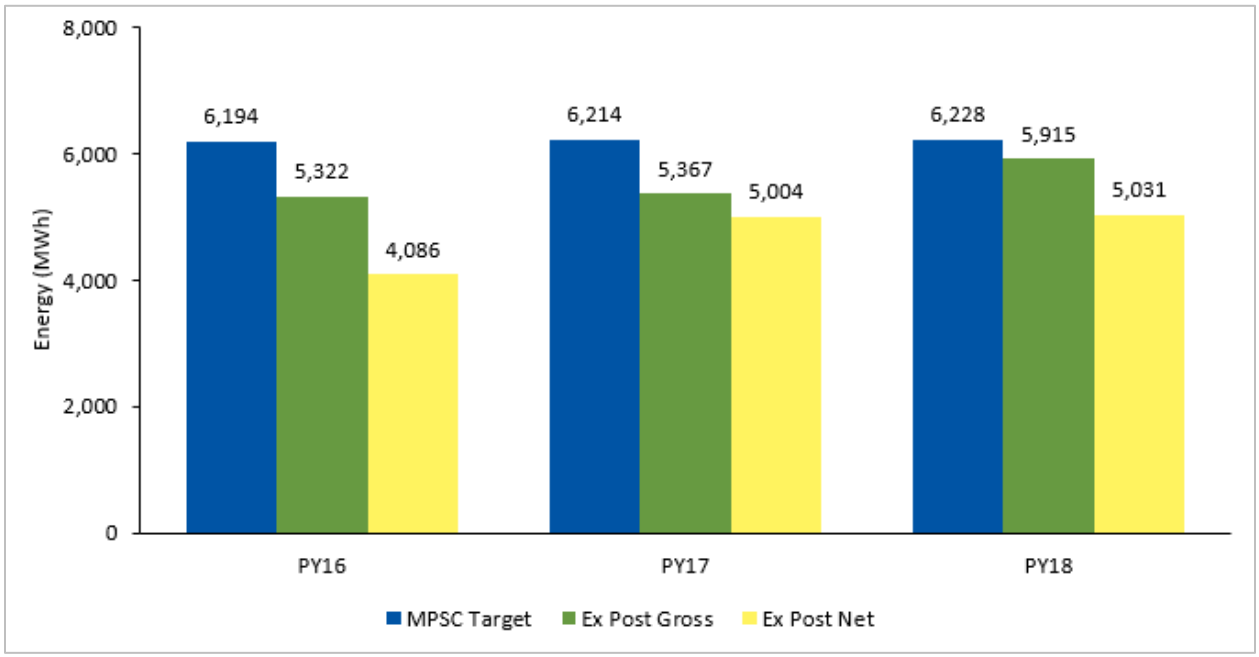
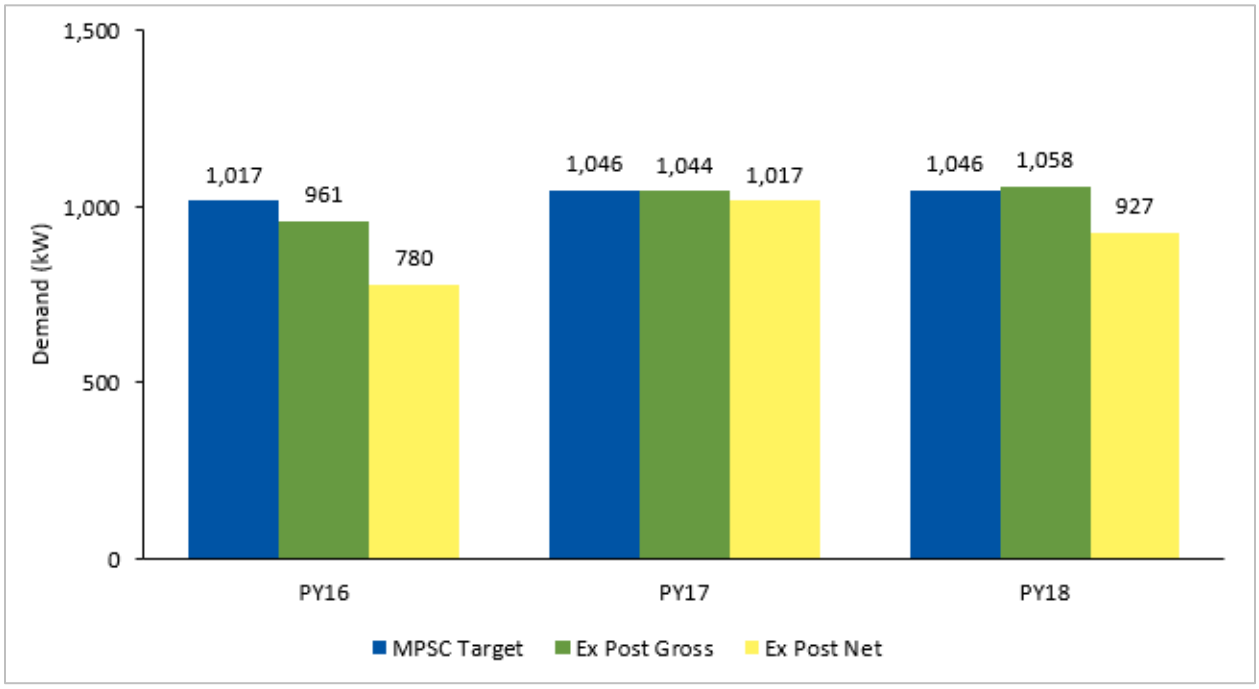


Figure 3. PY16-PY18 Energy Efficiency Kits Program Demand Savings Summary



Benchmarking

As part of the 2016 process evaluation, Cadmus researched eight other utilities that offered measures similar to those in Ameren Missouri's Energy Efficiency Kits 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. Appendix B contains a bibliography of sources. For the 2018 report, we have updated Ameren Missouri's metrics to reflect changes to program impacts.

Benchmarking Metrics and Topics

For the multifamily and school-based delivery channels, benchmarking research compared the following:

- Kit contents
- Measure installation rates
- Program participation
- *Ex post* per-kit savings (kWh)
- *Ex post* per-kit savings (kW)

School Kit Contents and Installation Rates

In comparing similar school kit programs to the school-based delivery channel of Ameren Missouri's Energy Efficiency Kits Program, Cadmus sought to establish whether grade levels targeted and measures implemented for Ameren Missouri could be considered standard practice, or if other measures could be considered.

The comparison programs all offered free energy-efficient products to students and their families, though they targeted varied grade levels. Benchmarked school kit programs most commonly targeted the fifth-grade level. All benchmarked kit programs offered kits to fifth graders, while PNM and IMP targeted fifth grade only, and Vectren Indiana targeted fourth- and fifth-grade levels.

On the other hand, Dayton Power and Light (DP&L) and PPL Electric targeted a more comprehensive range of students, with DP&L distributing kits to grades five to 12 and PPL Electric offering kits to grades two to 12.

As shown in Table 48, all programs offered showerheads, aerators, and LED or CFL light bulbs to students and their families. Compared to other school kit programs, Ameren Missouri's channel contained all of the most common measures (e.g., light bulbs, showerheads, aerators, filter alarm), other than LED night lights (which five other benchmarked programs offered). Only one program offered an energy-efficient power strip (PPL Electric) and did so only to secondary school students.

Table 48. Common School Kit Products

Utility	LED Light Bulbs	CFL Light Bulbs	Night Light	Showerhead	Aerators[1]	Power Strip	Furnace Whistle	Pipe Wrap[2]
Ameren Missouri	✓			✓	✓		✓	✓
Public Service Co. of New Mexico		✓	✓	✓	✓			
Indiana Michigan Power	✓	✓	✓	✓	✓		✓	
PPL	✓		✓	✓	✓	✓	✓	
Vectren Indiana		✓	✓	✓	✓		Discontinued	
Dayton Power & Light		✓	✓	✓	✓		✓	

[1]All school kit programs offered kitchen and bath aerators except for IMP, which only offered kitchen aerators.
[2]Pipe wrap was not included in any of the reviewed school kit programs.

Table 49 compares Ameren Missouri's school kit installation rates with results from similar programs. Lighting measures tend towards the highest installation rates, a result typical for school kit programs. The table presents some installation rates as a range, depending on bulb wattages for LED and CFL light bulbs or age groups targeted. When compared to other utility programs, Ameren Missouri's school kits in PY18 had the highest installation rates for bathroom aerators and some of the higher installation rates for LED light bulbs.

Table 49. Common School Kit Product Initial Installation Rates

Utility	LED Light Bulbs	CFL Light Bulbs	Night Light	Shower head	Kitchen Aerator	Bathroom Aerator	Power Strip	Furnace Whistle
Ameren Missouri (PY18)	**90%**	**Not Offered**	**Not Offered**	**59%**	**51%**	**57%**	**Not Offered**	**39%**
Ameren Missouri (PY17)	**87%**	**Not Offered**	**Not Offered**	**57%**	**53%**	**56%**	**Not Offered**	**45%**
Ameren Missouri (PY16)	**92%**	**Not Offered**	**Not Offered**	**65%**	**53%**	**57%**	**Not Offered**	**47%**
Public Service Co. of New Mexico[1]	Not Offered	65%	Not Offered	N/A	47%	44%	Not Offered	Not Offered
	Not Offered	72%	Not Offered	N/A	54%	51%	Not Offered	Not Offered
Indiana Michigan Power (IMP) [2]	64%	80-87%	94%	74%	59%	Not Offered	Not Offered	60%
PPL Electric[3]	89-90%	Not Offered	73-86%	25-31%	32%	27%	74%	13%
Vectren Indiana[2]	Not Offered	63-70%	86%	52%	47%	47%	Not Offered	Not Offered
Dayton Power & Light	Not Offered	86%	39%	63%	43%	42%	Not Offered	N/A

[1]Public Service Company of New Mexico measured installation rates for spring and fall customers. Spring installation rates are shown in the top row, and fall installation rates are shown below.
[2]For IMP and Vectren Indiana, the CFL light bulb installation rate is presented as a range, given they offer 23- and 13-watt bulbs, and measured installation rates for those separately.
[3]For PPL Electric, LEDs, CFLs, night lights, and showerheads were offered to different age groups, and installation rates were measured separately for those age groups.

