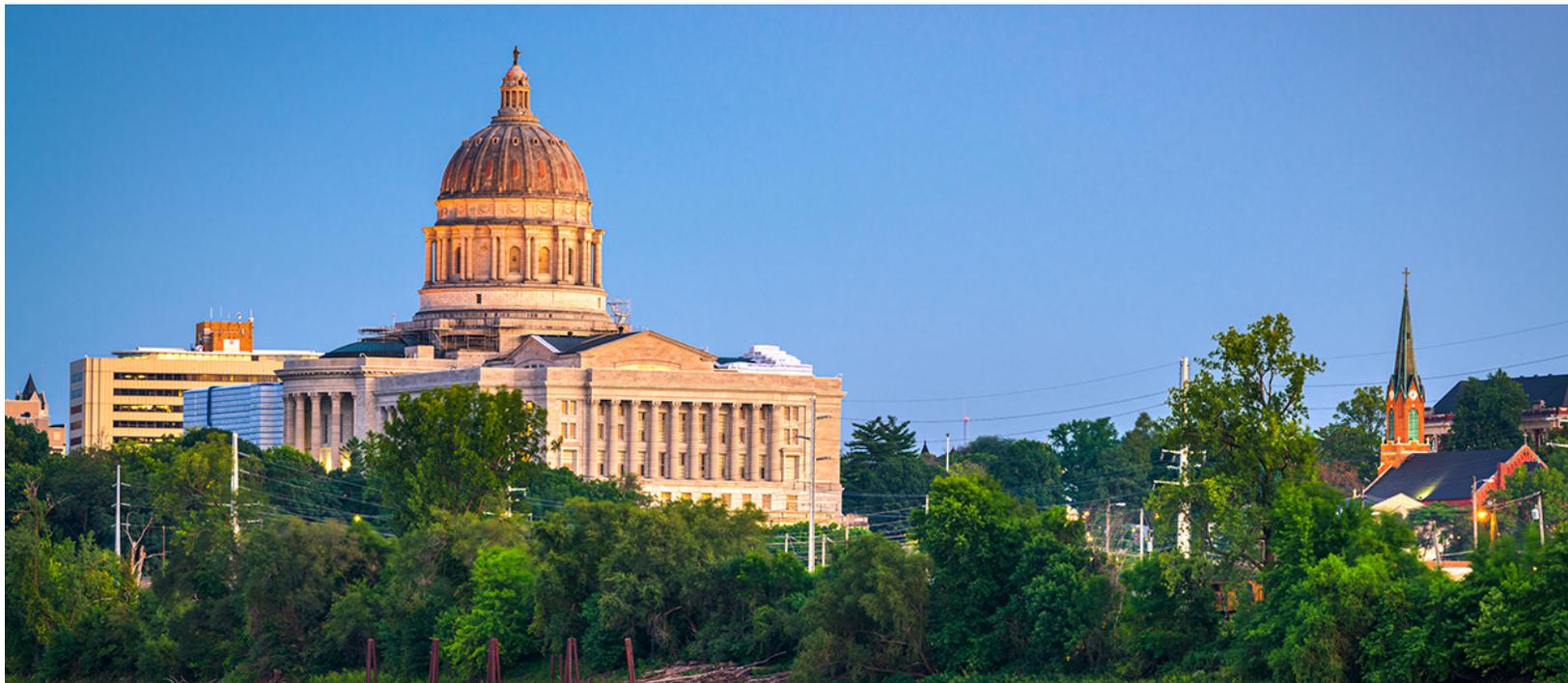




# Independent EM&V Audit of the Evergy PY2022 Program Evaluations



**Final Report**

**Submitted by Evergreen Economics**

**August 10, 2023**



**MichaelsEnergy**



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# 1 Executive Summary

In January 2022, Evergy (formerly Kansas City Power and Light, KCP&L), implemented its Missouri Energy Efficiency Investment Act (MEEIA) Cycle 3 Programs. The MEEIA Cycle 3 Programs covered in this audit include the following:

- **Business Standard Program** – Designed to help commercial and industrial (C&I) customers save energy through a broad range of energy efficiency options that address all major end uses and processes. The program offers standard rebates as well as mid-stream incentives. The measures incentivized included lighting, lighting controls, HVAC equipment, and motors.
- **Business Custom Program** - Offered to all Evergy C&I customers, the program provides incentives for a broad range of projects that do not fit within the Business EER – Standard program.
- **Process Efficiency Program** – In 2022 the program’s activities focused on providing retro-commissioning services. The program offers participants recommendations for higher cost system improvements, and incentives are offered on a \$/kWh basis to address the recommendations.
- **Heating, Cooling and Home Comfort** – Designed to help residential customers increase awareness and incorporation of energy efficiency into their homes by providing education and financial incentives. The program encourages home improvements that increase operational energy efficiency and home comfort and consists of four components: 1) Energy Savings Kit, 2) Insulation and Air Sealing, 3) HVAC, and 4) Online Marketplace.
- **Energy Saving Products** – The program is designed to promote, cultivate, and facilitate the adoption of energy efficient products in residential settings. It is designed to expand both residential customer and sales associate knowledge of and familiarity with the advantages of various energy efficient products and promote efficient product adoption. Customers receive instant discounts for a variety of efficient measures including a selection of LED lighting measures, including standard, specialty, and smart bulbs.
- **Income-Eligible Multi-Family** – The program provides income-eligible properties with assistance through energy assessments, program applications, technical support, and upgrade incentives. The program consists of three components: direct install, prescriptive, and custom measures.
- **Home Energy Report (HER) Program** – Distributes home energy reports by paper or email to educate residential customers about their home energy usage and provides them with information designed to encourage behavior change in energy use.

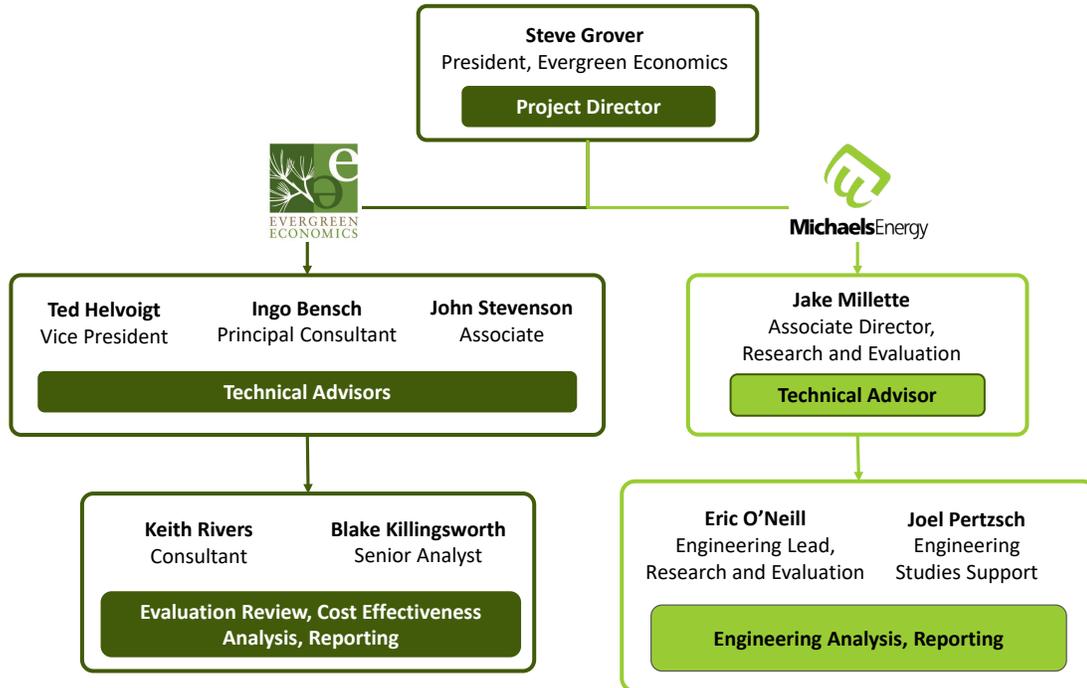
- **Income-Eligible Home Energy Report (IE-HER) Program** – Identical to the HER program except report messaging focuses on low- or no-cost ways to save energy.
- **Online Business Energy Audit** – Opt-in online tools that provide energy-saving tips and help customers track their energy usage. The tools encourage customers to take energy-saving actions in their homes and businesses through individual actions and through participation in other Evergy energy efficiency programs. This program claims no savings.
- **Business Smart Thermostat** – Uses automatic event call technology to reduce energy use during peak demand periods. Customers receive notification on their smart thermostat, and a customer’s setpoint will increase between two- and five- degrees Fahrenheit.
- **Business Demand Response** – Provides rebates to C&I customers for curtailing their energy usage during system peak demand periods. When Evergy calls an event, participants reduce their load toward a pre-defined firm power level to create demand savings.
- **Residential Demand Response** – Provides rebates to residential customers for curtailing their energy usage during system peak demand periods. When Evergy calls an event, participants reduce their load toward a pre-defined firm power level to create demand savings. Called upon devices will increase a customer’s setpoint between two- and five- degrees Fahrenheit.
- **Pay As You Save (PAYS)** – Supports the adoption of energy efficient equipment in residential homes by offsetting the upfront cost associated with major home improvements and upgrades. In 2022, the PAYS Program financed the installation of energy efficient air conditioners, heat pumps, smart thermostats, air and duct sealing, and ceiling insulation.

To ensure that programs comply with Missouri’s rules regarding electric utility resource planning, the PSC has rules requiring annual impact evaluations and process evaluations. Minimum requirements that evaluations must meet are stipulated in 4 CSR 240-22.070(8).

Evergy contracted with the evaluation teams led by Guidehouse, Inc. (Guidehouse) and ADM Associates (ADM). The evaluation teams conducted comprehensive impact and process evaluations of Evergy Metro’s and Evergy Missouri West’s energy efficiency portfolios in PY2022. For the purposes of this report, the evaluation teams will be referred to as “the Guidehouse team” and “the ADM team”.

In 2022, the Missouri Public Service Commission (PSC) contracted with Evergreen Economics and Michaels Energy (the Evergreen team) to serve in the capacity of EM&V Auditor. Figure 1 shows the audit team members and organization, the individual team members by firm, and the associated audit responsibilities.

**Figure 1: Evergreen Audit Team Organization**



The audit team is required to review program evaluation activities and provide comments on compliance with 4 CSR 240-22.070(8) and the overall quality, scope, and accuracy of the program evaluation reports, as well as recommendations to improve the evaluation and reporting process. Key findings of the Evergreen team’s review are summarized below.

## 1.1 Summary of Audit Conclusions and Recommendations

Over the last year, the audit team has had meetings and communications with the Guidehouse and ADM evaluation teams on analysis methods, and we were able to reach agreement on a few outstanding evaluation issues. The evaluation teams have also addressed the comments the audit team made on a draft version of the PY2022 evaluation report, in addition to addressing the issues raised as part of the PY2021 audit. As a consequence, we have no additional comments or recommendations relating to the PY2022 evaluation.

Many of the audit issues in prior years were related to net impact estimation methods, and Eergy will be shifting to a deemed net-to-gross value for PY2023 and PY2024, making the specific net impact methods less of a priority moving forward. If the evaluation teams return to updating the net-to-gross ratios in the future, we recommend that they continue to work toward more consistency of survey methods and scoring algorithms across the residential and non-residential sectors. Similarly, we also recommend that future net impact methods strive for more consistency between Ameren MO and Eergy for programs that have similar designs. The best way to accomplish this would be for both utility evaluation teams to use the net impact scoring algorithms included in the most current version of the Illinois TRM.



## 2 Introduction

The Missouri Energy Efficiency Investment Act (MEEIA) was passed in 2009, launching a new era for energy efficiency programs in Missouri. The Missouri Public Service Commission (the PSC) adopted four administrative rules (4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094) referred to as “MEEIA rules”) to implement MEEIA.<sup>1</sup> MEEIA directs the PSC to permit electric corporations to implement Commission-approved demand side management (DSM) programs, with a goal of achieving cost-effective demand-side savings.

In 2009, the State of Missouri and Evergy reached an agreement to create Evergy Metro’s and Evergy Missouri West’s suite of residential and commercial energy efficiency programs, which began in 2013 as MEEIA Cycle 1. The MEEIA Cycle 1 programs ended on December 31, 2015, for KCP&L-MO (Case No. EO-2012-0142). In early 2016, the PSC approved MEEIA Cycle 2 DSM programs for KCP&L-MO (Case No. EO-2015-0055). For PY2022, program evaluation reports were filed for Evergy as part of Case No. EO-2019-0132.

The PY2022 Evergy programs covered in this audit include:

- **Business Standard Program** – Designed to help commercial and industrial (C&I) customers save energy through a broad range of energy efficiency options that address all major end uses and processes. The program offers standard rebates as well as mid-stream incentives. The measures incentivized included lighting, lighting controls, HVAC equipment, and motors.
- **Business Custom Program** - Offered to all Evergy C&I customers, the program provides incentives for a broad range of projects that do not fit within the Business EER – Standard program.
- **Process Efficiency Program** – In 2022 the program’s activities focused on providing retro-commissioning services. The program offers participants recommendations for higher cost system improvements, and incentives are offered on a \$/kWh basis to address the recommendations.
- **Heating, Cooling and Home Comfort** – Designed to help residential customers increase awareness and incorporation of energy efficiency into their homes by providing education and financial incentives. The program encourages home improvements that increase operational energy efficiency and home comfort and consists of four components: 1) Energy Savings Kit, 2) Insulation and Air Sealing, 3) HVAC, and 4) Online Marketplace.

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<sup>1</sup> The PSC is currently in the process of revising the MEEIA rules.

- **Energy Saving Products** – The program is designed to promote, cultivate, and facilitate the adoption of energy efficient products in residential settings. It is designed to expand both residential customer and sales associate knowledge of and familiarity with the advantages of various energy efficient products and promote efficient product adoption. Customers receive instant discounts for a variety of efficient measures including a selection of LED lighting measures, including standard, specialty, and smart bulbs.
- **Income-Eligible Multi-Family** – The program provides income-eligible properties with assistance through energy assessments, program applications, technical support, and upgrade incentives. The program consists of three components: direct install, prescriptive, and custom measures.
- **Home Energy Report (HER) Program** – Distributes home energy reports by paper or email to educate residential customers about their home energy usage and provides them with information designed to encourage behavior change in energy use.
- **Income-Eligible Home Energy Report (IE-HER) Program** – Identical to the HER program except report messaging focuses on low- or no-cost ways to save energy.
- **Online Business Energy Audit** – Opt-in online tools that provide energy-saving tips and help customers track their energy usage. The tools encourage customers to take energy-saving actions in their homes and businesses through individual actions and through participation in other Evergy energy efficiency programs. This program claims no savings.
- **Business Smart Thermostat** – Uses automatic event call technology to reduce energy use during peak demand periods. Customers receive notification on their smart thermostat, and a customer’s setpoint will increase between two- and five- degrees Fahrenheit.
- **Business Demand Response** – Provides rebates to C&I customers for curtailing their energy usage during system peak demand periods. When Evergy calls an event, participants reduce their load toward a pre-defined firm power level to create demand savings.
- **Residential Demand Response** – Provides rebates to residential customers for curtailing their energy usage during system peak demand periods. When Evergy calls an event, participants reduce their load toward a pre-defined firm power level to create demand savings. Called upon devices will increase a customer’s setpoint between two- and five- degrees Fahrenheit.
- **Pay As You Save (PAYS)** – Supports the adoption of energy efficient equipment in residential homes by offsetting the upfront cost associated with major home improvements and upgrades. In 2022, the PAYS Program financed the installation of energy efficient air conditioners, heat pumps, smart thermostats, air and duct sealing, and ceiling insulation.

