

Portfolio Summary Report

Submitted to: Ameren Missouri

Submitted on: 6/10/2025

Submitted by: ADM Associates, Inc.

ADM Associates, Inc
3239 Ramos Circle
Sacramento, CA 95827
916-363-8383

Table of Contents

1	Introduction	1
2	Program Year 2024 Impact Results	2
2.1	Income Eligible Portfolio	3
2.2	Residential Portfolio	5
2.3	Business Portfolio	8
2.4	Demand Response Portfolio	10
3	Earnings Opportunity	12
3.1	Calculation of Core Earnings Opportunity	12
3.2	Calculation of Additional Earnings Opportunity	12
3.3	Calculation of Penalties	12
3.4	Earning Opportunity Calculation	13
4	Cost Effectiveness Results	15

Table of Tables

Table 2-1 Summary of Sector Level Energy Saving Results	2
Table 2-2 Summary of Sector Level Peak Demand Impacts	2
Table 2-3 Summary of Demand Response Portfolio Energy and Demand Impacts	3
Table 2-4 Summary of Income Eligible Program Energy Savings	4
Table 2-5 Summary of Income Eligible Program Peak Demand Impacts	5
Table 2-6 Summary of Residential Program Energy Savings	7
Table 2-7 Summary of Residential Program Peak Demand Impacts	7
Table 2-8 Summary of Business Program Energy Savings	9
Table 2-9 Summary of Business Program Peak Demand Impacts	9
Table 2-10 Summary of Demand Response Program Impacts	11
Table 3-1 Spending Floor Penalties	12
Table 3-2 Additional Penalties	12
Table 3-3 Earnings Opportunity Calculation	14
Table 4-1 Cost-Effectiveness Ratios by Program and Portfolio	16
Table 4-2 Cost-Effectiveness Inputs and Net Benefits by Program and Portfolio	16

1 Introduction

This report summarizes the impact evaluation and cost-effectiveness results for Ameren Missouri's PY2024 portfolio of energy efficiency and demand response programs.

The primary objective of this evaluation was to assess the electric energy and demand savings achieved through Ameren Missouri's program offerings. The findings may be used by Ameren Missouri and relevant stakeholders to track progress toward savings goals, refine program design and operations, develop strategies for achieving greater program savings, and ensure customer satisfaction and cost-effectiveness.

Additionally, the evaluation addresses the five process evaluation questions required by Missouri Code of State Regulations, section 20 CSR 4240-22.070(8).

The PY2024 portfolio consisted of the following programs:

- Income Eligible Programs
 - Multifamily Income Eligible
 - Single Family Income Eligible
 - Business Social Service Program
- Residential Programs
 - Efficient Products
 - Multifamily Market Rate
 - Heating and Cooling
 - Pay As You Save® ("PAYS®")
- Business Programs
 - Custom
 - Prescriptive/Standard
 - Small Business
 - Retro-Commissioning/ Continuous Commissioning
- Demand Response
 - Residential Demand Response
 - Business Demand Response

This report provides a high-level summary of program impact and cost-effectiveness results. More detailed evaluation findings and methodologies are available in Volumes 1 and 2 of the sector-level evaluation reports:

- Residential Energy Efficiency Portfolio (Volume 1)
- Residential Energy Efficiency Portfolio (Volume 2: Appendices)
- Business Energy Efficiency Portfolio (Volume 1)
- Business Energy Efficiency Portfolio (Volume 2: Appendices)
- Demand Response Portfolio

2 Program Year 2024 Impact Results

This section summarizes the gross and net savings results by program sector. Across all sectors, except demand response, the portfolio achieved 87% of its overall annual net MWh savings goal, with variations in goal attainment across different program categories. The Income Eligible program exceeded its target at 109%, achieving 15,389 net MWh savings. The Residential and Business programs reached 91% and 81% of their respective goals. The portfolio's gross realization rate was 99%, and lifetime net ex post savings totaled approximately 1.52 million MWh.

