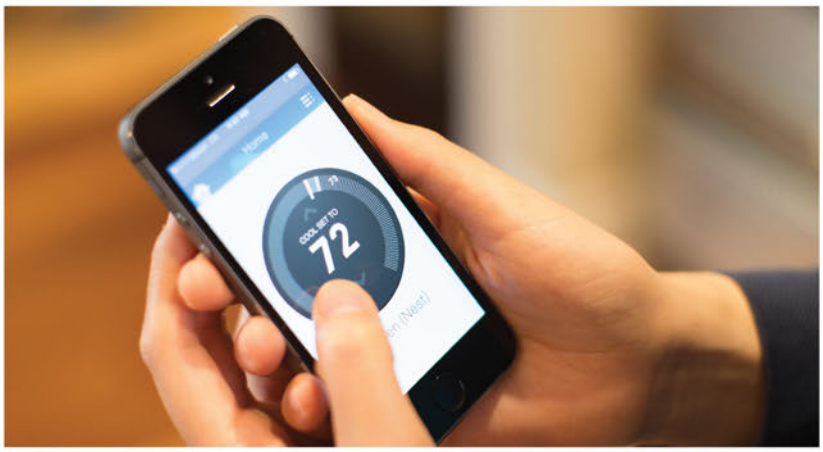
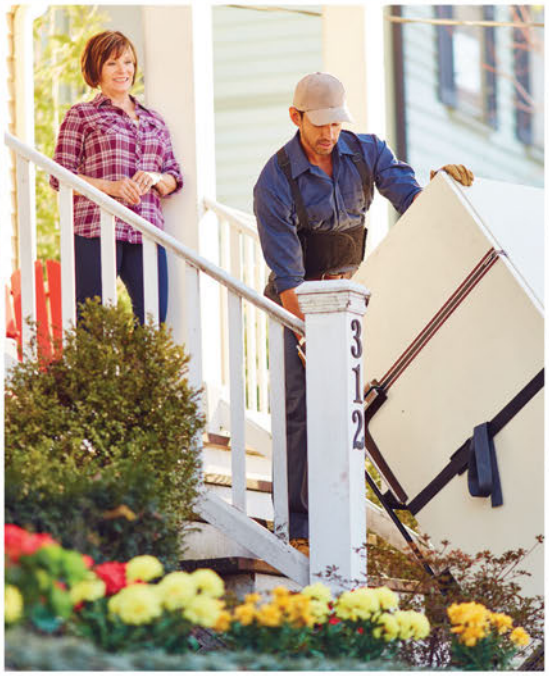
Ameren Missouri

2024-26 MEEIA Energy Efficiency Plan





Ameren MISSOURI

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Key Aspects of

MEEIA 2024 – 2026 Plan

Ameren MISSOURI

BENEFITS FOR EVERYONE

25 PROGRAMS
HELPING ALL CUSTOMERS
SAVE ENERGY AND MONEY

510 MW SAVINGS

$67,000,000 SUPPORTING
Income Eligible Customers and Underserved Communities
More than **DOUBLE** the **MEEIA 3 Investment**

5
EDUCATIONAL INITIATIVES

5 NEW
INNOVATIVE PROGRAMS

MORE THAN
80K
CUSTOMERS ENROLLED
IN DEMAND RESPONSE
BY THE END OF 2026

814,000 MWh SAVINGS
EQUIVALENT TO THE ANNUAL ELECTRIC USAGE FOR
66,500
AVERAGE MISSOURI HOMES

PLAN HIGHLIGHTS

3
YEAR PLAN

$439,000,000
NET BENEFITS

$367,000,000
INVESTMENT

Contents

Key Aspects of the Plan

Ameren Missouri's Missouri Energy Efficiency Investment Act ("MEEIA") 2024-26 plan (the "Plan") is designed to implement the results of the Company's 2020 Integrated Resource Planning ("IRP") and 2022 Change in Preferred Plan Annual Update. Additionally, it is designed to incorporate updates from the 2023 Market Potential Study ("MPS") and build on the lessons learned from previous MEEIA experience. The four key elements of the Plan are summarized below and are discussed in more detail throughout this report.

1) **Portfolio Overview** – The MEEIA 2024-26 plan reflects an increase in the Company's commitment to demand-side resources, creating $439 million in net benefits through the energy efficiency and demand response investment of $367 million in Missouri. As compared to MEEIA 2019-21 annual averages, MEEIA 2024-26 has 1.74 times the annual budget, 1.2 times the annual energy savings, and 1.6 times the annual peak demand savings. The portfolio includes 25 programs, a significant increase in spending and market reach for Income-Eligible customers,[1] specific education initiatives, and a variety of products and channels in which customers can participate. This expansion was reflected in the Company's 2022 IRP Annual Update filing (EO-2022-0362) and the latest Market Potential Study analysis and supported by indicative market pricing through a formal Request for Proposal ("RFP") process.

2) **Three-Year Term** – The Company is seeking approval of a portfolio of demand-side programs and a Demand-Side Investment Mechanism ("DSIM") to cover program launch starting January 1, 2024, through December 31, 2026. The MEEIA 2024-26 Plan builds on the previous plan and enables the Company to achieve energy savings made possible by consistent, longer-term relationships with customers. Additionally, the proposed MEEIA 2024-26 Plan promotes sustained ability to raise awareness and drive participation, reduces administrative cost, and supports long project cycle times.

3) **Demand Response Programs** – The growth in demand response achieved in MEEIA 2019-21 and proposed with the MEEIA 2024-26 is important in achieving system reliability and customer affordability. The MEEIA 2024-26 plan builds on the growth in demand response and continues the two demand response programs, one for residential customers and one for business customers. The residential program will use smart thermostats and may include other devices or

[1] The meaning of Income-Eligible customers shall mean the same as low-income customers as used in the Missouri Energy Efficiency Investor Act, 393.1075 RSMo., and the Commission rules, 20 CSR 4240-20.094.

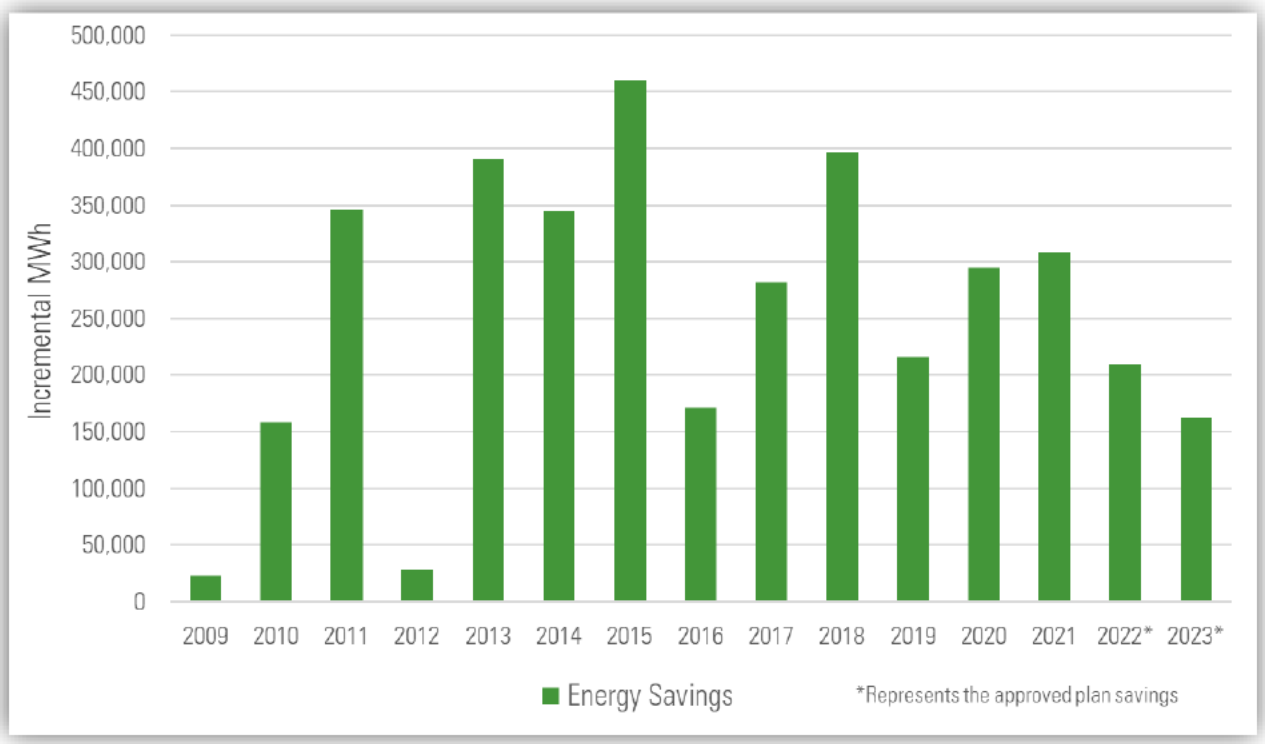
systems to reduce demand. The program will enroll over 80,000 customers by the end of 2026. The business demand response program partners with manufacturing, retail, schools K-12, colleges and universities, and others through custom curtailment plans specific to the customers' operations to reduce demand. Ameren Missouri plans continued participation in Midcontinent Independent System Operator, Inc.'s ("MISO") Planning Resource Auctions as a Load Managed Resource.

4) **Continuation of DSIM** – The MEEIA 2024-26 plan builds on the successful and collaborative DSIM framework established in MEEIA 2019-21 with few changes. The MEEIA 2024-26 DSIM continues the Company's Energy Efficiency Investment Charge Rider ("Rider EEIC"). Rider EEIC will continue to reflect the three components – program costs, the throughput disincentive, and an earnings opportunity – and will operate in a similar fashion to how it operates for the MEEIA 2019-21 plan. The Ameren Missouri Technical Resource Manual ("TRM") will continue to be the source for demand and energy savings along with updated net-to-gross data. The earnings opportunity performance metrics have been updated to reflect new market conditions and the new portfolio make-up.

Portfolio Summary

Ameren Missouri's recent history with implementation of large-scale customer energy efficiency programs began in earnest in 2009 when MEEIA was passed into law. From 2009 through 2021, Ameren Missouri's programs have achieved net savings of 3,418,103 MWh. The chart below demonstrates Ameren Missouri's energy efficiency efforts and clearly shows the impact MEEIA has had on the evolution of energy efficiency in the state. These results further demonstrate that, with the support of the Commission and Stakeholders through approval of MEEIA 2013-15, MEEIA 2016-18, and MEEIA 2019-21 (including extensions for PY22 and PY23), Ameren Missouri has been able to provide its customers with substantial cost-effective energy savings.

Figure 1 – Historical Ameren Missouri Energy Efficiency Program Savings



The MEEIA 2024-26 portfolio builds on Ameren Missouri's past successes and adds important new elements. The figure below represents a high-level overview of the portfolio, with the details of the programs explained later in this report.

Figure 2 – MEEIA 2024-26 Portfolio Structure

Sector	Program
Income-Eligible	Multifamily Income-Eligible Single Family Income-Eligible Business Social Services
Residential	Efficient Products Heating and Cooling Energy Efficient Kits PAYS Multifamily Market Rate New Construction Whole Home Residential Education
Business	Custom Standard Agriculture Schools Business Midstream Retro-Commissioning Smart Meter Commissioning SBDI (Small Business Direct Install)
Demand Response	Residential Demand Response Business Demand Response

The two figures below show the targeted cumulative energy savings and demand savings for the MEEIA 2024-26 portfolio. The cumulative portfolio net energy savings of 814 GWh represent a 2.5% cumulative reduction to retail energy sales or an annual average of 0.8%. The cumulative portfolio demand savings of 510 MW represent a 6.7% cumulative reduction to retail demand, or an annual average of 2.2%. It is also apparent that the business portfolio will result in significantly more cumulative energy savings while the gap on demand savings between the business portfolio and other sectors is not as wide.

Figure 3 – Cumulative Portfolio Energy Savings by Sector

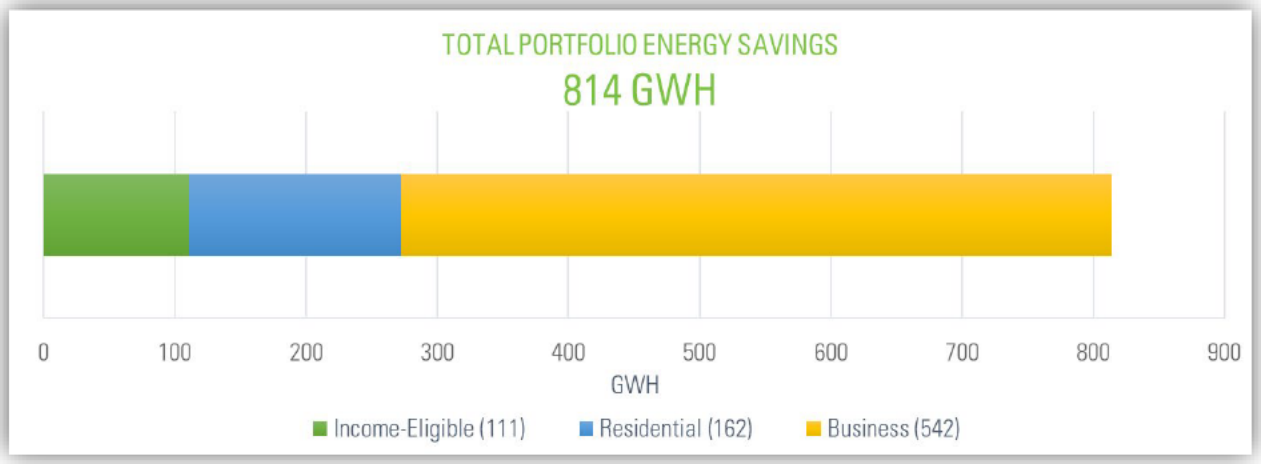
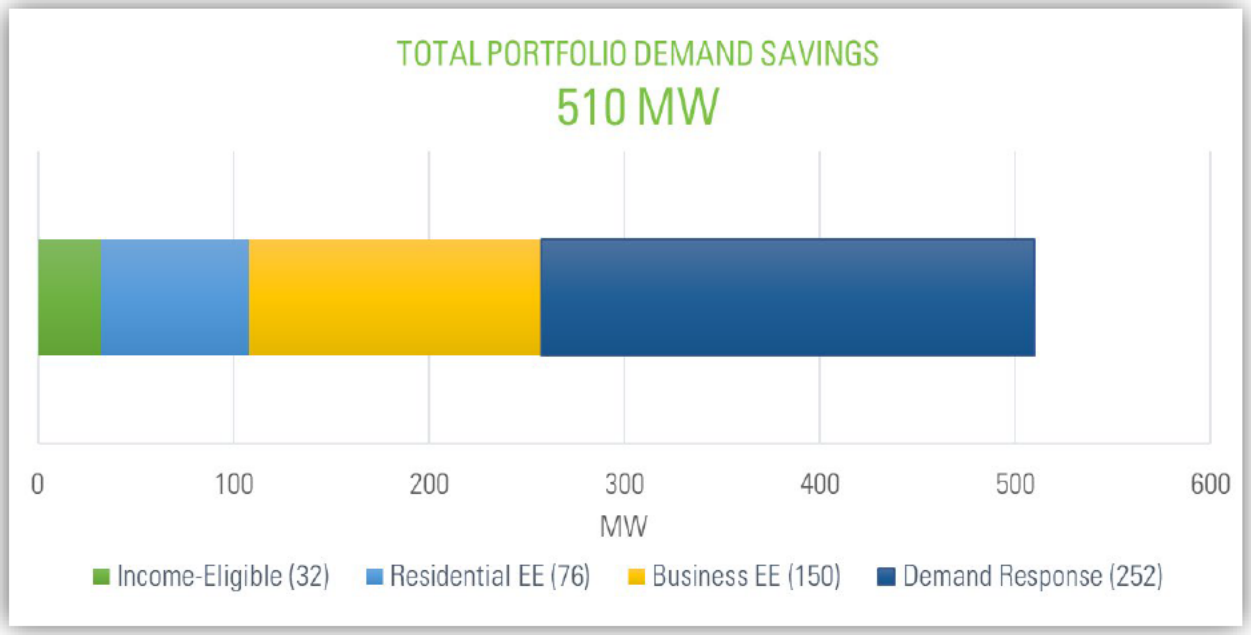


Figure 4 – Cumulative Portfolio Demand Savings by Sector



The two figures below show the same cumulative energy and demand savings but broken out for each year. This highlights the aggressive savings obtained over the term.

