



MEMORANDUM

To: Nick Warnecke and Nic Crowder, AIC; Nida Khan, CAMI Energy; Seth Craigo-Snell, SCS Analytics; and Elizabeth Horne, ICC Staff

From: The Opinion Dynamics Evaluation Team

Date: September 25, 2024

Re: AIC 2024 Business Program Custom Initiative Net-To-Gross Research

INTRODUCTION AND KEY FINDINGS

As part of the 2024 evaluation of the Ameren Illinois Company (AIC) Custom Initiative, Opinion Dynamics conducted free-ridership (FR) and spillover (SO) research with participating end-use customers to inform the development of net-to-gross ratio (NTGR) recommendations for the Initiative's New Construction Lighting and Custom Incentives channels for application in the 2025 program year.¹

The evaluation team completed this research using the net-to-gross (NTG) protocols prescribed in version 12.0 of the Illinois Technical Reference Manual (IL-TRM V12.0) Attachment A (Illinois Statewide Net-to-Gross Methodologies). Specifically, we used the IL-TRM's Core Non-Residential Free-Ridership Protocol² and the Core Participant Spillover (SO) Protocol.³ This memo presents FR and SO estimates for electric and gas savings resulting from that research effort.

The evaluation team plans to recommend updates to the NTGRs for New Construction Lighting and Custom Incentives channel electric savings; however, we plan to recommend maintaining the same NTGR recommendation from prior years for Custom Incentives channel gas savings due to the minimal savings coverage achieved through this research. Notably, the FR estimate for Custom Incentives channel electric savings for this research is relatively consistent with the FR rates reflected in NTGR recommendations for the channel's electric savings in previous years.

SUMMARY OF KEY FREE RIDERSHIP RESULTS

The resulting channel-level FR scores, SO scores, and NTGRs for electric energy and gas savings for the Custom Initiative are summarized in Table 1.

¹ The current research excludes an assessment of FR and SO for combined heat and power projects incentivized through the Custom Incentives channel. The evaluation team intentionally separated out these projects for a separate study. This research is ongoing.

² IL-TRM V12.0 Attachment A: Illinois Statewide Net-to-Gross Methodologies, Section 3.1.1: Core Non-Residential Free Ridership Protocol.

³ IL-TRM V12.0 Attachment A: Illinois Statewide Net-to-Gross Methodologies, Section 3.1.2: Core Participant Spillover Protocol.

Table 1. Custom Initiative Electric and Gas Savings NTG Results by Channel

Channel	Electric Energy Savings				Gas Savings			
	n	FR	SO	NTGR (1 - FR + SO)	n	FR	SO	NTGR (1 - FR + SO)
New Construction Lighting	4	0.100	0.000	0.900	0	N/A	N/A	N/A
Custom Incentives	17	0.248	0.000	0.752	6	0.355	0.000	0.645

a. The evaluation team identified one SO measure attributable to the program but lacked the sufficient information necessary to calculate the SO savings and resulting participant SO rate.

DATA COLLECTION AND SAMPLING METHODOLOGY

The evaluation team fielded a web survey with New Construction Lighting and Custom Incentives channel participants. The evaluation team drew the participant sample frame from the 2023 end-of-year and 2024 mid-year tracking data for the Initiative. Our key sample development and standardization steps included the following:

- Restricting the sample frame to the New Construction Lighting and Custom Incentives channels;
- Restricting the sample frame to projects with kWh and/or therms savings;
- Reviewing company and customer names to ensure consistent naming conventions and that participant details reflected end-use customer contact information rather than the Program Ally contact information;
- Confirming whether individual projects' trade allies were registered AIC trade allies (i.e., Program Allies);
- Reviewing key variables to write detailed project descriptions for each project;
- Identifying whether participating company locations participated in the Custom Initiative's Feasibility Study, Metering & Monitoring, and/or Process Energy Advisor Assessment channels; and
- Reviewing project details in Amplify (Ameren Illinois' Salesforce-based tracking database) for projects completed by the same company, at the same address, in the same channel to identify whether any projects should be combined into a single project for the purposes of the survey.⁴

The resulting sample frame included 174 unique projects: 28 New Construction Lighting projects and 146 Custom Incentives projects. Notably, five New Construction Lighting projects and 26 Custom Incentives projects were associated with facilities eligible under the NTG Ratio for Disadvantaged Areas policy defined in Section 7.4 of the Illinois Policy Manual based on the sector, location, and/or rate codes associated with the project.⁵ These DAC-eligible projects were excluded from the final populations for the purposes of this research. Our final sample frame included 143 unique projects: 23 New Construction Lighting projects and 120 Custom Incentives projects.

For multiple projects associated with the same participant, the evaluation team sampled the project with the highest electric energy savings for each unique email contact, except for two cases where a single email was associated with both a Custom Incentives project and a New Construction Lighting project. In these cases, we sampled the New Construction Lighting projects to maximize the number of New Construction Lighting projects in the sample. Additionally, we excluded two Custom Incentives projects for which we were missing key participant contact information; as well as one Custom Incentives project whose primary contact was also associated with a project included in the

⁴ The evaluation team identified three instances where Custom Incentives projects were separated into two component projects in order to support program implementation (e.g., paying out a portion of the total project incentive to the customer for completing a phase of the project). For the purposes of this survey, the evaluation grouped the components back together and treated them as a single project. The evaluation team only took this approach in cases where such actions were explicitly noted by the implementation team in Amplify.

⁵ <https://www.icc.illinois.gov/docket/P2023-0761/documents/344226/files/601129.pdf>

ongoing combined heat and power research.⁶ The resulting sample included 106 unique projects: 21 New Construction Lighting projects and 85 Custom Incentives projects.

Survey outreach started in mid-July 2024 and continued through mid-August 2024. Participants received an initial survey invitation and up to two follow-up emails. As presented in Table 2, we received 24 valid responses (i.e., participant responses that passed screening and equipment verification questions and were not associated with facilities eligible for the NTG Ratio for Disadvantaged Areas policy), for a response rate of 23% among non-DAC projects.⁷ Of those 24 responses, 18 were associated with projects that only produced electric savings, three were associated with projects that produced electric and gas savings, and three were associated with projects that only produced gas savings. Respondents accounted for 14% of the total electric energy savings and 4% of the total gas savings of the population.

Table 2. Representation of Savings in Sample and Survey Completes

Population (Sample Frame)			Sample			Completed Surveys		
n	Total Electric Energy Savings	Total Gas Savings	n	% of Electric Energy Savings*	% of Gas Savings*	n	% of Electric Energy Savings*	% of Gas Savings*
143	29,857,813	1,336,465	106	72%	29%	24	14%	4%

* Percentage of energy savings associated with projects captured in the sample and survey responses, relative to the total energy savings for the population.