To ensure that programs comply with Missouri’s rules regarding electric utility resource planning, the PSC has long-term resource planning rules that contain requirements for impact evaluations and process evaluations. The goal of the impact and process evaluations is “to develop the

information necessary to evaluate the cost effectiveness and improve the design of existing and future demand-side programs and demand-side rates, to improve the forecasts of customer energy consumption and responsiveness to demand-side programs and demand-side rates and to gather data on the implementation costs and load impacts of demand-side programs and demand-side rates for use in future cost effectiveness screening and integrated resource analysis.”<sup>2</sup>

Key requirements of the evaluations as outlined in 4 CSR 240-22.070(8) include the following:

- Utilities are expected to complete annual full process and impact evaluations for each DSM program.
- **At a minimum, impact evaluations should:**
  1. “develop methods of estimating the actual load impacts of each demand-side program” using one or both of the following methods:
    - a. “Comparisons of pre-adoption and post-adoption loads of program participants, corrected for the effects of weather and other intertemporal differences”; and
    - b. “Comparisons between program participants’ loads and those of an appropriate control group over the same time period”.
  2. “develop load-impact measurement protocols that are designed to make the most cost-effective use of the following types of measurements, either individually or in combination: monthly billing data, load research data, end-use load metered data, building and equipment simulation models, and survey responses or audit data on appliance and equipment type, size and efficiency levels, household or business characteristics, or energy-related building characteristics”.
  3. Develop protocols to collect data regarding demand-side program market potential, participation rates, utility costs, participant costs and total costs.
- **At a minimum, process evaluations should** address the following five questions:
  1. What are the primary market imperfections that are common to the target market segment?
  2. Is the target market segment appropriately defined or should it be further subdivided or merged with other segments?
  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 segment?
  4. Are the communication channels and delivery mechanisms appropriate for the target segment?

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<sup>2</sup> 4 CSR 240-22.070(8) Evaluation of Demand-Side Programs and Demand-Side Rates



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?

Evergy contracted with Guidehouse, Inc. and ADM Associates as the Evaluation, Measurement & Verification (EM&V) contractors to conduct comprehensive impact and process evaluations of Evergy Metro's and Evergy Missouri West's energy efficiency portfolio. Guidehouse evaluated the commercial energy efficiency programs, and ADM conducted evaluations of the residential energy efficiency and demand response programs.

In 2022, the PSC contracted with Evergreen Economics and Michaels Energy (the Evergreen team) to serve in the capacity of EM&V Auditor to review program evaluation activities and provide comments on compliance with 4 CSR 240-22.070(8) and the overall quality, scope, and accuracy of the program evaluation reports. The following report presents Evergreen Economics' review of the Evergy Metro and Evergy Missouri West program evaluations for PY2022.

To conduct this review, the Evergreen team conducted the following activities:

- Reviewed each program's evaluation report in its entirety, including impact, process, and cost effectiveness methodologies and results;
- Reviewed the evaluation survey instruments and responses (where available) to confirm that the methodologies used were reasonable and consistent with best practices and that reported findings aligned with the data collected; and
- Reviewed specific evaluation tools and methodologies used for calculating program savings, including selected measure-level savings calculations, and survey methods for developing net program impacts.

The remainder of this audit report is organized as follows. First, a summary of the impact and process evaluation results are provided in the following sections. After these summaries, we present our review of the cost effectiveness calculations where we confirm that the calculation inputs used match the results from the PY2022 evaluation. The final section presents the audit conclusions and recommendations.

## 3 Impact Evaluation Summary

This section summarizes the results and key findings and recommendations from the impact evaluations of Evergy Metro’s and Evergy Missouri West’s residential and business energy efficiency program portfolios.

### 3.1 Summary of Impact Evaluation Methods

Guidehouse and ADM followed the Missouri Code of State Regulations 4 CSR-240-22-070 (8), completing impact evaluations for each Evergy Metro and Every Missouri West program that reported energy savings in 2022. Missouri regulations state that programs should be evaluated using one or both methods and one or both protocols detailed below.

#### 1) *Impact Evaluation Methods*

“At a minimum, comparisons of one or both of the following types shall be used to measure program and rate impacts in a manner that is based on sound statistical principles:

- a) Comparisons of pre-adoption and post-adoption loads of program or demand-side rate participants, corrected for the effects of weather and other intertemporal differences.
- b) Comparisons between program and demand-side rate participants’ loads and those of an appropriate control group over the same time period.”

#### 2) *Load Impact Measurement Protocols*

“The evaluator shall develop load impact measurement protocols designed to make the most cost-effective use of the following types of measurements, either individually or in combination:

- a) Monthly billing data, hourly load data, load research data, end-use load metered data, building and equipment simulation models, and survey responses.
- b) Audit and survey data on appliance and equipment type, size and efficiency levels, household or business characteristics, or energy-related building characteristics.”

Table 1 summarizes Guidehouse’s and ADM’s methods and protocols for each program. The labels in columns three and four align with the Missouri requirements discussed above.

**Table 1: Impact Evaluation Methods and Protocols**

Program	Evaluator	Impact Method	Impact Protocol	Description
<b>Commercial and Industrial Programs</b>				
Business Standard Program	Guidehouse	1a	2a and 2b	Tracking database review, deemed measure savings review, engineering analysis
Business Custom Program	Guidehouse	1a	2b	Tracking database review, engineering analysis, desk/phone review
Process Efficiency Program	Guidehouse	1a	2b	Tracking database review, deemed measure savings review, engineering analysis
<b>Residential Programs</b>				
Heating, Cooling and Home Comfort	ADM	1a	2b	Tracking database review, deemed measure savings review, supporting documentation review, participant and general population surveys, ENERGY STAR data review
Energy Saving Products	ADM	1a	2b	Tracking database review, deemed measure savings review, general population surveys, ENERGY STAR data review
Income-Eligible Multi-Family	ADM	1a	2b	Tracking database review, deemed measure savings review, property manager surveys, ENERGY STAR data review
Pay As You Save	ADM	1a	2b	Tracking database review, deemed measure savings review
<b>Educational and Behavioral Programs</b>				

Program	Evaluator	Impact Method	Impact Protocol	Description
Home Energy Report	ADM	1b	2a	Tracking database review, participant and general population surveys, billing consumption data review, NOAA weather data review
<b>Demand Response (DR) Programs</b>				
Business Demand Response	ADM	1a	2a	Tracking database review, billing consumption data review, NOAA weather data review
Residential Demand Response	ADM	1b	2a	Tracking database review, schedule of program events, NOAA weather data review
Business Smart Thermostat	ADM	1b	2a	Tracking database review, schedule of program events, NOAA weather data review
<b>Products &amp; Services Incubator</b>				
Appliance Recycling	ADM	1a	2b	Tracking database review, deemed measure savings review, participant survey
Energy Efficiency Non-Profits	ADM	1a	2b	
Market Rate Multi-Family	ADM	1a	2b	
Energy-Saving Trees	ADM	1a	2b	

### 3.1.1 Net-to-Gross Calculation Methods

Guidehouse and ADM developed net-to-gross (NTG) ratios for selected Evergy Metro and Evergy Missouri West's programs to estimate net program savings. Net savings are the portion of total estimated savings that are directly attributable to a specific energy efficiency program. Net savings estimates typically account for one or more of the following:

- **Free Ridership (FR)** – Program savings attributable to program participants who would have implemented a program measure or practice in the absence of the program.
- **Participant Spillover (PSO)** – Additional energy savings achieved when a program participant installs energy efficiency measures or practices as a result of the program's influence outside the efficiency program.

- **Nonparticipant Spillover (NPSO)** – Additional energy savings achieved when a nonparticipant implements energy efficiency measures or practices because of the program’s influence (e.g., through exposure to the program).

The NTG ratio for each program adjusts gross program savings to account for the presence of free ridership, participant spillover, and non-participant spillover. The general formula for calculating the NTG ratio is:

$$\text{NTG Ratio} = 1 - \text{FR rate} + \text{PSO rate} + \text{NPSO rate}$$

Guidehouse applied NTG ratios developed over the course of the MEEIA Cycle 3 in PY2022 for the Business Standard program, while the Custom and Process Efficiency programs NTG ratio was estimated using the PY1 free ridership and participant spillover rates and a PY2 non-participant spillover rate. NTG ratios were not calculated by Guidehouse for the Business Online Energy Audit program as they did not claim savings.

ADM performed new research to determine NTG ratios for the Heating, Cooling, and Home Comfort, Energy Saving Products, and PAYS programs.

Additionally, ADM applied a deemed NTG ratio of 1.0 for the following programs in PY2021:

- The **Income-Eligible Multifamily** program, due to the specific targeting of the low-income sector and the small contributions of the program to the overall portfolio savings, which do not justify the cost of conducting primary research needed to adjust the NTG ratio from stipulated values.
- The **Demand Response** programs (Business Demand Response, Residential Demand Response, and Business Smart Thermostats), because customers are compensated only if they reduce their load during the peak demand window, presumably eliminating spillover and free ridership.
- The **Home Energy Reports** program because it is designed as a randomized control trial.

## 3.2 Summary of Impact Evaluation Findings

In this section, we provide a summary of the energy savings goals and accomplishments across Evergy Metro and Evergy Missouri West’s energy efficiency program portfolio. Table 2 and Table 3 show Evergy Metro’s energy efficiency targets, *ex ante* gross values, *ex post* gross values, the *ex post* net savings (evaluated) and net achievement compared to the targets for energy savings (kWh) and demand reductions (kW), respectively. Table 4 and Table 5 show these same values compared to energy savings (kWh) and demand reductions (kW) for Evergy Missouri West. To ensure clarity, these terms are defined as follows:

- **Ex Ante Gross Savings:** Annualized savings reported by Evergy Metro and Evergy Missouri West or calculated using tracked program activity to TRM savings values.
- **Ex Post Gross Savings:** Annualized savings calculated and provided by the evaluation team.
- **Net Savings Ex Post:** *Ex post* savings multiplied by the NTG ratio, accounting for free ridership, spillover effect, and market effects.
- **PSC-Approved Targets:** Annualized savings targets for the residential and commercial and industrial (C&I) sectors.

Table 2 summarizes the Evergy Metro results for energy savings. Evergy Metro's commercial portfolio achieved 24 percent of the three-year target net savings goal in 2022 at 25,004,403 kWh. The Business Standard and Custom programs reached 31 percent and 28 percent of their targets respectively.

In contrast, the residential portfolio achieved 109 percent of the three-year target net savings goal in 2022 at 17,818,151 kWh. Of the four residential programs, only the Energy Saving Products and Income-Eligible Multi-Family programs reached their three-year target, achieving 173 percent and 116 percent of their goals respectively. The Heating, Cooling, and Home Comfort and the Pay As You Save programs achieved 53 percent and 23 percent of their targets respectively.

The Home Energy Reports and the Income-Eligible Home Energy Reports programs collectively met 125 percent of their target net savings in 2022 at 15,592,749 kWh. More specifically, the Home Energy Reports program met 146 percent of its target, while the Income-Eligible Home Energy Reports program met 54 percent of its savings goal.

The Pilot Portfolio achieved 35 percent of the three-year net savings goal in 2022 at 652,001 kWh.

Finally, the demand response portfolio achieved 48 percent of the three-year target net savings goal in 2022 at 749,439 kWh. Although the Business Demand Response program did not claim any savings in 2022, the Business Smart Thermostat and Residential Demand Response programs met 46 percent and 48 percent of their savings goals respectively.

Table 2: Evergy Metro Portfolio Energy Savings in PY2022, kWh

Program	Evaluator	Ex Ante Gross Savings	Ex Post Gross Savings	Gross Realization Rate	MEEIA 3-Year Cycle 3 Targets	Net Savings Ex Post	% of Target Reached
Business Standard Program	Guidehouse	19,457,155	17,716,799	91%	53,977,377	16,512,056	31%
Business Custom Program	Guidehouse	9,584,681	10,383,458	108%	30,239,803	8,472,901	28%
Process Efficiency Program	Guidehouse	25,058	25,058	100%	19,454,539	20,447	0.1%
<b>Total Commercial Portfolio</b>		<b>29,066,893</b>	<b>28,125,314</b>	<b>97%</b>	<b>103,671,720</b>	<b>25,004,403</b>	<b>24%</b>
Heating, Cooling and Home Comfort	ADM	4,341,392	3,746,287	86%	5,426,432	2,884,703	53%
Energy Saving Products	ADM	25,444,819	23,623,482	93%	7,555,117	13,081,188	173%
Income-Eligible Multi-Family	ADM	1,511,236	1,345,155	89%	1,160,994	1,345,155	116%
Pay As You Save	ADM	638,404	582,118	91%	2,252,574	507,105	23%
<b>Total Residential Portfolio</b>		<b>31,935,851</b>	<b>29,297,042</b>	<b>92%</b>	<b>16,395,117</b>	<b>17,818,151</b>	<b>109%</b>
Home Energy Report	ADM	15,417,818	14,004,386	91%	9,579,000	14,004,386	146%
Income-Eligible Home Energy Report	ADM	983,931	1,588,363	161%	2,928,146	1,588,363	54%
<b>Total Educational Portfolio</b>		<b>16,401,749</b>	<b>15,592,749</b>	<b>95%</b>	<b>12,507,146</b>	<b>15,592,749</b>	<b>125%</b>
Appliance Recycling	ADM	3,612	4,324	120%		4,324	
Energy Efficiency Non-Profits	ADM	39,658	39,657	100%	1,869,808	39,657	35%
Energy-Saving Trees	ADM	25,176	23,373	93%		23,373	
Market Rate Multi-Family	ADM	990,241	584,647	59%		584,647	
<b>Total Pilot Portfolio*</b>		<b>1,058,687</b>	<b>652,001</b>	<b>62%</b>	<b>1,869,808</b>	<b>652,001</b>	<b>35%</b>
Residential Demand Response	ADM	755,495	709,475	94%	1,466,157	709,475	48%
Business Smart Thermostat	ADM	85,593	39,964	47%	87,468	39,964	46%
<b>Total Demand Response Portfolio*</b>		<b>841,088</b>	<b>749,439</b>	<b>89%</b>	<b>1,553,625</b>	<b>749,439</b>	<b>48%</b>

\*The Business Demand Response, BPI Certification, Power Check, and Virtual Energy Management for Small Business programs did not claim any energy savings.

Table 3 displays the Evergy Metro results for demand savings. The residential and educational portfolios both exceeded their targets, achieving 101 percent and 167 percent of their respective goals. The commercial portfolio fared similarly to its energy savings performance, meeting 32 percent of its demand savings target.

Of the residential programs, the Energy Saving Products and Income-Eligible Multi-Family programs met their goal, achieving 305 percent and 135 percent of their demand savings targets respectively. The Heating, Cooling and Home Comfort program met 75 percent of its goal, followed by the Pay As You Save program which met 17 percent of its three-year target.

Similar to energy savings targets, the Pilot Portfolio achieved 33 percent of its demand savings targets in 2022 at 94 kW.

In contrast with its energy savings performance, the Demand Response portfolio almost met its demand savings goal, achieving 98 percent of its target demand savings. The Business Demand Response program was the most successful, achieving 135 percent of its demand savings goal, while the Residential Demand Response and Business Smart Thermostat programs met 52 percent and 17 percent of their respective demand savings targets.