Table 2-1 Summary of Sector Level Energy Saving Results

Portfolio	Annual Net MWh Savings Goal	Percent Achievement of Annual Net MWh Savings Goal	Ex Ante Annual MWh Savings	Ex Post Annual Gross MWh Savings	Gross Realization Rate	Ex Post Annual Net MWh Savings	Net-to-Gross Ratio	Lifetime Net Ex Post MWh Savings
Income Eligible	14,147	109%	15,910	15,389	97%	15,389	100%	212,448
Residential	34,128	91%	45,192	47,631	105%	30,960	65%	339,972
Business	80,113	81%	103,878	100,060	96%	65,039	65%	970,182
Total	128,388	87%	164,980	163,080	99%	111,388	68%	1,522,602

Table 2-2 Summary of Sector Level Peak Demand Impacts

Portfolio	Annual Net MW Savings Goal	Percent Achievement of Annual Net MW Savings Goal	Ex Ante Gross MW Savings	Ex Post Gross MW Savings	Gross Realization Rate	Ex Post Net MW Savings	Net-to-Gross Ratio
Income Eligible	3.65	108%	4.24	3.94	93%	3.94	100%
Residential	18.52	98%	24.70	27.81	113%	18.07	65%
Business	25.87	82%	32.26	32.51	101%	21.13	65%
Total	48.04	90%	61.20	64.25	105%	43.14	67%

The demand response portfolio achieved 123% of its overall demand impact target. The Residential DR program reached 62% of its target, with a resource capability of 41.96 MW. The Business DR program exceeded its target at 123%, achieving a resource capability of 168.23 MW. While energy savings are not the primary objective of the demand response programs, the portfolio achieved 13% of its event season energy savings goal. Residential DR reached 9% of its target, and Business DR achieved 27% of its target. Total event season energy savings were 1,153.65 MWh.

Table 2-3 Summary of Demand Response Portfolio Energy and Demand Impacts

Metric	Residential DR	Business DR	DR Portfolio
Participant count	50,563	1,040	51,603
Demand Impact / Resource Capability			
Event day demand impact (MW)	31.16	143.63	174.79
Resource capability (MW)	41.96	168.23	210.19
PY2024 MEEIA III goal/target (MW)	67.67	137.04	204.71
Percent of PY2024 goal/target	62%	123%	103%
Energy Savings			
Event season energy savings (MWh)	604.86	548.79	1,153.65
PY2024 MEEIA III goal/target (MW)	6,547	2,000	8,547
Percent of PY2024 goal/target	9%	27%	13%

2.1 Income Eligible Portfolio

The PY2024 Income Eligible Portfolio included three programs targeting low-income customers. The three programs were:

- The **Multifamily Income Eligible (MFIE) Program**, promoted to customers as the CommunitySavers® Multifamily Program, is designed to provide long-term energy savings and bill-reduction opportunities to income-eligible customers of Ameren Missouri residing in multifamily properties. The program specifically targets income-eligible multifamily property managers and owners, offering a one-stop-shop approach to aid in navigating the challenges associated with comprehensive retrofits. The range of eligible measures includes lighting, advanced thermostats, advanced power strips, domestic hot water, building shell, and HVAC upgrades. The program's target market encompasses owners and managers of multifamily properties with four or more units and a high percentage of low-income residents.
- The **Single Family Income Eligible (SFIE) Program**, marketed as CommunitySavers® Single Family Program, is aimed at delivering whole-home energy efficiency upgrades to income-qualified Ameren Missouri customers residing in single-family homes, mobile homes, and triplexes and duplexes. The program's primary objective is to provide income-eligible customers with a comprehensive walkthrough home energy assessment, direct installation of low-cost energy efficiency measures, and home weatherization measures (including minor repairs necessary for these installations). Additionally, the program offers information on behavioral improvements and other Ameren Missouri programs, all at no cost to the customer. The implementation team chiefly engages participants through alliances with large housing organizations and reputable community groups.
- The **Business Social Services (BSS) Program** was introduced by Ameren Missouri with the objective to facilitate the adoption of energy efficient technologies within social service organizations. This program addresses various barriers including high upfront costs, absence of financing, lack of knowledge, and insufficient time and resources required to explore energy efficiency opportunities. The targeted market encompasses commercial, nonprofit, and tax-exempt business customers offering social services to low-income populations in federally designated opportunity zones. These services span family services, healthcare facilities, homeless shelters, employment services, worker training organizations, job banks,

and childcare facilities. The BSS Program offers lighting and other measures at low or no cost to qualifying social service business customers. The provision and installation of these measures are carried out by program-approved Service Providers who also complete the necessary paperwork for eligible participants and identify further energy efficiency opportunities beyond the scope of the BSS Program. When compared to the BizSavers programs, the BSS Program offers higher incentive levels for deemed measures, including incentives that cover 100% of eligible costs for specific interior lighting measures.

The Income Eligible portfolio achieved 109% of its annual net MWh savings goal, with varying levels of performance across its programs. The Multifamily Income Eligible Program exceeded its target at 108%, achieving 8,674 net MWh savings with a gross realization rate of 92%. The Single Family Income Eligible Program reached 59% of its goal, with net savings of 639 MWh and a gross realization rate of 85%. The Business Social Services Program exceeded its target at 121%, achieving 6,076 net MWh savings with a 106% realization rate. Overall, the portfolio resulted in lifetime net ex post savings of 212,448 MWh.