Table 3 and Table 4 include details on the breakdown of responses and savings coverage for each channel. Given the New Construction Lighting channel only produces electric savings, it is excluded from Table 4.

Table 3. Responses and Electric Energy Savings Coverage by Channel

Channel	Number of Completes	% of Participants Covered in Survey*	% of kWh Savings Covered in Survey*
New Construction Lighting	4	17%	44%
Custom Incentives	17	16%	12%

* Relative to the population.

Table 4. Responses and Gas Savings Coverage by Channel

Channel	Number of Completes	% of Participants Covered in Survey*	% of Therms Savings Covered in Survey*
Custom Incentives	6	14%	4%

* Relative to the population.

⁶ The current research excludes an assessment of FR and SO for combined heat and power projects incentivized through the Custom Incentives channel. The evaluation team intentionally separated out these projects for a separate study. This research is ongoing.

⁷ We received 28 total responses, but one Custom Incentives respondent did not pass the screening criteria and three were eligible for the NTG Ratio for Disadvantaged Areas policy (one New Construction Lighting, two Custom Incentives). The number of completes in Table 2, Table 3, and Table 4 reflect the exclusion of these respondents.

CORE NON-RESIDENTIAL FREE RIDERSHIP PROTOCOL

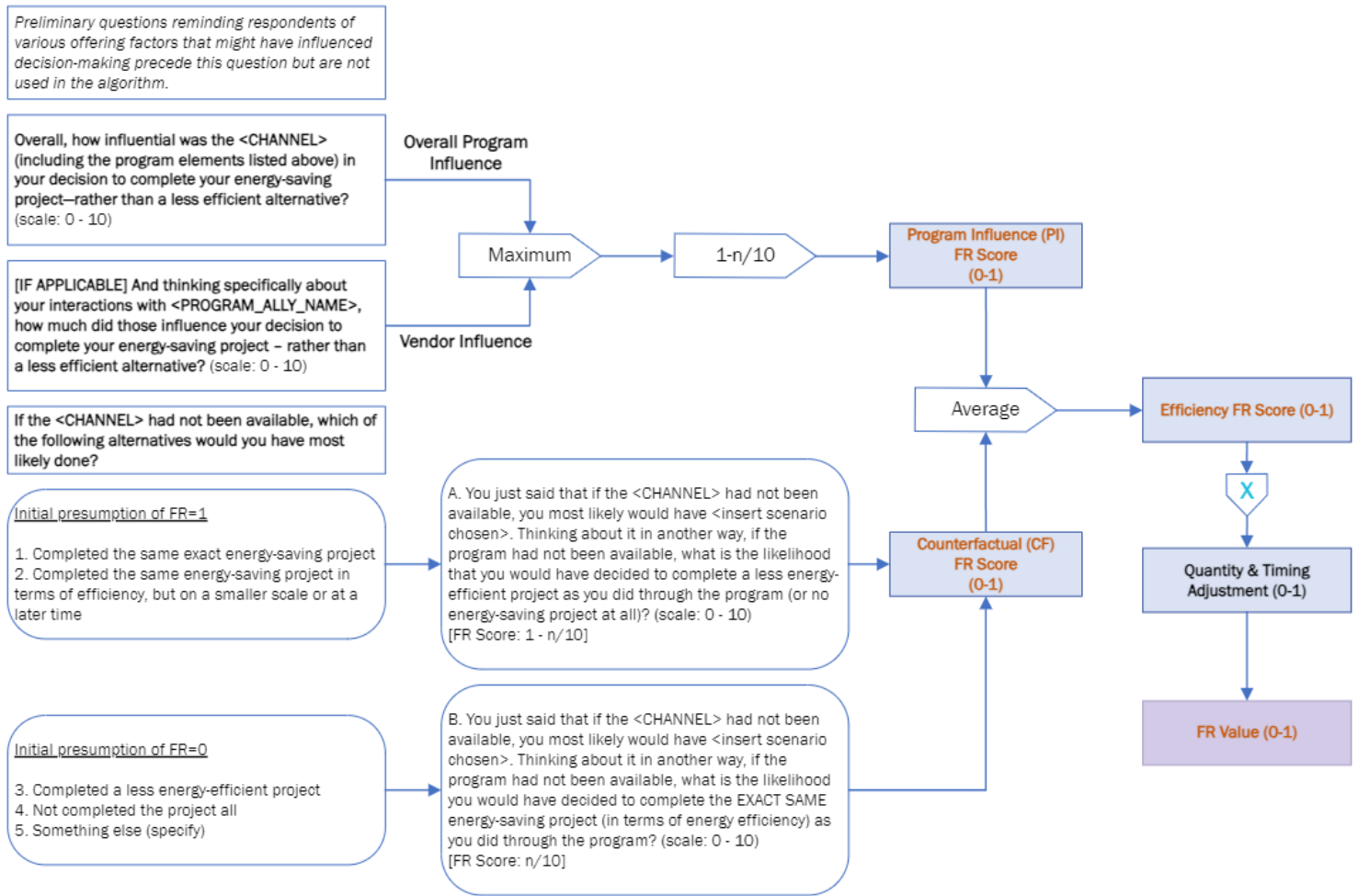
The evaluation team estimated FR using the methodology prescribed in the IL-TRM V12.0, Attachment A. In this methodology, FR is defined as the average of two FR sub-scores: the Program Influence (PI) FR Score and the Counterfactual (CF) FR Score, which can be further modified by applying a quantity and timing adjustment if applicable. We calculated these two FR sub-scores based on responses to an overall program influence question and a scenario-based counterfactual question, respectively. When vendor (i.e., registered trade ally) recommendations were considered a program factor, in addition to rating overall program influence, respondents rated the influence of their interactions with the vendor on their decision to complete their energy-saving project rather than a less efficient alternative. In these cases, the evaluation team used the maximum influence score across the vendor influence and overall program influence questions (or equivalently, the minimum FR scores derived from those questions) to calculate the Efficiency FR Score, in accordance with IL-TRM guidance. Together, these questions gauged the relative influence of the Initiative, the influence of the vendor recommendations when applicable, and the likelihood of comparable outcomes in the absence of the Initiative. Additional details on the three sub-scores, how they are calculated, and any applicable adjustments are provided in Appendix A.