Table 3: Evergy Metro Portfolio Demand Savings in PY2022, kW

Program	Evaluator	<i>Ex Ante</i> Gross Savings	<i>Ex Post</i> Gross Savings	Gross Realization Rate	MEEIA 3 -Year Cycle 3 Targets	Net Savings <i>Ex Post</i>	% of Target Reached
Business Standard Program	Guidehouse	3,460	2,974	86%	8,523	2,772	33%
Business Custom Program	Guidehouse	2,058	1,836	89%	4,834	1,498	31%
Process Efficiency Program	Guidehouse	4	4	100%	182	3	2%
<b>Total Commercial Portfolio</b>		<b>5,522</b>	<b>4,814</b>	<b>87%</b>	<b>13,538</b>	<b>4,274</b>	<b>32%</b>
Heating, Cooling and Home Comfort	ADM	2,541	2,446	96%	2,480	1,872	75%
Energy Saving Products	ADM	3,303	3,068	93%	558	1,702	305%
Income-Eligible Multi-Family	ADM	384	306	80%	228	306.33	135%
Pay As You Save	ADM	134	135	101%	704	117.44	17%
<b>Total Residential Portfolio</b>		<b>6,362</b>	<b>5,956</b>	<b>94%</b>	<b>3,970</b>	<b>3,998</b>	<b>101%</b>
Home Energy Report	ADM	1,756	2,353	134%	1,200	2,353	196%
Income-Eligible Home Energy Report	ADM	113	267	236%	366	267	73%
<b>Total Educational Portfolio</b>		<b>1,869</b>	<b>2,620</b>	<b>140%</b>	<b>1,566</b>	<b>2,620</b>	<b>167%</b>
Appliance Recycling	ADM	<1	<1	127%		<1	
Energy Efficiency Nonprofits	ADM	18	18	100%	286	18	33%
Market Rate Multi-Family	ADM	110	75	69%		75	
<b>Total Pilot Portfolio*</b>		<b>129</b>	<b>94</b>	<b>73%</b>	<b>286</b>	<b>94.22</b>	<b>33%</b>
Business Demand Response	ADM	20,282	20,265	100%	15,000	20,265	135%
Residential Demand Response	ADM	5,301	5,759	109%	11,135	5,759	52%
Business Smart Thermostat	ADM	81	106	131%	639	106	17%
<b>Total Demand Response Portfolio</b>		<b>25,664</b>	<b>26,129</b>	<b>102%</b>	<b>26,774</b>	<b>26,129</b>	<b>98%</b>

\*The Energy-Saving Trees Pilot, BPI Certification, Power Check, and Virtual Energy Management for Small Business programs did not claim any demand savings.

Table 4 shows Evergy Missouri West’s energy efficiency targets, *ex ante* gross values, *ex post* gross values, the evaluated *ex post* net savings (evaluated) and net achievement compared to the targets for energy savings (kWh).

Evergy Missouri West’s commercial portfolio achieved 40 percent of the three-year target net savings goal in 2022 at 30,736,427 kWh. The Business Custom program reached its three-year target at 150 percent of the energy savings goal. The Business Standard and Process Efficiency programs reached 33 percent and 1 percent of their targets respectively.

The residential portfolio achieved 116 percent of the three-year target net savings goal in 2022 at 22,984,094 kWh. Only the Energy Saving Products program exceeded its energy savings goal, reaching 219 percent of its target. The Heating, Cooling and Home Comfort, Income Eligible Multi-Family, and Pay As You Save programs did not meet their targets, achieving 46 percent, 68 percent, and 27 percent of their goals, respectively.

The educational portfolio, consisting entirely of the Home Energy Reports program for energy savings, achieved 95 percent of its target at 19,426,866 kWh.

The Pilot Portfolio achieved 34 percent of the three-year net savings goal in 2022 at 626,370 kWh.

Finally, the demand response portfolio achieved 46 percent of the three-year target net savings goal in 2022 at 745,935 kWh. Although the Business Demand Response program did not claim any savings in 2022, the Business Smart Thermostat and Residential Demand Response programs achieved 71 percent and 44 percent of their savings goals respectively.

Table 4: Evergy MO West Portfolio Energy Savings in PY2022, kWh

Program	Evaluator	<i>Ex Ante</i> Gross Savings	<i>Ex Post</i> Gross Savings	Gross Realization Rate	MEEIA 3 -Year Cycle 3 Targets	Net Savings <i>Ex Post</i>	% of Target Reached
Business Standard Program	Guidehouse	18,832,545	16,532,559	88%	46,646,197	15,408,345	33%
Business Custom Program	Guidehouse	18,366,396	18,441,487	100%	10,016,241	15,048,254	150%
Process Efficiency Program	Guidehouse	337,632	342,927	102%	20,470,674	279,828	1.4%
<b>Total Commercial Portfolio</b>		<b>37,536,573</b>	<b>35,316,974</b>	<b>94%</b>	<b>77,133,113</b>	<b>30,736,427</b>	<b>40%</b>
Heating, Cooling and Home Comfort	ADM	6,674,569	5,572,188	83%	8,338,188	3,865,891	46%
Energy Saving Products	ADM	30,927,705	29,198,473	94%	8,079,124	17,710,898	219%
Income-Eligible Multi-Family	ADM	633,124	799,829	126%	1,181,931	799,829	68%
Pay As You Save	ADM	725,990	697,713	96%	2,252,574	607,476	27%
<b>Total Residential Portfolio</b>		<b>38,961,388</b>	<b>36,268,203</b>	<b>93%</b>	<b>19,851,817</b>	<b>22,984,094</b>	<b>116%</b>
Home Energy Report	ADM	17,673,336	19,426,866	110%	20,355,375	19,426,866	95%
<b>Total Educational Portfolio</b>		<b>17,673,336</b>	<b>19,426,866</b>	<b>110%</b>	<b>20,355,375</b>	<b>19,426,866</b>	<b>95%</b>
Appliance Recycling	ADM	170,119	164,492	97%	1,852,097	164,492	34%
Market Rate Multi-Family	ADM	822,163	461,878	56%		461,878	
<b>Total Pilot Portfolio*</b>		<b>992,282</b>	<b>626,370</b>	<b>63%</b>	<b>1,852,097</b>	<b>626,370</b>	<b>34%</b>
Residential Demand Response	ADM	730,279	685,795	94%	1,549,459	685,795	44%
Business Smart Thermostat	ADM	128,805	60,140	47%	85,104	60,140	71%
<b>Total Demand Response Portfolio**</b>		<b>859,084</b>	<b>745,935</b>	<b>87%</b>	<b>1,634,563</b>	<b>745,935</b>	<b>46%</b>

\*The Business Demand Response, BPI Certification, Energy Efficiency Nonprofits, Power Check, and Virtual Energy Management for Small Business programs did not claim any energy savings.



Table 5 displays Evergy Missouri West's results for demand savings. The commercial portfolio met 65 percent of its target savings goal in 2022 at 6,034 kW. The Business Custom program exceeded its goal, achieving 193 percent.

Of the residential programs, only the Energy Saving Products program met its goals, achieving 403 percent of its demand savings targets. The Income-Eligible Multi-Family, Heating, Cooling and Home Comfort, and Pay As You Save programs met 39 percent, 70 percent, and 18 percent of their respective targets.

The Pilot portfolio exceeded its demand savings goal, achieving 128 percent of its three-year demand target.

Evergy Missouri West's Demand Response portfolio fared better for demand savings than for energy savings, achieving 76 percent of its target at 51,052 kW. The Business Demand Response program was the most successful, achieving 83 percent of its demand savings goal, while the Residential Demand Response and Business Smart Thermostat programs met 47 percent and 22 percent of their respective demand savings targets.

Table 5: Evergy MO West Portfolio Demand Savings in PY2022, kW

Program	Evaluator	<i>Ex Ante</i> Gross Savings	<i>Ex Post</i> Gross Savings	Gross Realization Rate	MEEIA 3 -Year Cycle 3 Targets	Net Savings <i>Ex Post</i>	% of Target Reached
Business Standard Program	Guidehouse	6,603	3,140	48%	7,514	2,926	39%
Business Custom Program	Guidehouse	4,462	3,762	84%	1,587	3,070	193%
Process Efficiency Program	Guidehouse	53	46	87%	227	38	17%
<b>Total Commercial Portfolio</b>		<b>11,118</b>	<b>6,948</b>	<b>62%</b>	<b>9,328</b>	<b>6,034</b>	<b>65%</b>
Heating, Cooling and Home Comfort	ADM	4,078	3,820	94%	3,655	2,554	70%
Energy Saving Products	ADM	4,000	3,865	97%	582	2,343	403%
Income-Eligible Multi-Family	ADM	72	87	122%	223	87	39%
Pay As You Save	ADM	142	146	103%	704	127	18%
<b>Total Residential Portfolio</b>		<b>8,292</b>	<b>7,919</b>	<b>96%</b>	<b>5,163</b>	<b>5,111</b>	<b>99%</b>
Home Energy Report	ADM	2,020	3,264	162%	2,550	3,264	128%
<b>Total Educational Portfolio</b>		<b>2,020</b>	<b>3,264</b>	<b>162%</b>	<b>2,550</b>	<b>3,264</b>	<b>128%</b>
Appliance Recycling	ADM	42	25	60%	295	25	28%
Market Rate Multi-Family	ADM	87	56	64%		56	
<b>Total Pilot Portfolio*</b>		<b>129</b>	<b>81</b>	<b>63%</b>	<b>295</b>	<b>81</b>	<b>28%</b>
Business Demand Response	ADM	45,962	45,354	99%	54,834	45,354	83%
Residential Demand Response	ADM	4,928	5,558	113%	11,774	5,558	47%
Business Smart Thermostat	ADM	130	139	108%	622	139	22%
<b>Total Demand Response Portfolio</b>		<b>51,020</b>	<b>51,052</b>	<b>100%</b>	<b>67,230</b>	<b>51,052</b>	<b>76%</b>

\*The BPI Certification, Energy Efficiency Nonprofits, Power Check, and Virtual Energy Management for Small Business programs did not claim any demand savings.

Table 6 and Table 7 show estimated free ridership, spillover, and non-participant spillover rates along with the final NTG ratios for both Evergy Metro and Evergy Missouri West's 2022 program portfolios.

**Table 6: Evergy Metro Portfolio Estimated Free Ridership, Spillover and NTG Ratio**

Program*	Evaluator	Free Ridership	Participant Spillover	Non-participant Spillover	NTG Ratio
Business Standard Program	Guidehouse	16%	8%	2%	93%
Business Custom Program	Guidehouse	24%	4%	2%	82%
Process Efficiency Program	Guidehouse	24%	0%	2%	82%
Online Business Energy Audit	Guidehouse	N/A - Savings not claimed in PY3			
Heating, Cooling and Home Comfort	ADM	32%	2%	7%	77%
Energy Saving Products - Upstream Rebates	ADM	51%	6%	-	54%
Energy Saving Products - Thank You Kit	ADM	54%	0%	-	47%
Energy Saving Products - Online Marketplace	ADM	15%	6%	-	91%
Energy Saving Products - Giveaway Hub	ADM	0%	0%	-	100%
Income-Eligible Multi-Family	ADM	ADM assumed a net-to-gross (NTG) value of 1.0 for the IEMF program			
Home Energy Report	ADM	Program is designed as a randomized control, NTG value of 1.0			
Pay As You Save	ADM	9%	0.5%	-	87%
Products & Incubator Programs	ADM	ADM assumed a NTG value of 1.0 for the pilot programs			
Business Demand Response	ADM	ADM assumed a NTG value of 1.0 for the Demand Response Programs			
Residential Demand Response	ADM				
Business Smart Thermostats	ADM				

\*NTG ratios are rounded to the nearest whole number.

**Table 7: Evergy MO West Portfolio Estimated Free Ridership, Spillover and NTG Ratio**

Program*	Evaluator	Free Ridership	Participant Spillover	Non-participant Spillover	NTG Ratio
Business Standard Program	Guidehouse	16%	8%	2%	93%
Business Custom Program	Guidehouse	24%	4%	2%	82%
Process Efficiency Program	Guidehouse	24%	0%	2%	82%
Online Business Energy Audit	Guidehouse	N/A - Savings not claimed in PY3			
Heating, Cooling and Home Comfort	ADM	39%	2%	7%	69%
Energy Saving Products - Upstream Rebates	ADM	43%	6%	-	61%
Energy Saving Products - Thank You Kit	ADM	54%	0%	-	47%
Energy Saving Products - Online Marketplace	ADM	15%	6%	-	91%
Energy Saving Products - Giveaway Hub	ADM	0%	0%	-	100%
Income-Eligible Multi-Family	ADM	ADM assumed a net-to-gross (NTG) value of 1.0 for the IEMF program			
Home Energy Report	ADM	Program is designed as a randomized control, NTG value of 1.0			
Pay As You Save	ADM	10%	0.5%	-	87%
Products & Incubator Programs	ADM	ADM assumed a NTG value of 1.0 for the pilot programs			
Business Demand Response	ADM	ADM assumed a NTG value of 1.0 for the Demand Response Programs			
Residential Demand Response	ADM				
Business Smart Thermostats	ADM				

\*NTG ratios are rounded to the nearest whole number.



## **3.3 Summary of Key Impact Evaluation Recommendations**

### **3.3.1 PY2022 Recommendations**

Guidehouse and ADM provided recommendations from the PY2022 program evaluations that seek to guide and improve future impact evaluations. Table 8 below summarizes the evaluator recommendations by program.

**Table 8: Evaluator Recommendations by Program**

Program	PY2022 Recommendation
Business Standard Program	<p>Update efficient case wattage for lighting Measure ID 580, i.e., “Interior LED fixture replacing &gt;850W HID fixture.</p> <hr/> <p>Update HVAC savings calculation unit from “per ton per efficiency increment” to “per ton” basis.</p> <hr/> <p>Create efficiency tiers for HVAC measures to reward more incentives to more efficient units.</p>
Business Custom Program	<p>The implementation contractor should provide unlocked analysis workbooks.</p> <hr/> <p>The implementation contractor should follow the methodology in the Indoor Horticulture Baseline Memo previously provided.</p> <hr/> <p>All indoor horticulture lighting be DLC-certified</p> <hr/> <p>The implementation contractor should use an 8,760 hourly analysis.</p>
Process Efficiency Program	<p>The implementation contractor should provide unlocked analysis workbooks.</p> <hr/> <p>The implementation contractor should include additional details in the analysis workbooks.</p>
Heating, Cooling, and Home Comfort	<p>Identify potential energy-savings measures for the Energy Savings Kit as the emphasis shifts away from residential lighting. The kits could include additional weather-stripping measures and energy-savings tips. The Evergy Savings Kit sub- program should continue to be actively promoted through community events, especially those targeting low-income areas.</p> <hr/> <p>Determine the program impacts of the code/standard changes and economic influences and make adjustments accordingly to the current rebate structure. Due to the baseline SEER rating of HVAC equipment updating in 2023 and other economic effects, such as inflation, Evergy should assess if the rebates currently offered through the program provide enough incentive to drive customers to install energy efficient equipment. As prices of HVAC equipment continue to increase, the financial burden on customers to install energy efficient equipment increases as well. By not raising the incentives to cover more of the cost of installing the equipment, this can drive the rate of program free ridership up. Revisions to incentives can be implemented on a per-equipment-type basis and be based on customer needs, equipment inventory, current market conditions, etc.</p> <hr/> <p>Create additional QA/QC checks for reviewing program tracking data prior to end- of-year reporting. During the final review of the program tracking data by the evaluation team at ADM, it was discovered that 25 central air conditioner projects were</p>

Program	PY2022 Recommendation
	<p>mistakenly processed as air source heat pumps. It was decided that the verified savings would report the projects as central air conditioners, while the reported savings would reflect the projects as air source heat pumps, which resulted in a lower realization rate. Additional implementation QA/QC checks to the program tracking data could help avoid future discrepancies between the reported and verified savings.</p>
Energy Saving Products	<p>Add additional non-lighting measures to the ESP Program. Evergy should pivot away from LED lighting-only point-of-sale rebates to include non-lighting measures such as ENERGY STAR® appliances and smart thermostats.</p>
Income-Eligible Multi-Family	<p>Add waste heat factors and coincident factors drawn from Illinois Technical Reference Manual (IL TRM) to reported custom lighting savings calculations.</p> <hr/> <p>Correct baseline efficiency values for IEMF - ASHP SEER 16 - replace ASHP ER: MF measure to reflect early replacement versus time-of-sale efficiency.</p> <hr/> <p>Add clothes washer and dishwasher measures to Evergy Technical Reference Manual (Evergy) TRM that specify water heater fuel type.</p> <hr/> <p>ADM recommends the collection of additional documentation by the implementer in the form of an attestation that HVAC units categorized as early replacement were in working order at the time of replacement. ADM will work with both implementation and Evergy program staff to ensure the operating status of early replacement HVAC units in the program is being included as part of the data collection.</p>
Pay As You Save	<p>Update reported savings calculations to account for heating fuel type as well as the presence of cooling equipment.</p> <hr/> <p>Provide implementation's modelled home energy savings estimates to ADM for review. Comparisons to implementation's modeled savings as well as input variables would enable beneficial benchmarking of the reported, TRM-derived savings as well as of the impact evaluation findings.</p> <hr/> <p>Continue to monitor regression-derived savings estimates. As the program continues to enroll more participants and as more post-installation billing data is available for participants from the 2022 program year, the regression analysis will likely improve in validity.</p>
Business Demand Response	<p>The program implementer should continue to develop customized tailored curtailment plans with facility managers. However, these plans may need to be reviewed during the DR season if customer usage changes unexpectedly. The program implementer should clarify for customers when load baselines are expected to change to minimize customer confusion and dissatisfaction.</p>
Residential Demand	<p>The program implementer should conduct additional QA/QC to ensure that all respondents receive notification of upcoming events, which is the chief source of participant dissatisfaction. The implementer should also consider sending notifications</p>



Program	PY2022 Recommendation
Response/Business Smart Thermostat	through multiple channels, such as email and text, to ensure that program participants are aware of the upcoming DR event.
Appliance Recycling	Use the coincident peak demand savings from the Evergy TRM, not the nameplate demand savings to account for demand savings more accurately during peak events.