School Kit Program Participation and Per-Kit Savings

For the school-based delivery channel, Cadmus compared Ameren Missouri to five other utility programs. Table 50 compares program participation and per-kit savings to Ameren Missouri's school kits, with results reported for other, similar programs. Of five benchmarked school kit programs, Ameren Missouri's school-based delivery channel sent out one of the highest numbers of school kits.

Table 50. School-Based Delivery Channel Benchmarking Results: Participation and Per-Kit Savings

Utility	Program	Total Kits Distributed	*Ex Post* Gross Savings (kWh/yr)	*Ex Post* Per Kit Savings	*Ex Post* Gross Savings (kW/yr)	*Ex Post* Per Kit Savings
Ameren Missouri (PY18)	**PY18 Energy Efficiency Kits Program (School Kits)**	**16,366**	**5,427,330**	**332**	**968**	**0.06**
Ameren Missouri (PY17)	**PY17 Energy Efficiency Kits Program (School Kits)**	**16,117**	**4,673,315**	**290**	**913.8**	**0.06**
Ameren Missouri (PY16)	**PY16 Energy Efficiency Kits Program (School Kits)**	**16,245**	**4,765,843**	**293**	**714.2**	**0.04**
Dayton Power and Light	2015 Residential Energy Education (Be E3 Smart) Program	9,298	4,162,367	448	281	0.03
Indiana Michigan Power	2015 School Energy Education Program	11,744	4,571,388	389	811	0.07
PPL Electric	2015-2016 Student & Parent Energy-Efficiency Education Program	25,085	4,053,000	162	428	0.02
Public Service Co. of New Mexico	2014 Student Efficiency Kits Program	3,578	437,753	122	22	0.01
Vectren Indiana	2015 Energy Efficient Schools Program	2,600	920,270	354	58	0.02

Multifamily Kit Contents

Cadmus compared the multifamily kit delivery channel to multifamily direct-install programs to establish whether kit contents represented standard practices or if other measures could be considered. The comparison programs all offered free products to multifamily households, but all programs—other than Ameren Missouri's multifamily kits delivery channel—worked as direct-install programs (rather than property manager-install kit programs). As shown in Table 51, all programs offered CFL light bulbs, showerheads, and kitchen and bathroom aerators to multifamily units.

Table 51. Common Multifamily Kit Products

Utility	LED Light Bulbs	CFL Light Bulbs	Shower-head	Kitchen Aerator	Bath Aerator	Pipe Wrap
Ameren Missouri	✓		✓	✓	✓	✓
Entergy Arkansas		✓	✓	✓	✓	
Indianapolis Power and Light		✓	✓	✓	✓	✓
Wisconsin Focus on Energy	✓	✓	✓	✓	✓	✓
Vectren Indiana		✓	✓	✓	✓	✓

Compared to other multifamily direct-install programs, Ameren Missouri's multifamily kit delivery channel contained most of the common measures provided by utilities, along with measures not typically offered by other programs (e.g., LED light bulbs, pipe wrap). Table 51 does not show one program that offered a thermostat (i.e., Indianapolis Power and Light), and another that offered advanced power strips and AC tune ups (Entergy Arkansas).

Table 52 compares Ameren Missouri's multifamily kit installation rates with results from similar programs. The table presents some installation rates as a range, depending on bulb wattages for LED and CFL light bulbs or on age groups targeted.

Table 52. Common Multifamily Kit Product Installation Rates

Utility	LED Light Bulbs	CFL Light Bulbs	Shower-head	Kitchen Aerator	Bathroom Aerator	Pipe Wrap
Ameren Missouri (PY18)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ameren Missouri (PY17)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ameren Missouri (PY16)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Entergy Arkansas[1]	Not Offered	100%	100%	100%	100%	Not Offered
Indianapolis Power and Light	Not Offered	76-91%	75%	80%	91%	100%
Wisconsin Focus on Energy	97%	97%	97%	97%	97%	97%
Vectren Indiana (2014)	Not Offered	94%	92%	86%	93%	100%

[1]Product installation rates were assumed to be 100% as savings were claimed for all reported measures.

Cadmus compared program participation for Ameren Missouri's multifamily kit delivery channel, with results reported for four other programs. Due to the unique delivery of Ameren Missouri's multifamily kits, the team could not find programs that directly offered kit programs for property owners and managers to install; consequently, the team benchmarked against direct-install multifamily kits. As shown in Table 53, Ameren Missouri's multifamily kit delivery channel distributed the least number of kits of all benchmarked utilities.

Table 53. Multifamily Kit Delivery Channel Benchmarking Results: Participation and Per-Kit Savings

Utility	Program	Total Kits Distributed	*Ex Post* Gross Savings (MWh/yr)	*Ex Post* Per Kit Savings	*Ex Post* Gross Savings (kW/yr)	*Ex Post* Per Kit Savings
Ameren Missouri	**PY18 Energy Efficiency Kits Program (Multifamily Kits)**	**591**	**487,948**	**826***	**90**	**0.15***
Ameren Missouri	**PY17 Energy Efficiency Kits Program (Multifamily Kits)**	**862**	**693,507**	**804.5**	**130**	**0.15**
Ameren Missouri	**PY16 Energy Efficiency Kits Program (Multifamily Kits)**	**82**	**35,397**	**431.7**	**3.9**	**0.05**
Entergy Arkansas	2015 Multifamily Homes Program	2,092	1,368,124	654	200	1.0
Indianapolis Power & Light	2015 Residential Multifamily Direct Install Program	7,701	4,114,637	534	554	0.07
Wisconsin Focus on Energy	2015 Multifamily Direct Install Program	5,016	3,119,305	622	200	0.04
Vectren Indiana	2014 Multifamily Direct Install Program	1,035	746,851	721.6	87	0.08

*In PY18, multifamily kits were customized, to provide up to one additional showerhead and bathroom faucet aerator for apartment units with more than one bathroom; similarly, water heater pipe wrap was provided as needed, in lengths up to 6 feet. Therefore, the number of kits reflects the number of units that received measures, but not necessarily the number of measures distributed.

Key Progress Indicators

Cadmus tracks the following key progress indicators for the Energy Efficiency Kits program:

- Program year electric savings
- Total number of kits distributed
- Changes to energy efficiency kit contents
- Recipient's satisfaction with energy efficiency kits and with Ameren Missouri

Table 54 and Table 55 show Cadmus' key metrics. In the PY18 evaluation, the team compared these key progress indicators to new results and reported the findings.

Table 54. Energy Efficiency School Kits Key Progress Indicators

Key Metric	PY16 School	PY17 School	PY18 School
Electric savings	4,765.8 MWh	4,288.5 MWh	5,427.3 MWh
Total Number of Kits Distributed	16,245	16,117	16,366
Changes to Energy Efficiency Kit Contents from previous program year	N/A	none	none
Percentage that agree with the statement, "I am satisfied with my child's experience in the Ameren Missouri Energy Efficiency Kits School Program"	99% satisfied (n=400)	98% satisfied (n=296)	100% satisfied (n=205)
Satisfaction with Ameren Missouri	79% satisfied (n=376)	94% satisfied (n=209)	97% satisfied (n=179)

Table 55. Energy Efficiency Multifamily Kits Key Progress Indicators

Key Metric	PY16 Multifamily	PY17 Multifamily	PY18 Multifamily
Electric savings	35.4 MWh	693.5 MWh	487.9 MWh
Total Number of Kits Distributed	82	862	591*
Changes to Energy Efficiency Kit Contents from previous program year	Removed CFLs from kit	Added 2 LED bulbs	Included up to 2 showerheads and bathroom faucet aerators; water heater pipe wrap, as needed
Percentage that agree with the statement, "I am satisfied with my experience in the Ameren Missouri Multifamily Efficient Kits Program"	N/A	100%	100%
Satisfaction with Ameren Missouri	N/A	100%	100%

*In PY18, multifamily kits were customized to provide up to one additional showerhead and bathroom faucet aerator for apartment units with more than one bathroom; similarly, water heater pipe wrap was provided as needed, in lengths up to 6 feet. Therefore, the number of kits reflects the number of units that received measures, but not necessarily the number of measures distributed.

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):[11]

- 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 Energy Efficiency Kits 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 Energy Efficiency Kits program, Ameren Missouri's costs included direct expenses for Energy Efficiency Kits program administration and measure cost, in addition to a percentage of portfolio-level costs. Portfolio costs—

[11] *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.

Table 56 summarizes cost-effectiveness findings by test. Any benefit-cost score above 1.0 passed the test as cost-effective. As shown, the Energy Efficiency Kits program passed the UCT, TRC, Societal, and PART tests.

Table 56. Cost-Effectiveness Results (PY18)

Program	UCT	TRC	RIM	SCT	PART
Energy Efficiency Kits	2.77	2.85	0.39	4.69	N/A

List of Appendices

Following are the Appendices for the Energy Efficiency Kits 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 savings.

Appendix B. Benchmarking Sources

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

Cadmus *Focus on Energy Calendar Year 2015 Evaluation Report Volume II*. Prepared for the Public Service Commission of Wisconsin. 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.