Figure 5 – Cumulative Portfolio Energy Savings by Sector by Year

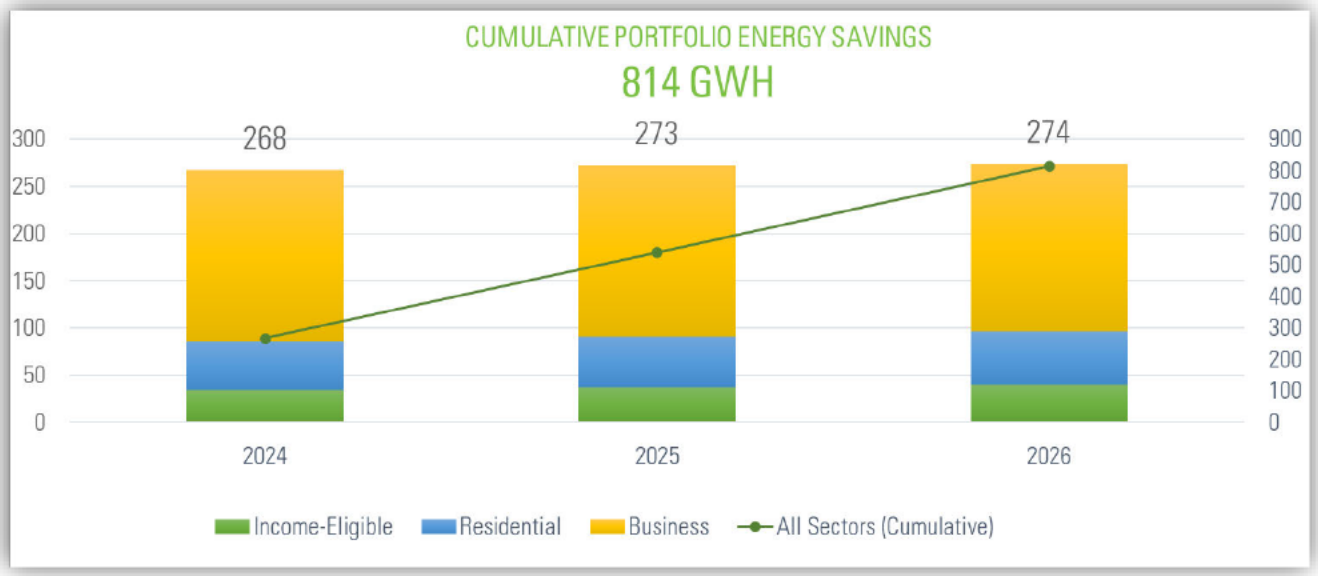
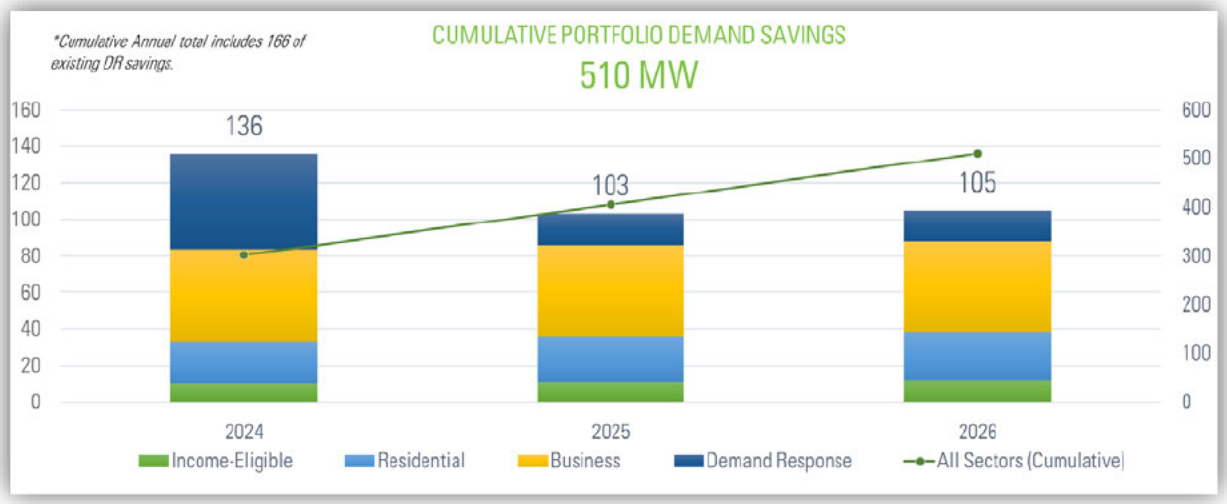


Figure 6 – Cumulative Portfolio Demand Savings by Sector by Year



The two figures below show the portfolio budgets for MEEIA 2024-26. The $367 million budget is indicative of market pricing and is comparable to the budget estimates reflected in the Company's IRP. A sizable portion of the total budget – approximately $67 million – is directed to the Income-Eligible sector.

Figure 7 – Total Portfolio Budgets by Sector

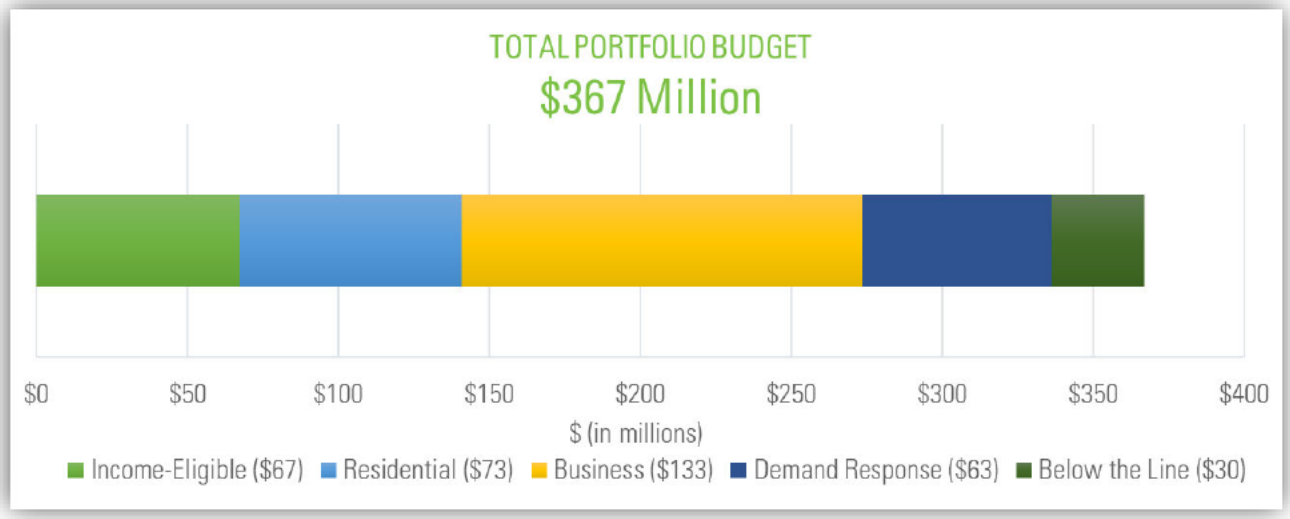
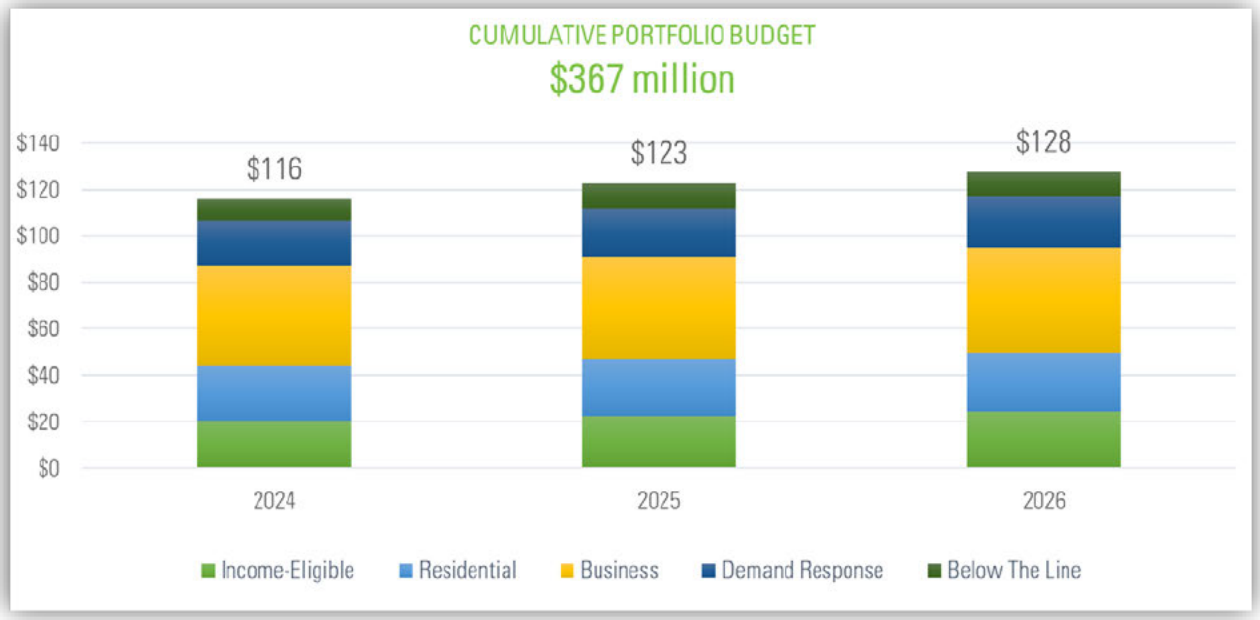


Figure 8 – Total Portfolio Budgets by Sector by Year



Annual tables of energy savings, demand savings, and cost-effectiveness results,[2] by program, are available in Appendix A. The figures below demonstrate the portfolio's cost-

[2] Societal Cost Test results are identical to the Total Resource Cost test results because no Non-Energy Benefits were quantified. Therefore, the Societal Cost Test results were not reported separately.

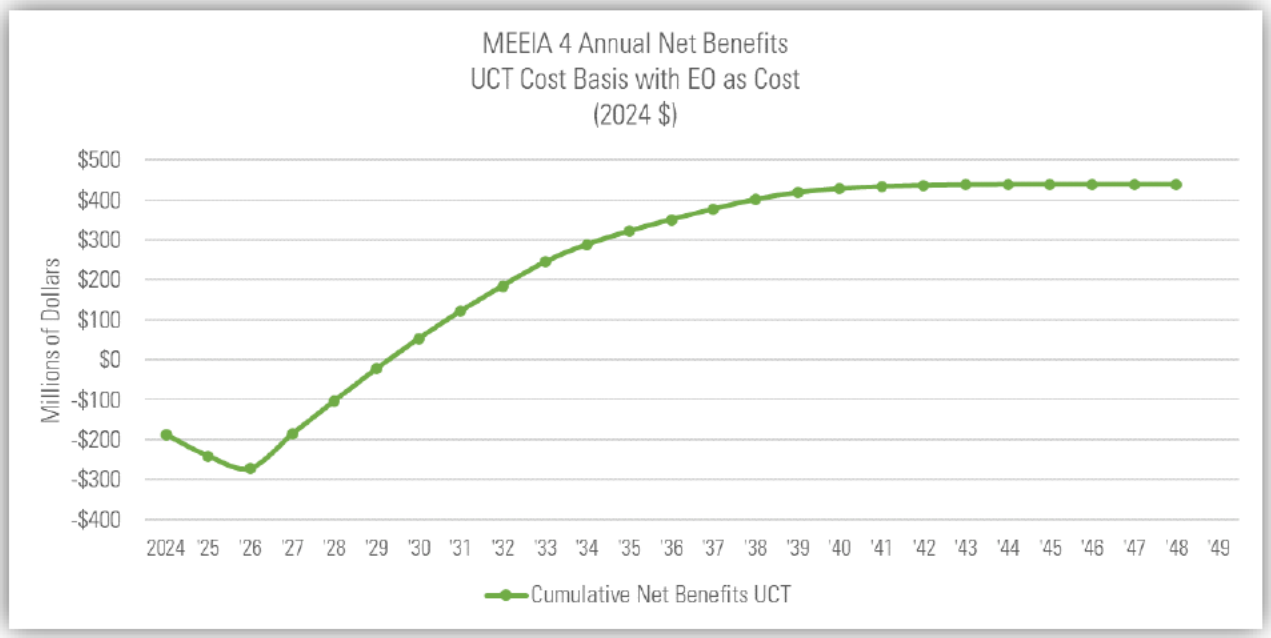
effectiveness. From the utility cost standpoint, the Plan results in $439 million in lifetime net benefits. It results in $355 million in lifetime net benefits from a total cost perspective.[3]

Table 1 – Portfolio Cost-effectiveness Summary (NPV[4])

Portfolio Cost Effectiveness		
	Utility Cost Test	Total Resource Cost Test
Benefits	$ 914,598,113	$ 914,598,113
Costs	$ 431,714,859	$ 515,542,684
Earnings Opportunity	$ 44,255,021	$ 44,255,021
Net Benefits	$ 438,628,234	$ 354,800,409
UCT Benefits/Costs Ratio	1.92	
TRC Benefits/Costs Ratio		1.63

The figure below shows the annual cumulative lifetime benefits by year. The payback to customers is demonstrably substantial and happens within six years compared to the 25+ years of program benefits.