The Custom Initiative Participant FR algorithm is graphically depicted in Figure 1. Per the algorithm, the evaluation team calculated an Efficiency FR Score for each respondent by averaging their PI FR Score – as derived from the overall program influence question or vendor influence question, as applicable – and the CF FR Score.⁸ We then multiplied the Efficiency FR Score by a Quantity and Timing (Q&T) Adjustment value, which we calculated based on participant responses to questions related to the scale and timing of their energy-saving project in the absence of the Initiative. The resulting final FR value is measured on a scale of 0 to 1, where 0 means the participant is a non-free rider and 1 means the participant is a full free rider.⁹

⁸ The evaluation team employed several consistency check questions to determine if the PI FR Score and CF FR Score should be weighted equally in the calculation of the Efficiency FR Score.

⁹ Additional detail on the Q&T Adjustment values and how they are calculated is provided in Appendix A.

Figure 1. Custom Initiative Participant Free Ridership Algorithm



The evaluation team calculated the channel-level FR scores for electric energy and gas savings as the average of respondents' individual FR scores for that channel, weighed by the energy savings associated with the project.

SPILLOVER PROTOCOL

Spillover occurs when a respondent's participation in an AIC Initiative influences future purchases/installations of high-efficiency measures beyond those directly incentivized through the Initiative. The evaluation team sought to estimate SO based on participant responses following the protocols prescribed in the IL-TRM V12.0, Attachment A.

Respondents answered a battery of questions regarding whether they had purchased/installed additional energy-efficient measures for their business at the same time as or since participating in the Custom Initiative, for which they did not receive an incentive. As part of this battery, the evaluation team collected basic information about the additional energy efficiency measures purchased/installed and assessed program attribution.

The evaluation team used the following questions to establish program attribution for each SO measure, per the IL-TRM:

- **Measure Attribution Score 1:** How important was your experience with the [New Construction Lighting offering/Custom Incentives offering] in your decision to purchase/install this measure? Please use a scale of 0 to 10, where 0 is “Not at all Important” and 10 is “Extremely Important.”
- **Measure Attribution Score 2:** If you had not participated in the [New Construction Lighting offering/Custom Incentives offering], how likely is it that your organization would have still purchased/installed this measure? Please use a 0 to 10 scale where 0 means you “Definitely WOULD NOT have purchased/installed this equipment” and 10 means you “Definitely WOULD have purchased/installed this equipment.”

The IL-TRM lists two possible methods to calculate program attribution.¹⁰ The evaluation team determined that Method 1 was the appropriate method for calculating program attribution given the data collection and analysis approach. According to this method, “program attribution is established if the average of Measure Attribution Score 1 and (10 – Measure Attribution Score 2) exceeds 5.0. If the average is greater than 5.0, 100% of the measure energy savings referenced in the question are considered to be attributable to the program. If the average is not greater than 5.0, none of the measure energy savings are considered to be attributable to the program.”

We asked respondents to provide additional information and technical specifications for SO measures with a program attribution greater than 5.0 to support the estimation of the corresponding SO savings, in accordance with the methods and algorithms specified in the IL-TRM V12.0. The resulting participant spillover rate would then be calculated as depicted in the following formula:

$$Participant\ Spillover\ Rate = \frac{\text{Sum of Spillover estimates for respondents in the sample}}{\text{Ex Post Gross Impacts for all projects by respondents in the sample}}$$

Notably, the evaluation team did not quantify a participant spillover rate based on this research. The evaluation team identified one SO measure attributable to the program; however, the respondent did not provide enough detail regarding the measure to accurately estimate the SO savings. This respondent was unresponsive to the evaluation team’s multiple attempts to reach out for further details.

NTG RESULTS BY CHANNEL

The evaluation team calculated the final channel-level NTGRs for electric energy and gas savings as 1 – FR + SO. Table 5 and Table 6 summarize the FR, SO, and NTGR results by channel for electric energy savings and gas savings, respectively.

Table 5. Custom Initiative Electric Savings NTG Results by Channel

Channel	Number of Completes	% of Participants Covered in Survey*	% of kWh Savings Covered in Survey*	Electric Energy Savings		
				FR	SO	NTGR (1 – FR + SO)
New Construction Lighting	4	17%	44%	0.100	0.000	0.900
Custom Incentives	17	16%	12%	0.248	0.000	0.752

a. The evaluation team identified one SO measure attributable to the program but lacked the sufficient information necessary to calculate the SO savings and resulting participant SO rate.

*Relative to the population.

¹⁰ IL-TRM V12.0 Attachment A: Illinois Statewide Net-to-Gross Methodologies, Section 3.1.2.2: Approach for Identifying and Quantifying Spillover. Opinion Dynamics

Table 6. Custom Initiative Gas Savings NTG Results by Channel

Channel	Number of Completes	% of Participants Covered in Survey*	% of Therms Savings Covered in Survey*	Gas Savings		
				FR	SO	NTGR (1 - FR + SO)
Custom Incentives	6	14%	4%	0.355	0.000	0.645

a. The evaluation team identified one SO measure attributable to the program but lacked the sufficient information necessary to calculate the SO savings and resulting participant SO rate.

*Relative to the population.

APPENDIX A. PARTICIPANT FREE RIDERSHIP DETAILED ANALYSES

FREE RIDERSHIP SUB-SCORES

The following sections detail how the participant survey captured participant FR sub-scores (including extracts from the survey instrument) and any adjustments made to sub-scores due to inconsistencies in responses.

PROGRAM INFLUENCE FR SCORE

The first section of the survey reminded respondents of the scope of the energy-saving project they completed through the Custom Initiative at a given facility. Next, the survey prompted respondents to think about the reasons why their business decided to complete their energy-saving project, whether they consulted with a contractor or vendor regarding the planning and execution of their project, and who the most influential actor was in identifying and recommending their project. The survey also asked some additional questions regarding the circumstances surrounding respondents' participation in the Custom Initiative, specifically, whether they learned about the Initiative before or after finalizing the details of their project and whether their business ever received incentives from an AIC offering prior to completing the project in question. These questions were meant to remind participants of the context around their project prior to answering the FR-related questions, as well as to provide the evaluation team with more information about the factors that went into the participants' decision-making process.

Moving forward, we will refer to the project you [IF MODE=SURVEY, "completed"; IF MODE=IN-DEPTH INTERVIEW, "are completing"] through the <CHANNEL> as your "energy-saving project". We are interested in hearing about your experience participating in the <CHANNEL>, and how it influenced your decision to complete your energy-saving project.

Q1. Please briefly describe why your company chose to complete the energy-saving project in the first place. [OPEN-END]

Q1.1. And why did your company choose to complete an energy-saving project through the <CHANNEL>? [OPEN-END]

Q2. Did you consult with [IF PROGRAM_ALLY=NO, "a contractor or vendor"; IF PROGRAM_ALLY=YES, <PROGRAM_ALLY_NAME>] in the planning or implementation of your energy-saving project?