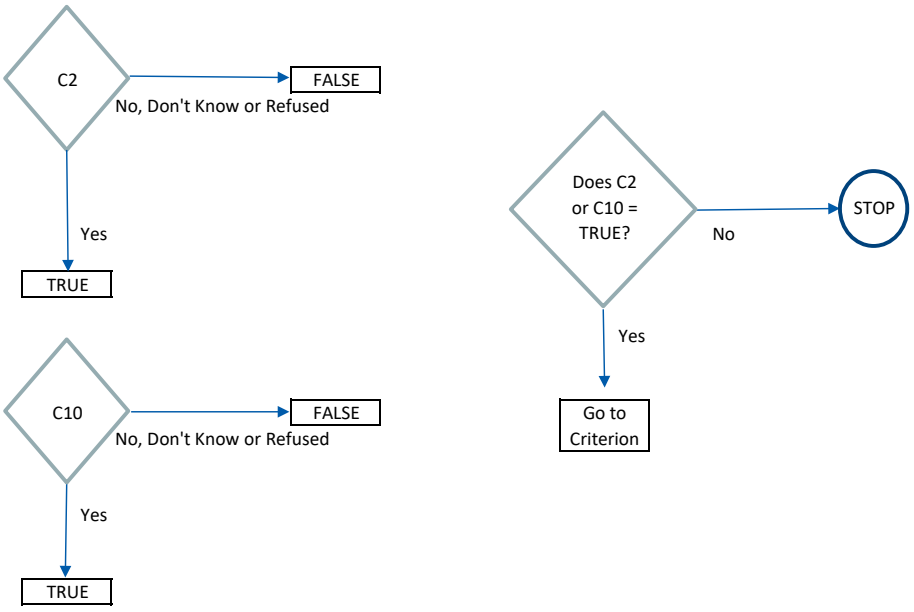
Uniform Methods Project, Chapter 21: Residential Lighting, available online: http://energy.gov/sites/prod/files/2015/02/f19/UMPChapter21-residential-lighting-evaluation-protocol.pdf Published February 2015

Appendix C. Nonparticipant Spillover Qualification Flow Charts

FLOWCHARTS FOR DETERMINING LIKE NPSO

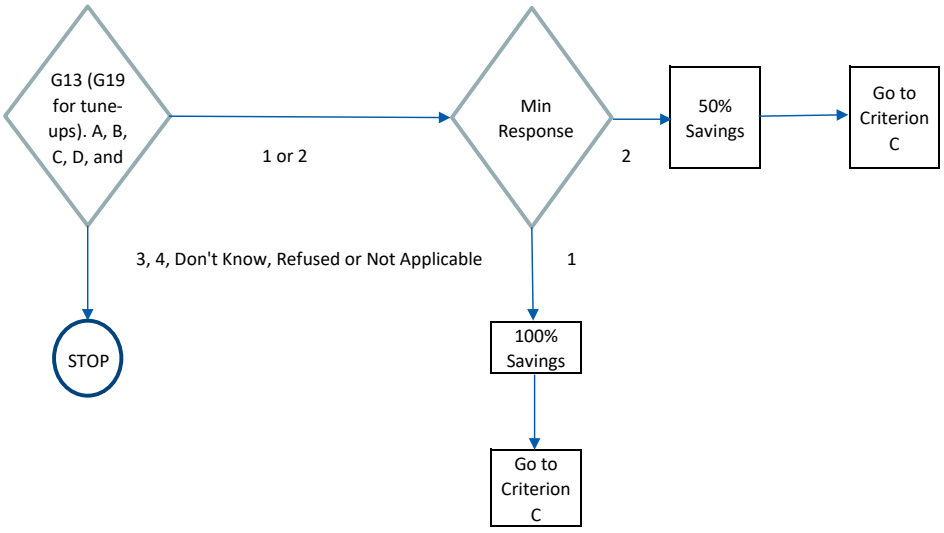
Criterion A: Familiarity with at least one Ameren Missouri program, rebate, or discount

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?



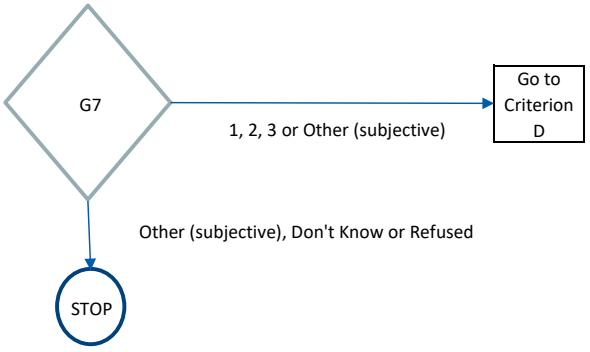
Criterion B: At least one element of Ameren Missouri's program marketing and outreach motivated them to adopt the measure

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



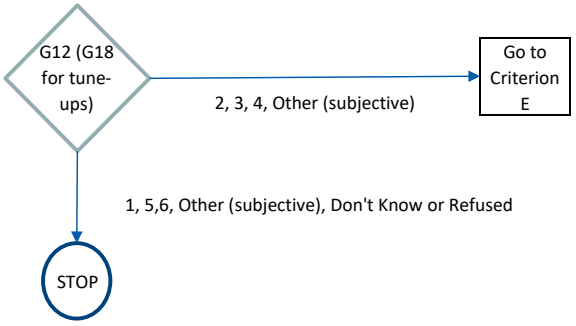
Criterion C: They had a valid reason for considering the adopted measure energy efficient (not for tune-ups)

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)



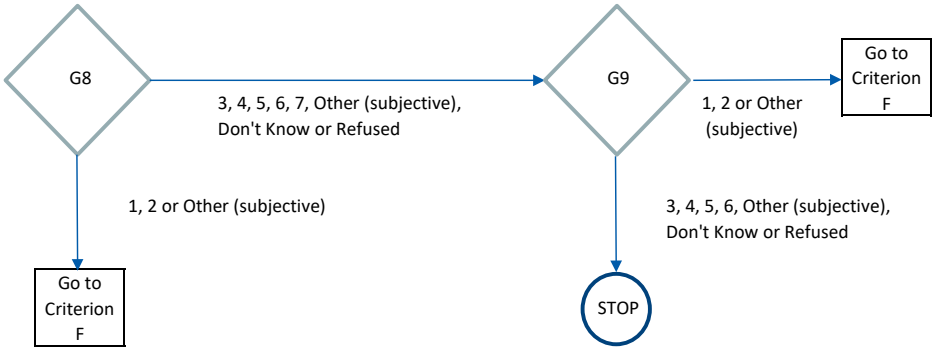
Criterion D: They had not received a rebate from Ameren Missouri, had not tried to receive a rebate from Ameren Missouri, and stated a valid reason for not applying for an Ameren Missouri measure rebate.

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)

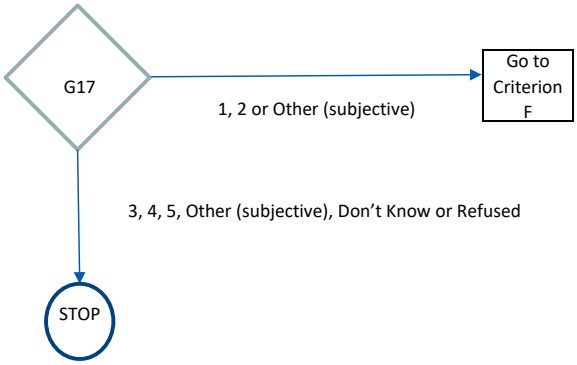


Criterion E: They had a valid reason for deciding to install the measure

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)

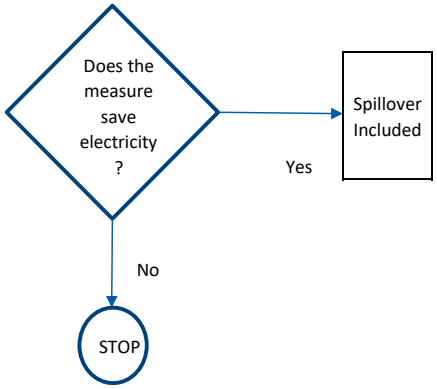


G17 (for tune-ups). Which of the following reasons best describe why you decided to install have the tune-up?
1 = To save energy, 2 = To save money, 3 = To improve home comfort, 4 = It was part of routine maintenance, 5 = To make repairs or replacements, 6 = Other (please specify)



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	new 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 an 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 an 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 an 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 an 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 an 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 an 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 an 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 an 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 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)
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 ,Air-source 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 ,Air-source 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 ,Air-source 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		0	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

CADMUS

Ameren Missouri Energy Efficiency Kits
Stakeholder Interview Guide PY18

Respondent name: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

For the Energy Efficiency Kits program evaluation, Cadmus will interview stakeholders annually. The interview will focus on PY18 program changes and identify recommendations for improving subsequent program years.

Roles and Responsibilities

1) Has anything changed about your role and responsibilities for Ameren Missouri's Energy Efficiency Kits Program? [Use last yearfao's responses as prompts]

    a. For IFC: Can you please describe the IFC team that helps to implement the program? [Probe: roles of staff, number people involved, etc.]

Program Goals [Ameren Missouri only]

2) The filed program plans for this program showed an estimated annual savings target for PY2018 of 6,228 MWh and 1.0463 MW and a goal of 94,644 measure installations, are these the current goals?

    a. How were these goals determined?

    b. For FY18, how were these goals divided between the two delivery channels: school kits and multifamily kits?

PY18 Program Design and Implementation: School Kit Delivery Channel

3) How did this year's new co-delivery partnership work with Ameren Missouri Gas?

    a. Does it operate any differently than the co-delivery with Spire Gas? If so, how?

4) Other than adding Ameren Missouri Gas as a co-delivery partner, has anything changed about the School Kit delivery channel design or how it is implemented?

    a. Did anything change to improve showerhead installation rates, for instance further education on benefits, or modifying the model?

b. Were there any changes to the Home Energy Worksheet to ask families about participation in prior years?

5) How about for how schools qualify to participate in the program?

    a. Did adding Ameren Missouri Gas change the area for qualifying schools?

6) Did anything change about how the school kit delivery channel is marketed?

7) [IFC and NEF Only] Did the kit contents change for PY18? [if yes, how?]

    a. In your opinion, should any additional measures be considered for inclusion in future kits?

    b. Conversely, should any measures be excluded in future kits?

8) Where there any changes to the goals of the energy education curriculum?

9) What feedback have you received from school teachers or administrators about the program?

    a. Is there a still survey for the teachers? If yes, how are the results from this survey used?

Program Tracking: School Kits Delivery Channel

10) Have there been any changes to the way you track schools and number of kits provided this year? [Use last year's responses as prompts]

    a. Have the id numbers identifying each school changed from last year? (If no, how many schools were repeat participants from the previous year?)

11) Do teachers still order the kits on behalf of the school?

    a. How long does it take for kits to arrive?

12) In prior years, the number of kits sent to each school was based on the quantities teacher requested during their online during registration, followed by confirmation by NEF prior to kit shipment. Has this changed?

    a. Was it still possible to return kits in PY18? (If kits could be returned, was there any communication about the kit return process in PY18?)

    b. Were individual items returned? If so, what happens to these items? If not, has the program considered accepting returned items?

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PY18 Program Design and Implementation: Multifamily Kit Delivery Channel (Ameren & ICF only)

13) Is this delivery channel expecting any participants this year? (If not, what are the reasons for this?)