Figure 9 – Annual Cumulative Net Present Value of Net Benefits (UCT)



[3] Avoided costs were based on the Company's 2022 Change in Preferred Plan and can be found in Appendix C.
[4] Net Present Value

Pursuing the Policy Goal of MEEIA

MEEIA's underlying policy is to encourage the implementation of programs that reflect valuing demand-side investments equal to supply-side investments with the goal of achieving all cost-effective demand-side savings. The Commission also offers direction that MEEIA is not simply to manage supply side resources or defer resource investments, but also that MEEIA should encourage utilities "to increase customer participation in energy efficiency programs."[5] "Additionally, the Commission recognized that benefits from a reduction in a customer's bill is not the only benefit to customers. There are also societal benefits, such as improved health and safety, investment in local economies, and local job creation."[6]

Ameren Missouri's IRP and supplemental 2023 MPS analysis are the most relevant tools to define all cost-effective demand-side savings. As part of the IRP, the Company analyzed a variety of demand-side portfolios; including Realistic Achievable Potential ("RAP"), Maximum Achievable Potential ("MAP"),[7] and a Mid-Case Portfolio, as well as portfolios where energy efficiency and demand response were offered together and separated. In addition to analyzing a variety of demand-side portfolios, the Company's IRP analyzed those demand-side portfolios against competing supply-side alternatives and weighed the various resource plans against its decision-making criteria. The Company's IRP calls for the adoption of the RAP Energy Efficiency and Demand savings targets, and the goals in MEEIA 2024-26 are consistent with the IRP. The table below demonstrates that the energy and demand savings goals are consistent with the 2023 MPS RAP analysis but that indicative pricing from the market indicates the savings can be achieved comparable to those assumed in the 2023 MPS.

Table 2 – Comparison of MEEIA 2024-26 to the 2023 MPS RAP

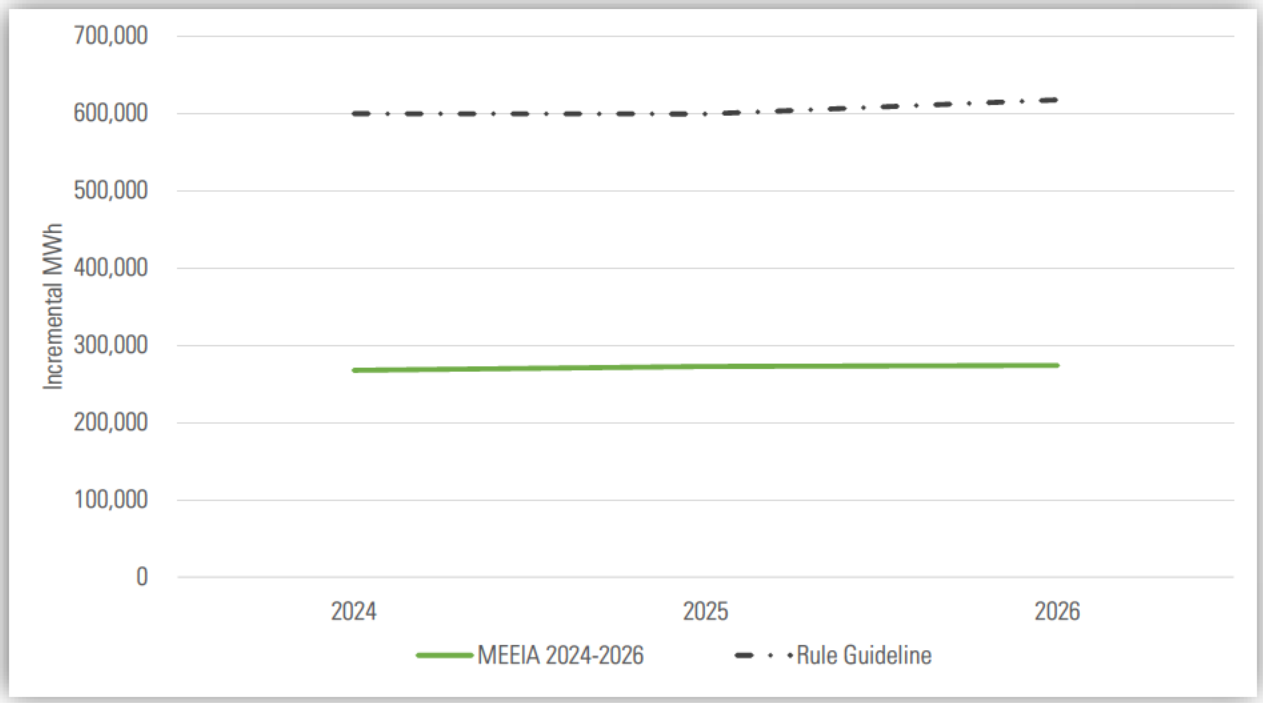
	Energy (MWh)	Demand (MW)	Cost ($MM)
2023 MPS (2024-2026)	870,340	497	$343
MEEIA 2024-2026	814,356	510	$367
% Difference	-6%	3%	7%

The Commission's MEEIA rules provide guidelines to review progress towards the goal of all cost-effective demand-side savings.The provided guideline is the greater of Realistic Achievable Potential or a list of savings percentages. According to the listed savings

[5] *See* File No. EO-2019-0132, *In the Matter of Evergy Missouri Metro and Evergy Missouri West's Notice of Intent to File Applications for Authority to Establish a Demand-Side Programs Investment Mechanism,* Report and Order issued December 11, 2019, at 13, paragraph 36.
[6] *Id.* at 14, paragraphs 39 and 40.
[7] The Realistic and Maximum Achievable Potentials were based on the Company's latest Market Potential Study which was also part of the Company's 2020 IRP as Appendix A to Chapter 8 – Demand-side Resources.

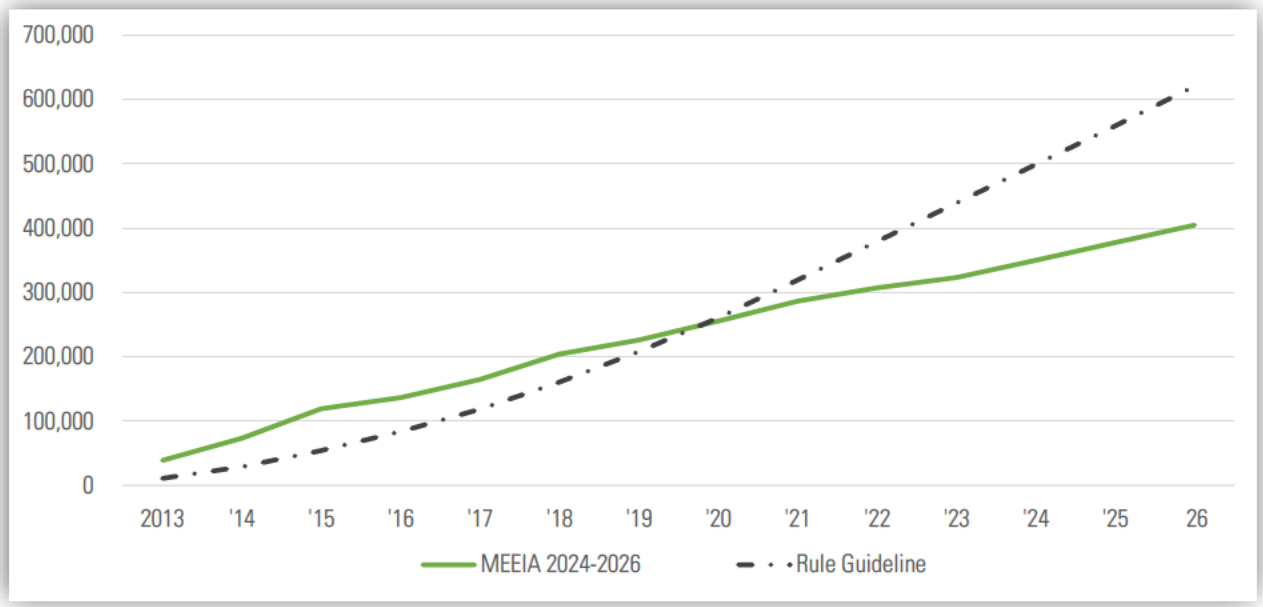
percentages, the incremental energy reduction guidelines is an ongoing 1.9% reduction for the ninth and all subsequent years while the incremental demand reduction targets are 1% per year.[8] The rules provide further guidance for cumulative savings by program year. The figures below compare the MEEIA 2024-26 portfolio to the non-mandatory MEEIA guidelines. From Figures 10 and 11 below, it is apparent that the energy savings percent guidelines in the Commission's MEEIA rules are much more aggressive than the Realistic Achievable Potential portfolio. Even though the MEEIA 2024-26 incremental energy savings are below the percent guidelines found in the Commission's MEEIA rules, the cumulative chart demonstrates the ongoing significant progress reflected in the Plan. In contrast, Figures 12 and 13 demonstrate that the Company's incremental and cumulative demand savings goals exceed the percent guidelines in the Commission's MEEIA rules. Together, the charts demonstrate that the Company is making progress towards all cost-effective demand-side savings. This is especially clear given the context of the situation: the Company's IRP evaluated multiple demand-side portfolios (including more aggressive portfolios) and determined that Realistic Achievable Potential is the appropriate portfolio.

Figure 10 – Comparison to Incremental Energy Savings Guidelines



[8] 20 CSR 4240-20.094(2)(A)9.

Figure 11 – Comparison to Cumulative Energy Savings Guidelines



The incremental and cumulative demand charts in Figures 12 and 13 exclude the 166 MW of demand savings from the MEEIA 2019-2021 Demand Response programs that will continue into PY2024.

Figure 12 – Comparison to Incremental Demand Savings Guidelines

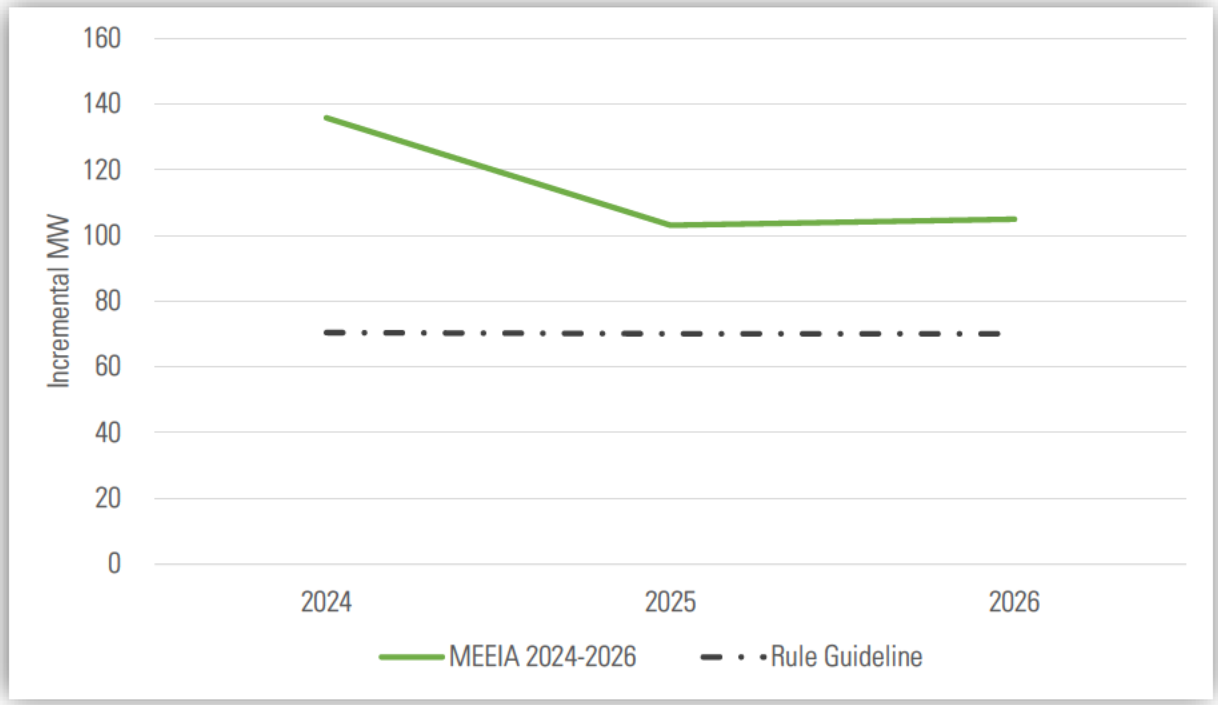
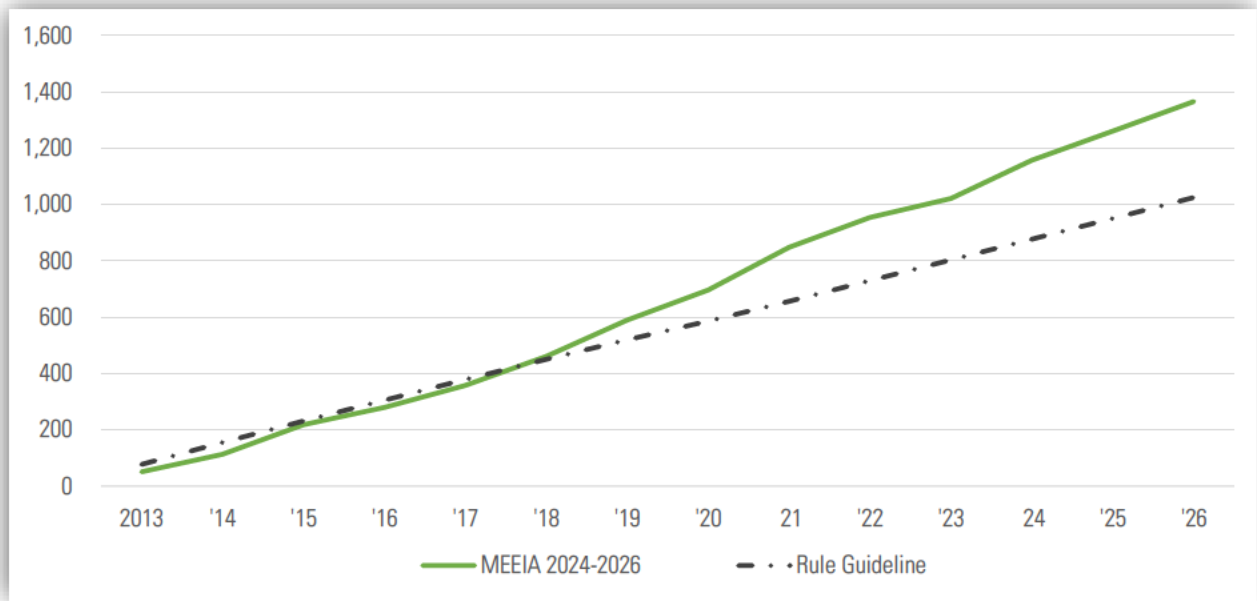


Figure 13 – Comparison to Cumulative Demand Savings Guidelines



Sector Programs

The Portfolio Summary above provides an overview of the portfolio broken down into four main sectors: Income-Eligible, Residential, Business, and Demand Response. The sections below deliver more granular sector assessments by describing the underlying programs within each sector and the relevant savings and budgets for each. The program templates included as Appendix B provide additional details for each program proposed by the Plan.