## 4 Process Evaluation Summary

This section summarizes key methods and findings from the PY2022 process evaluations of Evergy Metro’s and Evergy Missouri West’s residential and business energy efficiency program portfolios. The first subsection summarizes the process evaluation methods used by the evaluation teams and includes an assessment of how the process evaluation aligns with the minimum requirements for demand-side process evaluations set forth by the Missouri Code of State Regulations (CSR).

### 4.1 PY2022 Process Evaluation Findings

This subsection presents overall program process evaluation findings and evaluator recommendations.

#### 4.1.1 Process Evaluation Findings

Guidehouse and ADM presented the process evaluation findings for each program in terms of responses to key evaluation research questions, and responses to the five required process evaluation questions set forth in 4 CSR 240-22.070(9). Overall, the process evaluation findings are complete, thorough, and respond to the mandated questions.

In the following sections, we summarize key process evaluation findings and recommendations.

#### 4.1.2 Customer and Trade Ally Satisfaction

Evergy Metro and Evergy Missouri West’s programs appear to be performing to customer and trade ally satisfaction. The satisfaction results reported (on a five-point or ten-point scale) indicate that the programs are well run and are meeting the needs of customers and trade allies. Table 9 presents a summary of satisfaction results for the Evergy Metro and Evergy Missouri West’s programs.

**Table 9: PY2022 Customer and Trade Ally Satisfaction Findings Summary**

Program	Participant Satisfaction	Trade Ally Satisfaction
Business Standard Program	The average satisfaction rating for all categories was between 4.4 to 5.0, with the overall satisfaction rating being 4.5	N/A
Business Custom Program	The average satisfaction rating for all categories was between 4.2 to 4.7	Trade allies reported a high level of satisfaction with the Business Custom program, with an overall average satisfaction rating of 4 out of 5.

Program	Participant Satisfaction	Trade Ally Satisfaction
Heating, Cooling and Comfort	91 percent of participants rated their satisfaction as a 7 or higher out of 10.	90 percent of trade allies rated their satisfaction as a 4 or a 5.
Residential Demand Response	77 percent of participants rated their satisfaction with the program overall as a 4 or a 5.	N/A
Business Demand Response	68 percent of participants rated their satisfaction with the program overall as a 4 or a 5.	N/A
Business Smart Thermostats	100 percent of participants rated their satisfaction with the program overall as a 4 or a 5.	N/A
Energy-Saving Trees	89 percent of participants rated their satisfaction with the program overall as a 4 or a 5.	N/A

## 4.2 Summary of Key Process Evaluation Recommendations

Based on the evaluation findings, Guidehouse and ADM provided overall evaluation conclusions and recommendations for each PY2022 program. Table 10 summarizes the evaluators' recommendations by program.

**Table 10: PY2022 Key Process Evaluation Recommendations**

Program	PY2022 Recommendation
Business Standard Program	<p>C&amp;I customers appear to be driven by changes in incentives. Evergy provided increased incentives at the end of PY1 and PY3 to drive savings. Both times, these incentive increases appeared to be highly effective in increasing participation. C&amp;I customers and trade allies may start to anticipate such end of year incentive increases and hold off on submitting projects as a result. The implementer has started offering facility assessments and the evaluation team recommend considering additional methods to drive participation outside of end of year incentive increases.</p> <p>The program should continue efforts to increase participation among the school strata and small businesses such that certain business types do not dominate the program. These efforts have included targeted webinars explaining the benefits of implementing energy conservation, increased incentives for small businesses, and direct outreach to public sector and municipal customers.</p>

Program	PY2022 Recommendation
	<p>The program should continue the marketing and outreach efforts that led to the increased number of HVAC and cooling measures incentivized in PY3 compared to previous program years. The program could continue to research methods to increase participation in the cooking end-use category because that end use is still seeing low participation even though significant potential for energy savings is likely. The program may need to continue to diversify from lighting measures more in upcoming years as new building codes require highly efficient lighting and lighting controls in certain spaces.</p> <hr/> <p>Guidehouse recommends the following to improve the program’s communication channels and delivery mechanisms:</p> <ul style="list-style-type: none"> <li>• Continue education and training of new and existing trade allies to reduce rebate application errors.</li> <li>• Create accessible targeted marketing materials that can be available on the program’s website.</li> </ul> <hr/> <p>The program can continue to develop targeted marketing and targeted incentive increases for measures or business types with lower participation. The program may also benefit by taking a closer look at the types of measures that may be going through the Custom program and consider whether there are ways to move those measure types to the Standard program to reduce the burden of the application process for those measures.</p>
Business Custom Program	<p>Some customers do not have the in-house engineering expertise to pursue complex custom projects or to understand the benefits of these projects. The program should continue efforts to offer technical support to:</p> <ul style="list-style-type: none"> <li>• Help identify non-standard energy efficiency projects that do not fall in the Business Standard or Process Efficiency programs.</li> <li>• Help customers with the application process including the preapproval and post phase.</li> <li>• Develop new industry-specific outreach campaigns that help customers understand how custom projects benefit customers like them.</li> </ul> <hr/> <p>Evergy’s Business Custom program should continue to work to identify new types of projects with the potential for energy savings. These new project types may be in business types that tend to have low participation in the Business Program. Survey respondents indicated that there are still a few measure types that Evergy did not offer a rebate for that they would like to see included. These may have been due to communication challenges or long payback periods.</p> <p>The IC should continue to work closely with the CSMs to identify opportunities to keep Tier 1 customers actively participating in Evergy’s programs and meet the needs of these larger or national accounts.</p>

Program	PY2022 Recommendation
	<p>Trade allies and customers should continue to be encouraged to install non-lighting measures. As Evergy begins to conduct facility assessments, efforts could expand in PY4 to leverage these facility assessments to encourage participation in the various non-lighting measures available through the Business Custom program.</p> <p>Efforts should continue to educate customers and trade allies about the availability of peak load shifting because it can lead to significant savings.</p> <hr/> <p>Evergy should continue efforts to market and communicate about the Business Custom program as part of the broader marketing efforts of Evergy's business programs, including the Business Standard program. These efforts were shown in previous program years to lead to increased participation among smaller business customers in the Business Custom program.</p> <hr/> <p>Evergy and the IC should continue to offer technical support and education accessible to all customers. Some survey respondents indicated that they would have preferred more transparency in the final rebate total. However, the overall satisfaction with the program was very high in PY2 and PY3 responses, indicating the communication mechanisms are appropriate for most of the target market. Further efforts to identify trade ally and customer challenges with the application process should continue to be pursued as respondents indicated the lowest satisfaction with the application process.</p> <p>Guidehouse recommends that incentive levels for all end uses be reviewed annually to ensure they are significant enough to maintain strong participation in the program without increasing FR and to consider the time and effort needed to complete the Business Custom application.</p>
Process Efficiency Program	<p>RCx projects can be complex and difficult to understand from a requirements standpoint. If the program were to restart in future years, then it should continue efforts to educate and offer additional technical support to the trade allies, customers, and CSMs to:</p> <ul style="list-style-type: none"> <li>• Understand the program better.</li> <li>• Help identify energy efficiency projects.</li> <li>• Develop RCx-specific outreach campaigns that help customers understand how these measures benefit customers like them.</li> </ul> <hr/> <p>Evergy should work with CSMs to ensure they have the training and expertise needed to help customers identify energy savings in their facilities through an in-depth audit and face-to-face interactions. The CSMs could also work more closely with IC to help identify potential projects and work with IC staff to support the customer through the application process.</p> <hr/> <p>Evergy could consider targeting and adding more measures similar to the compressed air leaks survey and repairs to facilitate engagement with the customers.</p>

Program	PY2022 Recommendation
	<p>Evergy is leveraging multiple avenues to reach customers and trade allies. Evergy could consider RCx-focused events for customers to generate awareness about the measures similar to the C&amp;I Business Energy Solution Forum event in the past. In addition, the IC team should continue with the plan to collect customer testimonials to help build trust and program awareness if the program were to restart.</p> <hr/> <p>A key challenge to this program is that customers, trade allies, and CSMs may not completely understand it. Evergy could continue educating all the stakeholders and complete outreach efforts to generate awareness for the program.</p> <p>Evergy could also continue to look for innovative approaches to engage customers similar to the leaks survey and repair incentives being offered. As indicated by the IC, the program could allow wider RCx service provider participation with relevant training to get them up to speed on the program requirements.</p>
Heating, Cooling and Home Comfort	<p>Consider hosting contractor briefings/meetings and/or in-person trainings for trade allies. Trying to engage trade allies virtually can be much more challenging than in-person meetings where the trade allies can feel more engaged. In-person meetings also create opportunities to introduce the Evergy program staff to trade allies who are consolidating or expanding their operations.</p> <hr/> <p>Identify potential energy-savings measures for the Energy Savings Kit as the emphasis shifts away from residential lighting. The kits could include additional weather-stripping measures and energy-savings tips. The Evergy Savings Kit sub-program should continue to be actively promoted through community events, especially those targeting low-income areas.</p>
Energy Saving Products	<p>Provide additional customer education and cross-promotion of programs. Customer awareness of the ESP Program remains low. Additional educational materials in stores (as permitted by the retailers), as well as promotion through social media, bill inserts, and emails could improve the program performance and customer engagement.</p> <hr/> <p>Continue to develop an online marketplace. Program staff indicated that the online marketplace was successful in PY1 and PY2 and are exploring additional avenues for marketing the availability of the online marketplace and opportunities to add measures for purchase. The online marketplace provides an avenue to reach hard-to-reach customers and expand to additional measures.</p> <hr/> <p>Evergy should continue to push for free shipping on all its online products. This will become increasingly important as sales of LEDs are discontinued in the next program year.</p> <hr/> <p>Evergy should consider creating product bundles, such as home security bundles. This would increase the overall transaction amount and also make it easier for customers to purchase and install this equipment (Utility Online Marketplace Strategies).</p>
Income-Eligible Multi-Family	<p>When multiple models of a measure are installed in a project, create separate records for each model number. Savings are calculated using model specifications and would be easier to verify if each savings were calculated separately for each distinct equipment model number.</p>

Program	PY2022 Recommendation
Home Energy Report	<p>Work with ADM to include more information about when customers stop receiving reports. Many customers are filtered out of the analysis for not having enough post-period data for the months in PY3. While it is likely that many of these customers are no longer a part of the program, it would be beneficial to include a data field that informs us of exactly when that occurs. This will help ADM perform a more robust data validation process and ensure that no customers are unintentionally removed from the analysis.</p> <p>Evergy and Opower should continue efforts to make the information on home comparisons more salient. Given that the recent revisions to the report did not result in more thorough review by recipients, Evergy and Opower should consider carrying out additional research to determine what drives the thoroughness of report review and how to get customers to read them more thoroughly.</p> <p>Evergy should consider doing additional research to assess what increases motivation or intent to engage in the recommended behaviors. That information can be used to increase the effectiveness of its various outreach efforts and tools.</p> <p>If it has not yet done so, Opower may also consider discontinuing the practice of telling recipients (and Energy Analyzer users) they are being compared to their “neighbors”. A one-mile radius encompasses far more homes than many individuals may consider to be a neighbor. This practice may reinforce an inaccurate interpretation of how the comparison is actually made.</p>
Pay As You Save	<p>Continue to refine and expand program tracking metrics. Improved program tracking metrics could provide Evergy staff with enhanced clarity of overall program operations as well as increase data available for M&amp;V.</p> <p>Additional metrics that the implementer could include in quarterly reports are:</p> <ul style="list-style-type: none"> <li>• Number of completed audits</li> <li>• Conversion rate (audits/number of participants)</li> <li>• Number of program dropouts</li> <li>• Program enrollment processing time</li> <li>• Average loan amounts for Evergy customers</li> </ul> <p>Additional information that would benefit M&amp;V activities include:</p> <ul style="list-style-type: none"> <li>• Blower door test ratings before and after installations</li> <li>• Efficiency ratings of old and new equipment</li> <li>• R-values before and after installations</li> <li>• Complete tracking of heating fuel type</li> <li>• Tracking of premise for which program installations will yield significant changes in electric consumption (e.g., tracking of premises without cooling equipment prior to program installation)</li> </ul>

Program	PY2022 Recommendation
	<p>Review the participant application process to ensure that income eligible participants are aware of other low-cost options available to them. Twenty-three percent of surveyed participants (and 16% of full participants) reported income levels that would qualify their families for other income-qualified programs offered by Evergy.</p>
<p>Business Demand Response</p>	<p>The program implementer should continue to look for creative ways to market this program to smaller commercial and industrial customers by scaling the kW enrollment targets. This approach may be especially effective at reaching smaller customers in the rural Missouri West service territory.</p> <p>The program implementer should continue to develop customized tailored curtailment plans with facility managers. However, these plans may need to be reviewed during the DR season if customer usage changes unexpectedly. The program implementer should clarify for customers when load baselines are expected to change to minimize customer confusion and dissatisfaction.</p>
<p>Residential Demand Response/ Business Smart Thermostat</p>	<p>Evergy should continue to implement creative DR event strategies to minimize customer fatigue.</p> <p>The program implementer and Evergy should coordinate follow-up engagement strategies after each DR event. This would ensure that customers receive the notification promptly and understand the benefits of program participation.</p>
<p>Appliance Recycling</p>	<p>Add additional data collection requirements to the reporting fields for the program tracking data. This would allow for ARCA Recycling data to be combined with the tracking data allowing for easier calculations of savings. Additionally, this could catch errors in the data earlier in the year, allowing for changes to be made, such as the dehumidifier capacity being reported as a cubic feet capacity and not pints/day.</p> <p>Combine promotional efforts with other pilot programs. For example, the Appliance Recycling program could be promoted at the local libraries that are partnered with the Power Check program. This could attract an additional part of the community. Fliers could be added to the Power Check device boxes or attached to the trees given out with the Energy-Saving Trees program, assuming the locations coincide with the Appliance Recycling targeted area.</p> <p>Evaluation surveying efforts could be conducted to confirm the unit characteristics, verify the unit was in working condition and determine the participant satisfaction with the program. If the pickup location was a basement, the survey should include a question on if the basement is conditioned or not.</p>
<p>Energy-Saving Trees</p>	<p>Send follow-up emails to monitor the tree delivery and follow-up care to ensure that all trees remain healthy and are planted promptly.</p> <p>Continue to offer driveway drop-offs to ensure that the trees are delivered to the program participants.</p> <p>Explore strategies to increase program participation among low and moderate- income residents in these urban areas. This may include reaching out to landlords to increase participation among low-income renters.</p>



Program	PY2022 Recommendation
	<p>Conduct additional surveying efforts to better understand where participants are planting their trees. This may include additional questions to obtain the quantitative data needed for the correct adjustments to be made.</p>
<p>Energy Efficiency Nonprofits</p>	<p>Evergy should follow up with program participants in six months after measure installation. This follow-up will help remind these participants of the available energy savings opportunities, particularly the recommendations identified through the energy audit.</p>
<p>Market Rate Multi-Family</p>	<p>Evergy should consider removing the current MEEIA restrictions of buildings with four or more units to open up this program to a broader pool of building professionals. This includes those who typically specialize in single-family residences.</p> <p>The program should continue to reach out to property owners rather than property managers, as they are the decision-makers.</p>
<p>Power Check</p>	<p>Evergy should continue to cover all of the program costs to improve participation and target smaller, regional businesses with multiple locations instead of small mom-and-pop businesses with single locations.</p>



## 5 Review of Cost Effectiveness

Guidehouse and ADM calculated the cost effectiveness for the individual Evergy Metro and Evergy Missouri West's energy efficiency and demand response programs, as well as the cost effectiveness of the portfolios of energy efficiency and demand response programs. Guidehouse and ADM calculated cost effectiveness using the five-standard benefit-cost ratios that calculate cost effectiveness from the vantage points of different stakeholder groups:

- **Total Resource Cost (TRC) Test** – Compares the benefits and costs from the perspective of all utility customers, including energy program participants and nonparticipants.
- **Societal Cost Test (SCT)** – Compares the benefits and costs to all stakeholders in the utility service territory, state, or nation as a whole.
- **Utility Cost Test (UCT)** – Compares the benefits and costs to the utility implementing the program.
- **Participant Cost Test (PCT)** – Compares the benefits and costs from the perspective of the customer installing the measure.
- **Ratepayer Impact Measure (RIM) Test** – Compares the benefits and costs from the perspective on non-participating ratepayers, and the impact of energy programs on customer rates.