14) Has anything changed about the Multifamily Kit delivery channel Program design or how it is implemented? [Use last year's responses as prompts]

15) Have there been any changes in PY18 to how property managers qualify to participate in the program?

    a. Has a gas company partnership been considered for this delivery channel?

16) Have there been any changes to how the multifamily kit delivery channel is marketed for PY18? [Is the Low-Income program still the primary avenue for developing relationships with property owners?]

17) [ICF Only] Did the kit contents change? [if yes, how?]

    a. In your opinion, should any additional measures be considered for inclusion in future kits?

    b. Conversely, should any measures be excluded in future kits?

18) [If there were PY18 participants from Q15] Have you received any feedback in PY18 from property managers or their tenants about the program or kit contents? [probe regarding informational materials for property managers].

    a. Was there any investigation into furnace filter installation, operation and monitoring?

Program Tracking: Multifamily Kits Delivery Channel (NOT NEF)

19) Have there been any changes to the way you track kits this year?

Successes, Challenges, Suggestions for Improvement

20) In your opinion, how has the program performed in PY18 (in terms of both process and savings/participation goals)? [Prompts: what were the biggest successes? Challenges?]

21) What changes are being planned or considered for PY19?

    a. Why are these changes being considered?

    b. How, if at all, are you anticipating the program to change in the long-term?

22) Overall, do you have any suggestions for how to improve the program?

23) What issues would you like to see the evaluation help you solve?

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c. What would you most like to see addressed or presented in the evaluation?

d. Do you have any feedback on last year's evaluation? [Probe: what would you like to be different]

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

Appendix F. Property Manager Survey Instrument

CADMUS

Ameren Missouri 2018 EE Kits Multifamily Telephone Interview Guide

This interview guide is for property managers that have participated in Ameren Missouri's Multifamily Efficient Kits program. Eligible participants include Ameren Missouri electric account holders who are owners and managers of multifamily properties of three or more rental units with electric water heaters. This guide includes questions for the site-level property managers (SLPM) as well as corporate level property managers (CLPM).

Topic	Researchable Questions	Item
Screener		
Motivation	Assess participant motivations for participating.	*Section B*
Participation Process	Assess the usefulness of the marketing information.	*Section C*
Satisfaction with Program and Kit Items	How satisfied are participants with the program and kit items? Do participants have suggestions for improving the program?	*Section D*
Installation Rates	What are the installation rates of the various measures? How easy was the process of installing the measures?	*Section E*
Free ridership	Would the participant have purchased the product without the program?	*Section F*
Spillover	Did the Ameren program influence the participant to purchase any other energy-efficient upgrades?	*Section G*
Satisfaction with Ameren Missouri	How satisfied are participants with Ameren Missouri?	*Section H*
Demographics	Participant Demographics	*Section I*

Target Quota = Census of Collected Data

General Instructions

Interviewer instructions are in green

CATI programming/Interviewer instructions are in red

Do not read answer choices unless indicated with "**[READ LIST].**"

Variables to be Pulled into Survey

- **[SLPM] = SITE LEVEL PROPERTY MANAGER**
- **[CLPM] = CORPORATE LEVEL PROPERTY MANAGER**
- **[SITE NAME]**
- **[SITE ADDRESS/CITY/STATE/ZIP]**
- **[TOTAL NUMBER OF UNITS]**
- **[SHOWERHEAD QTY]**
- **[KITCHEN FAUCET AERATOR QTY]**
- **[BATHROOM FAUCET AERATOR QTY]**
- **[LED QTY]**
- **[FILTER ALARM QTY]**
- **[HEAT PIPE QTY]**

- **[PROPERTY MANAGER MAILING ADDRESS]**

Back-up information, not to be programmed:

- **If respondent asks how long, say, "Approximately 15 to 20 minutes."**
- **If "No – Not a convenient time," ask if respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.**
- **If questioned about survey's purpose: "This survey is for research purposes only and is not a marketing call. Your responses are important to Ameren Missouri."**
- **If respondent has questions about the Multifamily Efficient Kits Program: "Please call Ameren Missouri customer service at (877) 215 5752."**
- **If asked for contact information to authenticate survey, offer Laureen Welikson at** LWELIKSON@ameren.com.

A. Property Manager Screener

Hello. I'm **[NAME]**, calling on behalf of Ameren Missouri. We are talking to property managers who received energy efficiency items from Ameren Missouri for the Multifamily Efficient Kits program. As a token of our appreciation for your time today, you will be eligible to participate in a random drawing to win a $50 Visa gift card for completing the interview.

A1. **[ASK SLPM ONLY]** Our records indicate that you received energy efficiency Items from Ameren Missouri for your property at **[SITE NAME].** Is this correct? **[PROMPT: If further information needed give [SITE ADDRESS/CITY/STATE/ZIP]**

1. Yes, I received energy efficiency items for this site
2. Yes, I received energy efficiency items for this site as well as other sites
3. No, I received energy efficiency items for a different site
4. No, I did not receive energy efficiency items from Ameren Missouri **[TERMINATE]**

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

A2. **[IF A1=2] [IF A=3]** Could you tell me the correct [address/addresses] of the [site/sites] where you received energy-saving kits?

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

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

TERMINATE TEXT: Thank you for your time. This survey is only for Ameren Missouri customers that received energy efficiency items.

A3. *Are you or any members of your household employed by Ameren Missouri?

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

TERMINATE TEXT: Thank you for your time. This survey is only for Ameren Missouri customers that do not work for or have a family member that works for Ameren Missouri.

B. Motivation

B1. **[ASK CLPM]** I'm going to read you four statements, please tell me which of the following statements best describes your primary reasons for participating in this program? **[READ LIST, MULTIPLE RESPONSES ALLOWED]**

1. It provides a beneficial service to my tenants
2. It reduces energy bills for tenants
3. It reduces maintenance costs
4. It's good for the environment
5. It was free
6. None of these statements **[ASK TO SPECIFY PRIMARY REASON FOR PARTICIPATION:__]**

98. (Don't know)
99. (Refused)

C. Participation Process

C1. **[ASK CLPM AND SLPM]** Do you remember receiving informational material from Ameren Missouri to share with your tenants (e.g. tenant door hangers notifying them of the date of the upgrades and letters to send tenants before and after installing the items with information about the process)?

1. Yes, used them
2. Yes, did not use them
3. No

D. Satisfaction with Program and Kit Items

D1. **[ASK CLPM AND SLPM]** For the following statement, please tell me whether you strongly agree, somewhat agree, agree, somewhat disagree, or strongly disagree with the following statement: **[RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=AGREE, 4=SOMEWHAT DISAGREE, 5=STRONGLY DISAGREE, 98=(DON'T KNOW), OR 99=(REFUSED) FOR THE STATEMENT]**

1. "I am satisfied with my experience in the Ameren Missouri Multifamily Efficient Kits Program."

D2. **[ASK IF D1=3,4, OR 5]** Why do you **[RATING FROM D1]** with the statement? **[RECORD RESPONSE:_____]**

D3. **[ASK SLPM]** For each energy efficiency item, please tell me whether you were very satisfied, somewhat satisfied, not too satisfied or not at all satisfied with the energy efficiency item. **[READ LIST]**

Question	Energy Efficiency Kit Item	1. Very Satisfied	2. Somewhat Satisfied	3. Not Too Satisfied	4. Not Satisfied At All	5. (Don't know)	[IF D3 >2, THEN ASK D4 follow up immediately following]
D3a.	High-efficiency showerhead						
D3b.	High-efficiency kitchen faucet aerator						
D3c.	High-efficiency bathroom faucet aerator						
D3d.	LED Light Bulbs						
D3e.	Dirty filter alarm						
D3f.	Hot water pipe insulation						

D4. **[IF ANY D3 >2]** Why are you **[RATING FROM D3]** with the **[INSERT ENERGY EFFICIENCY KIT ITEM D3A. TO D3F.]**? **INTERVIEWER: DO NOT READ ITEMS, PROBE TO CODE.**

1. The item is of poor quality
2. The amount of energy savings/ utility bill savings is less than I expected
3. The item is of high quality
4. The amount of energy savings/ utility bill savings is what I expected or greater
5. Other **[SPECIFY:_____]**

98. (Don't know)
99. (Refused)

E. Installation Rates

By participating in the Multifamily Efficient Kits Program you were sent a number of energy efficiency items including: high-efficiency showerheads, high-efficiency faucet aerators (bathroom and kitchen), ENERGY STAR® certified light emitting diode (LED) bulbs, dirty filter alarm (electric forced air heat), and electric hot water pipe insulation.

E1. **[SLPM ONLY]** Who installed the energy efficiency items?

1. I installed the energy efficiency item
2. An employee of mine installed the energy efficiency items
3. I hired an outside contractor to install the energy efficiency items
4. I left them with the tenants to install directly
5. Other **[SPECIFY:_____]**

98. (Don't know)
99. (Refused)

E2. **[IF E1=2,3,4]** How did you verify the items were installed?

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

99. (Refused)

E3. **[SLPM ONLY]** According to our tracking data, you received energy efficient items to install in **[TOTAL NUMBER OF UNITS]** units, is this correct?

1. Yes
2. No

E4. **[IF E1=2 or 3]** In how many total units did you install energy efficiency items?

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

E5. **[IF E1=4]** For how many total units did you leave energy efficiency items for tenants to install?

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

E6. **[SLPM ONLY]** Did you install all of the energy efficiency items that you received?