Income-Eligible Sector Programs

As shown in Figure 2 above, the Plan's portfolio has three Income-Eligible programs[9] designed to achieve savings in three distinct market segments: multifamily dwellings, single family dwellings, and qualifying businesses that have facilities providing social services to the public.

The Plan significantly increases the investment in energy efficiency programs to serve Income-Eligible customers as compared to MEEIA 2019-21; an average increase in annual program spending of nearly 200% of the current annual budgets.

[9] Some income-eligible programs are defined as low-income programs that are not required to meet a cost-effective test.

Multifamily Income-Eligible	One-stop-shop approach for owners and operators of multifamily income-eligible properties to assist with applications for financing and technical support along with incentives designed to overcome barriers to completing comprehensive retrofits.
Single Family Income-Eligible	Employs multiple delivery channels to provide a one-stop-shop for single family, whole-home energy efficiency upgrades for the benefit of income-eligible residential customers. Also includes a Grants and Community Products delivery channel.
Business Social Services	Deliver, install, and complete paperwork for low-cost and/or no-cost energy efficiency measures in business social services facilities so they can better serve income-eligible individuals.

Income-Eligible Sector Discussion

Residential Income-Eligible Programs

The Income-Eligible programs are designed to serve eligible participants through multiple channels to expand participation and overcome hurdles specific to each customer and often the property type. Multiple delivery channels ensure a diversity of participants and equitable delivery across Ameren Missouri's service territory.

These programs will conduct individual and/or group educational meetings with participating income-eligible customers to increase awareness of energy efficiency habits and measures, such as purchasing ENERGY STAR® certified products to encourage market transformation.

Multifamily Income-Eligible Program

Beginning in 2015, Ameren Missouri revised its Multifamily Income-Eligible Program to administer the residential and business components using a single implementation contractor. To assist in overcoming many of the barriers unique to multifamily properties, the program established a one-stop-shop offering a concierge approach to assist property owners through the process of applying for and securing energy efficiency upgrades using a single application. While the increased incentives were a program enhancement, tying them to business program incentives proved problematic. For example, lowering business incentives also lowered multifamily income-eligible incentives, thus reducing the ability to encourage participation. Having learned from this, Ameren Missouri established separate Multifamily Income Eligible program incentives and will continue that strategy in the Plan.

Ameren Missouri will continue the one-stop-shop approach in MEEIA 2024-26 to encourage property owners in their energy efficiency journey and enable easy

engagement with the program. The goal is to help multifamily property managers understand their buildings' energy usage amounts, continue to achieve immediate energy savings through no-cost direct install measures, and move beyond initial measures to investments in standard and/or custom measures for common areas, building shell, and whole-building systems to benefit from deeper energy savings.

The multifamily implementation strategy includes the following:

- Direct outreach and marketing to inform eligible property managers of the many benefits of improving their properties' energy efficiency.
- Assignment of a dedicated contact to assist building managers throughout the process.
- Offering Level I Energy Assessment to qualifying buildings at no cost to provide a report including:
    - list of measures;
    - estimated energy savings;
    - estimated cost savings;
    - estimated cost for equipment and installation;
    - simple payback analysis; and
    - identify appropriate incentive package options to achieve whole-building energy and demand savings.
- Providing bid specifications and referrals for repair work, if required.
- Identifying scope of work and securing qualified program partners to perform energy efficiency upgrades.
- Assisting with retrofit scheduling and completion.
- Verifying quality installation of selected measures.
- Providing all eligible participants with past 12 months of energy usage and technical assistance to begin benchmarking buildings using ENERGY STAR® Portfolio Manager.
- Assisting managers of participating multifamily properties in maintaining their improved building efficiency and boost market transformation by providing incentives to defray the cost to attend Building Operator Certification Training.

Along with project incentives, the program will seek to encourage property owners to achieve maximum savings possible by offering seamless access to financing and other alternatives to reduce financial barriers to investing in energy efficiency upgrades. For example, the Company will obtain a list of applicants with allocated income-eligible housing tax credits that could be invested in energy efficiency and continue to work with the Missouri Housing Development Commission to establish a link to new tax credit applicants. The Company will also facilitate access for its customers to other funding that could be used for energy efficiency measures, such as grants (e.g. Federal and State weatherization funding for income-qualified properties), Federal Housing Administration loan incentives, Fannie and Freddie’s Green Loan incentives, tax credits and deductions, and Energy Financing mechanisms.

In addition to the strategies noted above, Ameren Missouri will continue its successful collaboration with gas utilities to co-deliver certain MEEIA programs, which reduces program costs and provides a more comprehensive energy efficiency solution for our customers. In the event co-delivery is not possible, the program will ensure participants are aware of all available utility incentives and will assist participants in claiming them.

Besides maintaining records to assist in on-going business development opportunities, data collected for this program will include measure information, financial data, energy and demand savings, customer outreach and participation information. Data will be tracked and available for EM&V. The following list is not all inclusive, but is an example of tracked data points:

- number of buildings and units within each property
- incentives paid to property
- number of and type of measures installed
- percent energy savings implemented versus identified energy savings opportunity
- number of properties that received benchmarking assistance
- number of audits performed

The Company will continue to provide updates to stakeholders at quarterly stakeholder meetings and following receipt of the EM&V report, will provide an annual update to the Missouri Energy Efficiency Advisory Collaborative ("MEEAC").

Single Family Income-Eligible Program

The program is offered to residential customers residing in single family detached housing, duplexes, and mobile homes (wood-frame bolted to steel chassis, designed to be transported). The program will use a neighborhood approach, and continuing collaboration with community-based organizations to identify income-eligible areas with the greatest need such as those with high energy usage, and high incidence of arrearages or payment delinquencies. This allows the Company to group participants and focus on a single geographic area at a time. In some instances, the program may also serve a single home as the result of receiving a referral by a qualified income-eligible assistance agency. The program will provide energy assessments and/or diagnostic testing and install a comprehensive package of whole house energy saving measures at no or low cost to customers.

The program will seek to collaborate with familiar community-based organizations and leaders – such as homeowner associations, churches, senior centers, schools, other non-profits, and employers or local community leaders – to obtain their endorsements promoting the program and their assistance with opportunities to stage cooperative recruitment drives and/or education events. This approach of utilizing trusted, familiar organizations generates enthusiasm and momentum behind the effort.

Subcomponents of the Single Family Income-Eligible Program will include Income-Eligible Efficiency Housing Grants and a Community Products delivery channel. Through Income-Eligible Efficiency Housing Grants, the administrator may make free energy saving measure packages or incentives directly available to organizations that can provide labor for qualified installations of measures at no charge to income-eligible residential end users (i.e., provide Income-Eligible Efficiency Housing Grants). In connection with these grants, the program will provide technical information, education, and support to the grant-receiving organizations so they can understand and comply with the program requirements. Approved Income-Eligible Efficiency Housing Grants must:

a. Be implemented by a not-for-profit organization, governmental body, entity representing residential customers served by the Company, or through a Company-sponsored event;
b. Be limited in distribution to residential customers residing in the Ameren Missouri service territory;
c. Be used for a project that provides access and sufficient performance data to allow the project's evaluation, measurement, and verification ("EM&V"); and
d. Include consumer education elements regarding the installed equipment.

A Community Products delivery channel will also be made available to income-eligible communities that will offer discounted LEDs (Light Emitting Diode) through retail establishments and community-based organizations such as local food banks. This channel will also provide energy efficiency kits that include energy savings products and materials to educate customers on energy efficiency and the benefits. Kits will be distributed to community-based organizations and/or at community-based events or establishments targeted to low-income customers. The purpose for this channel is to provide energy savings measures to income-eligible customers that may not be selected for whole-home retrofits and broaden the opportunity to serve this segment.

Eligibility Guidelines for All Residential Income-Eligible Programs

The goal of these eligibility guidelines is to reduce barriers to participation in the Company's residential income-eligible offerings by providing multiple pathways to establish eligibility.

Approved participants will be required to meet one of the following income eligibility requirements:

1. Reside in federal, state, or local subsidized housing and fall within the subsidized housing program's income guidelines.
2. Reside in non-subsidized housing with proof of income[10] levels at or below 80% of area median income.

[10] Proof of income can be accomplished in multiple ways, including but not limited to submission of rent rolls or documentation of being on the Department of Energy ("DOE") Weatherization Assistance Program waitlist.

3. Fall within a census tract that indicates at least 85% of customers are at or below 80% of area median income.
4. Targeting underserved communities in Company's list of income-eligible census tracts

With respect to the multifamily program, where a multifamily property does not meet one of the income eligibility criteria listed above and has a combination of qualifying tenants and non-qualifying tenants, at least 50% of the tenants must be eligible to qualify the entire property.

Business Income-Eligible Program

Business Social Services Program

The Business Social Services Program will promote the installation of energy efficient technologies by removing participation barriers. Qualifying businesses will be eligible for a streamlined program process with no-cost and low-cost project opportunities. Participation will save energy and allow social service businesses to better serve the income-eligible public. Such non-profit businesses with qualifying facilities will be able to take advantage of no-cost efficiency lighting upgrades and higher than standard incentives for deep dive savings opportunities, such as HVAC, for those facilities.

A business's qualifying facilities include those that receive small or large general electric service, and that are primarily used for income-eligible public social services such as: food banks, food pantries, soup kitchens, homeless shelters, employment services, worker training, job banks, and childcare.

Income-Eligible Sector Summary Charts

The figure below shows that the majority of the Income-Eligible savings are from the Multifamily and Single Family programs.

Figure 14 – Cumulative Income-Eligible Energy Savings by Program

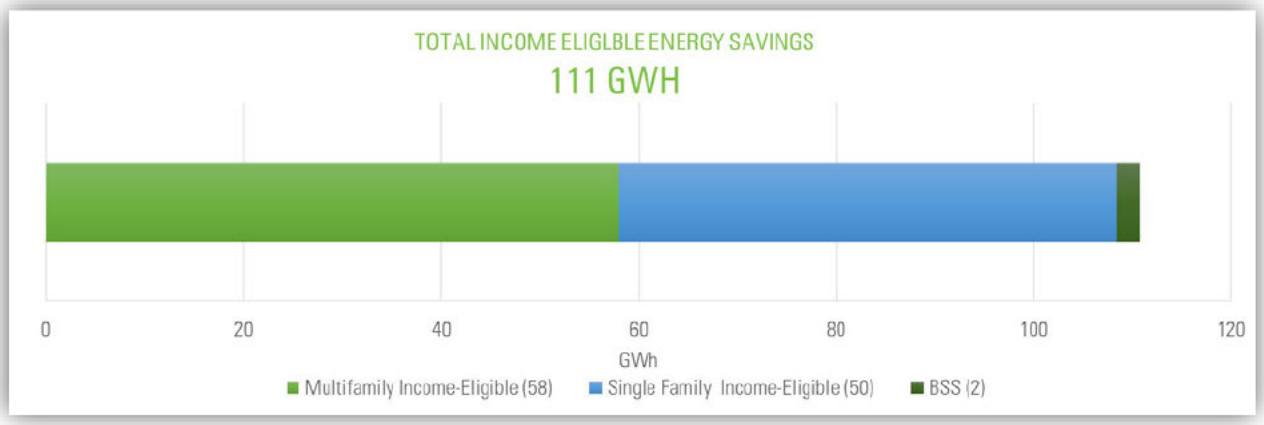
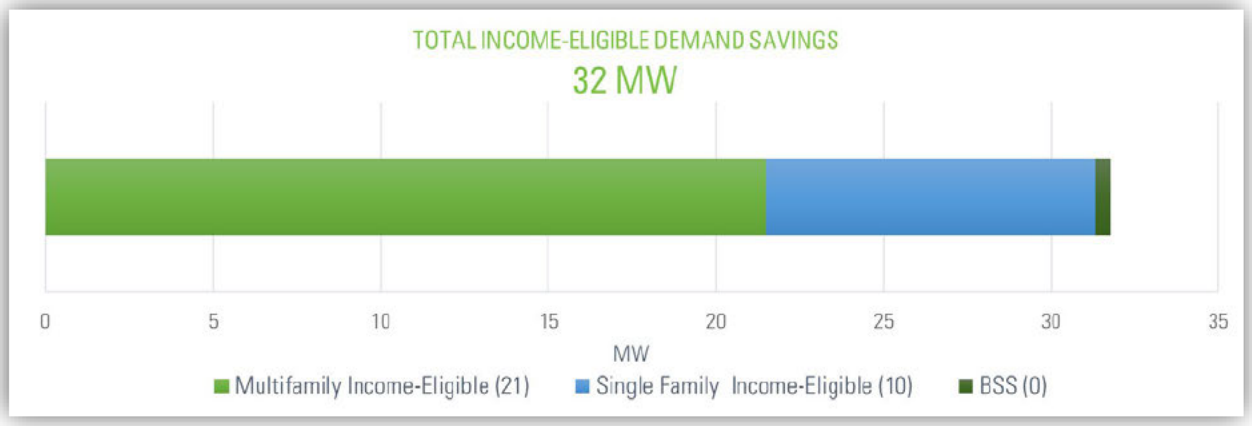


Figure 15 – Cumulative Income-Eligible Demand Savings by Program



The figure below shows that the annual energy savings for the income-eligible sector is increasing with program momentum over time.