Guidehouse and ADM conducted these tests in a manner consistent with the 2001 California Standard Practice Manual (SPM).<sup>3</sup> For this evaluation audit, Guidehouse and ADM provided output files that included measure specific cost and benefit inputs, detailed load shapes, electricity avoided costs, program administration costs, electricity rates, and other assumptions including discount rates.

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<sup>3</sup> California Public Utilities Commission. October 2001. "California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects."

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The Evergreen team reviewed residential and commercial summary findings from the portfolio reports and the output files for each program and at the portfolio level to confirm that calculations were performed correctly. The specific audit tasks undertaken were to:

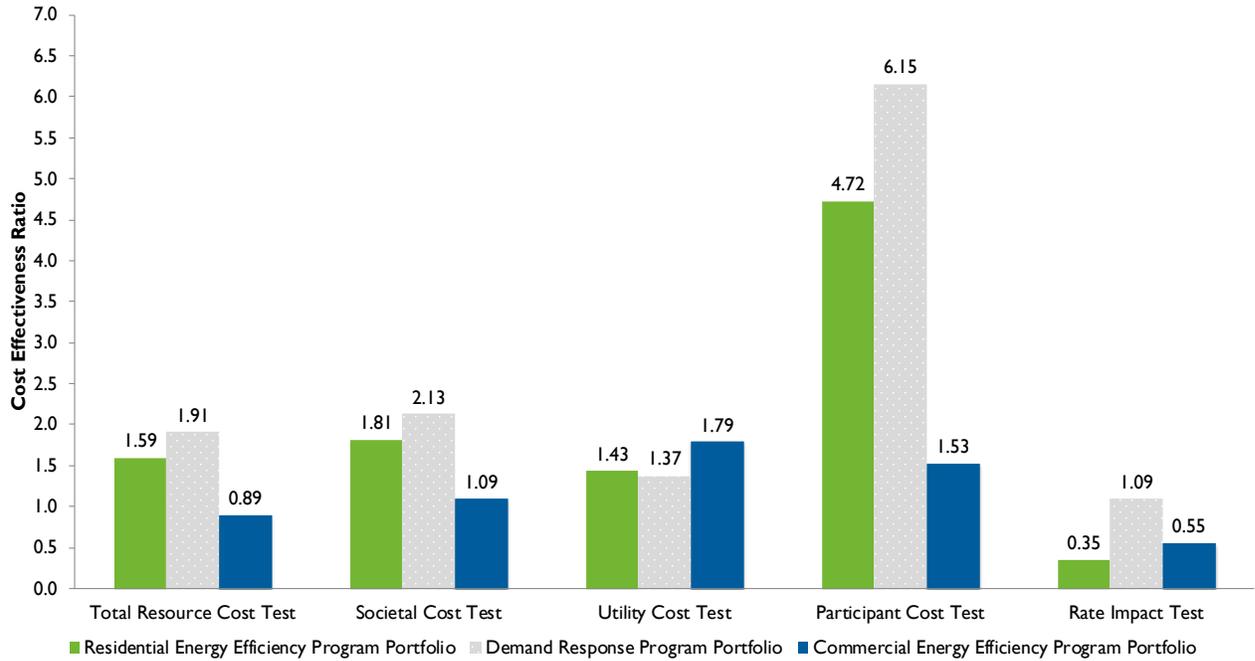
- Confirm summary values included in the final evaluation report matched the values in the results file;
- Confirm that the reported costs matched the costs input into the cost effectiveness input files, including administrative costs, incentive costs, and participant incremental equipment costs;
- Review avoided cost of energy and demand values and confirmed Guidehouse and ADM used appropriate values to calculate program level benefits;
- Confirm that measures received appropriate cost effectiveness input values, from appropriate sources, consistent with the sources used in the Guidehouse and ADM evaluation reports (i.e., kWh savings, expected usable life (EUL), incremental cost); and
- Confirm that discount rates were appropriate.

## 5.1 Cost Effectiveness Results

Figure 2 and Figure 3 present the results of the cost effectiveness tests for Evergy Metro's and Evergy Missouri West's residential, commercial, and demand response portfolios.

Evergy Metro's residential energy efficiency portfolio is cost effective across all tests except the Rate Impact Measure Test, while the demand response portfolio is cost effective across all tests. The commercial energy efficiency portfolio achieves a Total Resource Cost ratio of 0.89 (Figure 2).

**Figure 2: Evergy Metro Cost Effectiveness Test Results**



Evergy Missouri West’s residential portfolio is cost effective across all tests except for the Rate Impact Measure Test, while the demand response portfolio is cost effective across all tests. The commercial energy efficiency portfolio achieves a Total Resource Cost ratio of 0.91 (Figure 3).

**Figure 3: Evergy Missouri West Cost Effectiveness Test Results**

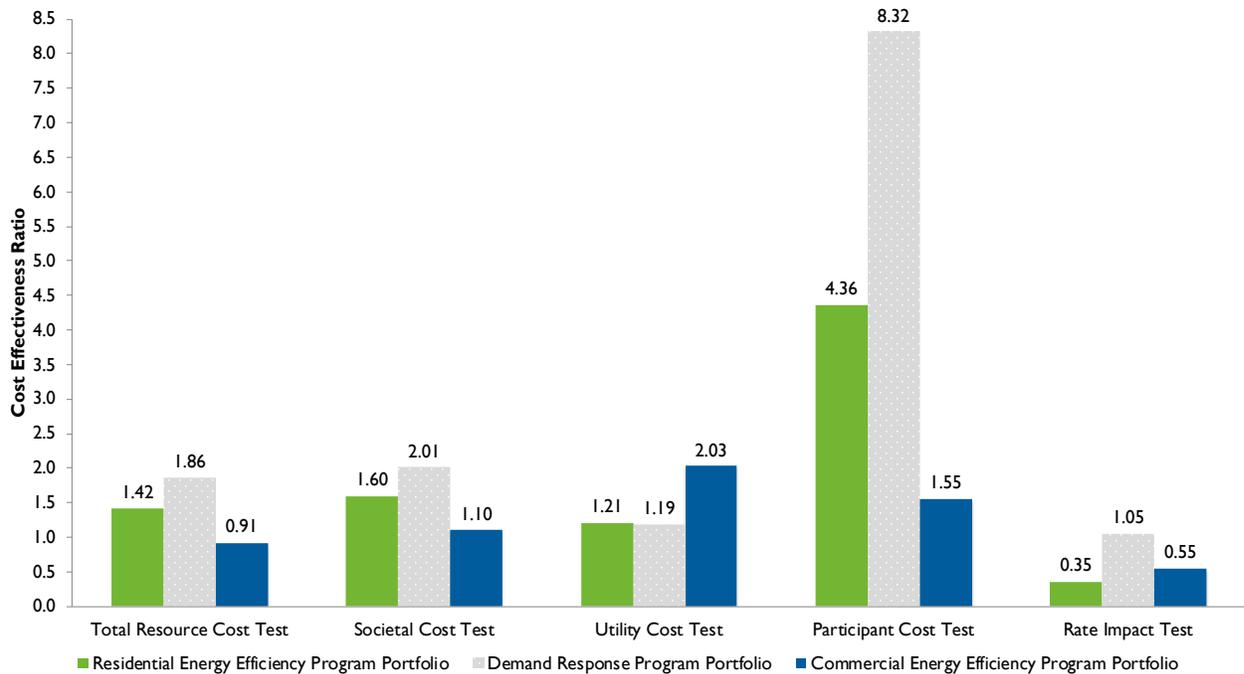




Table 11 and Table 12 present the program specific cost effectiveness test results for Every Metro and Every Missouri West service territories. Where applicable, we also present the cost effectiveness results for PY2021 for comparison.

For Missouri Metro, using the PCT test, all but one program is cost effective from the participant perspective. The Process Efficiency program is not cost effective under the PCT test. Additionally, only the Business and Residential Demand Response programs are cost effective under the RIM test.

For Missouri West, using the PCT test, all programs are cost effective from the participant perspective and only the Business Demand Response program is cost effective under the RIM test.

Table 11: Evergy Metro Cost Effectiveness Test Results

Program	TRC		SCT		UCT		PCT		RIM	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Business EER - Standard	0.86	0.86	1.01	1.03	1.43	1.93	1.54	1.39	0.52	0.56
Business EER - Custom	0.98	0.98	1.19	1.26	2.12	1.73	1.64	1.82	0.58	0.55
Process Efficiency Program	N/A	0.01	N/A	0.01	N/A	0.01	N/A	0.31	N/A	0.01
Energy Saving Products	3.62	3.82	3.96	4.18	2.06	1.98	11.12	7.42	0.37	0.37
Heating, Cooling and Home Comfort	1.04	1.11	1.28	1.39	1.40	1.81	2.53	2.15	0.40	0.41
Home Energy Report	1.54	1.82	1.54	1.82	1.54	1.82	--*	--*	0.25	0.26
Income-Eligible Multi-Family	0.47	0.76	0.54	0.93	0.43	0.72	4.16	3.06	0.26	0.37
Income-Eligible Home Energy Report	0.48	0.71	0.48	0.71	0.48	0.71	--*	--*	0.19	0.21
Pay As You Save	N/A	0.26	N/A	0.32	N/A	0.31	N/A	2.76	N/A	0.19
Business Demand Response	1.97	2.43	1.97	2.43	1.07	1.19	N/A	N/A	1.07	1.19
Business Smart Thermostat	1.12	1.04	1.30	1.21	1.24	1.01	2.41	3.47	0.94	0.77
Residential Demand Response	1.39	1.78	1.61	2.07	1.49	1.48	2.99	4.45	1.02	1.06

\* Ratios are infinite because there are positive benefits and no participant costs.

\*\* Benefit-cost calculations for Educational Programs are not included because no savings are claimed for these programs.

Table 12: Evergy Missouri West Cost Effectiveness Test Results

Program	TRC		SCT		UCT		PCT		RIM	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Business EER - Standard	0.94	0.81	1.12	0.97	1.62	1.99	1.77	1.33	0.49	0.55
Business EER - Custom	1.08	1.08	1.39	1.32	2.55	2.19	1.70	1.84	0.57	0.57
Process Efficiency Program	0.23	0.12	0.24	0.12	0.23	0.12	3.53	4.80	0.17	0.10
Energy Saving Products	3.11	2.68	3.40	2.94	1.85	1.52	11.27	7.50	0.35	0.34
Heating, Cooling and Home Comfort	1.02	0.99	1.26	1.23	1.47	1.37	2.02	1.71	0.45	0.43
Home Energy Report	1.35	1.50	1.35	1.50	1.35	1.50	--*	--*	0.29	0.30
Income-Eligible Multi-Family	0.45	0.42	0.51	0.48	0.50	0.31	2.49	5.30	0.28	0.20
Pay As You Save	N/A	0.29	N/A	0.36	N/A	0.36	N/A	2.61	N/A	0.20
Business Demand Response	2.45	2.47	2.45	2.47	1.21	1.17	N/A	N/A	1.21	1.17
Business Smart Thermostat	0.85	0.62	0.99	0.73	0.95	0.63	2.60	3.29	0.68	0.51
Residential Demand Response	1.39	1.57	1.61	1.82	1.45	1.25	2.60	4.37	1.08	0.98

\* Ratios are infinite because there are positive benefits and no participant costs.

\*\* Benefit-cost calculations for Educational Programs are not included because no savings are claimed for these programs.



## 6 Audit Conclusions

Over the last year, the audit team has had meetings and communications with the Guidehouse and ADM evaluation teams on analysis methods, and we were able to reach agreement on a few outstanding evaluation issues. The evaluation teams have also addressed the comments the audit team made on a draft version of the PY2022 evaluation report, in addition to addressing the issues raised as part of the PY2021 audit. As a consequence, we have no additional comments or recommendations relating to the PY2022 evaluation.

Many of the audit issues in prior years were related to net impact estimation methods, and Evergy will be shifting to a deemed net-to-gross value for PY2023 and PY2024, making the specific net impact methods less of a priority moving forward. If the evaluation teams return to updating the net-to-gross ratios in the future, we recommend that they continue to work toward more consistency of survey methods and scoring algorithms across the residential and non-residential sectors. Similarly, we also recommend that future net impact methods strive for more consistency between Ameren MO and Evergy for programs that have similar designs. The best way to accomplish this would be for both utility evaluation teams to use the net impact scoring algorithms included in the most current version of the Illinois TRM.

# Appendix A: Evergy Metro Full Process Evaluation Responses to Minimum Question Requirements



This appendix provides a summary of the detailed responses to minimum process evaluation requirement questions.

**Table 13: Minimum Process Evaluation Questions**

Issue Number	Question
Issue 1	What are the primary market imperfections common to the target market segment?
Issue 2	Is the target market segment appropriately defined, or should it be further subdivided or merged with other market segments?
Issue 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?
Issue 4	Are the communication channels and delivery mechanisms appropriate for the target market segment?
Issue 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?