1. Yes
2. No

E7. **[IF E6=2]** How many of each item were NOT installed? **[RECORD NUMERIC RESPONSE]**

Question	Multifamily Efficient Kits Item	Record Number Left to Install	Calculate Total Number Installed
E7a	High-efficiency showerhead	_____	**SHOWERHEAD QTY**
E7b	High-efficiency kitchen faucet aerator	_____	**KITCHEN FAUCET AERATOR QTY**
E7c	High-efficiency bathroom faucet aerator	_____	**BATHROOM FAUCET AERATOR QTY**
E7d	LED Bulbs	_____	**LED QTY**
E7e	Dirty filter alarm	_____	**FURNACE FILTER ALARM QTY**
E7f	Electric hot water pipe insulation	_____	**HEAT PIPE QTY**

E8. **[FOR EACH ITEM E7a TO E7f, WHERE E7a TO E7f EQUALS LESS THAN NUMBER RECIEVED]** Why didn't you install all the **[MULTIFAMILY EFFICIENT ITEM E7a TO E7f]** you received? **READ LIST. MULTIPLE RESPONSES ALLOWED.**

1. The energy efficiency item was difficult to install
2. The energy efficiency item wasn't needed in the unit
3. I kept it and plan to install the energy efficiency item later
4. I left it for the tenants to install later
5. The tenant(s) did not want the item installed
6. None of these statements **[ASK TO SPECIFY WHY:__]**

98. (Don't know)
99. (Refused)

E9. **[FOR EACH E8=1 , FOR EACH ITEM IDENTIFIED IN E7a TO E7f]** What was difficult about installing the **[MULTIFAMILY EFFICIENT ITEM E7a TO E7f]**? **INTERVIEWER: DO NOT READ ITEMS, PROBE TO CODE. MULTIPLE RESPONSES ALLOWED.**

1. The item is of poor quality
2. The item did not fit or could not be installed in the property
3. The property already has the item
4. We did not have the proper tools for installation
5. Other **[SPECIFY:_____]**

98. (Don't know)
99. (Refused)

E10. **[FOR EACH ITEM E7a TO E7f, WHERE E7a TO E7f EQUALS LESS THAN NUMBER RECIEVED]** What happened to the **[MULTIFAMILY EFFICIENT ITEM E7a TO E7f]** that you did not install?

1. Returned to Ameren Missouri
2. Stored the energy efficiency item
3. Gave to tenants for future use
4. Took them home
5. Threw them away
6. Other **[SPECIFY:_____]**

98. (Don't know)
99. (Refused)

E11. **[CLPM ONLY]** Did you install Ameren Missouri energy efficiency kit items at properties other than the properties listed in our tracking data? **INTERVIEWER: READ LIST OF SITE NAMES FROM TRACKING DATA IF NEEDED**

1. Yes
2. No

E12. **[IF E11=1]** Were these properties located in Ameren Missouri's service territory?

1. Yes
2. No

F. Free Ridership

[ASK QUESTIONS IN THIS SECTION OF CLPM ONLY, REPEAT QUESTIONS FOR EACH SITE IN A2 (RATHER THAN LOOPING THROUGH THE WHOLE SECTION FOR EACH SITE)]

The following questions are about your decision to request energy efficiency items from Ameren Missouri.

F1. **[IF NEEDED FOR ADDITIONAL SITES:** I'll repeat each question for each site you mentioned earlier. Thinking about the first site you mentioned, [first site address from A2],**]** If you had not received the free LEDs from Ameren Missouri, what is the likelihood you would have purchased new light bulbs of any type within 6 months? (0-10 scale, where 0 is not at all likely and 10 is very likely) **[FORCED RESPONSE – NO SKIP] [IF NEEDED FOR ADDITIONAL SITES:** How about for the next site you mentioned,[next site address in A2]?**]**

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

F2. If you had not received the free LEDs from Ameren Missouri, how likely is it that you would have removed any of the working light bulbs and replaced them with LEDs within 6 months? (0-10 scale, where 0 is not at all likely and 10 is very likely) **[IF NEEDED FOR ADDITIONAL SITES:** For the first site you mentioned? What about the second site?**] [FORCED RESPONSE – NO SKIP]**

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

F3. **[IF G2 > 5]** If you had not received the free LEDs from Ameren Missouri, how many LEDs would you have purchased within 6 months? (0-10 scale, where 0 is not at all likely and 10 is very likely) **[IF NEEDED FOR ADDITIONAL SITES:** For the first site you mentioned? What about the second site?**] [FORCED RESPONSE – NO SKIP]**

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

F4. Before you knew about the Ameren Missouri program, were you already planning to buy LEDs? **[IF NEEDED FOR ADDITIONAL SITES:** For the first site you mentioned? What about the second site?**] [FORCED RESPONSE – NO SKIP]**

1.Yes
2.No

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 when deciding to install LEDs. If a factor is not applicable to you, please say so. **[IF NEEDED FOR ADDITIONAL SITES:** For the first site you mentioned? What about the second site?**] [NOTE: RESPONDENTS CAN ALSO STATE THAT A PARTICULAR FACTOR IS NOT APPLICABLE, PLEASE CODE AS 'NA'] [FORCED RESPONSE – NO SKIP]**

1. Free LEDs from Ameren Missouri
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 program

F6. In your own words, please tell me the influence the Ameren Missouri program had on your decision to install LEDs? **[IF NEEDED FOR ADDITIONAL SITES:** For the first site you mentioned? What about the second site?**] [FORCED RESPONSE – NO SKIP]**

[RECORD RESPONSE:_____]

G. Spillover

[ASK QUESTIONS IN THIS SECTION OF CLPM AND SLPM]

G1. Since participating in the Multifamily Efficient Kits Program, have you purchased and installed any energy-efficient upgrades at this facility that were not given to you with rebates or for free?

1. Yes
2. No **[SKIP TO G5]**

98. (Don't know) **[SKIP TO G5]**

99. (Refused)

G2. **[IF G1= YES]** What energy-efficient upgrades did you make? [RECORD EQUIPMENT TYPE AND QUANTITY]

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. Refrigerator
18. Freezer
19. Clothes washer
20. Other (please specify): _____
21. None **[RECORD RESPONSE: _____]**
98. (Don't know)
99. (Refused)

G3. **[ASK FOR EACH ITEM FROM G2]** How did you determine whether or not the **[G2 RESPONSE]** was energy efficient?

1. **[RECORD RESPONSE: _____]**
98. (Don't know)
99. (Refused)

G4. **[ASK FOR EACH ITEM FROM G2]** How important was your experience with the Multifamily Efficient Kits Program on your decision to purchase or install the **[G2 RESPONSE]**?

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

G5. Since participating in the Multifamily Efficient Kits Program, have you undertaken energy retrofits in any other properties, *in Ameren Missouri's territory*, include energy-efficient equipment or measures that were not given to you with rebates or for free?

1. Yes
2. No **[SKIP TO 0]**
3. (Don't know) **[SKIP TO 0]**
99. (Refused)

G6. **[IF G5= YES]** What energy-efficient upgrades did you make at the other properties? [RECORD EQUIPMENT TYPE AND QUANTITY]

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. Refrigerator
18. Freezer
19. Clothes washer
20. Other (please specify): _____
21. None **[RECORD RESPONSE: _____]**
98. (Don't know)
99. (Refused)

G7. **[ASK FOR EACH ITEM FROM G6]** How did you determine whether or not the **[G6 RESPONSE]** was energy-efficient?

1. **[RECORD RESPONSE: _____]**
98. (Don't know)
99. (Refused)

G8. **[ASK FOR EACH ITEM FROM G6]** How important was your participation in the Multifamily Efficient Kits Program in your decision to install **[G6 RESPONSE]**? Would you say:

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

G9. **[ASK FOR EACH MEASURE FROM G6]** Prior to purchasing or installing the items listed below, had you heard or read about the benefits of installing this equipment from Ameren Missouri or Ameren Missouri's Act on Energy campaign?

	Yes (1)	No (2)	Don't know (98)
[INSERT 1st RESPONSE FROM G6]			
[INSERT 2nd RESPONSE FROM G6]			
[INSERT 3rd RESPONSE FROM G6]			
[INSERT 4th RESPONSE FROM G6]			

G10. **[ASK FOR EACH YES RESPONSE IN G9]** How important was the information Ameren Missouri provided about the energy efficiency or money saving benefits of in your decision to purchase or install the items listed below?

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

G11. **[ASK FOR EACH ITEM FROM G6]** What is the address of the location where you installed **[G6 RESPONSE]**?

1. **[RECORD RESPONSE: _____]**
98. (Don't know)
99. (Refused)

H. Participant Satisfaction with Ameren Missouri

[ASK QUESTIONS IN THIS SECTION OF CLPM AND SLPM]

I just have a few questions left.

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

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

98. (Don't know)
99. (Refused)

H2. *Based on your experience with the Multifamily Efficient Kits Program, would you say your satisfaction with Ameren Missouri has…**[READ LIST]**

1. Increased
2. Stayed about the same, or
3. Decreased?

98. (Don't know)
99. (Refused)

I. Demographics

Now, we have just a few last questions about your tenants and the units where you installed the energy efficiency items.

I1. **[SLPM ONLY]** What is the total number of people that live in the units where you installed energy efficient items?

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

98. (Don't know)
99. (Refused)

I2. **[IF I1=98]** How many people typically live in each type of unit? **[READ LIST]**

1. 1 Bed/ 1 Bath **[RECORD RESPONSE: _____]**
2. 2 Bed/ 1 Bath **[RECORD RESPONSE: _____]**
3. 2 Bed/ 2 Bath **[RECORD RESPONSE: _____]**
4. 3 Bed/ 2 Bath **[RECORD RESPONSE: _____]**
5. 4 Bed/ 3 Bath **[RECORD RESPONSE: _____]**
6. Studio **[RECORD RESPONSE: _____]**

98. (Don't know)
99. (Refused)

I3. **[ASK CLPM AND SLPM]** As I mentioned,, you are eligible to participate in a random drawing to win a $50 Visa gift card. I need to confirm your address in the event that you win the drawing. Is your correct address, **[PROPERTY MANAGER MAILING ADDRESS]**?

1. Yes
2. No, **[ENTER CORRECT ADDRESS**: _____]

Appendix G. Student Family Survey Instrument

CADMUS

Ameren Missouri 2018 Energy Efficiency Kits:
School Delivery Channel Online Parent Survey

This survey will gather data to estimate freeridership, spillover and assess any changes in installation of school kit items. To avoid duplication of effort, this survey, wherever possible, will not ask for information that has already been gathered by ICF on Home Energy Worksheets. The Home Energy Worksheet asks participants how many kit items they installed, their satisfaction with the program, and questions about the participant's home including number of occupants.