Figure 16 – Cumulative Income-Eligible Energy Savings by Program by Year

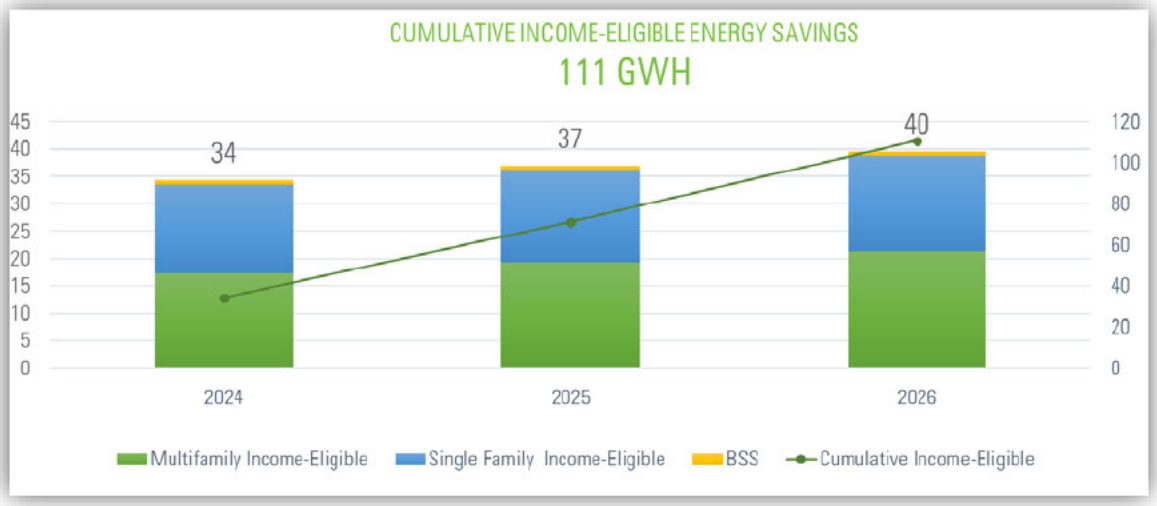
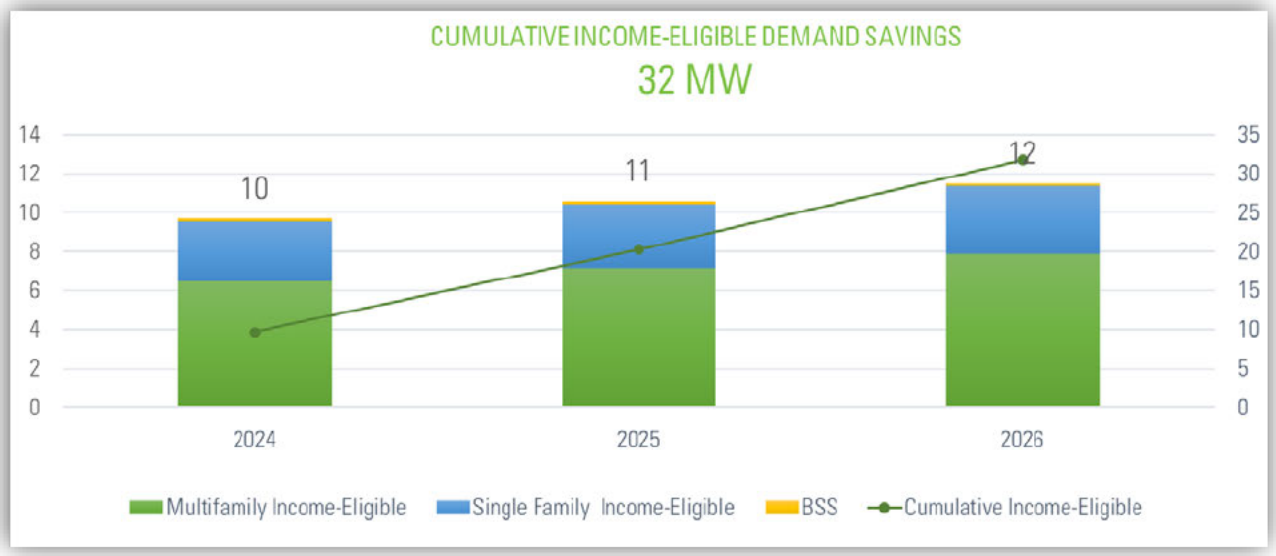
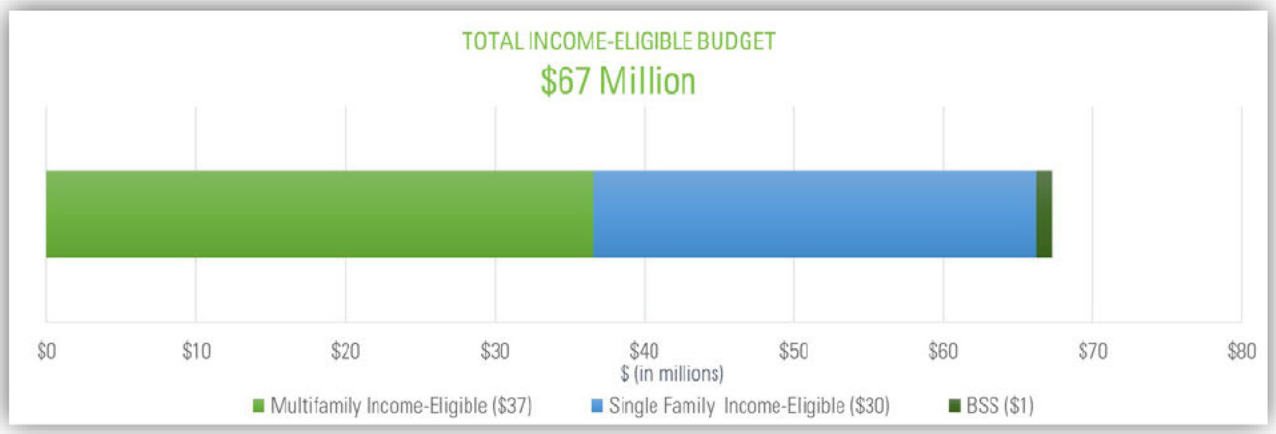


Figure 17 – Cumulative Income-Eligible Demand Savings by Program by Year



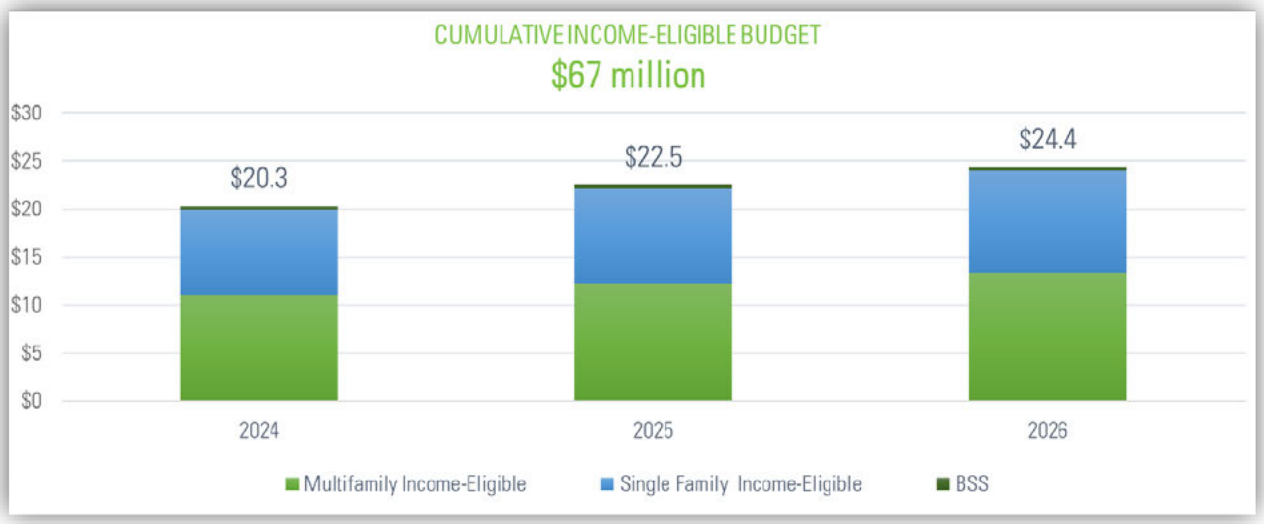
The figures below show that a majority of the budgets are going to the Multifamily and Single Family Income-Eligible programs with 55% of the budget allocated to the Multifamily Income-Eligible program.

Figure 18 – Total Income-Eligible Budgets by Program



The figure below shows that the annual budgets for the Income-Eligible programs are increasing over time and are consistent with the energy savings trend.

Figure 19 – Total Income-Eligible Budgets by Program by Year



Under MEEIA, Income-Eligible programs do not have to pass cost-effectiveness testing. However, the Plan's Income-Eligible programs, shown in the table below, do result in net benefits to all customers.

Table 3 – Income-Eligible Sector Cost-effectiveness Summary (NPV)

Income-Eligible Cost Effectiveness		
	Utility Cost Test	Total Resource Cost Test
Benefits	$ 76,304,670	$ 76,304,670
Costs	$ 69,521,852	$ 75,483,558
Net Benefits	$ 6,782,818	$ 821,111
UCT Benefits/Costs Ratio	1.10	
TRC Benefits/Costs Ratio		1.01

Residential Sector Programs

The Plan's portfolio design for residential energy efficiency programs is to provide a variety of cost-effective programs that all customers can participate in.

All residential programs are designed to increase customer access to information about available incentives for energy efficient equipment, how to lower energy costs and other associated benefits. The programs are delivered through a variety of channels to encourage continued participation through cross-promotion and provide personalized offers that are timely and relevant. The following is a summary description of the residential programs. A detailed description of each residential program can be found in Appendix B.

Efficient Products	Provides incentives to customers to raise awareness of the benefits of "high-efficiency" products whereby the end-user receives a discount on the price of qualified products via mail-in rebate, online and/or from program partners and contractors. Incentives are provided to local, national, and retail partners to increase sales and awareness of ENERGY STAR® qualified products whereby the end-user receives a discount on the price of ENERGY STAR® qualified or other high efficiency lighting products in stores or online.

HVAC	Provides incentives to customers for improving the efficiency of new and existing HVAC systems, heat pumps, and air conditioners by achieving electric energy savings. Incentives may also be provided to manufacturers or distributors as a midstream channel to promote the sale of energy efficient HVAC measures.
Energy Efficient Kits	Provides energy efficient kits and educational materials through secondary schools, single family homes and community-based events to raise customer awareness of the benefits of high-efficiency products and educates residential customers about energy use in their homes and to offer information, products, and services to residential customers to effectively save on energy costs.
Pay As You Save (PAYS®)	Promotes the installation of energy efficient technologies and increases deeper, long term energy savings and bill reduction opportunities for Ameren Missouri customers by delivering program funded energy efficiency services and customer repayment of those services through a tariffed on bill charge tied to the meter.
Multifamily Market Rate	Provides customers who are tenants, property owners and operators of eligible multifamily properties with education and incentives to encourage the installation of high efficient products and equipment to lower energy usage.
Whole Home New Construction - New	Provides technical training, bonuses and incentives to builders and HERS (Home Energy Rating System) raters to encourage them to build new construction homes that meet the ENERGY STAR® certified homes requirements and/or the DOE's ZERH (Department of Energy's Zero Energy Ready Homes) certifications.

EDUCATION PROGRAMS

Building Science Training	Provides a suite of contractor resources, training and education to contractors and sub-contractors to deliver high quality services aligned with national best practices for home performance to drive participation in energy efficiency programs.
Residential Code Compliance	Provides education to builders, sub-contractors, supply houses, energy raters, and others to improve the quality of newly constructed single-family homes to improve compliance with local energy code requirements focused on high energy impact measures, thereby reducing the long-term energy usage of homeownership.
Community Based Organization Engagement	Provides education and information on energy efficiency, Ameren programs, and energy affordability to Community-based organizations (CBOs) to enable them to become local ambassadors for Ameren Energy Efficiency programs by creating a resource library that CBOs can use to assist the underserved and income-eligible individuals.
Building Operator Certification (BOC)	Provides high quality continuing education initiatives and increases the amount of Ameren Missouri customers participating in BOC trainings. BOC emphasizes low-cost improvements to existing equipment to leverage energy savings opportunities without large capital investments.
Real Estate Education	Uses real estate institutions as a channel to encourage home energy audits to improve home performance before purchasing a new home. Provides education and offers discounted education to real estate professionals, including real estate agents and appraisers. The program provides the education and tools necessary to value high performing, energy efficient homes and assists clients in buying and selling such homes.

Discussion of Selected Residential Sector Programs

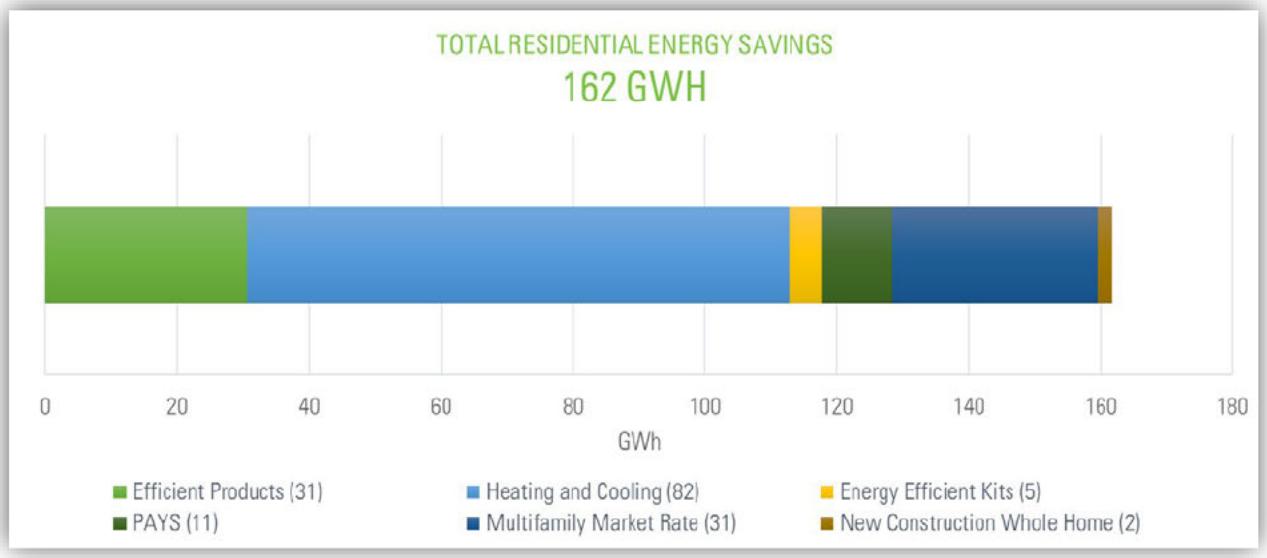
The residential programs in the Plan build on the traditional energy efficiency concepts and programs that have proven successful in the last decade plus experience in delivering energy efficiency programs in the marketplace. At its core, the suite of program offerings provide education, awareness, and financial incentives to offset the cost of energy efficient products and energy saving solutions. The Company will continue to deliver and build upon the relationships and delivery strategies that deliver cost-effective programs such as:

- The promotion of ENERGY STAR® certified products
- Promotion of high impact energy saving technologies such as heating and cooling equipment through a network of trained professionals
- Delivery of products such as energy efficient kits as an entry to educating customers in energy efficiency
- Co-delivery of energy saving products and equipment with gas and/or water utilities
- Promote the installation of energy efficient technologies and increase deeper, long term energy savings by providing a financing option for customers to remove the upfront cost barrier to participation.