**Table 14: Issue 1 - What are the primary market imperfections common to the target market segment?**

Program	2021 Summary Response	2022 Summary Response
<p>Business Standard Program</p>	<p>The business sector faces a high barrier to participation because of the high upfront installation cost and a lack of understanding of lifetime value for energy efficient products. Evergy addresses these barriers by providing incentives and education, which reduce the incremental cost and improve the understanding of the long-term benefits.</p> <p>Smaller business customers such as restaurants may have limited resources for researching energy conservation, leading to imperfect or incomplete information about the market. For PY2, Evergy focused on communication and marketing to increase program participation from small business customers.</p>	<p>The business sector faces a high barrier to participation because of the high upfront installation cost and a lack of understanding of lifetime value for energy efficient products. Evergy addresses these barriers by providing incentives and education, which reduce the incremental cost and improve the understanding of the long-term benefits.</p> <p>For PY3, Evergy offered an end-of-the- year bonus to further incentivize project applications, which contributed toward increased participation in PY3 as compared with PY2.</p>
<p>Business Custom Program</p>	<p>Project types included in the Business Custom program can be complex and take many years to complete. Customers may not fully understand the available energy savings from these types of projects, which requires utility education initiatives and incentives.</p>	<p>Project types included in the Business Custom program can be complex and take many years to complete. Customers may not fully understand the available energy savings from these types of projects, which requires utility education initiatives and incentives.</p>



Program	2021 Summary Response	2022 Summary Response
<p>Process Efficiency Program</p>	<p>PY1 was the first year for the Process Efficiency program offering. The program was slow to ramp up in PY1 due to challenges posed by the COVID-19 pandemic and that trend continued in PY2. Because it is a new program and Retro commissioning (RCx) can be perceived as complex, it takes time for customers and trade allies to better understand the program.</p>	<p>PY1 was the first year for the Process Efficiency program offering. The program was slow to ramp up in PY1 and PY2 due to challenges posed by the COVID-19 pandemic. Because it is a new program and RCx can be perceived as complex, it takes time for customers and trade allies to better understand the program. However, the program had slightly more engagement in PY3 compared with prior years.</p>
<p>Heating, Cooling and Home Comfort</p>	<p>The COVID-19 pandemic is part of the reason that HCHC did not achieve goals, especially in the first part of 2021, as customer unwillingness to allow contractors in their home to perform air sealing and insulation reduced participation in that program component. Our evaluation did not find evidence of other substantial barriers, such as poor program awareness, resistance to energy reduction in general, or ineffectiveness of program incentives.</p>	<p>Lingering effects from the COVID-19 pandemic had a negative impact on the HCHC Program achieving its savings goals. The COVID-19 pandemic and other external factors, such as economic uncertainty and supply chain issues, led to increasing prices for contractor-delivered services and equipment. These external factors also made acquiring equipment (such as HVAC equipment and duct work) more difficult for trade allies.</p> <p>Another issue that negatively affected the program was consolidation within the trade ally market occurring. Many trade allies are family-owned businesses, and these owners are selling out to larger regional and national firms. The buyouts and consolidation of trade allies has led to some changes in the relationships, but the implementer continues to work on developing relationships with the new business owners. Our evaluation did not find evidence of other substantial barriers, such as poor program awareness or resistance to adoption of energy-efficient measures.</p>



Program	2021 Summary Response	2022 Summary Response
Income-Eligible Multi-Family	<p>IEMF staff identified four challenges faced by the program. First, limited financing for affordable housing projects continues to be an issue. Second, there are a limited number of affordable housing properties in the Missouri West jurisdiction reducing the number of properties that are eligible for the program. Third, labor shortages that resulted from the COVID pandemic plagued both trade allies that were contracted to work on program projects and housing property staffs; both shortages obstructed project progress. And finally, supply chain issues stalled progress on projects when partially finished projects to languished while contractors waited for building materials or appliances.</p>	<p>IEMF staff identified inflation as the most significant challenge the program faces. The long-term nature of most multifamily building rehabilitation projects compounds the impact inflation has on project budgets and financing.</p>
Energy Saving Products	<p>Although the ESP program met savings goals, program staff reported that customer education and market saturation are challenges for the program. ADM’s evaluation found that about half of surveyed customers who reported buying LEDs at participating stores through ESP were aware of the Evergy discount, which compares well to awareness rates we have identified in similar programs in other states. Given that the program met goals, this may be adequate, but given program staff’s concerns, increasing customer awareness of the discounts and that Evergy provided them may help improve the proper assignment of attribution of the savings resulting from the purchases.</p>	<p>Although the ESP program met savings goals, program staff reported that customer education and market saturation are challenges for the program. ADM’s evaluation found that just under half of surveyed customers who reported buying light-emitting diode (LED) lightbulbs at participating stores through ESP were aware of the Evergy discount, which compares well to awareness rates we have identified in similar programs in other states. Given that the program met goals, this may be adequate, but given program staff’s concerns, increasing customer awareness of the discounts and that Evergy provided them may help improve the proper assignment of attribution of the savings resulting from the purchases.</p>



Program	2021 Summary Response	2022 Summary Response
Home Energy Report & Income-Eligible Home Energy Report	<p>The primary potential barriers to program effectiveness would appear to be lack of customer motivation to save energy, lack of understanding of how to save energy, and differences among customer sub-segments in either of those two items. In this light, the primary barriers that our evaluation identified are that: 1) the rate with which report recipients review the reports in detail could be higher; 2) a small minority (~5%) of recipients may misunderstand the basis on which the report compares their home to that of other homes, which may lead to frustration and failure to accept the report’s suggestions; 3) report recipients were no more familiar with some other Evergy program offerings – specifically, with rebates for smart thermostats, heating and cooling, and insulation and air sealing – than were the matched controls.</p>	<p>The primary potential barriers to program effectiveness would appear to be lack of customer motivation to save energy, lack of understanding of how to save energy, and differences among customer sub-segments in either of those two items. In this light, the primary barriers that our evaluation identified are that: 1) the rate with which report recipients review the reports in detail could be higher; 2) a small percentage of recipients may misunderstand the basis on which the report compares their home to that of other homes, which may lead to frustration and failure to accept the report’s suggestions; 3) report recipients were no more familiar with some other Evergy program offerings – specifically, with rebates for smart thermostats, HVAC, and insulation and air sealing – than were the matched controls.</p>
Pay As You Save	<p>No feedback for this issue was offered by the evaluator for this program.</p>	<p>Although there were no specific goals established for the PAYS Program in 2022, the program met most of its participation goals. This could have been a result of the addition of Spire and the joint collaboration for the delivery of the PAYS Program.</p>



Program	2021 Summary Response	2022 Summary Response
<p>Business Smart Thermostat</p>	<p>Feedback from program staff identified two factors that contributed to BST not meeting goals. First, marketing did not have the desired results despite Everygy using "every marketing tactic available". Second, market saturation may be a contributing factor in declining enrollments. As the program manager explained, this program has been offering free thermostats since 2016, and the program offering is now quite mature and well-known. Therefore, enrolling new participants has been more challenging during this program cycle.</p> <p>In addition, the program continued to be affected negatively by the pandemic. Although some technicians could install the thermostats in residences or small businesses, they had to follow the CDC guidelines and had more days sick due to the virus. In addition, many customers did not want a technician in their home performing installations due to the virus which impacted direct installs.</p>	<p>Market saturation may be a contributing factor in declining enrollments in the RDR and BST programs and led to not meeting overall program goals. The program has been offering free thermostats since 2016, and the program is now quite mature and well-known. Therefore, enrolling new participants has been more challenging in future program cycles. Another issue the evaluation identified was an increase in opt-out rates, which may have resulted from customer fatigue. Everygy called 12 residential events in 2022, which was higher than the previous years due to the increased temperatures during summer. The program may need to look for ways to be more innovative in calling events in order to avoid customer fatigue and decrease opt-out rates.</p>
<p>Business Demand Response</p>	<p>The Business Demand Response (BDR) program did not claim energy savings.</p>	<p>The Business Demand Response (BDR) program did not claim energy savings.</p>



Program	2021 Summary Response	2022 Summary Response
Residential Demand Response	<p>Feedback from program staff identified two factors that contributed to RDR not meeting goals. First, marketing did not have the desired results despite Every using "every marketing tactic available". Second, market saturation may be a contributing factor in declining enrollments. As the program manager explained, this program has been offering free thermostats since 2016, and the program offering is now quite mature and well-known. Therefore, enrolling new participants has been more challenging during this program cycle.</p> <p>In addition, the program continued to be affected negatively by the pandemic. Although some technicians could install the thermostats in residences or small businesses, they had to follow the CDC guidelines and had more days sick due to the virus. In addition, many customers did not want a technician in their home performing installations due to the virus which impacted direct installs.</p>	<p>Market saturation may be a contributing factor in declining enrollments in the RDR and BST programs and led to not meeting overall program goals. The program has been offering free thermostats since 2016, and the program is now quite mature and well-known. Therefore, enrolling new participants has been more challenging in future program cycles. Another issue the evaluation identified was an increase in opt-out rates, which may have resulted from customer fatigue. Everygy called 12 residential events in 2022, which was higher than the previous years due to the increased temperatures during summer. The program may need to look for ways to be more innovative in calling events in order to avoid customer fatigue and decrease opt-out rates.</p>



**Table 15: Issue 2 - Is the target market segment appropriately defined, or should it be further subdivided or merged with other market segments?**

Program	2021 Summary Response	2022 Summary Response
<p>Business Standard Program</p>	<p>Evergy has a well-defined target market of large and small commercial businesses for the Business Standard program.</p> <p>Evergy and the IC track activity by trade ally and have bi-yearly Trade Ally Advisory Board meetings. At these meetings, Evergy provides a program status update and requests feedback from the trade ally representatives on the advisory board about all business programs.</p> <p>Evergy actively solicits feedback on the program by sending surveys to all customers that completed a project in the final email communication. Evergy reviews this feedback and incorporates it into the program design as warranted.</p>	<p>Evergy has a well-defined target market of large and small commercial businesses for the Business Standard program.</p> <p>Evergy and the IC track activity by trade ally and have bi-yearly Trade Ally Advisory Board meetings. At these meetings, Evergy provides a program status update and requests feedback from the trade ally representatives on the advisory board about all business programs.</p> <p>Evergy actively solicits feedback on the program by sending surveys to all customers that completed a project in the final email communication. Evergy reviews this feedback and incorporates it into the program design as warranted.</p>

Program	2021 Summary Response	2022 Summary Response
Business Custom Program	Guidehouse found that the target market is appropriately defined. All business customers are eligible to participate in the Business Custom program. Tier 1 customers provide the most energy savings to the program. The program could target small and medium sized customers. The small and medium business customers are highly targeted by the Business Standard program because the application process and incentives are easier to complete and receive.	Guidehouse found that the target market is appropriately defined. All business customers are eligible to participate in the Business Custom program. Indoor agriculture projects provide the most energy savings to the program. The small and medium business customers are highly targeted by the Business Standard program because the application process and incentives are easier to complete and receive.
Process Efficiency Program	The program primarily targets industrial customers for implementing RCx projects. For the RCx sector, the target market is appropriately defined.	The program primarily targets industrial customers for implementing RCx projects. For the RCx sector, the target market is appropriately defined.
Heating, Cooling and Home Comfort	The Heating, Cooling, and Home Comfort program participant survey respondents were highly skewed toward homeowners, small households (one to two occupants), and were highly educated (Bachelor's degree or higher). However, we cannot be certain that either of these reflects a bias in participation or in survey response.	The Heating, Cooling, and Home Comfort program participant survey respondents were highly skewed toward homeowners, small households (one to two occupants), and were highly educated (Bachelor's degree or higher). However, we cannot be certain that either of these reflects a bias in participation or in survey response.
Income-Eligible Multi-Family	The Income-Eligible Multifamily program serves lower- and middle-income customers. The evaluation did not identify clear evidence that any specific program fails to serve any specific part of its target audience.	The Income-Eligible Multifamily program serves lower- and middle-income customers. The evaluation did not identify clear evidence that any specific program fails to serve any specific part of its target audience.

Program	2021 Summary Response	2022 Summary Response
Energy Saving Products	The Energy Saving Products program serves homeowners and renters. The evaluation did not identify clear evidence that any specific program fails to serve any specific part of its target audience.	The Energy Saving Products program serves homeowners and renters. The evaluation did not identify clear evidence that any specific program fails to serve any specific part of its target audience.
Home Energy Report & Income-Eligible Home Energy Report	The Home Energy Report programs serves homeowners and renters. The Home Energy Report survey respondents skewed older, more educated, and more likely to be homeowners than the Evergy general population. However, we cannot be certain that either of these reflects a bias in participation or in survey response.	The Home Energy Report program serves homeowners and renters. The evaluation did not identify clear evidence that any specific program fails to serve any specific part of its target audience.
Pay As You Save	No feedback for this issue was offered by the evaluator for this program.	For the PAYS participant survey respondents overall (both full and partial participants), we noted that more than two-thirds of participants reported incomes above 200% Federal Poverty Income Guidelines (FPIG). This means only about one third of all participants would qualify as income eligible. However, we cannot be certain that either of these reflects a bias in program participation or in survey response.
Business Smart Thermostats	No feedback for this issue was offered by the evaluator for this program.	No feedback for this issue was offered by the evaluator for this program.
Business Demand Response	No feedback for this issue was offered by the evaluator for this program.	No feedback for this issue was offered by the evaluator for this program.
Residential Demand Response	No feedback for this issue was offered by the evaluator for this program.	No feedback for this issue was offered by the evaluator for this program.



**Table 16: Issue 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?**

Program	2021 Summary Response	2022 Summary Response
<p>Business Standard Program</p>	<p>The Business Standard program complements the Business Custom program by providing rebates for common energy efficiency upgrades, which continued to be primarily lighting measures in PY2. Evergy is working toward further aligning the Business Standard and Business Custom programs so that multiple end-use energy-saving projects can be easily served across the entire portfolio.</p> <p>While the Business Standard program includes measures that address a variety of energy end uses for a participant, including the HVAC, refrigeration, and cooking energy end uses, 90% of the projects in PY2 were for lighting or lighting control measures. Non-lighting measure participation has increased in PY2 to 10% compared to 6% in PY1. Evergy and the IC are constantly evaluating the measure list to determine if it is meeting the needs of customers. The other Evergy Business programs primarily address the end uses besides lighting, but they also tend to be dominated by lighting projects.</p>	<p>The Business Standard program complements the Business Custom program by providing rebates for common energy efficiency upgrades, which continued to be primarily lighting measures in PY3. Evergy is working toward further aligning the Business Standard and Business Custom programs so that multiple end-use energy-saving projects can be easily served across the entire portfolio.</p> <p>While the Business Standard program includes measures that address a variety of energy end uses for a participant, including the HVAC, refrigeration, and cooking energy end uses, 84% of the projects in PY3 were for lighting or lighting control measures. Non-lighting measure participation has increased in PY3 to 16% compared with 10% in PY2 and 6% in PY1. Evergy and the IC are constantly evaluating the measure list to determine whether it is meeting the needs of customers. The other Evergy Business programs primarily address the end uses besides lighting, but they also tend to be dominated by new construction lighting projects.</p>
<p>Business Custom Program</p>	<p>Evergy has been successful in keeping the share of non-lighting measures above 20% for the Business Custom program. In PY2, the program consisted of approximately 30% non-lighting measures. The inclusion of some large grow facility projects added to the diversity of the program as they included</p>	<p>Evergy has been successful in keeping the share of non-lighting measures well above 20% for the Business Custom program. In PY3, the program consisted of approximately 50% non-lighting measures. The inclusion of some large grow facility projects added to the diversity of the program as they included agriculture lighting and agriculture HVAC measures.</p>



Program	2021 Summary Response	2022 Summary Response
	<p>agriculture lighting and agriculture HVAC measures. Because the overall savings in the Business Custom program can be driven by one or two large projects, Guidehouse thinks program participation appropriately reflects the end use needs within the target market segment.</p>	<p>Because the overall savings in the Business Custom program can be driven by one or two large projects, Guidehouse thinks program participation appropriately reflects the end-use needs within the target market segment.</p>
<p>Process Efficiency Program</p>	<p>The program is currently focused on providing services for RCx projects for industrial customers. Over time, express tune-up measures will be included, but the timeline to do that is not set.</p>	<p>The program is currently focused on providing services for RCx projects for industrial customers.</p>
<p>Heating, Cooling and Home Comfort</p>	<p>Heating, Cooling and Home Comfort offers energy saving measures through three program components: 1) an Energy Savings Kit with an assortment of low-cost measures (LED lightbulbs, faucet aerators, low-flow showerheads, pipe insulation, and advanced power strips); 2) insulation and air sealing measures; and 3) HVAC measures. HCHC participants and trade allies were generally satisfied with the program, and over two-thirds of trade allies were satisfied with the equipment that the program offers, the rebate/discount payment process, the program paperwork, and Evergy’s website. The primary substantive suggestion that trade allies made regarding the program offerings was to push higher SEER (&gt;17) HVAC equipment, as well as an increase in the incentives offered for higher-efficiency HVAC models.</p>	<p>HCHC offers energy saving measures through three program components: 1) an Energy Savings Kit with an assortment of low-cost measures (LED lightbulbs, faucet aerators, low-flow showerheads, pipe insulation, and advanced power strips); 2) insulation and air sealing measures; and 3) HVAC measures. HCHC participants and trade allies were generally satisfied with the program, and over two-thirds of trade allies were satisfied with the equipment that the program offers, the rebate/discount payment process, the program paperwork, and Evergy’s website. The primary substantive suggestion that trade allies made regarding the program offerings was to push higher SEER (&gt;17) HVAC equipment, as well as an increase in the incentives offered for higher-efficiency HVAC models.</p>