1. Yes
2. No
98. Unsure

Q3. Who was most influential in identifying and recommending the energy-efficient elements of your energy-saving project?

1. Me
2. Someone else at my company
3. [SHOW IF Q2=1] [IF PROGRAM_ALLY=NO, "My contractor or vendor"; IF PROGRAM_ALLY=YES, <PROGRAM_ALLY_NAME>]
4. An Ameren Illinois representative
0. Other, please specify: [OPEN-END]
98. Unsure

Q4. Did you learn about the <CHANNEL> **before** or **after** finalizing the details of your energy-saving project?

1. Before
2. After
98. Unsure

Q5. Prior to [IF MODE=SURVEY, "completing"; IF MODE=IN-DEPTH INTERVIEW, "deciding to complete"] this energy-saving project, had <COMPANY> received incentives from an Ameren Illinois program for another energy-efficient project?

1. Yes
2. No
98. Unsure

PROGRAM INFLUENCE

Next, participants reviewed a list of elements of the Custom Initiative that may or may not have influenced their decision to complete their energy-saving project. This list identified key elements of the Initiative designed to influence participants directly. The list was included to prime participants to think about the various elements of their participation that may have influenced their decision to complete their energy-saving project and prepared them for the mention of such influence in subsequent questions.

The next few questions ask about the role the <CHANNEL> played in your decision to complete your energy-saving project. When thinking about the <CHANNEL>, please consider the following program elements:

- The program incentive;
- [SHOW IF CHANNEL=NEW CONSTRUCTION LIGHTING OFFERING] Ameren Illinois' New Construction Lighting Application;
- [ASK IF FEAS_STUDY=YES] Information provided through the Feasibility Study you conducted with support from the program;
- [ASK IF M&M_PROJ=YES] Metering and monitoring enhancements installed with support from the program;
- [ASK IF PEA_ASSESS=YES] Energy efficiency audit and resulting report you received from the program;
- [SHOW IF PROGRAM_ALLY=YES & Q2=1] Interactions with <PROGRAM_ALLY_NAME>, a vendor or contractor associated with the <CHANNEL>;
- Interactions with an Ameren Illinois representative, including an Energy Advisor or Key Account Executive;
- [SHOW IF Q5=1] Previous experience with an Ameren Illinois program;
- Information from the <CHANNEL> materials and/or application.

The survey captured program influence by asking respondents about the influence of all applicable Initiative elements on their decision to complete their energy-saving project.

[DISPLAY THE LIST OF PROGRAM ELEMENTS ABOVE AND Q6 ON THE SAME SCREEN]

Q6. Overall, how influential was the <CHANNEL> (including the program elements listed above) in your decision to complete your energy-saving project—rather than a less efficient alternative? [SCALE: 0, “Not at all influential” – 10, “Extremely influential”]

The evaluation team calculated each participant's Program Influence FR Score as $PI\ FR\ SCORE = 1 - (Q6/10)$.

VENDOR INFLUENCE

In accordance with the IL-TRM, the evaluation team determined that the Custom Initiative has a qualifying trade ally network that includes pre-approved, registered trade allies who are an integral component of program delivery, and who receive program-sponsored training. As such, vendor recommendations are considered a program factor in the cases where the participant interacted with a registered trade ally for the project in question.

When the participant interacted with a trade ally associated with the Custom Initiative, the survey captured vendor influence by asking respondents how much their interaction with that vendor influenced their decision to complete their energy-saving project.

[ASK IF PROGRAM_ALLY=YES]

Q7. And thinking specifically about your interactions with <PROGRAM_ALLY_NAME>, how much did those influence your decision to complete your energy-saving project – rather than a less efficient alternative? [SCALE: 0, “Not at all influential” – 10, “Extremely influential”]

The evaluation team calculated each participant's Vendor Influence FR Score as $VI\ FR\ SCORE = 1 - (Q7/10)$.

FINAL PROGRAM INFLUENCE FREE-RIDERSHIP SCORE

As outlined in the IL-TRM, when vendor recommendations were a program factor, the evaluation team used the minimum of the PI FR Score and the VI FR SCORE –or equivalently, the maximum influence score of Q6 and Q7—as the final score used to calculate the Efficiency FR Score.

COUNTERFACTUAL FR SCORE

The evaluation team assessed the CF FR Score by asking respondents to consider how their decision to complete their energy-saving project would have differed if the Initiative had not been available. We first asked respondents to consider what alternative action they would have taken in the absence of the Initiative.

- Q8. If the <CHANNEL> had not been available, which of the following alternatives would you have most likely done?
1. I would have decided to complete the **same exact** energy-saving project
 2. I would have decided to complete the **same** energy-saving project in terms of **efficiency**, but on a **smaller scale** or at a **later time**
 3. I would have decided to complete a **less energy-efficient** project
 4. I would have decided **not to complete** the energy-saving project at all
 5. I would have decided to do something else: [OPEN-END]

Depending on respondents' answers to Q8, the survey prompted them to clarify the likelihood of two different outcomes in the absence of the Initiative.

- If the respondent answered that they would have decided to complete the same exact energy-saving project or that they would have decided to complete the same energy-saving project in terms of efficiency, but on a smaller scale or at a later time, the survey prompted the respondent to indicate the likelihood that they would have decided to complete a less energy-efficient project as they did through the Initiative (or no energy-saving project at all).
- If the respondent answered that they would have decided to complete a less energy-efficient project, decided not to complete the energy-saving project at all, or done something else, the survey prompted them to indicate the likelihood that they would have decided to complete the exact same energy-saving project (in terms of energy efficiency) as they did through the Initiative.

[ASK IF Q8=1 OR 2]

- Q9. You just said that if the <CHANNEL> had not been available, you most likely <INITIAL_CF>. Thinking about it in another way, if the program had not been available, what is the likelihood that you would have decided to complete a **less energy-efficient project** as you did through the program (or **no energy-saving project** at all)? [SCALE: 0, "Not at all likely" – 10, "Extremely likely"]

[ASK IF Q8=3, 4, OR 5]

- Q10. You just said that if the <CHANNEL> had not been available, you most likely <INITIAL_CF>. Thinking about it in another way, if the program had not been available, what is the likelihood you would have decided to complete the **EXACT SAME** energy-saving project (in terms of **energy efficiency**) as you did through the program? [SCALE: 0, "Not at all likely" – 10, "Extremely likely"]

The evaluation team calculated each participant's Counterfactual FR Score as:

- If Q8 = 1 or 2: CF SCORE = 1 – (Q9/10)
- If Q8 = 3, 4, or 5: CF SCORE = Q10/10.