Table 2-4 Summary of Income Eligible Program Energy Savings

Portfolio	Annual Net MWh Savings Goal	Percent Achievement of Annual Net MWh Savings Goal	Ex Ante Annual MWh Savings	Ex Post Annual Gross MWh Savings	Gross Realization Rate	Ex Post Annual Net MWh Savings	Net-to-Gross Ratio	Lifetime Net Ex Post MWh Savings
Multifamily Income Eligible Program	8,048	108%	9,452	8,674	92%	8,674	100%	115,241
Single Family Income Eligible Program	1,087	59%	752	639	85%	639	100%	6,159
Business Social Services Program	5,012	121%	5,706	6,076	106%	6,076	100%	91,048
Total	14,147	109%	15,910	15,389	97%	15,389	100%	212,448

Table 2-5 Summary of Income Eligible Program Peak Demand Impacts

Portfolio	Annual Net MW Savings Goal	Percent Achievement of Annual Net MW Savings Goal	Ex Ante Gross MW Savings	Ex Post Gross MW Savings	Gross Realization Rate	Ex Post Net MW Savings	Net-to-Gross Ratio
Multifamily Income Eligible Program	2.21	106%	2.61	2.34	90%	2.34	100%
Single Family Income Eligible Program	0.46	96%	0.54	0.44	82%	0.44	100%
Business Social Services Program	0.98	118%	1.08	1.15	107%	1.15	100%
Total	3.65	108%	4.24	3.94	93%	3.94	100%

2.2 Residential Portfolio

The PY2024 Residential Portfolio included four programs targeting residential customers. The four programs were:

- The **Ameren Missouri Residential HVAC Program** was designed to achieve energy and demand savings by incentivizing the installation of energy-efficient central air conditioning, heat pump, and advanced thermostat measures, targeting both single-family and multifamily residential homeowners within the Ameren Missouri service territory. The program operated through two channels: Downstream and Midstream, both relying on a network of trade allies to promote high-efficiency HVAC installations and manage the rebate application process. In the Downstream channel, customers could receive the rebate directly or as an instant incentive on their invoice, with contractors covering the cost upfront and receiving reimbursement upon processing. The Midstream channel focused on incentivizing equipment with a rated Seasonal Energy Efficiency Ratio (SEER2) of 18 or higher, aiming to influence distributor stocking and sales patterns to increase availability and accelerate market transformation. Contractors played a key role in both channels by recommending and explaining the benefits of energy-efficient HVAC equipment, as well as procuring and installing the systems, positioning them as essential participants in marketing and promoting the program.
- Ameren Missouri's **Efficient Products Program** aimed to increase customer awareness about the benefits of high-efficiency products. It educates residential customers on energy usage in their homes and offers information, products, and services for cost-effective energy savings. The target market for this program includes all residential customers within the Ameren Missouri service territory. The Efficient Products Program served as an umbrella program, incorporating various partners, products, and delivery strategies. The primary program measure is smart thermostats, which account for most of the program savings. The program also offered incentives for heat pump water heaters and advanced power strips.