Residential Sector Summary Charts

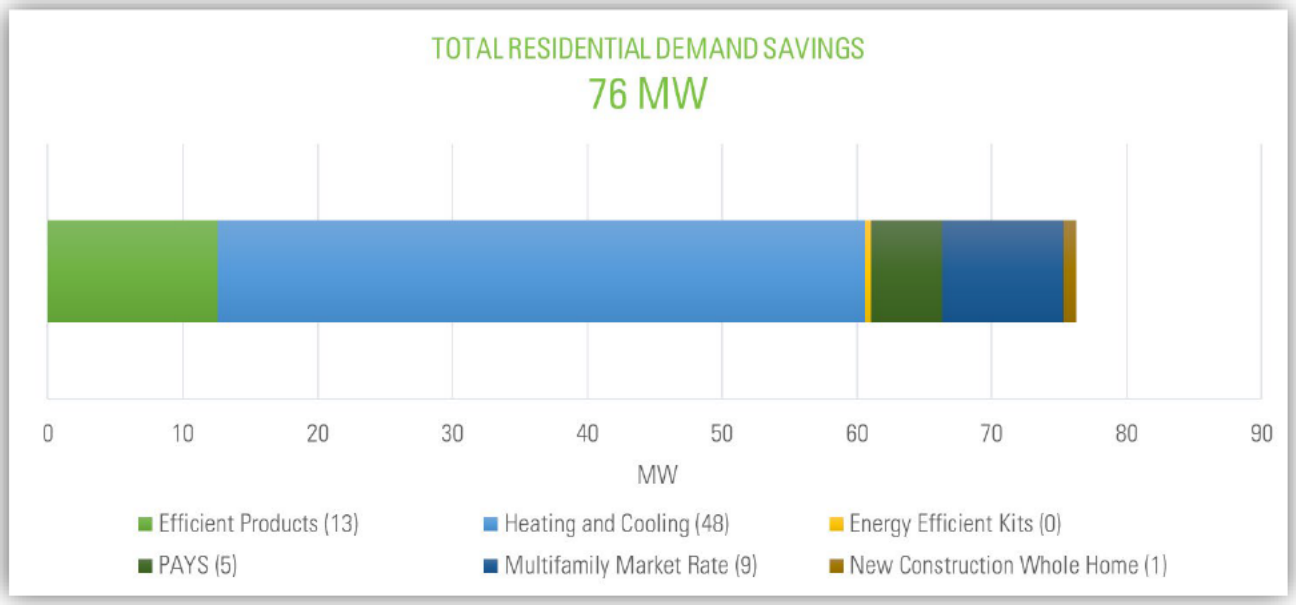
Figure 20 below shows the allocation of savings for the residential programs. The HVAC Program continues to contribute the largest portion of residential energy savings with over 50% of the Residential Portfolio; the Efficient Products program which offers a variety of product options for customers, represents the second largest portion of savings; and the Multifamily Market Rate program represents the next largest portion of the Residential Portfolio. The Multifamily Market Rate program helps customers that may not invest in energy efficiency upgrades as they do not typically own the property.

Figure 20 – Cumulative Residential Energy Savings by Program



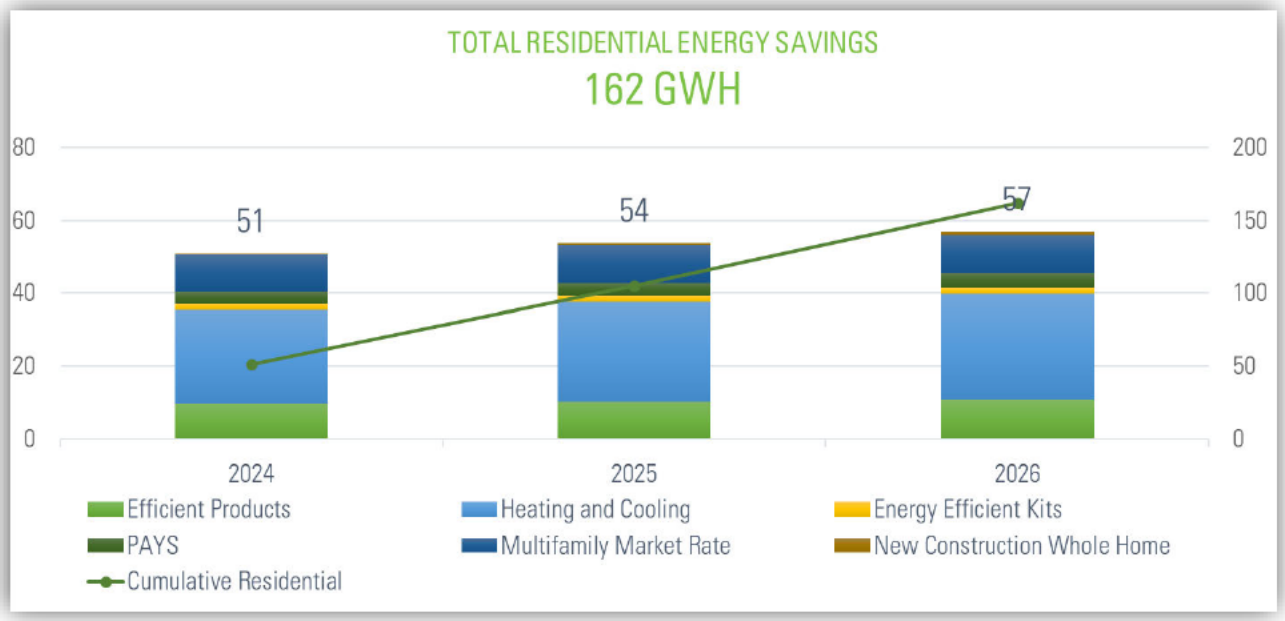
The figure below shows Heating and Cooling is the largest contributor to demand savings (at 63%), with Efficient Products contributing 17% and the remaining 20% from the other programs.

Figure 21 – Cumulative Residential Demand Savings by Program



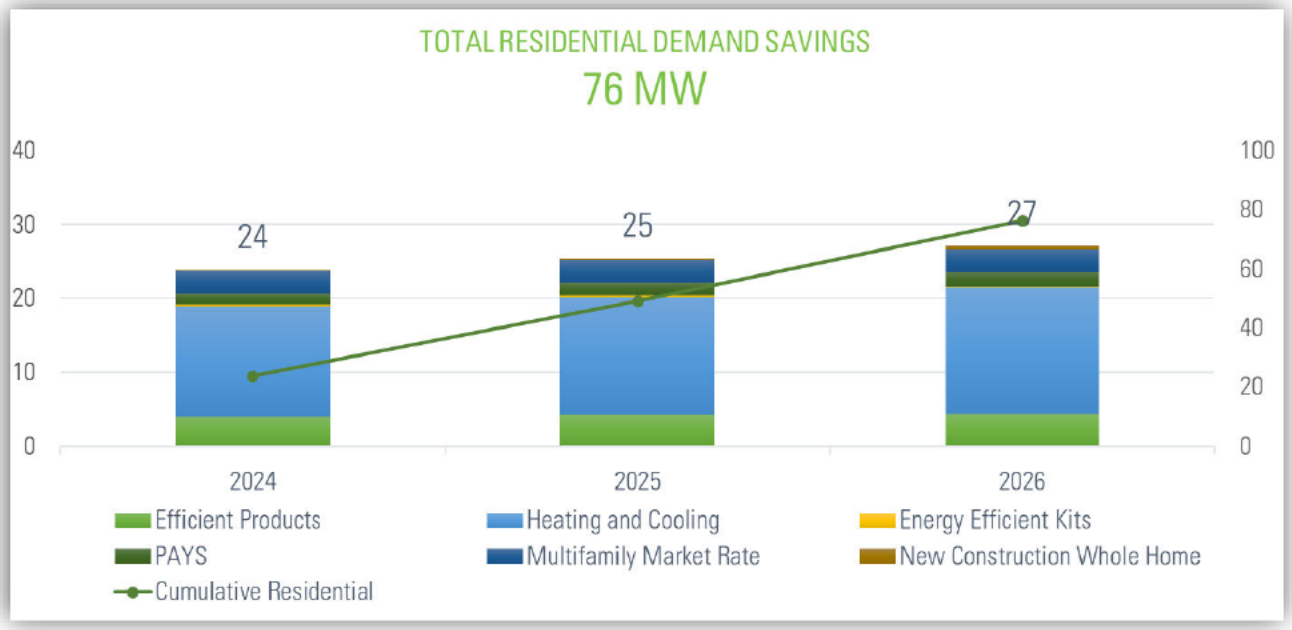
The figure below shows that the annual energy savings for the residential sector is slightly increasing over time.

Figure 22 – Incremental Residential Energy Savings by Program by Year



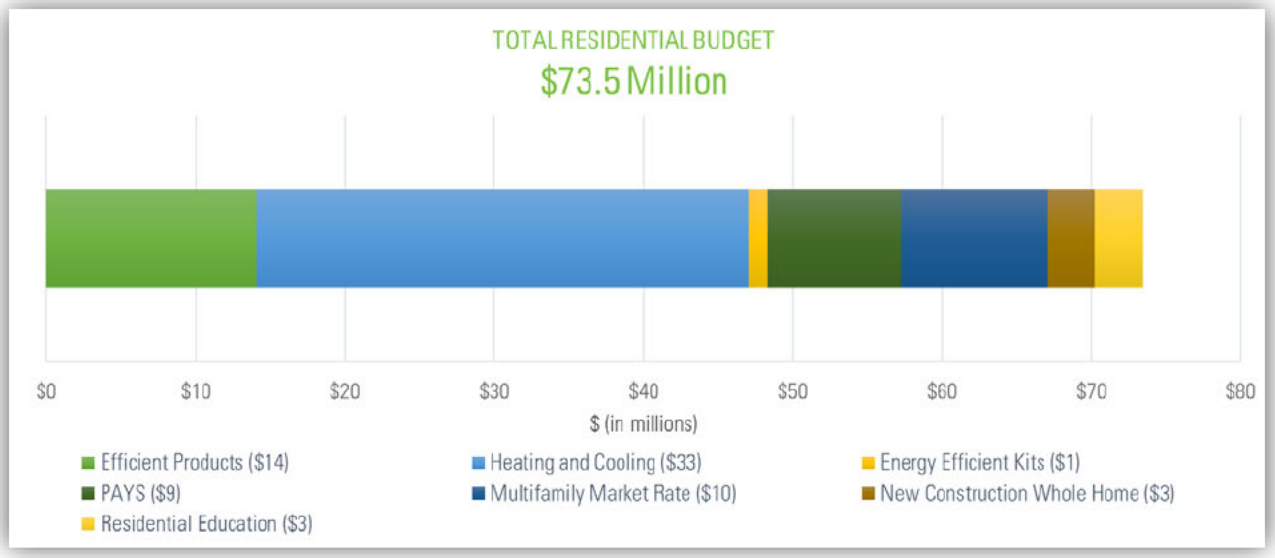
The residential Heating and Cooling program provides significant demand savings and increases with program momentum over time.

Figure 23 – Incremental Residential Demand Savings by Program by Year



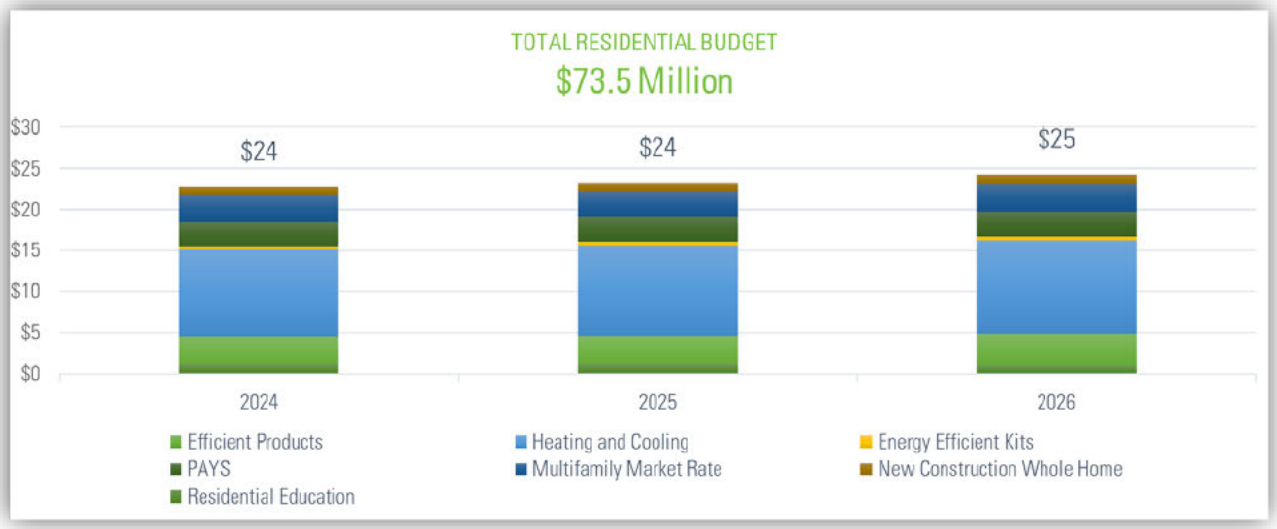
The residential Heating and Cooling program makes up the largest portion of the Residential budget by program at 45% and has the highest impact on demand savings.

Figure 24 – Total Residential Budgets by Program



Program budgets remain fairly consistent over the implementation period.

Figure 25 – Total Residential Budgets by Program by Year



The table below indicates, from a utility cost standpoint, residential customers will benefit $1.85 for every $1 spent.

Table 4 – Residential Sector Cost-effectiveness Summary (NPV)

Residential Sector Cost Effectiveness		
	Utility Cost Test	Total Resource Cost Test
Benefits	$ 140,750,014	$ 140,750,014
Costs	$ 76,107,130	$ 92,597,456
Net Benefits	$ 64,642,884	$ 48,152,558
UCT Benefits/Costs Ratio	1.85	
TRC Benefits/Costs Ratio		1.52

Business Sector Programs

The Business Sector Programs are built around the importance of customers understanding energy, being aware of how they use it, and Ameren Missouri's ability to identify and implement savings opportunities. In addition to the current business portfolio, pilot programs will be validated throughout the term using the process for pilot initiation, implementation and completion as defined herein. The Company is supporting customers by continuing reduction of barriers to participation through:

- Connecting businesses with trade ally contractors;
- A concierge-customer approach;
- Using targeted business segments;
- Benchmarking and energy usage to identify savings targets;
- Providing energy efficiency project finance options; and
- Reduces barriers associated with identifying energy efficiency contractors

Each Business Sector program is summarized below, and a detailed description of each program can be found in Appendix B.

Custom	Applies to energy efficient measures that do not fall into the Standard Incentive program. These projects are often complex and unique, requiring separate incentive applications and calculations of estimated energy savings. Includes incentives designed for different business segments such as Agriculture and Schools, and complex New Construction projects are incentivized through the Custom program.

Standard	Incentivizes customers to purchase energy efficient measures with predetermined savings value and fixed incentive levels. Includes incentives designed for different business segments such as Agriculture and Schools, and measures for New Construction projects.
Business Midstream - New	Incentivizes customers to purchase higher efficient measures at the wholesale point of sale.
Retro-Commissioning	This program has a special focus on larger complex control systems and identifying opportunities through smart meter ("AMI") analysis, providing options and incentives for businesses to improve operations and maintenance practices for buildings, systems, and processes, achieving electric energy savings. The Smart Meter Commissioning Program ("SMC") utilizes advanced metering infrastructure ("AMI") analytics to deliver recommendations through direct engagement with commercial and industrial ("C&I") electric end users.
SBDI (Small Business Direct Install)	Provide installation of low-cost and/or no-cost energy-efficient measures to small business customers. Program Providers will deliver, install, and complete paperwork for measures provided for in this program. The primary objective of the Small Business Direct Install Program is to remove barriers to participation

Discussion of Selected Business Sector Programs

The Company's outreach plans focus on specific business customer segments, and will be implemented using direct outreach by the program administrator and trade allies. This will educate customers on savings opportunities and secure energy efficiency incentives through the business programs. Targeted market approaches will include considerations such as business types, energy usage, energy intensity ratings, and Energy Star® benchmarking scores.