CONSISTENCY CHECKS

We asked respondents to answer consistency check questions if their PI FR Score or VI FR Score contradicted their CF FR Score. In alignment with the IL-TRM, this contradiction was defined as (1) a PI FR Score or VI FR Score greater than

0.6 (suggesting high FR) and CF FR Score less than 0.4 (suggesting low FR), or (2) a PI FR Score or VI FR Score less than 0.4 (suggesting low FR) and CF FR Score greater than 0.6 (suggesting high FR).¹¹

The survey asked respondents a timing consistency check question if they (1) reported learning about the Initiative after finalizing the details of their energy-saving project and (2) had a PI FR Score less than 0.4, VI FR Score less than 0.4, and/or CF FR Score less than 0.4 (all of which suggest low FR).

PROGRAM INFLUENCE CONSISTENCY CHECK

If the PI consistency check was triggered, respondents answered one of two questions, depending on the direction of the inconsistency, regarding the Initiative's influence on their decision to complete their energy-saving project.

[ASK IF PI_FR_SCORE<0.4 AND CF_FR_SCORE>0.6]

Q11. When asked how influential the <CHANNEL> was on your decision to complete your energy-saving project you provided a response of <Q6 RESPONSE>, suggesting the program **was highly influential**. However, your responses to the questions regarding what you would have decided to do if the program had not been available suggest that you would have decided to **complete the same energy-saving project as you did through the program** regardless of the program's availability.

In your own words, can you describe how the program did or did not influence your decision to complete your energy-saving project? [OPEN-ENDED RESPONSE]

[ASK IF PI_FR_SCORE>0.6 AND CF_FR_SCORE<0.4]

Q12. When asked how influential the <CHANNEL> was on your decision to complete your energy-saving project you provided a response of <Q6 RESPONSE>, suggesting the program **was not influential**. However, your responses to the questions regarding what you would have decided to do if the program had not been available suggest that you **would have decided to do a less energy-efficient project (or no energy-saving project at all)** in the absence of the program.

In your own words, can you describe how the program did or did not influence your decision to complete your energy-saving project? [OPEN-ENDED RESPONSE]

To add additional clarification, respondents also answered a straightforward, binary question as to whether the Initiative did or did not positively influence their decision to complete their energy-saving project.

[ASK IF (PI_FR_SCORE<0.4 AND CF_FR_SCORE>0.6) OR (PI_FR_SCORE>0.6 AND CF_FR_SCORE<0.4)]

Q13. Overall, did the <CHANNEL> positively influence your decision to complete your energy-saving project?

1. Yes
 2. No
-

The evaluation team used the responses to the PI consistency check questions to contextualize respondents' scores and determine if either the PI FR Score or CF FR Score needed to be modified or dropped.

VENDOR INFLUENCE CONSISTENCY CHECK

If the VI consistency check was triggered, respondents answered one of two questions, depending on the direction of the inconsistency, regarding the vendor's influence on their decision to complete their energy-saving project.

¹¹ The IL-TRM suggests the use of 0.3 and 0.7 as the threshold to trigger consistency check questions; however, the evaluation team implemented a wider range (0.4 and 0.6) to gather additional context from respondents whose scores were on the initial limits and adjust their scores to more accurately represent what they describe in their consistency check responses.

[ASK IF PI_FR_SCORE>PA_FR_SCORE AND (PA_FR_SCORE<0.4 AND CF_FR_SCORE>0.6)]

Q14. When asked how influential your interactions with <PROGRAM_ALLY_NAME> were on your decision to complete your energy-saving project you provided a response of <Q7 RESPONSE>, suggesting that your interactions with <PROGRAM_ALLY_NAME> were **highly influential**. However, your responses to the questions regarding what you would have decided to do if the program (including your interactions with <PROGRAM_ALLY_NAME>) had not been available suggest that you would have decided to **complete the same energy-saving project as you did through the program** regardless of the program's availability.

In your own words, can you describe how your interactions with <PROGRAM_ALLY_NAME> did or did not influence your decision to complete your energy-saving project? [OPEN-ENDED RESPONSE]

[ASK IF PI_FR_SCORE>PA_FR_SCORE AND (PA_FR_SCORE>0.6 AND CF_FR_SCORE<0.4)]

Q15. When asked how influential your interactions with <PROGRAM_ALLY_NAME> were on your decision to complete your energy-saving project you provided a response of <Q7 RESPONSE>, suggesting that your interactions with <PROGRAM_ALLY_NAME> were **not influential**. However, your responses to the questions regarding what you would have decided to do if the program (including your interactions with <PROGRAM_ALLY_NAME>) had not been available suggest that you **would have decided to do a less energy-efficient project (or no energy-saving project at all)** in the absence of the program.

In your own words, can you describe how your interactions with <PROGRAM_ALLY_NAME> did or did not influence your decision to complete your energy-saving project? [OPEN-ENDED RESPONSE]

To add additional clarification, respondents also answered a straightforward, binary question as to whether the vendor did or did not positively influence their decision to complete their energy-saving project.

[ASK IF PI_FR_SCORE>PA_FR_SCORE AND ((PA_FR_SCORE<0.4 AND CF_FR_SCORE>0.6) OR (PA_FR_SCORE>0.6 AND CF_FR_SCORE<0.4))]

Q16. Overall, did your interactions with <PROGRAM_ALLY_NAME>, a vendor or contractor associated with the <CHANNEL>, positively influence your decision to complete your energy-saving project?

1. Yes
2. No

The evaluation team used the responses to the VI consistency check questions to contextualize respondents' scores and determine if either the VI FR Score or CF FR Score needed to be modified or dropped.

PROGRAM/VENDOR INFLUENCE CONSISTENCY CHECK OUTCOMES

Of the 24 respondents, seven triggered the PI consistency check questions, and three triggered the VI consistency check questions. The evaluation team compared each respondent's PI FR Score to their CF Score, and their VI FR Score to their CF Score as applicable. The evaluation team then used the additional context from the consistency checks to identify if, within each PI FR Score – CF Score and VI FR Score – CF Score combination, there was sufficient evidence to suggest that one score was a more accurate reflection of the level of influence of the Initiative and should therefore be weighted more heavily in calculating the Efficiency FR Score. Respondents whose scores were consistent or whose consistency checks did not suggest one score was a more accurate reflection than the other were weighted equally. After weighing these respondents' scores accordingly, the evaluation team determined which combination of weighted scores—the weighted PI FR Score and its corresponding weighted CF FR Score, or the weighted VI FR Score and its corresponding weighted CF FR Score—would result in the lower Efficiency FR Score. Only calculating the minimum between the PI FR Score and the VI FR Score, now that these scores were weighted relative to their corresponding CF FR Score, would not always result in the most accurate reflection of program influence. The evaluation team used that combination of weighted scores and calculated the Efficiency FR Score as the sum of (1) the weighted PI FR Score or weighted VI FR Score and (2) the corresponding weighted CF FR Score.