- The **Pay As You Save® (PAYS) Program** provided participating residential customers with on-bill financing for various energy efficiency measures, including LED lighting, domestic hot water, insulation, air sealing, and HVAC equipment. During an initial home assessment, program staff delivered some smaller equipment at no cost, while installations of other items for qualifying customers were included in more extensive retrofit projects. The program design allowed customers to repay the cost of energy efficiency upgrades incrementally through a tariff charge on their utility bill, ensuring that both the cost and repayment obligation remained with the premise rather than the individual customer. If a participant vacated the home before full repayment, the remaining balance was transferred to the new occupant's utility bill. The program operated on an 80/20 rule, structuring monthly loan payments to ensure that expected energy savings exceeded project costs, resulting in lower net monthly utility bills for participants. To qualify, the cost of a measure could not exceed 80% of the estimated post-upgrade savings over 80% of its expected lifecycle, with the remaining 20% of savings benefiting the participant. The program targeted residential customers with higher-than-expected energy usage based on housing characteristics, regardless of income level, and provided custom marketing materials with an option for online enrollment. Participation was structured into four tiers: Tier 1 involved an in-person appointment where an energy advisor conducted a visual inspection, provided program details, and delivered direct-install measures; Tier 2 included a comprehensive home assessment, analyzing building characteristics and HVAC systems, potentially including direct-air and duct leakage tests, provided no health or safety issues were present; Tier 3 used home assessment data in the proprietary OptiMiser® modeling software to estimate potential savings, producing an Easy Plan detailing recommended upgrades, with participants receiving a copay quote if the project did not meet the 80/20 rule independently; and Tier 4 involved installation by registered Trade Allies, with costs recovered through a tariff charge on the utility bill, and quality control conducted remotely for all projects and on-site for 10% of Tier 4 projects. Additionally, installed measures qualified for other energy efficiency program incentives offered by Ameren Missouri, which were automatically applied to project costs without requiring further action from participants.
- The **Multifamily Market Rate Program** was designed to provide long-term energy savings and bill reductions to customers residing in multifamily properties with four or more units. Targeted at multifamily property managers and owners, the program offered a one-stop-shop approach to address challenges associated with comprehensive retrofits. Eligible measures included lighting, refrigerators, advanced thermostats, advanced power strips, domestic hot water, building shell improvements, and HVAC equipment. The program's one-stop-shop approach provided concierge-style services to support participants in identifying and implementing energy efficiency projects. The primary implementer managed customer recruitment, assisted with the application process, recommended project scopes, estimated incentives, and coordinated installations. Customers could either contract installation work to a program-approved Trade Ally or install measures themselves. Post-installation, the primary implementer's staff conducted Quality Assurance/Quality Control (QA/QC) activities, submitted final project data for invoicing, and delivered rebates to customers upon project completion.

The Residential portfolio achieved 91% of its annual net MWh savings goal, with significant variation across programs. The Residential HVAC Program exceeded its target at 109%, contributing 25,140 net MWh savings with a gross realization rate of 107%. Similarly, the Residential Efficient Products Program

reached 104% of its goal, achieving 3,518 net MWh savings. The Pay As You Save® (PAYS) Program achieved only 8% of its target, with 393 net MWh savings and a high gross realization rate of 122%. The Multifamily Market Rate Program achieved 1,768 net MWh savings and a gross realization rate of 95%. The overall portfolio resulted in lifetime net ex post savings of 339,972 MWh.

Table 2-6 Summary of Residential Program Energy Savings

Portfolio	Annual Net MWh Savings Goal	Percent Achievement of Annual Net MWh Savings Goal	Ex Ante Annual MWh Savings	Ex Post Annual Gross MWh Savings	Gross Realization Rate	Ex Post Annual Net MWh Savings	Net-to-Gross Ratio	Lifetime Net Ex Post MWh Savings
Residential HVAC Program	23,031	110%	36,200	38,894	107%	25,281	65%	280,605
Residential Efficient Products Program	3,367	104%	5,637	5,412	96%	3,518	65%	35,313
Pay As You Save® Program	5,013	8%	497	605	122%	393	65%	5,591
Multifamily Market Rate Program	2,717	65%	2,857	2,720	95%	1,768	65%	18,463
Total	34,128	91%	45,192	47,631	105%	30,960	65%	339,972

Table 2-7 Summary of Residential Program Peak Demand Impacts

Portfolio	Annual Net MW Savings Goal	Percent Achievement of Annual Net MW Savings Goal	Ex Ante Gross MW Savings	Ex Post Gross MW Savings	Gross Realization Rate	Ex Post Net MW Savings	Net-to-Gross Ratio
Residential HVAC Program	13.53	117%	20.93	24.26	116%	15.77	65%
Residential Efficient Products Program	1.17	110%	2.15	1.98	92%	1.29	65%
Pay As You Save® Program	2.34	5%	0.17	0.18	103%	0.12	65%
Multifamily Market Rate Program	1.48	61%	1.45	1.39	96%	0.90	65%
Total	18.52	98%	24.70	27.81	113%	18.08	65%

2.3 Business Portfolio

The PY2024 Business Portfolio included four programs targeting nonresidential customers. The four programs were:

- The **Standard Program** was designed to promote energy awareness and encourage the adoption of energy-efficient technologies or services by offering incentives to offset the higher costs of these projects. The program simplified participation processes to increase customer engagement, focusing on technologies such as lighting, motors, controls, HVAC, and refrigeration. Participation was application-based and supported by a network of registered Trade Allies and non-registered Market Partners, including contractors, distributors, wholesale retailers, and, where applicable, local economic and professional associations. The target market included commercial, industrial, and institutional customers, excluding multifamily and low-income customers, who were served by residential programs.
- The **Custom Program** aimed to increase energy awareness and adoption of energy-efficient technologies or services by providing incentives to help offset higher costs. It focused on processes, technologies, and energy efficiency measures not covered by other predefined programs, typically involving complex and unique projects. These projects required customer-specific incentive applications and calculations of estimated energy savings. Incentive levels were determined based on energy savings estimates for each proposed measure, except for interior lighting measures, where incentives were based on the watts reduced. Projects with incentives exceeding \$15,000 required onsite visits to verify baseline data, energy savings estimates, and post-installation measurement capabilities. Like the Standard Program, the Custom Program targeted commercial, industrial, and institutional customers while excluding multifamily and low-income customers. New construction projects were also eligible for incentives through the Custom Program.
- The **Small Business Direct Install (SBDI) Program** was designed to promote the adoption of energy-efficient technologies among small businesses by addressing barriers such as high upfront costs, limited knowledge, and a lack of time and resources to explore energy efficiency opportunities. Targeted at small non-residential customers under the Small General Service Rate 2(M), the program served commercial and institutional customers but excluded multifamily properties. SBDI Program Service Providers played a critical role in delivering low-cost energy-efficient measures by managing the supply, installation, and required paperwork for eligible participants, while also identifying additional energy efficiency opportunities beyond the program's scope.
- The **RCx Program** was designed to support customers in retro-commissioning existing facilities by conducting a retro-commissioning study, benchmarking current building system performance, identifying opportunities to optimize system operations, and, where applicable, providing financial incentives to encourage the implementation of recommended improvements. Optimization measures typically focused on compressed air, refrigeration, and building systems. The program relied on program-approved contractors, known as Retro-Commissioning Service Providers (RSPs), to achieve measurable energy savings. These providers conducted comprehensive facility energy studies aimed at optimizing equipment performance and educating customers on maintaining long-term efficiency. The Virtual Commissioning™ (VCx™) component analyzes facility energy usage to identify unexpected and wasted energy. Offered at no cost to small- and medium-sized business customers through Ameren Missouri's energy partner, Power TakeOff, the program required no fees or applications. The program uses a trained Energy Advisor reviewing energy usage data remotely.

The Business portfolio achieved 81% of its annual net MWh savings goal, with strong performance across most programs. The Custom Incentive Program exceeded its target at 111%, contributing 32,373 net MWh savings, while the Retro-Commissioning Program also achieved 111% of its goal with 3,711 net MWh savings. The Standard Incentive Program reached 63% of its target, achieving 25,084 net MWh savings, and the Small Business Direct Install Program attained 49% of its goal, contributing 3,871 net MWh savings. The portfolio produced lifetime net ex post savings of 970,182 MWh.

Table 2-8 Summary of Business Program Energy Savings

Portfolio	Annual Net MWh Savings Goal	Percent Achievement of Annual Net MWh Savings Goal	Ex Ante Annual MWh Savings	Ex Post Annual Gross MWh Savings	Gross Realization Rate	Ex Post Annual Net MWh Savings	Net-to-Gross Ratio	Lifetime Net Ex Post MWh Savings
Standard Incentive Program	39,547	63%	38,224	38,591	101%	25,084	65%	365,995
Custom Incentive Program	29,246	111%	53,637	49,805	93%	32,373	65%	512,692
Small Business Direct Install Program	7,981	49%	6,323	5,955	94%	3,871	65%	57,269
Retro-Commissioning Program	3,339	111%	5,694	5,709	100%	3,711	65%	34,226
Total	80,113	81%	103,878	100,060	96%	65,039	65%	970,182

Table 2-9 Summary of Business Program Peak Demand Impacts

Portfolio	Annual Net MW Savings Goal	Percent Achievement of Annual Net MW Savings Goal	Ex Ante Annual MW Savings	Ex Post Annual Gross MW Savings	Gross Realization Rate	Ex Post Annual Net MW Savings	Net-to-Gross Ratio
Standard Incentive Program	9.83	84%	12.69	12.74	100%	8.28	65%
Custom Incentive Program	13.06	81%	16.14	16.34	101%	10.62	65%
Small Business Direct Install Program	1.59	47%	1.20	1.14	95%	0.74	65%
Retro-Commissioning Program	1.39	107%	2.24	2.29	102%	1.49	65%
Total	25.87	82%	32.26	32.51	101%	21.13	65%

2.4 Demand Response Portfolio

The PY2024 Demand Response Portfolio included two programs targeting nonresidential customers. The two programs were:

- The **Residential Demand Response Program** managed cooling load through smart thermostats to achieve demand and energy savings. It was open to Ameren Missouri electric customers with central air conditioning or heat pumps who owned or were willing to acquire an eligible smart thermostat, including models from Google Nest, Copeland Sensi, Honeywell, and Ecobee. Enrolled customers received a \$50 sign-up bonus and \$25 annually for continued participation. The program initially employed a randomized control trial (RCT) approach for the first few events, withholding treatment for a subset of participants to serve as a control group. This approach was later discontinued when the evaluation methodology was revised to use a separately constructed matched comparison group of non-participants. Events, scheduled from May through September with a maximum of 15 per year, allowed participants to opt out by adjusting their thermostats, though no customers had been removed for opting out as of May 2024. In 2024, the program conducted 13 summer events between May and August and two winter events in December. Ameren Missouri planned to introduce additional winter events and proposed a tariff modification to allow up to five MISO emergency events, along with circuit-specific and phased events with staggered start times.
- The **Business Demand Response Program** is designed to reduce loads during peak demand periods. The program aggregator handles customer recruitment and enrollment, load reduction nominations, creation of customized load curtailment strategies, demand response event dispatch, and customer relationship maintenance for participating businesses. Businesses may use direct load control or manual response to reduce load during events. Participation in the program is voluntary and participants may choose not to engage in an event. Customers who have opted out of participating in demand side management programs may participate in the Business Demand Response Program.

The Business Demand Response (DR) Program exceeded its PY2024 MEEIA III demand impact target, achieving 123% of the goal, while the Residential DR program reached 62% of its target. Business DR achieved a demand impact of 143.66 MW against a target of 137.04 MW, whereas Residential DR achieved 31.16 MW against a target of 67.67 MW.

Energy savings fell short of targets for both programs; however, energy savings are not the primary objective of the demand response programs. Residential DR achieved 9% of its energy savings goal (605.50 MWh out of 6,547 MWh), while Business DR reached 27% of its target (548.79 MWh out of 2,000 MWh). Despite strong demand reduction performance in the Business DR sector, energy savings remain an area for improvement in both programs.

Table 2-10 Summary of Demand Response Program Impacts

Metric	Residential DR	Business DR	DR Portfolio
Participant count	50,563	1,040	51,603
Demand Impact / Resource Capability			
Event day demand impact (MW)	31.16	143.63	174.79
Resource capability (MW)	41.96	168.23	210.19
PY2024 MEEIA III goal/target (MW)	67.67	137.04	204.71
Percent of PY2024 goal/target	62%	123%	103%
Energy Savings			
Event season energy savings (MWh)	604.86	548.79	1,153.65
PY2024 MEEIA III goal/target (MWh)	6,547	2,000	8,547
Percent of PY2024 goal/target	9%	27%	13%

3 Earnings Opportunity

This section summarizes the Ameren Missouri 2024 earnings opportunity.

3.1 Calculation of Core Earnings Opportunity

The ADM Team determined the Core Earnings Opportunity using the formula:

$$\text{Core Earnings Opportunity} = \$12.155 \text{ million} \times (\text{PY2024 Actual Spend} / \$76.26 \text{ million})$$

- Actual Spend was the total expenditure across the Residential, Business, Low Income, and PAYS® programs, including demand response programs.
- The Core Earnings Opportunity was capped at \$12.155 million.

3.2 Calculation of Additional Earnings Opportunity

The ADM Team also determined the Additional Earnings Opportunity related to demand response. The maximum earnings opportunity for demand response was \$768,750, calculated at \$51,250 per event for up to 15 events. No more than five test events were included in the calculation unless they were conducted for:

- Locational demand purposes, or
- During a winter peaking period.

3.3 Calculation of Penalties

The ADM Team calculated any applicable penalties for not meeting the required spending floor. The spending floor levels and penalties are summarized in Table 3-1.

Table 3-1 Spending Floor Penalties

Program	Spending Floor Requirements	Penalty
Residential	at least \$15,000,000 (includes a minimum spend for HVAC of \$10,000,000)	\$1,000,000
Business	at least \$20,000,000	\$1,000,000
Low-Income	at least \$10,000,000 (includes a minimum spend for MFLI of \$5,000,000)	\$1,000,000
PAYS	at least \$1,000,000	\$1,000,000

Table 3-2 summarizes additional penalties Ameren Missouri is subject to if the requirements are not met.