Program	2021 Summary Response	2022 Summary Response
Income-Eligible Multi-Family	<p>The Income-eligible Multifamily program provides a wide range of measure types, various direct-install measures (low-flow showerheads, kitchen faucet aerators, and smart power strips); prescriptive rebates for LED lighting, appliances (dishwashers, washing machines, dryers), HVAC (air conditioners, heat pumps), bathroom fans, and refrigerator replacement; and custom rebates are comprised of common area lighting, come truly custom measures as well as measures that are also included in direct install and prescriptive projects. LED lighting and direct-install measures make up a substantial proportion of program savings. Program staff believes that direct install measures will decrease in importance as deeper energy savings are found in higher impact prescriptive and custom measures.</p>	<p>IEMF provides a wide range of prescriptive appliances and HVAC measures that offer deep energy savings opportunities to multifamily building owners and residents. Prescriptive measures account for over 78 percent of program savings. In-unit, direct install lighting continues to decline in importance to the program, while common area custom light measures accounted for 20 percent of program savings during PY3 and continue to be an important category for the program.</p>
Energy Saving Products	<p>Energy Saving Products provides upstream discounts for energy efficient products, which currently are limited to a selection of LED lighting measures.</p>	<p>ESP provides upstream discounts for energy efficient products, with the vast majority of savings coming from a selection of LED lighting measures. Non-lighting measures have been added to the online marketplace channel in 2022; however, high shipping costs represent a barrier to growing this segment of the program.</p>
Home Energy Report and Income-Eligible Home Energy Report	<p>No feedback for this issue was offered by the evaluator for this program.</p>	<p>No feedback for this issue was offered by the evaluator for this program.</p>
Pay As You Save	<p>No feedback for this issue was offered by the evaluator for this program.</p>	<p>PAYS financed the installation of energy efficient air conditioners, heat pumps, smart thermostats, ceiling insulation, air sealing, and duct sealing. Program participants</p>

Program	2021 Summary Response	2022 Summary Response
		also received direct install energy saving measures at no-cost during their initial home audits. These included a variety of LED lightbulbs, power strips, pipe insulation, faucet aerators, and low flow showerheads.
Business Smart Thermostat	No feedback for this issue was offered by the evaluator for this program.	No feedback for this issue was offered by the evaluator for this program.
Business Demand Response	No feedback for this issue was offered by the evaluator for this program.	No feedback for this issue was offered by the evaluator for this program.
Residential Demand Response	No feedback for this issue was offered by the evaluator for this program.	No feedback for this issue was offered by the evaluator for this program.

**Table 17: Issue 4 - Are the communication channels and delivery mechanisms appropriate for the target market segment?**

Program	2021 Summary Response	2022 Summary Response
Business Standard Program	The IC works one-on-one with larger customers and those larger customers' customer solution managers (CSMs). The trade ally network addresses medium and smaller customers. There is also targeted marketing for sectors with historically lower participation. In PY2, the IC continued hosting targeted webinars for the public sector, schools, and customers interested in HVAC upgrades. These targeted webinars were in addition to general webinars for all business customers interested in	The IC works one-on-one with larger customers and those larger customers' customer solution managers (CSMs). The trade ally network addresses medium and smaller customers. During Cycle 3, the IC has also provided targeted marketing for sectors with historically lower participation. Communication around the PY3 end-of- the-year incentive bonus was clear and effective, leading to record-setting participant levels in Dec 2022.



Program	2021 Summary Response	2022 Summary Response
	<p>energy efficiency upgrades available across all the Business programs.</p> <p>Some participants indicated that they would prefer to receive information on the program in the form of bill inserts or direct emails.</p>	
<p>Business Custom Program</p>	<p>Due to the COVID-19 pandemic, marketing and promotion of the Business Custom program was primarily through emails and online webinars available to customers and trade allies. The online communications throughout the year provided information about Evergy’s business programs and supplemented the information available on Evergy’s website. Customers indicated the in-person kickoff event in PY1 and the online communications that continued in PY2 led them to complete Business Custom projects, indicating these communications are appropriate for the target market.</p> <p>The Business Custom program communicates closely with the CSMs who represent the larger Tier 1 customers. The Business Custom program experienced about a 30% reduction in Tier 1 participation in PY2 in terms of kWh savings, which is attributed partially to the effects of the pandemic and market uncertainty.</p>	<p>Marketing and promotion of the Business Custom program is primarily through emails and online webinars available to customers and trade allies. The online communications throughout the year provided information about Evergy’s business programs and supplemented the information available on Evergy’s website.</p> <p>The Business Custom program communicates closely with the CSMs who represent the larger Tier 1 customers. The implementer has also worked with the CSMs to identify if any direct communication options with Tier 1 customers can be made available to allow for more direct marketing and engagement of these large Tier 1 customers.</p>
<p>Process Efficiency Program</p>	<p>The program is in its second year, and Evergy had challenges promoting it due to the COVID-19 pandemic. However, all the communication channels</p>	<p>The program is in its third year, and Evergy had challenges throughout promoting it due to the COVID-19 pandemic and the perception of the RCx measures being complex. However,</p>



Program	2021 Summary Response	2022 Summary Response
	<p>are appropriate for the target market sector. The marketing and promotion activities involved a Business Energy Solutions forum, email campaign, direct mail, webinars, and an RCx-focused campaign for trade allies. The IC team marketing activities evolved over time to build on past efforts.</p>	<p>all the communication channels are appropriate for the target market sector. The marketing and promotion activities involved an email campaign, direct mail, webinars, and an RCx-focused campaign for trade allies. The IC team marketing activities evolved over time to build on past efforts.</p>
<p>Heating, Cooling, and Home Comfort</p>	<p>The Heating, Cooling and Home Comfort program has consistent structures in place with rebate distribution, a well-developed internal marketing team, and continued trade ally support. HCHC participants and trade allies were satisfied with program processes and interactions. However, some trade allies reported that the application process/paperwork can be complicated, and additional program training would be helpful.</p>	<p>The Heating, Cooling and Home Comfort program has consistent structures in place with rebate distribution, a well-developed internal marketing team, and continued trade ally support. HCHC participants and trade allies were satisfied with program processes and interactions with program and implementation staff. However, some trade allies reported that the application process/paperwork can be complicated and would prefer a more simplified application form.</p>
<p>Income-Eligible Multi-Family</p>	<p>Income-eligible Multifamily program participants were satisfied with the program processes. Most participants (property managers) learned about the program via outreach from program staff.</p>	<p>Most Income-Eligible Multifamily participants (property owners and managers) learned about the program via outreach from program staff or from sustainability consultants or contractors. Given the nature of the program, this mechanism for developing program participant leads is appropriate and effective.</p>
<p>Energy Saving Products</p>	<p>Energy Saving Products program participants also were satisfied with the program. Our evaluation found that about half of surveyed customers who reported buying LEDs at participating stores through ESP were aware of the Evergy discount, which compares well to awareness rates we have identified</p>	<p>ESP participants also were satisfied with the program. Our evaluation found that about half of surveyed customers who reported buying standard and specialty LEDs at participating lighting rebate stores were aware of the Evergy discount. The most common sources that led to participants' awareness of the Evergy lighting discounts are the Evergy newsletter and in-</p>



Program	2021 Summary Response	2022 Summary Response
	<p>in similar programs in other states. Given that the program met goals, this may be adequate, but program staff indicated concerns about market saturation, and so increasing customer awareness of the discounts and that Evergy provided them may help improve the proper assignment of attribution of the savings resulting from the purchases.</p>	<p>store displays. However, awareness of lighting rebates did not appear to have a substantial effect on the ESP Program as goals continue to be met. Program staff indicated that the lighting rebate portion of the program focuses exclusively on promoting LED lighting products and was viewed as Evergy’s final push to promote energy-efficient lighting before this measure is being removed from future program plans.</p>
<p>Home Energy Report and Income-Eligible Home Energy Report</p>	<p>No feedback for this issue was offered by the evaluator for this program.</p>	<p>No feedback for this issue was offered by the evaluator for this program.</p>
<p>Pay As You Save</p>	<p>No feedback for this issue was offered by the evaluator for this program.</p>	<p>For the PAYS Program, our evaluation found that about one-third of participant survey respondents had considered other financing options prior to enrolling in PAYS. Some of the other types of financing options included a home equity line of credit or a bank loan. The biggest barriers preventing participants from purchasing energy-saving products were not having enough money and concern about the overall cost. Expanding program marketing would help increase program awareness which could, in turn, increase program participation by having customers reach out to Evergy about energy-saving products before applying for a loan through some other source.</p>
<p>Business Smart Thermostat</p>	<p>Business Smart Thermostat participants indicated they would like more advance notice of events.</p>	<p>One of the primary findings from the demand response programs is that participants in both the RDR and BST indicated they would like more advance notice of events. Our evaluation also found an increase in opt-out rates, which might indicate some customer fatigue. It is important to note that Evergy called 12 residential events, which was higher than in previous years. The program is approaching maturity, so finding ways to</p>



Program	2021 Summary Response	2022 Summary Response
		<p>keep customers participating in the program will be a challenge. Offering free thermostats did lead to increased program enrollments; however, this offer was most successful when coupled with an email activation campaign.</p>
<p>Business Demand Response</p>	<p>No feedback for this issue was offered by the evaluator for this program.</p>	<p>No feedback for this issue was offered by the evaluator for this program.</p>
<p>Residential Demand Response</p>	<p>Residential Demand Response participants indicated they would like more advance notice of events.</p>	<p>One of the primary findings from the demand response programs is that participants in both the RDR and BST indicated they would like more advance notice of events. Our evaluation also found an increase in opt-out rates, which might indicate some customer fatigue. It is important to note that Evergy called 12 residential events, which was higher than in previous years. The program is approaching maturity, so finding ways to keep customers participating in the program will be a challenge. Offering free thermostats did lead to increased program enrollments; however, this offer was most successful when coupled with an email activation campaign.</p>



**Table 18: Issue 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?**

Program	2021 Summary Response	2022 Summary Response
Business Standard Program	<p>PY2 saw lower participation due to lingering effects from the COVID-19 pandemic. Some trade allies report that higher incentives may help them reach customers who are more reluctant to participate either due to budget or interest; they feel that the low hanging fruit has already been picked and the customers that remain need additional motivation.</p> <p>Trade allies appear highly satisfied with the application process, though some participants indicate that the process remains somewhat challenging for them. These participants indicated that they had to reach out directly to Evergy for assistance, suggesting that they were purchasing equipment without the assistance of a trade ally.</p>	<p>In PY3, Evergy implemented some incentive changes to increase participation. Evergy also offered an end-of-the-year bonus to further incentivize project applications, which contributed to the highest monthly program participation in the program’s history for Dec 2022.</p>
Business Custom Program	<p>Customers and trade allies need support to identify and implement large and non- standard energy efficiency projects that fall in the Business Custom program. Trade allies reported an interest in learning about potential leads that program staff may have about customers that have shown interest in the program. Trade allies also reported a desire to shift more measures from the Business Custom program to the Business Standard program. They also reported a desire for higher incentives for exterior lighting projects due to the higher labor costs for exterior projects.</p>	<p>Customers and trade allies need support to identify and implement large and non- standard energy efficiency projects that fall in the Business Custom program. In previous program years, trade allies reported an interest in learning about potential leads that program staff may have about customers that have shown interest in the program. Trade allies also reported a desire to shift more measures from the Business Custom program to the Business Standard program because incentive processing is easier. They also reported a desire for higher incentives for exterior</p>



Program	2021 Summary Response	2022 Summary Response
Process Efficiency Program	<p>The program is strategically streamlining the process by offering incentives for measures such as compressed air leak survey and repairs. The customers can then do other RCx measures under the same project without having to reapply. Evergy is pursuing innovative approaches to encourage customer engagement within the overall C&amp;I suite of programs.</p>	<p>lighting projects due to the higher labor costs for exterior projects.</p> <p>The Process Efficiency program is not being continued in Cycle 3 PY4. If Evergy were to restart the program in future years, Evergy may want to pursue innovative approaches to encourage customer engagement with this program and within the overall C&amp;I suite of programs.</p>
Heating, Cooling and Home Comfort	<p>Monitor installation rates on an ongoing basis for the Energy Savings Kit sub-program. The sub-program currently performs both direct install (~70 percent) to virtual install (~30 percent), and this comes with trade-offs of lower administration costs but greater risk of non-installation or measure removal. If the Energy Savings Kit sub-program is going to continue to perform virtual installs, additional customer resources, such as educational materials or a direct customer service line, may be needed to keep installation rates high.</p> <p>Periodically review the incentive structure for higher-efficiency HVAC systems in the program. When examining the benefit-cost ratios for higher-efficiency HVAC systems, Evergy can assess if incentives can be or need to be revised. Metrics for this may assessment include:</p> <ul style="list-style-type: none"> <li>• Balance between UCT and PCT ratios. If the UCT ratio exceeds the PCT ratio, Evergy can rebalance by increasing incentives.</li> </ul>	<p>Consider hosting contractor briefings/meetings and/or in-person trainings for trade allies. Trying to engage trade allies virtually can be much more challenging than in-person meetings where the trade allies can feel more engaged. In-person meetings also create opportunities to introduce the Evergy program staff to trade allies who are consolidating or expanding their operations.</p> <p>Identify potential energy-savings measures for the Energy Savings Kit as the emphasis shifts away from residential lighting. The kits could include additional weather-stripping measures and energy-savings tips. The Evergy Savings Kit sub-program should continue to be actively promoted through community events, especially those targeting low-income areas.</p> <p>Develop a simplified and more automated application process to reduce the load on trade allies. As it is, some trade allies reported that the application process has many required components that can be easily overlooked. Drop-down options with pre-programmed equipment and AHRI</p>



Program	2021 Summary Response	2022 Summary Response
	<ul style="list-style-type: none"> <li>Percent of incremental cost covered by incentives. If incremental cost coverage is below 50 percent, Evergy can consider increasing incentives while remaining within boundaries of industry norms for this measure group.</li> <li>Develop a simplified and more automated application process to reduce the load on trade allies. As it is, some trade allies reported that the application process has many required components that can be easily overlooked. Drop-down options with pre-programmed equipment and AHRI numbers could be utilized to reduce the time it takes for trade allies to look up the information themselves and would reduce input error.</li> </ul> <p>Encourage the outreach team to set up in-person trainings for trade allies. Trying to engage trade allies virtually can be much more challenging than in-person meetings where the focus of the trade ally is undivided. All trade allies that had trainings in 2021 described them as being helpful. Creating multiple in-person trainings may increase further trade ally support.</p> <p>Add additional data collection requirements to the reporting fields for the program tracking data. The air sealing and attic insulation measures calculate energy savings based on the heating fuel type for each home. Savings are calculated differently based on whether a home is gas heated or electric heated. However, the</p>	<p>numbers could be utilized to reduce the time it takes for trade allies to look up the information themselves and would reduce input error.</p> <p>Determine the program impacts of the code/standard changes and economic influences and make adjustments accordingly to the current rebate structure. Due to the baseline SEER rating of HVAC equipment updating in 2023 and other economic effects, such as inflation, Evergy should assess if the rebates currently offered through the program provide enough incentive to drive customers to install energy efficient equipment. As prices of HVAC equipment continue to increase, the financial burden on customers to install energy efficient equipment increases as well. By not raising the incentives to cover more of the cost of installing the equipment, this can drive the rate of program free ridership up. Revisions to incentives can be implemented on a per-equipment-type basis and be based on customer needs, equipment inventory, current market conditions, etc.</p> <p>Create additional QA/QC checks for reviewing program tracking data prior to end- of-year reporting. During the final review of the program tracking data by the evaluation team at ADM, it was discovered that 25 central air conditioner projects were mistakenly processed as air source heat pumps. It was decided that the verified savings would report the projects as central air conditioners, while the reported savings would reflect the projects as air source heat pumps, which resulted in a lower realization rate. Additional implementation QA/QC checks to the program</p>