TIMING CONSISTENCY CHECK

If the timing consistency check was triggered, respondents answered one of two questions related to clarifying the timing of when they learned about the Initiative relative to finalizing the details of their energy-saving project and the influence of the program or vendor on their decision to complete their energy-saving project.

[ASK IF Q4=2 AND (PI_FR_SCORE<=PA_FR_SCORE OR PROGRAM_ALLY=NO) AND (PI_FR_SCORE<0.4 OR CF_FR_SCORE<0.4)]

Q17. When asked when you learned about the program relative to finalizing the details of your energy-saving project, you indicated that **the details of your energy-saving project were finalized before you learned about the program.**

However, you [IF PI_FR_SCORE<0.4, “provided a response of <Q6 RESPONSE> for how influential the program was on your decision to complete your energy-saving project”] [IF PI_FR_SCORE<0.4 AND CF_FR_SCORE<0.4, “and”] [IF CF_FR_SCORE<0.4, “provided responses that suggest you would have decided to do a less energy-efficient project (or no energy-saving project at all) if the program had not been available”], suggesting the program **was highly influential.**

In your own words, can you describe **when** you learned about the program relative to finalizing the details of your energy-saving project, and how the program did or did not influence your decision to complete your energy-saving project? [OPEN-ENDED RESPONSE]

[ASK IF Q4=2 AND PI_FR_SCORE>PA_FR_SCORE AND (PA_FR_SCORE<0.4 OR CF_FR_SCORE<0.4)]

Q18. When asked when you learned about the program relative to finalizing the details of your energy-saving project, you indicated that **the details of your energy-saving project were finalized before you learned about the program.**

However, you [IF PA_FR_SCORE<0.4, “provided a response of <Q7 RESPONSE> for how influential your interactions with <PROGRAM_ALLY_NAME>, a vendor or contractor associated with the program, were on your decision to complete your energy-saving project”] [IF PA_FR_SCORE<0.4 AND CF_FR_SCORE<0.4, “and”] [IF CF_FR_SCORE<0.4, “provided responses that suggest you would have decided to do a less energy-efficient project (or no energy-saving project at all) if the program had not been available”], suggesting the program (including your interactions with <PROGRAM_ALLY_NAME>) **was highly influential.**

In your own words, can you describe **when** you learned about the program relative to finalizing the details of your energy-saving project, and how your interactions with <PROGRAM_ALLY_NAME> did or did not influence your decision to complete your energy-saving project? [OPEN-ENDED RESPONSE]

The evaluation team used the responses to the timing consistency check questions to contextualize participants’ responses, determine whether they had finalized project details prior to learning about the Initiative, and decide if either the PI FR Score, VI FR Score, or CF FR Score needed to be modified or dropped.

Of the 24 respondents, one participant triggered the timing consistency check questions. Based on the respondent’s answers, the evaluation team concluded they had not finalized all the details of their project before learning about the Initiative; therefore, their previous FR scores remained unchanged.

QUANTITY AND TIMING ADJUSTMENT

The Quantity and Timing (Q&T) adjustment is a multiplicative factor that decreases the Efficiency FR Score if the respondent indicated that the Initiative expedited all or some of the scope of their energy-saving project. In the Q&T survey section, the survey asked respondents to consider if they would have completed the full scale of their energy-saving project at the same time they did (i.e., around the same time they participated in the Initiative) had the Initiative not been available.¹² The question included a response option that allowed the respondent to indicate if scale was not relevant to their energy-saving project (i.e., their project could not be scaled down).

Respondents who indicated they would have scaled down their project indicated what percentage of the total scale of their project they would have completed at the same time they did through the Initiative. The survey asked these

¹² Respondents did not receive the Q&T section of the survey if their existing PI FR Score, VR FR Score, and CF Score would result in a FR value of 0, as their final FR value could not be decreased any further.

respondents if they would have completed the remaining portion of their project at a later time, and if so, how much later they would have completed the remaining portion relative to when they completed their project through the Initiative. Participants who indicated that scale was not relevant to their project or that they would not have completed any part of their energy-saving project at the same time they did through the Initiative had the Initiative not been available were asked if they would have completed the entirety of their project at a later time. If respondents indicated they would have completed the project at a later time, they were asked how much later they would have completed their projects relative to when they completed it through the Initiative.

[IF TOT_FR_SCORE=0 AND CF_FR_SCORE=0, SKIP TO Q24]

Q19. Please think about the **full scale** of your energy-saving project (number of units included, number of different types of equipment included, etc.) and the **[IF MODE=IN-DEPTH INTERVIEW, “planned”] timing** of your energy-saving project when answering the following questions. If the question does not apply to your energy-saving project, please select “not applicable”. If the <CHANNEL> had not been available, would you have **[IF MODE=SURVEY, “completed”**; **IF MODE=IN-DEPTH INTERVIEW, “decided to complete”**] the full scale of your energy-saving project **[IF MODE=SURVEY “around <COMPLETION_DATE> (i.e., at the same time as you did through the program)”**; **IF MODE=IN-DEPTH INTERVIEW, “on the same timeline as your current project”**], or a smaller portion of your energy-saving project?

1. I would have **[IF MODE=SURVEY, “completed”, DISPLAY IF MODE=IN-DEPTH INTERVIEW, “decided to complete”]** the full scale of the energy-saving project around <COMPLETION_DATE> **[SKIP TO Q24]**
 2. I would have **[IF MODE=SURVEY, “completed”, DISPLAY IF MODE=IN-DEPTH INTERVIEW, “decided to complete”]** a smaller portion of the energy-saving project around <COMPLETION_DATE>
 3. I would **[IF MODE=SURVEY, “not have completed”, DISPLAY IF MODE=IN-DEPTH INTERVIEW, “have decided not to complete”]** any part of the energy-saving project around <COMPLETION_DATE> **[SKIP TO Q22a]**
96. Not applicable to my project/My project could not be scaled down **[SKIP TO Q22]**
98. Unsure **[SKIP TO Q24]**

[ASK IF Q19=2]

Q20. Thinking about the full scale of your energy-saving project **[IF MODE=SURVEY, “completed around <COMPLETION_DATE>”]**, what portion of your energy-saving project would you have **[IF MODE=SURVEY, “completed at the same time you did (i.e., around the same date)”**; **IF MODE=IN-DEPTH INTERVIEW, “decided to complete on the same planned timeline”]** without the <CHANNEL>? *Please provide your response as an estimated percentage.* **[0-100 NUMERIC RESPONSE; 998=Unsure]**

[ASK IF Q20<100]

Q21. If the <CHANNEL> had not been available, would you have **[IF MODE=SURVEY, “completed”**; **IF MODE=IN-DEPTH INTERVIEW, “planned to complete”]** the **remaining <100 – Q20RESPONSE>%** of your energy-saving project at a later time?