Table 3-2 Additional Penalties

Program	Additional Requirements	
Business	Spend at least \$2,500,000 on small business customers (2M rate class)	\$500,000
Low-Income	Administration Overhead spend > 30% of Low-Income Program spend (3 rd party contract relative to incentives)	\$150,000
Business	Business non-lighting spend is at least \$9,000,000. ¹	\$500,000
Low-Income	MFLI Average % Savings – at least 15% average savings at each property is achieved. The Average Percent Energy Savings Per Property will be calculated as the total Multifamily-Low-Income program's evaluated	\$250,000

Program	Additional Requirements	
	energy savings for the program year divided by the total billed energy consumption for all the properties served during that program year. ²	
Demand Response	Failure to develop non-summer forecast for events and savings. ³	\$1,000,000
<p>1. ADM followed Ameren Missouri guidance regarding what, if any, non-incentive costs are allocable to the spend values referenced in this table.</p> <p>2. Not all units for which measures are installed at a multifamily property will have a customer account number identified in the program documentation. ADM will attempt to match these units to customer accounts using the address information in the program data.</p> <p>3. Ameren Missouri will provide ADM the non-summer forecast for events and savings.</p>		

3.4 Earning Opportunity Calculation

Table 3-3 summarizes the earnings opportunity result.

Table 3-3 Earnings Opportunity Calculation

Core Earnings Opportunity				
Program	Formula	Actual Spend	Core EO Cap	Earnings Opportunity
Residential, Business, Low Income, and PAYS®	Core Earnings Opportunity = \$12.155 million × (PY2024 Actual Spend / \$76.26 million), capped at \$12.155 million	\$74,760,165.58	\$12,155,000	\$11,915,942.99
Additional Earnings Opportunity				
Program	Requirement	Number of Events	Number of Test Events	Earnings Opportunity
Residential Demand Response	The maximum demand response earnings were \$768,750, based on \$51,250 per event for up to 15 events, with a limit of five test events excluding locational demand and winter peaking tests.	15	3 test events excluding locational and winter events	\$768,750.00
Penalties				
Program	Requirement	Penalty if Not Met	Performance	Penalty
Residential	Spending Floor Requirement - \$15,000,000	\$1,000,000	Floor met	\$0.00
HVAC	Spending Floor Requirement - \$10,000,000		Floor met	
Business	Spending Floor Requirement - \$20,000,000	\$1,000,000	Floor met	\$0.00
Low-Income	Spending Floor Requirement - \$10,000,000	\$1,000,000	Floor met	\$0.00
MFLI	Spending Floor Requirement - \$5,000,000		Floor met	
Pays	Spending Floor Requirement - \$1,000,000	\$1,000,000	Floor met	\$0.00
Small Business Customers (2M Rate Class)	Spending Floor Requirement - \$500,000	\$500,000	Floor met	\$0.00
Low-Income	Administration Overhead spend ≤ 30% of Low-Income Program spend (3rd party contract relative to incentives)	\$150,000	Low-income admin costs equaled 29% of total low-income costs.	\$0.00
Business Non-Lighting	Business Non-Lighting Spending Floor Requirement - \$9,000,000	\$500,000	Floor met	\$0.00
Low-Income	MFLI Average % Savings – Each property achieves at least 15% average savings, calculated as the program's total evaluated savings divided by the total billed energy consumption of all served properties for the year.	\$250,000	Threshold met	
Demand Response	Develop non-summer forecast for events and savings.	\$1,000,000	Completed and presented to stakeholders during Q1 2024 and Q2 2024 meetings	\$0.00
Total Earnings Opportunity				
Payout				
\$12,684,692.99				

4 Cost Effectiveness Results

ADM analyzed the final, post-implementation cost-effectiveness of each measure, program, and the overall portfolio. ADM coordinated with Ameren Missouri to provide the economic and financial assumptions for developing the model, including the discount rate, line losses, summer peak date/time, avoided electric transmission and distribution costs, and escalation rates. Program spending data for implementation, incentives, and administration were provided by Ameren Missouri. ADM supplied measure-level data by program, including model inputs for the number of units, measure life, gross energy savings, net energy savings, demand savings, end use, and incremental costs.

The approaches for calculating gross and net energy and demand savings are detailed in sector-level evaluation reports. The sources of data for EULs and incremental costs, in order of preference, included the Ameren Missouri TRM, project-specific information, and other sources such as the Illinois TRM, Mid-Atlantic TRM, or Pennsylvania TRM.

The PY2024 cost-effectiveness analysis was conducted by Integral Analytics using DSMore software. DSMore is a financial modeling tool used to assess the costs, benefits, and risks associated with energy efficiency programs and measures. The software estimates the value of energy efficiency measures on an hourly basis, accounting for variations in weather and energy costs. To model these fluctuations, DSMore incorporates over 30 years of historical weather data.