Program	2021 Summary Response	2022 Summary Response
	<p>heating fuel type is currently not being collected in the tracking data for all air sealing and attic insulation projects in the program, which causes the reported savings calculations to use a default assumption of an electric-heated home. Using the actual heating fuel type for each project would more accurately reflect the energy savings per home and would coincide with the verified savings calculations.</p> <p>Consider adding additional measures to the Evergy TRM based on the current mix of measure in the program tracking data. Currently, there are measures in the 2021 program tracking data that are not specifically outlined in the Evergy TRM. This includes measures with multiple baselines as stipulated in the IL TRM. For example, a measure for an air sealing project in a gas heated home or a measure for a ground source heat pump project replacing an existing central AC are not currently included in the Evergy TRM. Adding additional measures to the Evergy TRM based on the program tracking data could help better align the reported and verified savings calculations.</p>	<p>tracking data could help avoid future discrepancies between the reported and verified savings.</p>
<p>Income-Eligible Multi-Family</p>	<p>Consider including a data element to program tracking data that identifies a project property across all measure types (direct install, prescriptive and custom). This may reduce errors in aggregating project level analysis and evaluation.</p> <p>Using primary key measure identifier for custom measures wherever possible could increase consistency</p>	<p>When multiple models of a measure are installed in a project, create separate records for each model number. Savings are calculated using model specifications and would be easier to verify if each savings were calculated separately for each distinct equipment model number.</p>



Program	2021 Summary Response	2022 Summary Response
	<p>of savings calculations and reduce the calculation burden for direct install or prescriptive measures installed under a custom project application as a custom measure.</p> <p>Consider expanding the Evergy TRM to include measures that more accurately reflect measure models that are installed through the program, such as auto-defrost refrigerators.</p> <p>Additional data entry controls to verify that unit savings are reported consistently could prevent reduced or inflated claimed savings and improve realization rates. For example, ensuring that LED bulb savings are reported by bulb rather than by fixture, could increase accuracy of reported savings.</p>	<p>Add waste heat factors and coincident factors drawn from Illinois Technical Reference Manual (IL TRM) to reported custom lighting savings calculations.</p> <p>Correct baseline efficiency values for IEMF - ASHP SEER 16 - replace ASHP ER: MF measure to reflect early replacement versus time-of-sale efficiency.</p> <p>Add clothes washer and dishwasher measures to Evergy Technical Reference Manual (Evergy) TRM that specify water heater fuel type.</p> <p>ADM recommends the collection of additional documentation by the implementer in the form of an attestation that HVAC units categorized as early replacement were in working order at the time of replacement. ADM will work with both implementation and Evergy program staff to ensure the operating status of early replacement HVAC units in the program is being included as part of the data collection.</p>
Energy Saving Products	<p>Provide additional customer education and cross-promotion of programs. Customer awareness of the ESP Program remains somewhat low. Additional educational materials in stores (as permitted by the retailers), as well as promotion through social media, bill inserts, and emails could improve the program performance and customer engagement.</p> <p>Continue to develop an online marketplace. Program staff indicated that the online marketplace was</p>	<p>Provide additional customer education and cross-promotion of programs. Customer awareness of the ESP Program remains low. Additional educational materials in stores (as permitted by the retailers), as well as promotion through social media, bill inserts, and emails could improve the program performance and customer engagement.</p> <p>Add additional non-lighting measures to the ESP Program. Evergy should pivot away from LED lighting-only point-of-</p>



Program	2021 Summary Response	2022 Summary Response
	<p>successful in PY1 and are exploring additional avenues for marketing the availability of the online marketplace and opportunities to add measures for purchase. The online marketplace provides an avenue to reach hard-to-reach customers and expand to additional measures.</p>	<p>sale rebates to include non-lighting measures such as ENERGY STAR® appliances and smart thermostats.</p> <p>Continue to develop an online marketplace. Program staff indicated that the online marketplace was successful in PY1 and PY2 and are exploring additional avenues for marketing the availability of the online marketplace and opportunities to add measures for purchase. The online marketplace provides an avenue to reach hard- to-reach customers and expand to additional measures.</p> <p>Evergy should continue to push for free shipping on all its online products. This will become increasingly important as sales of LEDs are discontinued in the next program year.</p> <p>Evergy should consider creating product bundles, such as home security bundles. This would increase the overall transaction amount and also make it easier for customers to purchase and install this equipment (Utility Online Marketplace Strategies).</p>
<p>Home Energy Report and Income-Eligible Home Energy Report</p>	<p>Consider including a data element to program tracking data that identifies a project property across all measure types (direct install, prescriptive and custom). This may reduce errors in aggregating project level analysis and evaluation.</p> <p>Using primary key measure identifier for custom measures wherever possible could increase consistency of savings calculations and reduce the calculation burden for direct install or prescriptive measures</p>	<p>Work with ADM to include more information about when customers stop receiving reports. Many customers are filtered out of the analysis for not having enough post-period data for the months in PY3. While it is likely that many of these customers are no longer a part of the program, it would be beneficial to include a data field that informs us of exactly when that occurs. This will help ADM perform a more robust data validation process and ensure that no customers are unintentionally removed from the analysis.</p>



Program	2021 Summary Response	2022 Summary Response
	<p>installed under a custom project application as a custom measure.</p> <p>Consider expanding the Evergy TRM to include measures that more accurately reflect measure models that are installed through the program, such as auto-defrost refrigerators.</p> <p>Additional data entry controls to verify that unit savings are reported consistently could prevent reduced or inflated claimed savings and improve realization rates. For example, ensuring that LED bulb savings are reported by bulb rather than by fixture, could increase accuracy of reported savings.</p> <p>Work with ADM to include more information about when customers stop receiving reports. Many customers are filtered from the analysis for not having enough post-period data for the months in PY2. While it is likely that many of these customers are no longer a part of the program, it would be beneficial to include a data field that informs us of exactly when that occurs. This will help ADM perform a more robust data validation process and ensure that no customers are unintentionally removed from the analysis.</p> <p>Evergy and Oracle should continue efforts to make the information on home comparisons more salient. Given that the recent revisions to the report did not result in</p>	<p>Evergy and Opower should continue efforts to make the information on home comparisons more salient. Given that the recent revisions to the report did not result in more thorough review by recipients, Evergy and Opower should consider carrying out additional research to determine what drives the thoroughness of report review and how to get customers to read them more thoroughly.</p> <p>Evergy should consider doing additional research to assess what increases motivation or intent to engage in the recommended behaviors. That information can be used to increase the effectiveness of its various outreach efforts and tools.</p> <p>If it has not yet done so, Opower may also consider discontinuing the practice of telling recipients (and Energy Analyzer users) they are being compared to their “neighbors”. A one-mile radius encompasses far more homes than many individuals may consider to be a neighbor. This practice may reinforce an inaccurate interpretation of how the comparison is actually made.</p>



Program	2021 Summary Response	2022 Summary Response
	<p>more thorough review by recipients, Evergy and Oracle should consider carrying out additional research to determine what drives the thoroughness of report review and how to get customers to read them more thoroughly.</p> <p>Evergy should consider doing additional research to assess what increases motivation or intent to engage in the recommended behaviors and use that information to increase the effectiveness of its various outreach efforts and tools.</p> <p>If it has not yet done so, Oracle may also consider discontinuing the practice of telling recipients (and Energy Analyzer users) they are being compared to their “neighbors.” A one-mile radius encompasses far more homes than many individuals may consider to be a neighbor. This practice may reinforce an inaccurate interpretation of how the comparison is made.</p>	
<p>Pay As You Save</p>	<p>No feedback for this issue was offered by the evaluator for this program.</p>	<p>Continue to refine and expand program tracking metrics. Improved program tracking metrics could provide Evergy staff with enhanced clarity of overall program operations as well as increase data available for M&amp;V.</p> <p>Additional metrics that the implementer could include in quarterly reports are:</p> <ul style="list-style-type: none"> <li>• Number of completed audits</li> <li>• Conversion rate (audits/number of participants)</li> <li>• Number of program dropouts</li> </ul>



Program	2021 Summary Response	2022 Summary Response
		<ul style="list-style-type: none"> <li>• Program enrollment processing time</li> <li>• Average loan amounts for Evergy customers</li> </ul> <p>Additional information that would benefit M&amp;V activities include:</p> <ul style="list-style-type: none"> <li>• Blower door test ratings before and after installations</li> <li>• Efficiency ratings of old and new equipment</li> <li>• R-values before and after installations</li> <li>• Complete tracking of heating fuel type</li> <li>• Tracking of premises for which program installations will yield significant changes in electric consumption (e.g., tracking of premises without cooling equipment prior to program installation)</li> </ul> <p>Update reported savings calculations to account for heating fuel type as well as the presence of cooling equipment.</p> <p>Provide implementation’s modelled home energy savings estimates to ADM for review. Comparisons to implementation’s modeled savings as well as input variables would enable beneficial benchmarking of the reported, TRM-derived savings as well as of the impact evaluation findings.</p> <p>Continue to monitor regression-derived savings estimates. As the program continues to enroll more participants and as more post-installation billing data is available for</p>



Program	2021 Summary Response	2022 Summary Response
		<p>participants from the 2022 program year, the regression analysis will likely improve in validity.</p> <p>Review the participant application process to ensure that income eligible participants are aware of other low-cost options available to them. Twenty-three percent of surveyed participants (and 16% of full participants) reported income levels that would qualify their families for other income-qualified programs offered by Evergy.</p> <p>Continue to monitor free ridership and spillover rates to ensure that the program is continuing to reach its critical target markets.</p>
<p>Business Smart Thermostat</p>	<p>Evergy staff should continue to reinforce customer messaging regarding program enrollment as there seems to be some lack of customer understanding about the timing of these events.</p> <p>Evergy should continue to offer free smart thermostats to entice new customers into the program.</p> <p>The program implementation staff should continue to monitor activation rates through the multiple email strategy, which has led to noticeable increases in new enrollments.</p>	<p>Evergy should continue to implement creative DR event strategies to minimize customer fatigue.</p> <p>The program implementer should conduct additional QA/QC to ensure that all respondents receive notification of upcoming events, which is the chief source of participant dissatisfaction. The implementer should also consider sending notifications through multiple channels, such as email and text, to ensure that program participants are aware of the upcoming DR event.</p> <p>The program implementer and Evergy should coordinate follow-up engagement strategies after each DR event. This would ensure that customers receive the notification promptly and understand the benefits of program participation.</p>



Program	2021 Summary Response	2022 Summary Response
<p>Business Demand Response</p>	<p>Evergy staff should continue to work with both the DERMS database provider and the implementation contractor to improve the accuracy of capturing participant performance promptly. After each DR event, providing participant reports of savings will reinforce the program's value to these customers and perhaps encourage greater kW savings efforts.</p> <p>The program implementer should continue to look for creative ways to market this program to smaller commercial and industrial customers by scaling the kW enrollment targets. This approach may be especially effective at reaching smaller customers in the rural Missouri West jurisdiction.</p>	<p>The program implementer should continue to look for creative ways to market this program to smaller commercial and industrial customers by scaling the kW enrollment targets. This approach may be especially effective at reaching smaller customers in the rural Missouri West service territory.</p> <p>The program implementer should continue to develop customized tailored curtailment plans with facility managers. However, these plans may need to be reviewed during the DR season if customer usage changes unexpectedly. The program implementer should clarify for customers when load baselines are expected to change to minimize customer confusion and dissatisfaction.</p>
<p>Residential Demand Response</p>	<p>Evergy staff should continue to reinforce customer messaging regarding program enrollment as there seems to be some lack of customer understanding about the timing of these events.</p> <p>Evergy should continue to offer free smart thermostats to entice new customers into the program.</p> <p>The program implementation staff should continue to monitor activation rates through the multiple email strategy, which has led to noticeable increases in new enrollments.</p>	<p>Evergy should continue to implement creative DR event strategies to minimize customer fatigue.</p> <p>The program implementer should conduct additional QA/QC to ensure that all respondents receive notification of upcoming events, which is the chief source of participant dissatisfaction. The implementer should also consider sending notifications through multiple channels, such as email and text, to ensure that program participants are aware of the upcoming DR event.</p> <p>The program implementer and Evergy should coordinate follow-up engagement strategies after each DR event. This would ensure that customers receive the notification promptly and understand the benefits of program participation.</p>



Program	2021 Summary Response	2022 Summary Response
Appliance Recycling	No feedback for this issue was offered by the evaluator for this program.	<p>Add additional data collection requirements to the reporting fields for the program tracking data. This would allow for ARCA Recycling data to be combined with the tracking data allowing for easier calculations of savings. Additionally, this could catch errors in the data earlier in the year, allowing for changes to be made, such as the dehumidifier capacity being reported as a cubic feet capacity and not pints/day.</p> <p>Use the coincident peak demand savings from the Evergy TRM, not the nameplate demand savings to account for demand savings more accurately during peak events.</p> <p>Combine promotional efforts with other pilot programs. For example, the Appliance Recycling program could be promoted at the local libraries that are partnered with the Power Check program. This could attract an additional part of the community. Fliers could be added to the Power Check device boxes or attached to the trees given out with the Energy-Saving Trees program, assuming the locations coincide with the Appliance Recycling targeted area.</p> <p>Evaluation surveying efforts could be conducted to confirm the unit characteristics, verify the unit was in working condition and determine the participant satisfaction with the program. If the pickup location was a basement, the survey should include a question on if the basement is conditioned or not.</p>
BPI Certification	No feedback for this issue was offered by the evaluator for this program.	Evergy staff should continue this pilot in 2023. Specifically, the staff should work with the implementation contractor to identify additional contractors, especially those who



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<p>Energy Efficiency Nonprofits</p>	<p>Evergy should consider revising its current smart thermostat installations requirements to include those living in short-term rental properties. The building owner can sign the installation agreement to ensure that the smart thermostats are installed in these premises and remain in place. This modification will provide additional value to both the organizations and Evergy.</p> <p>Evergy should follow up with program participants in six months after measure installation. This follow-up will help remind these participants of the available energy savings opportunities, particularly the recommendations identified through the energy audit. Checking in with these past program participants will also provide additional information needed to help them replace aging HVAC equipment before equipment failure.</p>	<p>support other Evergy Diversity, Equity and Inclusion (DEI) initiatives, to increase the quality and availability of contractors to support Evergy’s residential programs.</p> <p>Evergy should follow up with program participants in six months after measure installation. This follow-up will help remind these participants of the available energy savings opportunities, particularly the recommendations identified through the energy audit.</p>
<p>Energy-Saving Trees</p>	<p>Send follow-up emails to monitor the tree delivery and follow-up care to ensure that all trees remain healthy and are planted promptly.</p> <p>Consider having the Bridging the Gap volunteers assist homeowners in planting the trees, assuming that an appropriate liability release could be developed.</p>	<p>Send follow-up emails to monitor the tree delivery and follow-up care to ensure that all trees remain healthy and are planted promptly.</p> <p>Continue to offer driveway drop-offs to ensure that the trees are delivered to the program participants.</p> <p>Explore strategies to increase program participation among low and moderate- income residents in these urban areas.</p>



Program	2021 Summary Response	2022 Summary Response
	<p>Continue to offer driveway drop-offs to ensure that the trees are delivered to the program participants.</p> <p>Explore strategies to increase program participation among low and moderate- income residents living in these urban areas. These approaches could include allowing tenants to plant trees or working with the landlords to plant trees in the areas managed by these multifamily buildings.</p> <p>Conduct additional surveying efforts to better understand where participants are planting their trees and the reasons some trees.</p>	<p>This may include reaching out to landlords to increase participation among low-income renters.</p> <p>Conduct additional surveying efforts to better understand where participants are planting their trees. This may include additional questions to obtain the quantitative data needed for the correct adjustments to be made.</p>
Market-Rate Multi-Family	No feedback for this issue was offered by the evaluator for this program.	<p>Evergy should consider removing the current MEEIA restrictions of buildings with four or more units to open up this program to a broader pool of building professionals. This includes those who typically specialize in single-family residences.</p> <p>The program should continue to reach out to property owners rather than property managers, as they are the decision-makers.</p>
Power Check	No feedback for this issue was offered by the evaluator for this program.	Evergy should continue to cover all of the program costs to improve participation and target smaller, regional businesses with multiple locations instead of small mom-and-pop businesses with single locations.