1. Yes
2. No

98. Unsure

[ASK IF Q19=96]

Q22. If the <CHANNEL> had not been available, would you have **[IF MODE=SURVEY, “completed your energy-saving project at the same time (i.e., around <COMPLETION_DATE>) or a later time?”**; **IF MODE=IN-DEPTH INTERVIEW, “planned to complete your energy saving project on the same timeline or at a later time?”]**

1. Same time
2. Later

98. Unsure

[ASK IF Q19=3]

Q22a. You indicated that if the <CHANNEL> was unavailable, you would not have completed any part of your energy-saving project at the time you did. Would you have completed the project at a later time or never have completed the project?

1. Completed the project at a later time
2. Never completed the project

98. Unsure

[ASK IF Q21=1 OR Q22=2 OR Q22a=1]

Q23. Which date range represents your best estimate of when you would have **[IF MODE=SURVEY, “completed”**; **IF MODE=IN-DEPTH INTERVIEW, “planned to complete”]** **[IF Q21=1, “the remaining <100 – Q20RESPONSE>% of”]** the energy-saving project if the <CHANNEL> had not been available? *Please answer relative to the [IF MODE=SURVEY, “date that you actually completed the project.”*; **IF MODE=IN-DEPTH INTERVIEW, “estimated date the project will be completed.”]**

1. Within 6 months
2. Between 6 months – 1 year
3. Between 1 – 2 years
4. Between 2 – 3 years
5. 3 years or more

96. I would not have completed the energy-saving project at all

98. Unsure

The Q&T Adjustment value could range from 0 to 1 and could only reduce the final FR value. The Timing Adjustment was calculated using a midpoint of the date range selected by the respondent, also known as the “number of months expedited.” The midpoint was estimated within a time frame between six months and three years, consistent with IL-TRM guidance, and was calculated using the following formula:

$$3 - \text{year Time Horizon Adjustment} = 1 - (\text{Number of Months Expedited} - 6)/30$$

Table 7 provides details on the Timing Adjustment values corresponding to the date ranges respondents could choose from.

Table 7. Timing Adjustments

Participant Survey Response	Timing Adjustment (3-year Time Horizon Adjustment)
Within 6 months	1.0
Between 6 months - 1 year	0.90
Between 1-2 years	0.60
Between 2-3 years	0.20
Over 3 years	0
I would not have completed the project at all	0
Don't know	$1 - (\text{Average Number of Months Expedited} - 6)/30$

Two respondents indicated “Unsure” when asked whether, in the absence of the Initiative, they would have completed the remaining percentage of their energy-saving project at a later time. One additional respondent who indicated they would not have done any part of their project at the same time as they had through the Initiative if it were not available indicated they were “Unsure” if they would have ever completed the project at all or would have completed it later. For these three respondents, the evaluation team used the average number of months expedited across respondents of the corresponding fuel type to calculate the Timing Adjustment.¹³

The evaluation team calculated the final Q&T Adjustment value for each participant using the following formula:

$$Q\&T \text{ Adjustment} = (\% \text{ Not Installed at the Same Time} * \text{Timing Adjustment}) + \% \text{ Installed at Same Time}$$

Respondents who reported that, in the absence of the Initiative, they would have completed the full scale of their energy-saving project at the same time they did through the Initiative or that were otherwise unsure what they would have done in the absence of the Initiative, received a Q&T Adjustment of 1. This means that their FR value remained the same (i.e., was not reduced). Respondents who indicated that they never would have completed their energy-saving project in the absence of the Initiative received a Q&T Adjustment of 0, meaning that their FR value would then also be 0. Finally, one respondent did not qualify for the Q&T Adjustment based on their responses to Q19; however, in their open-ended response to the consistency check question, they had indicated an influence of the Initiative incentive on the timing of the project. Therefore, the evaluation team decided to apply an average Q&T Adjustment value for this respondent.

¹³ The average number of months expedited was 9.75 for electric energy savings. None of the projects associated with gas savings had a valid survey response as to the number of months expedited. Given this, we elected to use the average for electric energy savings for gas savings as well.

SPILOVER

The following section details how the survey attempted to capture qualifying participant SO savings (including extracts from the survey instrument).

In the SO section of the survey, respondents indicated whether they had purchased/installed additional energy-efficient equipment for their business since or at the same time as participating in the Custom Initiative, for which they did not receive, nor planned to receive an incentive. The survey provided a list of possible energy-efficient equipment from which respondents could choose.

Q27. At the same time you participated in the <CHANNEL>, did you purchase and/or install any OTHER energy-efficient equipment at <COMPANY>'s <ADDRESS> location or at any other facilities within Ameren Illinois' service territory that **did not** receive an incentive or rebate from Ameren Illinois?

1. Yes
2. No

Q28. And since your participation in the <CHANNEL>, did you purchase and/or install any OTHER energy-efficient equipment at <COMPANY>'s <ADDRESS> location or at any other facilities within Ameren Illinois' service territory that **did not** receive an incentive or rebate from Ameren Illinois?

1. Yes
2. No

[ASK IF Q27=1 OR Q28=1, ELSE SKIP TO SATISFACTION SECTION]

Q29. To the best of your knowledge, does Ameren Illinois offer an incentive or rebate for this additional energy-efficient equipment?

1. Yes, all
2. Yes, some
3. No
98. Unsure

[ASK IF Q29=1 OR 2]

Q30. Have you applied, or do you still plan to apply for an Ameren Illinois incentive or rebate for these additional energy-efficient equipment?

1. Yes, all
2. Yes, some
3. No
98. Unsure

[ASK IF (Q29= 3 OR 98) OR (Q30= 2 OR 3), ELSE SKIP TO SATISFACTION SECTION]

Q31. What was the **first** type of energy-efficient equipment you installed/purchased after your participation in the <CHANNEL>, that **did not** receive an incentive or rebate from Ameren Illinois?