Topic	Researchable Questions	Item
Screener		*Section A*
Satisfaction with Program and Kit Items	How satisfied are participants with the program?	*Section B*
Installation Rates	What are the installation rates of the various measures? How easy was the process of installing the measures?	*Section C*
Satisfaction with Ameren Missouri	How satisfied are participants with Ameren Missouri?	*Section D*
Free ridership	Would the participant have purchased the product without the program?	*Section E*
Spillover	Did the Ameren program influence the participant purchase any other energy-efficient equipment?	*Section F*
Demographics	Participant Demographics	*Section G*

Target Quota = Census of Collected Data

General Instructions

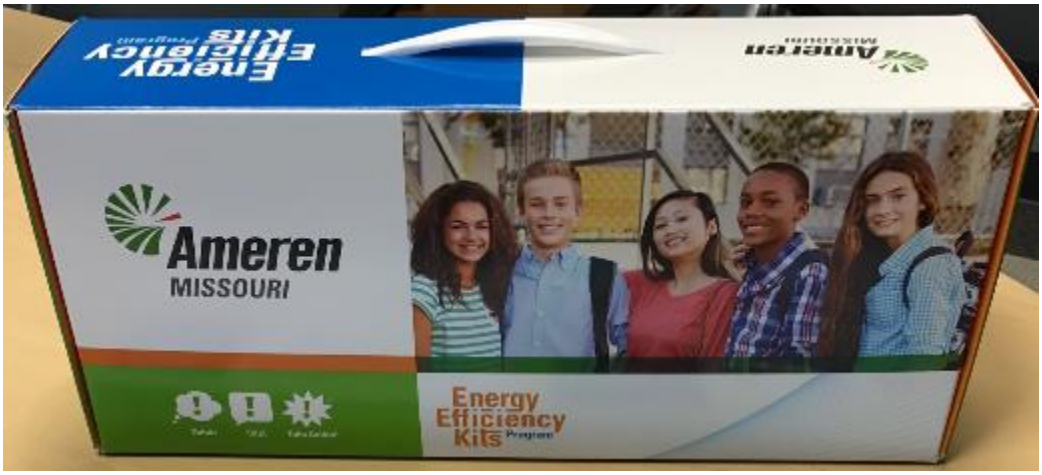
- Open-ended responses are in green **[LIKE THIS]**
- Programming instructions are in red **[LIKE THIS]** (not visible to the respondents)
- Skipped responses are not visible (99 = code for nothing selected/skipped question)

Variables to be Pulled into Survey

- **[SCHOOL NAME]** = The name of the school their student attends
- **[LED QTY]** = quantity of LEDs (0 to 4)
- **[SHOWERHEAD]** = measure status from tracking data (1, 2, 3 or 99)
- **[KITCHAER]** = measure status from tracking data (1, 2, 3 or 99)
- **[BATHAER]** = measure status from tracking data (1, 2, 3 or 99)
- **[WHISTLE]** = measure status from tracking data (1, 2, 3 or 99)
- **[HWPWRAP]** = measure status from tracking data (1, 2, 3 or 99)
- **[LED_TOTALQTY]** = sum of LED QTY for responses from same email in tracking data
- **[SHOWERHEAD_QTY]** = calculated showerhead quantity from measure status and number of responses in tracking data

- **[KITCHAER_QTY]** = calculated kitchen aerator quantity from measure status and number of responses in tracking data
- **[BATHAER_QTY]** = calculated bathroom aerator quantity from measure status and number of responses in tracking data
- **[WHISTLE_QTY]** = calculated furnace whistle quantity from measure status and number of responses in tracking data
- **[HWPWRAP_QTY]** = calculated pipe wrap quantity (number of lengths) from measure status and number of responses in tracking data
- **[LED_NOTINSTALLED]** = quantity of LEDs not installed from tracking data (incorporating number of responses in tracking data)
- **[SHOWERHEAD_NOTINSTALLED]** = quantity of showerheads not installed from tracking data
- **[KITCHAER_NOTINSTALLED]** = quantity of kitchen aerators not installed from tracking data
- **[BATHAER_NOTINSTALLED]** = quantity of bath aerators not installed from tracking data
- **[WHISTLE_NOTINSTALLED]** = quantity of furnace whistles not installed from tracking data
- **[HWPWRAP_NOTINSTALLED]** = quantity of pipe wrap lengths not installed from tracking data
- **[TYPE]** = Electric + Spire or Electric Only
- **[HEW_QTY]** = number of HEW responses by email

A. Screener



A1. Thank you for participating in **Ameren Missouri's Energy Efficiency School Kits Program**. We would like to know more about your experience with the program. Our records indicate that your family received an Energy Efficiency Kit from **[SCHOOL NAME].** Is this correct? **[FORCED RESPONSE (NO SKIP)]**

1. Yes, I received one Energy Efficiency Kit
2. Yes, I received two Energy Efficiency Kits
3. Yes, I received three or more Energy Efficiency Kits
4. No, I did not receive Energy Efficiency Kit **[TERMINATE TEXT: We are only surveying customers who received Energy Efficiency Kits at the present time, but Ameren Missouri appreciates you for taking time to respond. Thank you. Have a nice day!]**

A2. *Are you or any members of your household employed by Ameren Missouri? **[FORCED RESPONSE, NO SKIP OR DON'T KNOW]**

1. Yes, I or someone in my household works for Ameren Missouri **[TERMINATE TEXT: We are not surveying Ameren Missouri employee households, but we appreciate you for taking time to respond. Thank you. Have a nice day!]**
2. No, no one in my household works for Ameren Missouri

A3. Is Ameren Missouri your electricity provider?

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

A4. Who is your gas provider?

1. Ameren Missouri
2. Spire
3. Another provider **[SPECIFY: _____]**
4. Don't have a gas provider
98. Don't know
99. (Skipped)

B. Satisfaction with Program and Kit Items

First, I'd like to know more about your satisfaction with Ameren Missouri's Energy Efficiency Kits School Program.

B1. For the following statement, check the box that corresponds with whether you strongly agree, somewhat agree, agree, somewhat disagree, or strongly disagree with the following statement: **[RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=AGREE, 4=SOMEWHAT DISAGREE, 5=STRONGLY DISAGREE, 98=DON'T KNOW, OR 99=REFUSED FOR THE STATEMENT]**

1. "I am satisfied with my child's experience in the Ameren Missouri Energy Efficiency Kits School Program."

B2. **[ASK IF B1=3,4, OR 5]** Why do you **[RATING FROM B1]** with the statement?
[OPEN ENDED RESPONSE: _____]

C. Installation Rates

[IF ANY _QTY OR NOT INSTALLED FIELD > 0] Each Energy Efficiency Kit contained the following energy efficient items for you to install in your home, in addition to other materials and installation instructions:

- Four ENERGY STAR© certified LED bulbs
- One high-efficiency showerhead
- One high-efficiency kitchen faucet aerator
- One high-efficiency bathroom faucet aerator
- One dirty furnace filter whistle
- Hot water pipe insulation (3 feet)

We'd like to now follow up with you on the installation of the Energy Efficiency Kit items.

C1. **[IF ANY _QTY FIELD > 0]** In the Home Energy Worksheet you'd indicated that you installed the following type and number of items. Of these, how many are still installed?

Question	Energy Efficiency Kit Item	Number still installed? [VALIDATE THAT RESPONSE ≤ MEASURE QUANTITY]
C1a.	**[IF SHOWERHEAD_QTY >0]** Of the **SHOWERHEAD_QTY** high-efficiency showerhead(s)…	____
C1b.	**[IF KITCHAER _QTY >0]** Of the **KITCHAER _QTY** high-efficiency kitchen faucet aerator(s)…	____
C1c.	**[IF BATHAER _QTY >0]** Of the **BATHAER _QTY** high-efficiency bathroom faucet aerator(s)…	____
C1d.	**[IF WHISTLE _QTY >0]** Of the **WHISTLE _QTY** dirty Furnace filter whistle(s)…	____
C1e.	**[IF HWPWRAP _QTY >0]** Of the **HWPWRAP _QTY** piece(s) of hot water pipe insulation…	____
C1f.	**[IF LED_TOTALQTY >0]** Of the **LED_TOTALQTY** LED bulb(s)…	____

C2. [**ASK FOR EACH ITEM IN C1 WHERE "QUANTITY INSTALLED ≠ "HOW MANY OF THESE ITEMS ARE STILL INSTALLED"**] Why did you remove the [INSERT ITEM NOT INSTALLED]?

1. It broke **[OR ALTERNATE FOR LEDS]:** The bulb(s) broke or burned out
2. I didn't need it **[OR ALTERNATE FOR LEDS]:** I didn't need them
3. It didn't work well **[OR ALTERNATE FOR LEDS]:** they didn't work well
4. I didn't like how it looked **[OR ALTERNATE FOR LEDS]:** I didn't like how they looked
5. Other **[SPECIFY: _____]**

98. Don't Know
99. Skipped

C3. **[IF ANY _NOTINSTALLED FIELD > 0]** In the Home Energy Worksheet, you indicated that the following items were not installed or you left the answer blank. Of these, please indicate the number of items that you have since installed.

Question	Energy Efficiency Kit Item	Number installed since? [VALIDATE THAT RESPONSE ≤ NOT INSTALLED QUANTITY]
C3a.	**[IF SHOWERHEAD_NOTINSTALLED >0]** Of the **SHOWERHEAD_NOTINSTALLED** high-efficiency showerhead(s)…	____
C3b.	**[IF KITCHAER _NOTINSTALLED >0]** Of the **KITCHAER _NOTINSTALLED** high-efficiency kitchen faucet aerator(s)…	____
C3c.	**[IF BATHAER _NOTINSTALLED >0]** Of the **BATHAER _NOTINSTALLED** high-efficiency bathroom faucet aerator(s)…	____
C3d.	**[IF WHISTLE _NOTINSTALLED >0]** Of the **WHISTLE _NOTINSTALLED** dirty furnace filter whistle(s)…	____
C3e.	**[IF HWPWRAP _NOTINSTALLED >0]** Of the **HWPWRAP _NOTINSTALLED** piece(s) of hot water pipe insulation…	____
C3f.	**[IF LED_NOTINSTALLED >0]** Of the LED Bulb(s)…	____

C4. **[IN C3 IF "QUANTITY NOT INSTALLED" ≠ "INSTALLED SINCE"]** Why didn't you install **[FOR LEDS ONLY ADD "**all of**"]** the Energy Efficiency Kit **[INSERT ITEM NOT INSTALLED]**? Check all that apply. **[MULTIPLE RESPONSES, CHECK ALL THAT APPLY]**

1. It was difficult to install
2. I didn't need it
3. I plan to install it later
4. It didn't fit
5. Other **[SPECIFY: _____]**
98. Don't Know
99. Skipped

C5. **[IF C4=1]** What was difficult about installing the Energy Efficiency Kit **[INSERT ITEM NOT INSTALLED]**? Check all that apply. **[MULTIPLE RESPONSES, CHECK ALL THAT APPLY]**

1. The item is of poor quality
2. The item did not fit or could not be installed in my home
3. My home already has the item
4. We did not have the proper tools for installation
5. Other **[SPECIFY: _____]**

98. Don't Know
99. Skipped

C6. **[ASK FOR EACH ITEM IN C3 IF "QUANTITY NOT INSTALLED" ≠ "INSTALLED NOW" OR LED QTY FINAL LESS THAN LED QTY]** What did you do with the **[INSERT ITEM NOT INSTALLED]** that you did not install? **[FOR LEDS, ALLOW MULTIPLE RESPONSE AND ADD:]** Please check all that apply.