Concierge service will continue to be implemented in MEEIA 2024-26 to support the customer through all phases of a project. As part of this service, business development representatives will coach customers and assist them with energy savings opportunities. A primary target segment is one or more electric accounts under a parent account using two million kWh annually, and applying additional criteria mentioned in the prior paragraph. Examples of customers in this targeting include school districts, retail chains, and government accounts such as state, county, and local governments.

To increase participation in certain business segments, such as educational facilities ("Schools") and farms ("Agriculture"), these segments have their own incentive structure, customer outreach and education plans, based on long-term savings opportunities. Schools continue to struggle in balancing their limited funds (obtained through local, state, and federal resources) on whether to utilize funds for higher efficient equipment versus immediate educational needs such as teachers. To help balance the selection scale, School energy efficiency incentives have been increased. This will reduce the upfront capital to obtain long term energy savings, which will also support long-term educational needs. The agriculture business segment incentive structures will be based on farm equipment measures with similar customer outreach and educational plans.

Additionally, to increase participation of small and medium size customers with energy efficiency program trade allies, Ameren Missouri will actively market the bid board web connection tool where customers can submit potential projects to obtain competitive bids. The bid board provides trade ally members the opportunity to review each customer's potential project, engage in project development, and present energy efficiency upgrade proposals to customers. Where customers may need additional bid board support, an implementation specialist or business development representative will work hand in hand with them in uploading their project data. This reduces customer barriers associated with identifying energy efficiency contractors and gives trade ally contractors an additional avenue to engage potential customers. The simple bid board web base request form to submit potential projects includes customer contact information, proposal scope, technology (Lighting, HVAC, Refrigeration, etc.) and proposal timeline.

Ameren Missouri will also include finance options to energy efficiency incentive offers to help business customers move ahead with proposed upgrades. Continuing with the concierge service approach, financing options will be an integral part of the total energy efficiency incentive offer. Financing will be available for qualified customers through traditional business loans along with specialty financing. The executed loan agreements and financing costs will be between the customer and lender.

Business Customer Opt-out

MEEIA allows eligible customers to opt-out of paying the costs of utility energy efficiency programs. Three categories of customers can opt-out:

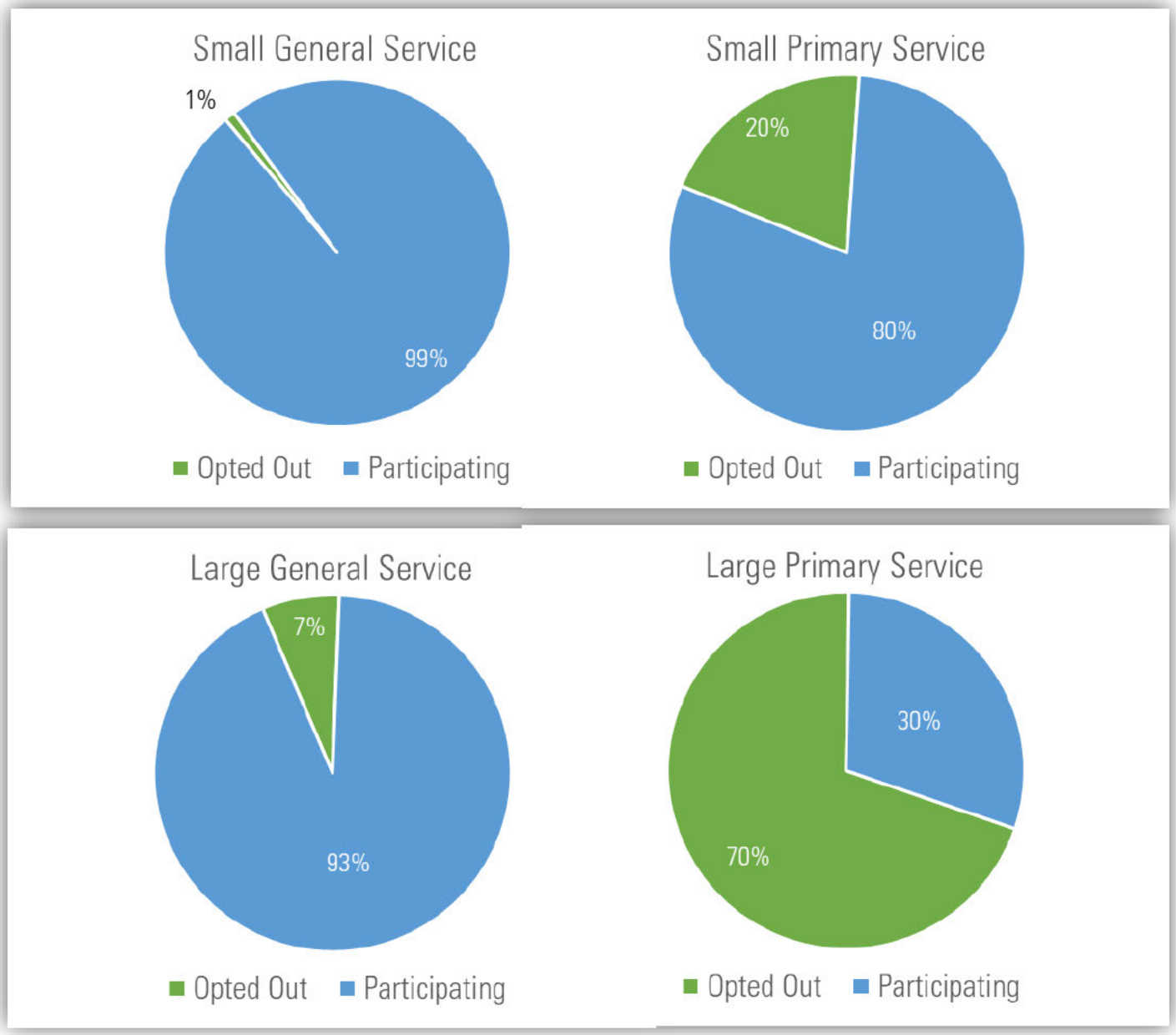
- Customers with a single facility exceeding 5,000 kW of peak demand can opt-out without restriction.
- Interstate pipeline pumping station customers can opt-out without restriction.
- Customers that can aggregate accounts to greater than 2,500 kW of coincident demand can opt-out provided the customer has a comprehensive demand-side or energy efficiency program and can demonstrate an achievement of savings at least equal to those expected from utility-provided programs.

Opt-out shall be in effect for 10 years beginning with the first calendar year of the opt-out. Customers must declare their desire to continue to opt-out in the 10^{th} year.

Through 2022, 36 Commercial and Industrial ("C&I") customers were opted out of the MEEIA program with their total annual load of 3,755,696 MWh. This is 21.2% of the total C&I customers' load. Three additional customers with an approximate total load of 361,065 MWh have been approved to opt out in the 2022 window.

The figure below shows the percentage of energy by rate class that opted-out.

Figure 26 – Opt-Out Percentage by Rate Class (2022 Actuals)



Continuity from the MEEIA 2019-21 PY23 extension into MEEIA 2024-26

Transition plans between MEEIA cycles is essential to obtain all energy savings for customers with long-lead projects that span cycles. This affords customers the opportunity to take advantage of all available energy savings. A continuity transition plan for MEEIA 2024-26 will allow customers to accept contingent efficiency incentive offers for projects during the MEEIA 2019-21 PY23 extension term which incentivizes customers to higher efficient equipment for projects that will be completed in 2024-25 and incentives made as part of the MEEIA 2024-26.

During MEEIA 2016-18, a transition plan was developed collaboratively with regulatory stakeholders and approved by the Commission. This transition plan allowed customers with long-lead projects to participate in MEEIA 2016-18 even if the completion dates of their projects fell after the current MEEIA cycle expired, as long as the completion date still fell within a specified timeline. Results from MEEIA II transition plan, which had a budget of $4 million, provided assurance that this program supports our customers to complete long-lead projects after the end of cycle. With 70 projects completed, the customers saved 20,771,464 kWh and 7,012 kW. These customers would not have had the opportunity to obtain these savings without the transition plan.

The continuity transition plan for MEEIA 2024-26 apply to long-lead projects with contingent offer incentives valid in the MEEIA 2019-21 PY23 extension, for projects with preapproval as part of the program guidelines such as are in Standard, Custom, and Retro-Commissioning. The total amount of program costs of continuity projects is capped at $9 million.

The contingency incentive offers made to customers with the long-lead project are contingent on incentives being made available for these measures in MEEIA 2024-26.

Business Sector Summary Charts

Over the implementation period, the figures below show Custom and Standard business programs, including the Agriculture and Schools components, make up 82% of the total energy savings forecast with Business Midstream, Retro-Commissioning including Smart Meter Commissioning, and Small Business Direct Install making up the remainder.

Figure 27 – Cumulative Business Energy Savings by Program

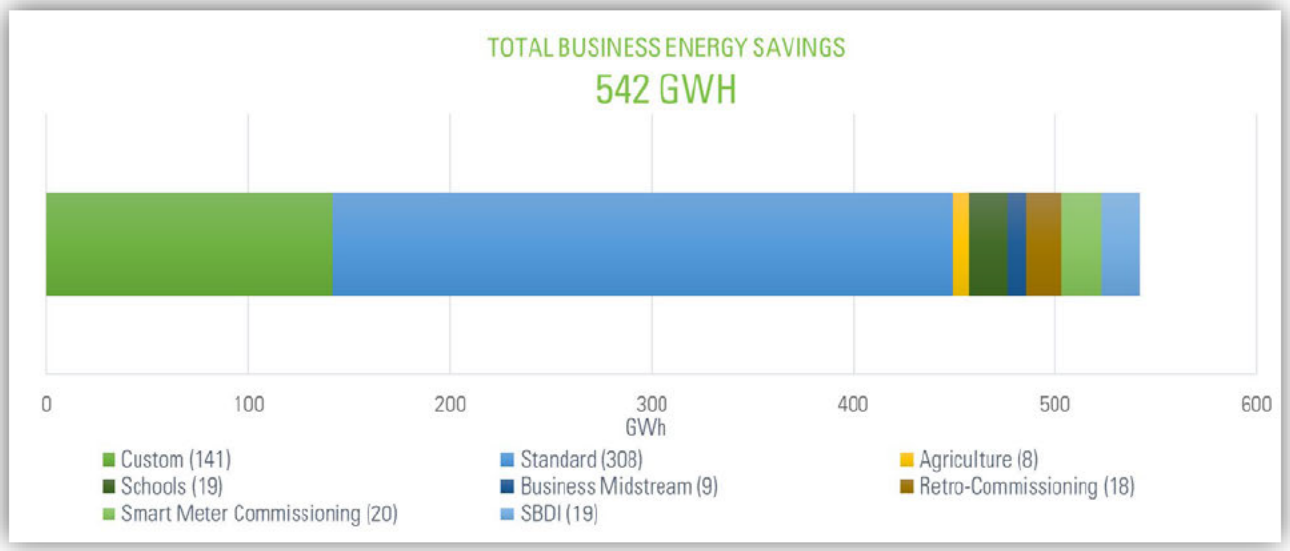
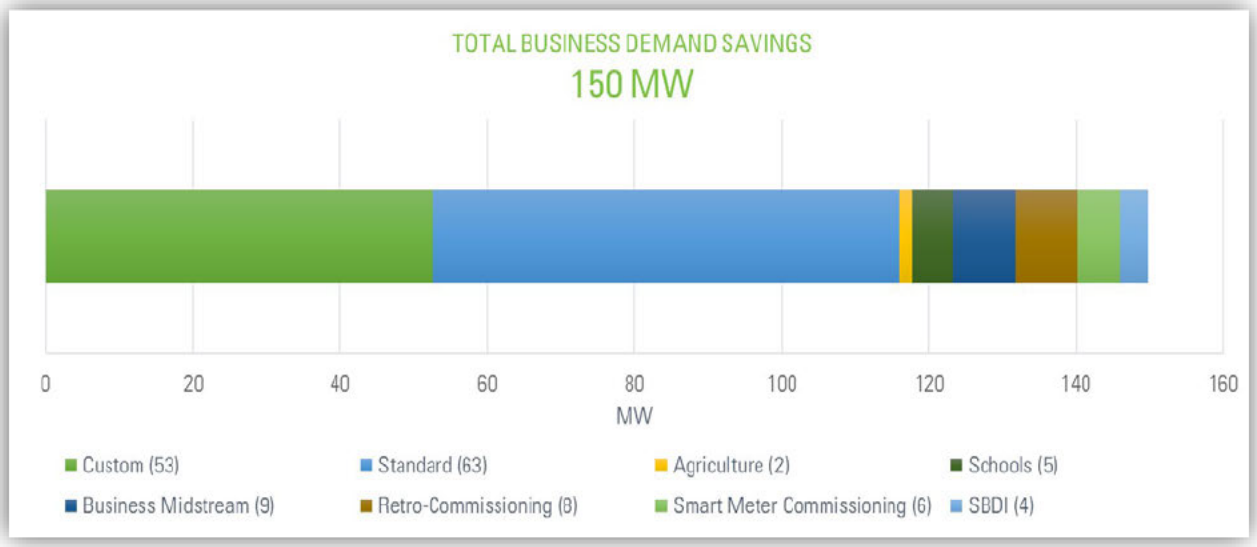


Figure 28 – Cumulative Business Demand Savings by Programs



Shown in the figures below, the energy and demand savings forecasts remain relatively flat through 2026.