1. Linear LEDs
2. Non-linear LEDs
3. Occupancy sensor(s) or other lighting controls
4. Unitary/Split air conditioning system(s)
5. Room air conditioner(s)
6. Variable Frequency Drives VFD/VSD on HVAC Motor(s)
7. Efficient motor(s)
8. Strip curtain(s)
9. Anti-sweat control(s)
10. EC motor(s) for walk-in cooler/freezer
11. EC motor(s) for reach-in cooler/freezer
96. I did not install/purchase any other energy-efficient equipment
98. Unsure
0. Other, please specify: **[OPEN-END]**

[IF Q31= 96, 98, SKIP TO SATISFACTION SECTION; HIDE RESPONSE SELECTED IN Q31, EXCEPT IF 0 WAS SELECTED]

Q32. What was the **second** type of energy-efficient equipment you installed/purchased after your participation in <CHANNEL>, that **did not** receive an incentive or rebate from Ameren Illinois?

1. Linear LEDs
2. Non-linear LEDs
3. Occupancy sensor(s) or other lighting controls
4. Unitary/Split air conditioning system(s)
5. Room air conditioner(s)
6. Variable Frequency Drives VFD/VSD on HVAC Motor(s)
7. Efficient motor(s)
8. Strip curtain(s)
9. Anti-sweat control(s)
10. EC motor(s) for walk-in cooler/freezer
11. EC motor(s) for reach-in cooler/freezer

- 96. I did not install/purchase any other energy-efficient equipment
- 98. Unsure
- 0. Other, please specify: [OPEN-END]

[IF Q32=96, 98, SKIP TO Q34_intro; HIDE RESPONSES SELECTED IN Q31 AND Q32; EXCEPT IF 0 WAS SELECTED]

Q33. What was the **third** type of energy-efficient equipment you installed/purchased after your participation in the <CHANNEL>, that **did not** receive an incentive or rebate from Ameren Illinois?

- 1. Linear LEDs
- 2. Non-linear LEDs
- 3. Occupancy sensor(s) or other lighting controls
- 4. Unitary/Split air conditioning system(s)
- 5. Room air conditioner(s)
- 6. Variable Frequency Drives VFD/VSD on HVAC Motor(s)
- 7. Efficient motor(s)
- 8. Strip curtain(s)
- 9. Anti-sweat control(s)
- 10. EC motor(s) for walk-in cooler/freezer
- 11. EC motor(s) for reach-in cooler/freezer
- 96. I did not install/purchase any other energy-efficient equipment
- 98. Unsure
- 0. Other, please specify: [OPEN-END]

Survey respondents then answered a set of questions for each type of energy-efficient equipment they purchased/installed (up to three) regarding how important the Initiative was on their purchase/installation, and the likelihood of them still purchasing/installing that equipment if they had not participated in the Initiative. The evaluation team used these responses to identify and calculate program attribution.

Q34_intro. For the next few questions, please think of the **first** energy-efficient equipment you purchased/installed: [DISPLAY IF Q31=0, <OPEN-ENDED RESPONSE IN Q31_0>, OTHERWISE, <Q31 RESPONSE>]

Q34. How important was your experience with the <CHANNEL> in your decision to purchase/install the [DISPLAY IF Q31=0, <OPEN-ENDED RESPONSE IN Q31_0>, OTHERWISE, <Q31 RESPONSE>]? Please use a scale of 0 to 10, where 0 is “Not at all Important” and 10 is “Extremely Important”.

Q35. Can you explain how your experience with the <CHANNEL> influenced your decision to purchase/install the [DISPLAY IF Q31=0, <OPEN-ENDED RESPONSE IN Q31_0>, OTHERWISE, <Q31 RESPONSE>]? [OPEN-ENDED RESPONSE]

Q36. If you had not participated in the <CHANNEL>, how likely is it that your organization would still have purchased/installed the [DISPLAY IF Q31=0: <OPEN-ENDED RESPONSE IN Q31_0>, OTHERWISE, <Q31 RESPONSE>]? Please use a 0 to 10 scale where 0 means you “Definitely WOULD NOT have purchased/installed this equipment”, and 10 means you “Definitely WOULD have purchased/installed this equipment.”

The evaluation team defined respondents' answers to the first question above (Q34 for respondents' first SO measure) as Measure Attribution Score 1 and answers to the third question above (Q36 for respondents' first SO measure) as Measure Attribution Score 2. The evaluation team calculated program attribution for each type of energy-efficient equipment using the following formula:

$$\text{Program Attribution} = (\text{Measure Attribution Score 1} + (10 - \text{Measure Attribution Score 2}))/2$$

If the resulting program attribution was greater than 5 (suggesting moderate to high influence), we also collected basic information about the energy-efficient equipment installed, such as quantity and whether the space where the equipment was installed was heated, cooled, or both. The evaluation team also asked why the respondent did not go through an AIC offering to purchase/install the equipment. The evaluation team attempted to follow up with individual respondents via email to request more specific information about the purchased/installed equipment to better estimate the associated energy savings as necessary.

[ASK IF AVERAGE(Q34, (10-Q36)) >5, ELSE SKIP TO Q41_Intro]

Q37. How many [DISPLAY IF Q31=0, <OPEN-ENDED RESPONSE IN Q31_0>, OTHERWISE, <Q31 RESPONSE>] did you purchase/install without receiving an incentive or rebate? [NUMERIC OPEN-ENDED RESPONSE 0-995; 998=Unsure]

[ASK IF Q31=1,2,3]

Q38. Generally, what type of lighting did the <Q31 RESPONSE> [SHOW IF Q31=1 OR 2, "replace"; SHOW IF Q31=3, "control"]? [MULTIPLE RESPONSE]

1. Incandescent lamps
2. CFLs
3. LEDs
4. Halogen lamps
5. Linear fluorescent T12 lamps
6. Linear fluorescent T8 lamps
0. Other, please specify: [OPEN-END]
98. Unsure

Q39. Which of the following best describes the space where the majority of the [DISPLAY IF Q31=0, <OPEN-ENDED RESPONSE IN Q31_0>, OTHERWISE, <Q31 RESPONSE>] were installed?

1. Space is only cooled
2. Space is only heated
3. Space is both cooled and heated
4. Space is neither cooled nor heated
98. Unsure

Q40. Can you explain why you decided to purchase/install this energy-efficient equipment on your own, rather than going through an Ameren Illinois offering? [MULTIPLE RESPONSE]

1. It takes too long to get approval
2. I didn't have time to participate because I needed to purchase/install the equipment immediately
3. The equipment did not qualify
4. The incentive or rebate amount was not large enough
5. I did not know about an Ameren Illinois offering being available
6. There was no Ameren Illinois offering available [EXCLUSIVE]
0. Other, please specify: [OPEN-END]

Of the 24 respondents, five reported purchasing/installing additional energy-efficient measures, but only one met the SO attribution threshold. This respondent did not provide enough details to sufficiently estimate SO savings and was unresponsive to the evaluation team's multiple attempts to reach them. Given this, the evaluation team did not calculate an SO rate.