1. Gave it to someone else **[OR ALTERNATE FOR LEDS]:** Gave them to someone else
2. Kept it but haven't used it **[OR ALTERNATE FOR LEDS]:** Kept but haven't used them
3. Thrown away or recycled it **[OR ALTERNATE FOR LEDS]:** Thrown away or recycled them

98. Don't Know
99. Skipped

D. Participant Satisfaction with Ameren Missouri

Next, I'd like to know more about your experiences with Ameren Missouri as your utility.

D1. 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
99. Skipped

D2. Based on your experience with this 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)

E. Free Ridership

E1. If you had not received the free LEDs from Ameren Missouri, what is the likelihood you would have purchased new light bulbs of any type within 6 months? (0-10 scale, where 0 is not at all likely and 10 is very likely) **[FORCED RESPONSE – NO SKIP]**

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

E2. If you had not received the free LEDs from Ameren Missouri, what is the likelihood you would have purchased LEDs within 6 months? (0-10 scale, where 0 is not at all likely and 10 is very likely) **[FORCED RESPONSE – NO SKIP]**

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

E3. **[IF E2 > 5]** If you had not received the free LEDs from Ameren Missouri, how many LEDs would you have purchased within 6 months? **[FORCED RESPONSE – NO SKIP]**

1.**[RECORD NUMBER:___]**

F. Spillover

F1. Since participating in the Energy Efficient School Kits program, have you added any other energy-efficient products in your home or performed any additional energy-saving activities that were not discounted through Ameren Missouri?

1. Yes
2. No [**SKIP TO NEXT SECTION**]
98. Don't Know [**SKIP TO NEXT SECTION**]
99. (Skipped) [**SKIP TO NEXT SECTION**]

F2. **[IF F1=1]** Please select the energy-saving activities you've pursued since your experience with Ameren Missouri's Energy Efficient School Kits program. [**RANDOMIZE ORDER, CHECK ALL THAT APPLY**]

1. Had a home audit
2. Recycled a refrigerator or freezer
3. Constructed an Energy Star New Home
4. Purchased and installed efficient light fixtures or ceiling fan
   a. How many of these are currently installed in your home? [**SPECIFY:** __]
5. Purchased and installed an efficient refrigerator
6. Purchased and installed an efficient freezer
7. Purchased and installed an efficient clothes washer
8. Purchased and installed an efficient dishwasher
9. Purchased and installed an efficient room air conditioner
   a. How many did you purchase and install? [**SPECIFY:** __]
10. Purchased and installed energy efficient electronics (e.g. TV, DVD, computer)
11. Purchased and installed an efficient room air purifier
    a. How many did you purchase and install? [**SPECIFY**: __]
12. Purchased and installed an efficient pool pump
13. Purchased and installed an efficient dehumidifier
14. Purchased and installed an efficient water heater (other than heat pump water heater)
15. Purchased and installed efficient showerheads
    a. How many did you purchase and install in your home? [**SPECIFY:** _____]
16. Purchased and installed efficient kitchen faucet aerators
    a. How many did you purchase and install in your home? [**SPECIFY**: _____]
17. Purchased and installed efficient bathroom faucet aerators
    a. How many did you purchase and install in your home? [**SPECIFY**: _____]

18. Purchased and installed an efficient central air conditioner
19. Purchased and installed an air source heat pump
20. Purchased and installed a ground-source or geothermal heat pump
21. Purchased and installed a ductless or mini-split heat pump
22. Purchased and installed a dual-fuel heat pump
23. Purchased and installed an efficient furnace fan with ECM (Electronically Commutated Motor)
24. Purchased and installed a heat pump water heater
25. Purchased and installed a programmable (but not "smart") thermostat
26. Purchased and installed a learning or "smart" thermostat
27. Purchased and installed insulation
28. Purchased and installed efficient windows
29. Purchased and installed solar panels
30. Other items
    a. Please specify: [**SPECIFY**: _____]

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

[PRESENT THIS MESSAGE IF F1=1 AND NOTHING SELECTED IN F2]

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

If you did pursue additional energy-savings activities (that were not discounted by Ameren Missouri) since receiving the kit, 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.

F3. **[Ask if F2=1]** What kind of changes did you make to your home as a result of the audit?

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

F4. **[Ask if F2=24 or 25]** What kind of thermostat did you replace with the ["programmable thermostat" or "smart thermostat (may be called a learning thermostat)" from F2]?

1. **[IF F2=26 "ANOTHER"]** Smart thermostat (may be called a learning thermostat)
2. **[IF F2=25 "ANOTHER" OR IF F2=26 "A"]** Programmable (but not "smart") thermostat
3. Manual thermostat
98. Don't Know
99. (Skipped)

F5. [**Ask if F2=4, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, F2.21, 22, 23, 24, 27, 28 – ask for each**] How do you know that the **[F2 RESPONSE]** is energy efficient?

1. ENERGY STAR brand
2. Efficiency rating [**RECORD NUMERIC RESPONSE:** _____]
3. Other [**RECORD RESPONSE:** _____]
98. Don't Know
99. (Skipped)

F6. **[ASK if F2 = 26]** How many square feet of insulation did you have installed?

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

F7. **[ASK if F2 = 27]** How many square feet of windows did you have installed?

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

F8. **[ASK if F2 = 26]** In what location in your home was the insulation installed?

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

F9. **[ASK if F2 = 27]** In what location in your home were the windows installed?

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

F10. **[ASK ONCE FOR EACH ITEM CHECKED IN F2]** Why did you choose to purchase or install the items listed below? **[INSERT TABLE OF CHECKED RESPONSES FROM F2]**

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

F11. 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 F2 – ALLOW MULTIPLE RESPONSE]**

1. Yes, from Ameren Missouri
2. Yes, from another organization
3. No

98. Don't Know
99. (Skipped)

F12. **[ASK FOR EACH ITEM WHERE F11 = 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 F2]**

Please specify: [**RECORD RESPONSE:** _____]

F13. **[FOR MEASURES for which Ameren provides incentives (F2.9, F2.11, F2.12, 17, 19, 20, 21, 22, 23, 24, 26), ASK FOR EACH ITEM WHERE F11= 2 or 3]** Why didn't you apply for a rebate from Ameren Missouri for the purchase of your **[F2 RESPONSE]**?

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

99. (Skipped)

F14. How important was your experience with the **Ameren Missouri's Energy Efficiency School Kits Program** on your decision to purchase or install the **[F2 RESPONSE]**? **[INSERT TABLE OF CHECKED RESPONSES FROM F2]**

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

98. Don't Know
99. (Skipped)

F15. **[ASK FOR EACH CHECKED ITEM FROM F2]** Prior to purchasing or installing the items listed below, had you heard or read about the benefits of installing this equipment from Ameren Missouri or Ameren Missouri's Act on Energy campaign?

	Yes (1)	No (2)	Don't know (98)
[INSERT 1st CHECKED RESPONSE FROM F2]			
[INSERT 2nd CHECKED RESPONSE FROM F2]			
[INSERT 3rd CHECKED RESPONSE FROM F2]			
[INSERT 4th CHECKED RESPONSE FROM F2]			

F16. **[ASK FOR EACH YES RESPONSE IN F15]** How important was the information Ameren Missouri provided about the energy efficiency or money saving benefits of in your decision to purchase or install the items listed below? **[INSERT TABLE OF ALL "YES" RESPONSES FROM F15]**

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

98. Don't Know
99. (Skipped)

G. Demographics

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

G1. How many people live in your home?

1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven or more
8. I prefer not to answer this question

99. Skipped

G2. 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)

G3. How do you cool your home? Please check all that apply. **[CHECK ALL THAT APPLY]**

1. Central Cooling System
2. Window AC
3. Mini-split
4. Heat pump
5. Package Terminal System (through wall unit)
6. I don't have or don't use cooling
7. Other
   a. Please specify: [**SPECIFY:** _____]

98. Don't know
99. (Skipped)

G4. Which of these fuels primarily heat your home?

1. Natural gas
2. Electricity
3. Other fuel

98. Don't know
99. (Skipped)

G5. **[G4=2]** What type of space heating equipment do you have?

1. Electric Furnace
2. Electric Heat Pump
3. Electric Baseboard
4. Other
   a. Please specify: [**SPECIFY:** _____]

98. Don't know
99. (Skipped)

G6. How is your water heated?

1. Natural Gas
2. Electricity
3. Other fuel
98. Don't know
99. (Skipped)

G7. How many showers are in your home?

1. One
2. Two
3. Three or more
98. Don't Know
99. Skipped

G8. How many kitchen faucets are in your home?

1. One
2. Two
3. Three or more
98. Don't Know
99. Skipped

G9. How many bathroom faucets are in your home?

1. One
2. Two
3. Three or more
98. Don't Know
99. Skipped

H. CLOSING

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

Appendix H. General Population Survey Instrument

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. School Kit Survey Responses

Table 1 shows the most frequent answers to demographic questions asked in the student family participant survey.