The ADM Team calculated cost-effectiveness using the five most widely accepted tests for evaluating energy efficiency programs in North America:

- Utility Cost Test (UCT): Compared program administrator costs to resource supply costs.
- Total Resource Cost Test (TRC): Compared program administrator and customer costs to utility resource savings.
- Ratepayer Impact Measure Test (RIM): Assessed the program's impact on all ratepayers, including non-participants.
- Societal Cost Test (SCT): Compared total societal costs to resource savings and non-monetized benefits.
- Participant Cost Test (PCT): Compared costs and benefits from the perspective of customers implementing the measures.

Table 4-1 summarizes the cost-effectiveness results for all programs in the Income Eligible, Residential, and Business portfolios.

Table 4-1 Cost-Effectiveness Ratios by Program and Portfolio

Portfolio	Program Name	TRC	UCT	RIM	PCT	SCT
Residential Portfolio	Residential HVAC Program	1.61	1.96	0.50	5.41	1.95
	Residential Efficient Products Program	1.12	1.21	0.42	5.64	1.33
	Pay As You Save® Program	0.13	0.13	0.11	2.99	0.15
	Multifamily Market Rate Program	1.04	0.93	0.38	8.19	1.29
	Residential Demand Response Program	0.90	0.69	0.68	-	0.90
	Residential Portfolio Total	1.29	1.34	0.50	5.61	1.48
Low Income Portfolio	Business Social Services Program	4.27	1.90	0.41	16.09	4.27
	Multifamily Income Eligible Program	1.58	0.79	0.31	10.72	1.58
	Single Family Income Eligible Program	0.38	0.24	0.18	5.95	0.38
	Low Income Portfolio Total	1.72	0.88	0.33	11.39	1.72
Business Portfolio	Standard Incentive Program	2.85	2.68	0.56	10.20	3.90
	Custom Incentive Program	3.09	3.22	0.59	10.13	4.01
	Small Business Direct Install Program	2.30	1.63	0.40	16.28	3.75
	Retro-Commissioning Program	3.63	2.63	0.76	15.29	5.57
	Business Demand Response Program	4.24	2.18	2.17	-	4.24
	Business Portfolio Total	3.15	2.68	0.67	10.78	4.05
Total Portfolio		2.13	1.83	0.56	8.48	2.52

Table 4-2 provides a summary of the total cost and benefits associated with each program in the Income Eligible, Residential, and Business portfolios under the TRC and UCT tests.

Table 4-2 Cost-Effectiveness Inputs and Net Benefits by Program and Portfolio

Portfolio	Program Name	Lifetime Benefits	TRC Test		UCT Test	
			Program Costs	Net Benefits	Program Costs	Net Benefits
Residential Portfolio	Residential HVAC Program	20,600,469	6,396,407	7,804,624	10,529,015	10,071,454
	Residential Efficient Products Program	2,292,646	1,313,117	245,549	1,901,457	391,189
	Pay As You Save® Program	181,631	1,161,492	(1,168,328)	1,374,476	(1,192,845)
	Multifamily Market Rate Program	1,273,323	923,302	51,260	1,364,551	(91,228)
	Residential Demand Response Program	4,348,869	4,843,582	(494,713)	6,258,149	(1,909,280)
	Residential Portfolio Total	28,696,938	14,637,900	6,438,393	21,427,648	7,269,290

Portfolio	Program Name	Lifetime Benefits	TRC Test		UCT Test	
			Program Costs	Net Benefits	Program Costs	Net Benefits
Low Income Portfolio	Business Social Services Program	3,871,921	341,480	2,965,539	2,037,508	1,834,413
	Multifamily Income Eligible Program	5,021,999	1,823,872	1,837,545	6,385,287	(1,363,288)
	Single Family Income Eligible Program	525,245	1,053,612	(847,500)	2,233,991	(1,708,745)
	Low Income Portfolio Total	9,419,165	3,218,964	3,955,584	10,656,786	(1,237,621)
Business Portfolio	Standard Incentive Program	19,950,839	3,925,843	12,943,926	7,440,676	12,510,163
	Custom Incentive Program	26,908,839	4,658,360	18,199,806	8,359,685	18,549,154
	Small Business Direct Install Program	2,449,896	733,760	1,384,255	1,499,259	950,638
	Retro-Commissioning Program	2,330,599	471,843	1,688,850	886,975	1,443,624
	Business Demand Response Program	12,611,588	2,971,739	9,639,849	5,783,853	6,827,735
	Business Portfolio Total	64,251,761	12,761,545	43,856,687	23,970,448	40,281,313
Total Portfolio		102,367,864	30,618,409	54,250,664	56,054,881	46,312,983