Table 1. Demographics

Demographic	Most Frequent Answer	Percentage
Is Ameren Missouri your electricity provider?	Yes	92%, n=209
How many people live in your house?	Four	41%, n=178
Primary heating fuel	Natural Gas	59%, n=174
Water heating fuel*	Natural Gas	51%, n=164
How many showers are in your home?	Two	49%, n=177
How many kitchen faucets are in your home?	One	83%, n=174
How many bathroom faucets are in your home?	Three or more	46%, n=176

*46% of the respondents answered that their water is heated with electricity (n=164).

This appendix provides responses to questions in the Energy Efficiency Kits Program's school kits survey. The tables below provide the number of responses to answers for each closed-ended survey question. They also provide the percentage of customers selecting each response, excluding those answering "don't know" or "not applicable." Note: these frequencies are not weighted to account for survey modes.

Kit Confirmation

Table 2. Survey Question A1 Responses (n=218)

Our records indicate that your family received an Energy Efficiency Kit from school. Is this correct?		
Response	**Count of Response**	**Percent of Respondents**
Yes, we received one Energy Efficiency Kit	208	95%
Yes, we received two Energy Efficiency Kits	6	3%
Yes, we received three or more Energy Efficiency Kits	1	0%
No, we did not receive an Energy Efficiency Kit	3	1%

Satisfaction with Program and Kit Items

Table 3. Survey Question B1 Responses (n=209)

For the following statement, check the box that corresponds with whether you strongly agree, somewhat agree, agree, somewhat disagree, or strongly disagree with the following statement? "I am satisfied with my experience in the Ameren Missouri Multifamily Efficient Kits Program."		
Response	**Count of Response**	**Percent of Respondents**
Strongly agree	147	72%
Somewhat agree	24	12%
Agree	33	16%
Somewhat disagree	0	0%
Strongly disagree	1	0%
Don't know	4	2%

Installation Rates

Table 4. Survey Question C2a Responses (n=7)

Why did you remove the high-efficiency showerhead?		
Response	**Count of Response**	**Percent of Respondents**
It broke	0	0%
I didn't need it	1	14%
It didn't work well	2	29%
I didn't like how it looked	1	14%
Other (Please specify)	3	43%
Don't know	0	

Table 5. Survey Question C2b Responses (n=13)

Why did you remove the high-efficiency kitchen faucet aerator?		
Response	**Count of Response**	**Percent of Respondents**
It broke	0	0%
I didn't need it	2	15%
It didn't work well	3	23%
I didn't like how it looked	0	0%
Other (Please specify)	8	62%
Don't know	0	

Table 6. Survey Question C2c Responses (n=11)

Why did you remove the high-efficiency bathroom faucet aerator?		
Response	**Count of Response**	**Percent of Respondents**
It broke	0	0%
I didn't need it	2	18%
It didn't work well	4	36%
I didn't like how it looked	0	0%
Other (Please specify)	5	45%
Don't know	2	

Table 7. Survey Question C2d Responses (n=11)

Why did you remove the dirty furnace filter whistle?		
Response	**Count of Response**	**Percent of Respondents**
It broke	0	0%
I didn't need it	5	45%
It didn't work well	3	27%
I didn't like how it looked	0	0%
Other (Please specify)	3	27%
Don't know	1	

Table 8. Survey Question C2e Responses (n=6)

Why did you remove the hot water pipe insulation?		
Response	**Count of Response**	**Percent of Respondents**
It broke	1	17%
I didn't need it	2	33%
It didn't work well	1	17%
I didn't like how it looked	0	0%
Other (Please specify)	2	33%
Don't know	0	

Table 9. Survey Question C2f Responses (n=16)

Why did you remove the LED bulb(s)?		
Response	**Count of Response**	**Percent of Respondents**
The bulb(s) broke or burned out	3	19%
I didn't need them	2	13%
They didn't work well	1	6%
I didn't like how they looked	2	13%
Other (Please specify)	8	50%
Don't know	2	

Table 10. Survey Question C4a Responses (n=70)

Why didn't you install the Energy Efficiency Kit high-efficiency showerhead? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
It was difficult to install	2	3%
I didn't need it	31	42%
I plan to install it later	15	21%
It didn't fit	11	15%
Other (Please specify)	14	19%
Don't know	1	

Table 11. Survey Question C4b Responses (n=76)

Why didn't you install the Energy Efficiency Kit high-efficiency kitchen faucet aerator? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
It was difficult to install	5	6%
I didn't need it	21	25%
I plan to install it later	18	21%
It didn't fit	24	29%
Other (Please specify)	16	19%
Don't know	1	0%

Table 12. Survey Question C4c Responses (n=65)

Why didn't you install the Energy Efficiency Kit high-efficiency bathroom faucet aerator? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
It was difficult to install	4	6%
I didn't need it	24	34%
I plan to install it later	19	27%
It didn't fit	16	23%
Other (Please specify)	7	10%
Don't know	2	

Table 13. Survey Question C4d Responses (n=93)

Why didn't you install the Energy Efficiency Kit dirty furnace filter whistle? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
It was difficult to install	5	5%
I didn't need it	26	27%
I plan to install it later	33	34%
It didn't fit	12	12%
Other (Please specify)	22	22%
Don't know	8	

Table 14. Survey Question C4e Responses (n=58)

Why didn't you install the Energy Efficiency Kit hot water pipe insulation? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
It was difficult to install	6	10%
I didn't need it	24	39%
I plan to install it later	18	29%
It didn't fit	2	3%
Other (Please specify)	12	19%
Don't know	4	

Table 15. Survey Question C4f Responses (n=19)

Why didn't you install all of the Energy Efficiency Kit LED bulb(s)? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
They were difficult to install	0	0%
I didn't need them	5	23%
I plan to install them later	15	68%
They didn't fit	1	5%
Other (Please specify)	1	5%
Don't know	0	

Table 16. Survey Question C5a Responses (n=2)

What was difficult about installing the Energy Efficiency Kit high-efficiency showerhead? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
The item is of poor quality	0	0%
The item did not fit or could not be installed in my home	1	50%
My home already has the item	0	0%
We did not have the proper tools for installation	1	50%
Other (Please specify)	0	0%
Don't know	0	

Table 17. Survey Question C5b Responses (n=5)

What was difficult about installing the Energy Efficiency Kit high-efficiency kitchen faucet aerator? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
The item is of poor quality	0	0%
The item did not fit or could not be installed in my home	4	80%
My home already has the item	0	0%
We did not have the proper tools for installation	1	20%
Other (Please specify)	0	0%
Don't know	0	

Table 18. Survey Question C5c Responses (n=4)

What was difficult about installing the Energy Efficiency Kit high-efficiency bathroom faucet aerator? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
The item is of poor quality	0	0%
The item did not fit or could not be installed in my home	3	75%
My home already has the item	0	0%
We did not have the proper tools for installation	0	0%
Other (Please specify)	1	25%
Don't know	0	

Table 19. Survey Question C5d Responses (n=3)

What was difficult about installing the Energy Efficiency Kit dirty furnace filter whistle? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
The item is of poor quality	0	0%
The item did not fit or could not be installed in my home	2	67%
My home already has the item	0	0%
We did not have the proper tools for installation	0	0%
Other (Please specify)	1	33%
Don't know	2	

Table 20. Survey Question C5e Responses (n=3)

What was difficult about installing the Energy Efficiency Kit hot water pipe insulation? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
The item is of poor quality	0	0%
The item did not fit or could not be installed in my home	1	33%
My home already has the item	1	33%
We did not have the proper tools for installation	0	0%
Other (Please specify)	1	33%
Don't know	2	

Table 21. Survey Question C5f Responses (n=0)

What was difficult about installing the Energy Efficiency Kit LED bulb(s)? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
The item is of poor quality	0	0
The item did not fit or could not be installed in my home	0	0
My home already has the item	0	0
We did not have the proper tools for installation	0	0
Other (Please specify)	0	0
Don't know	0	

Table 22. Survey Question C6a Responses (n=71)

What was difficult about installing the Energy Efficiency Kit hot water pipe insulation? Check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
Gave it to someone else	14	20%
Kept it but haven't used it	56	79%
Thrown away or recycled it	1	1%
Don't know	0	

Table 23. Survey Question C6b Responses (n=77)

What did you do with the high-efficiency kitchen faucet aerator that you did not install?		
Response	**Count of Response**	**Percent of Respondents**
Gave it to someone else	12	16%
Kept it but haven't used it	61	79%
Thrown away or recycled it	4	5%
Don't know	1	

Table 24. Survey Question C6c Responses (n=67)

What did you do with the high-efficiency bathroom faucet aerator that you did not install?		
Response	**Count of Response**	**Percent of Respondents**
Gave it to someone else	12	18%
Kept it but haven't used it	53	79%
Thrown away or recycled it	2	3%
Don't know		

Table 25. Survey Question C6d Responses (n=101)

What did you do with the dirty furnace filter whistle that you did not install?		
Response	**Count of Response**	**Percent of Respondents**
Gave it to someone else	12	12%
Kept it but haven't used it	84	83%
Thrown away or recycled it	5	5%
Don't know	1	

Table 26. Survey Question C6e Responses (n=60)

What did you do with the hot water pipe insulation that you did not install?		
Response	**Count of Response**	**Percent of Respondents**
Gave it to someone else	6	10%
Kept it but haven't used it	52	87%
Thrown away or recycled it	2	3%
Don't know	2	

Table 27. Survey Question C6f Responses (n=19)

What did you do with the LED bulb(s) that you did not install? Please check all that apply.		
Response	**Count of Response**	**Percent of Respondents**
Gave them to someone else	1	5%
Kept but haven't used them	18	95%
Thrown away or recycled them	0	0%
Don't know	0	

Participant Satisfaction with Ameren Missouri

Table 28. Survey Question D1 Responses (n=179)

Thinking about your overall experiences with Ameren Missouri as your utility, how satisfied would you say you are with Ameren Missouri?		
Response	**Count of Response**	**Percent of Respondents**
Very satisfied	113	63%
Somewhat satisfied	61	34%
Not too satisfied	3	2%
Not at all satisfied	2	1%
Don't know	2	

Table 29. Survey Question D2 Responses (n=179)

Based on your experience with this program, would you say your satisfaction with Ameren Missouri has:		
Response	**Count of Response**	**Percent of Respondents**
Increased	100	56%
Stayed about the same	78	44%
Decreased	1	1%
Don't know	6	

Appendix J. Illinois TRM Flow Chart