Figure 29 – Incremental Business Energy Savings by Program

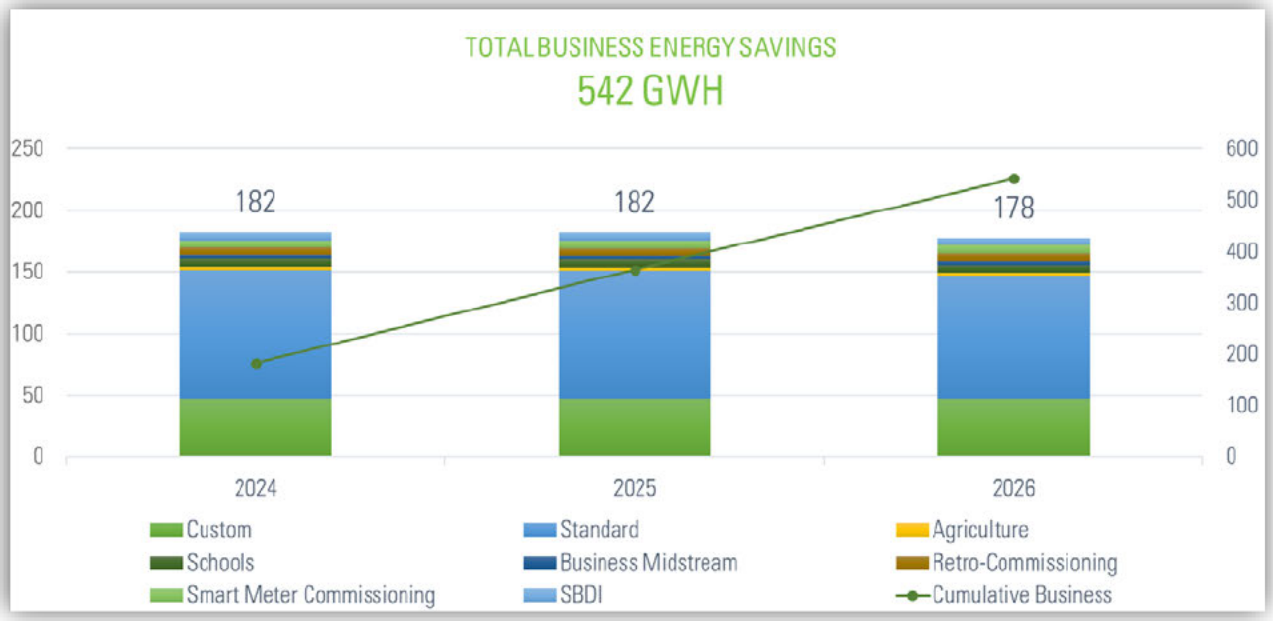
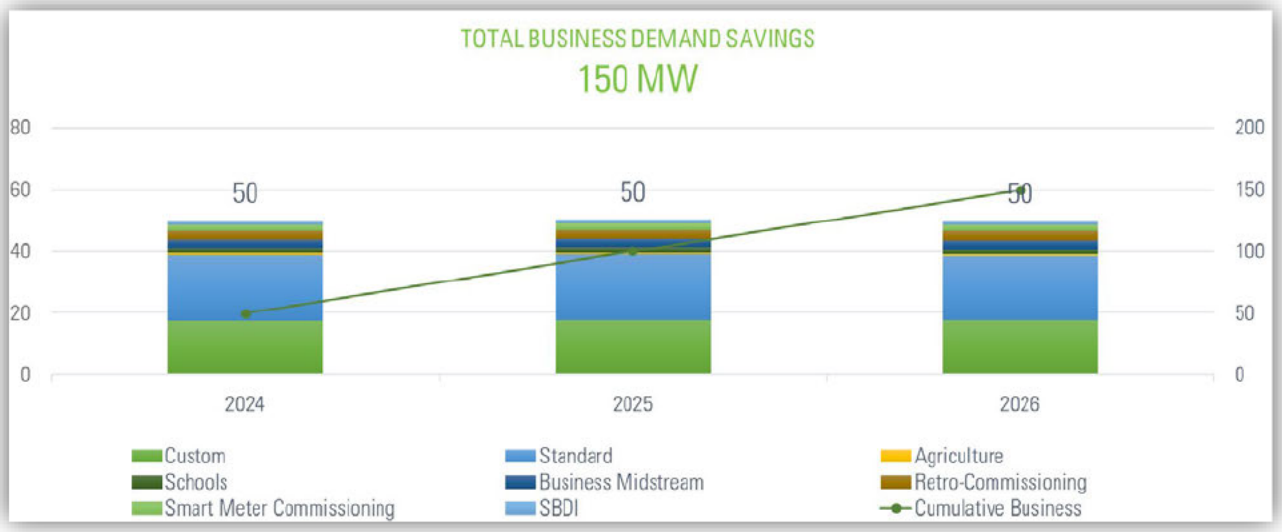


Figure 30 – Incremental Business Demand Savings by Program



Shown in the figures below, over the three-year MEEIA implementation period all program budgets slightly increase each year, with the exception of Standard program which slightly decreases in the last year.

Figure 31 – Total Business Budgets by Program

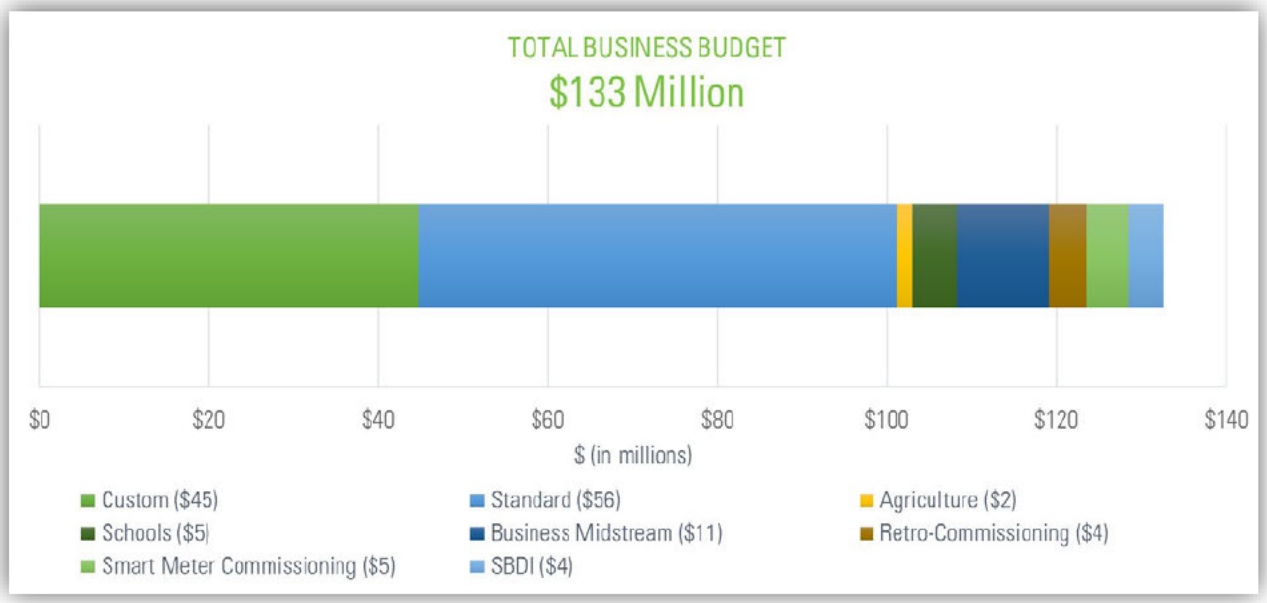
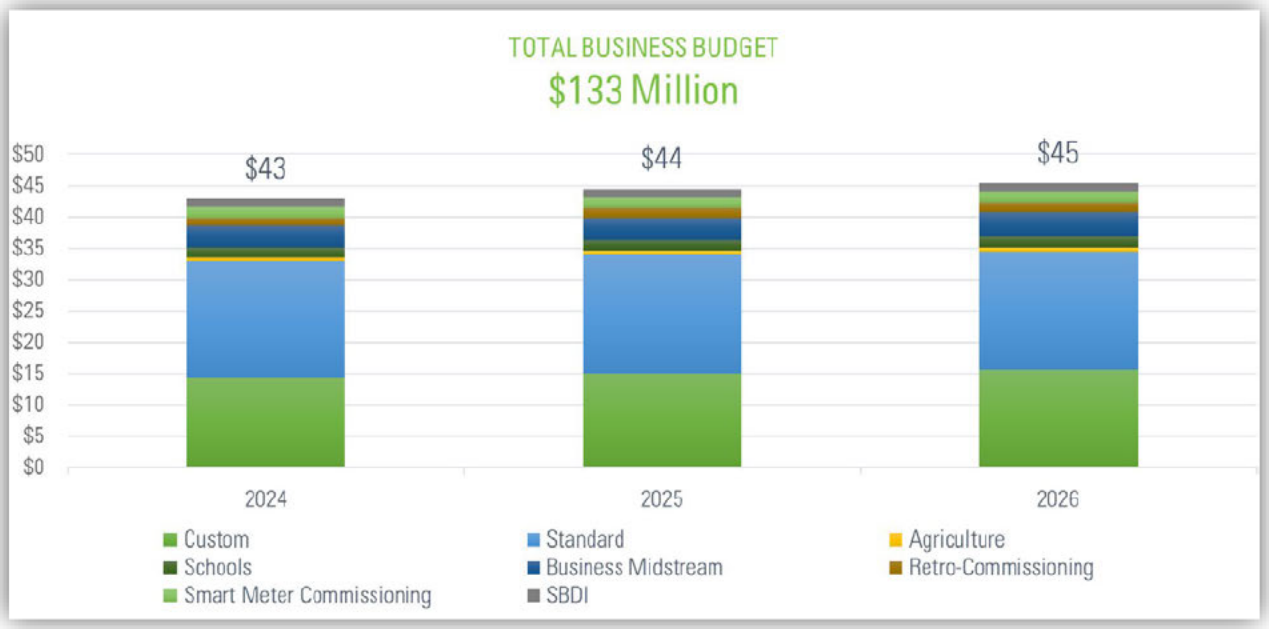


Figure 32- Total Business Budgets by Program by Year



When compared to Table 4 (Residential Sector Cost-effectiveness), it is apparent that the Business Sector programs are more cost effective and provide meaningfully more net benefits. Based on the individual program total cost resource test in Appendix A, the Retro-Commissioning program is the most cost-effective, with the new Business Midstream channel having the highest implementation costs.

Table 5 – Business Sector Cost-effectiveness Summary (NPV)

Business Sector Cost Effectiveness		
	Utility Cost Test	Total Resource Cost Test
Benefits	$ 430,093,527	$ 430,093,527
Costs	$ 137,253,084	$ 198,628,876
Net Benefits	$ 292,840,443	$ 231,464,651
UCT Benefits/Costs Ratio	3.13	
TRC Benefits/Costs Ratio		2.17

Demand Response Sector Programs

The Demand Response (DR) programs are designed to allow customers to help manage peak electric demand and lower overall system costs, which directly affects customer affordability. The MEEIA 2024-26 plan includes two demand response programs, one for business customers and one for residential customers. The programs will build on the success of the MEEIA 2019-21 delivery by continuing to engage customers currently enrolled in the programs. The growth in demand response achieved in MEEIA 2019-21 and proposed with the MEEIA 2024-26 is important in continuing to improve the foundation of system reliability and achieving customer affordability.

Discussion of Demand Response Sector Programs

Each Demand Response Sector program is summarized below, and a detailed description of each is in Appendix B.

Residential Demand Response	Provides customers the resources and incentives necessary to identify and take advantage of demand response opportunities using an integrated, data-informed approach to customer engagement and marketing of available demand response offerings.
Business Demand Response	Provides customers the resources and incentives necessary to identify and take advantage of demand response opportunities.

Residential Demand Response

The residential Demand Response ("DR") program is a key method for obtaining cost-effective demand savings. The residential DR program is designed to leverage customer or Company owned devices to reduce consumption during system peak conditions. The program is "customer-centric," as the program will, for example, operate with a specific goal to stay within temperature guidelines for each customer based on the customer's smart thermostat temperature setpoints.

The residential DR program will partner with device manufacturers to balance a variety of channels to recruit program participants, such as integrating with the Ameren Missouri online marketplace, leveraging the existing network of smart thermostat owners seeded through the MEEIA 2024-2026 programs, and planning for the option of installation incentives as the program reaches for deeper participation beyond early adopters. The Company will seek to diversify and expand the program to potentially include additional eligible device types (such as electric vehicles or water heaters), demand reduction based on "MISO," locational, or seasonal demand needs, or from custom device programming intended to achieve energy savings throughout the year.

The program will use smart thermostats and may include other devices or systems to reduce demand and will enroll over 80,000 customers by the end of 2026.

The residential DR program is designed to provide significant demand savings and is planned to begin the first year with 60,000 cumulative devices which will have been enrolled through the end of 2023.

Business Demand Response

In the Business DR program, the Company will procure demand savings through customers using unique contract offerings and price points for each customer. Savings may be achieved behind the meter through generation, controls, and operations modification. Ameren Missouri plans to register capacity from DR program(s) as a Load Modifying Resource in the MISO market.

The program partners with retail, schools K-12, manufacturing, colleges and universities, and others with custom curtailment plans specific to the customers' operations to reduce demand.

Business MEEIA Opt-Out DR Customer Participation

Pursuant to Section 393.1075.10 RsMo., customers electing to opt-out of MEEIA will be eligible to participate in the Business Demand Response program continuing to benefit all customers.

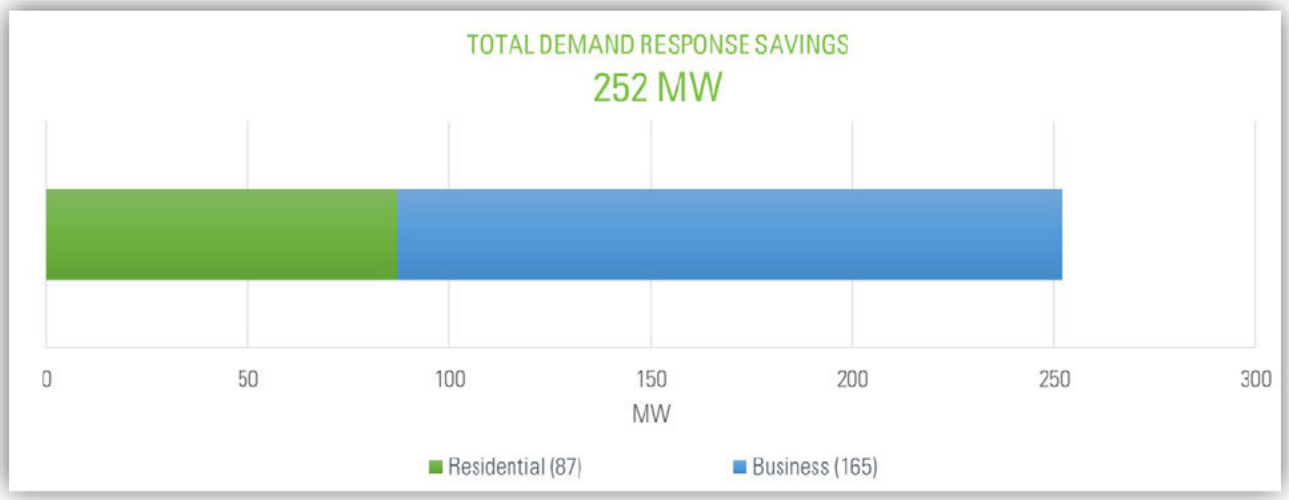
- Existing opted out customers are expected to bring an additional 50 MW in the first years, increasing system reliability.
- As generation resources transition, transmission and distribution system reliability is critical to customers' quality of life. Adding this new channel is an important cost-effective option to meet incremental reliability needs.
- All customers have the potential to benefit from the additional participation through future avoided investment in capacity resources, transmission and distribution infrastructure, and participation in MISO's four-season capacity Planning Resource Auction ("PRA") and the Fuel and Purchased Power Adjustment Clause ("FAC") Rider.
    - The value is recently demonstrated through our 2022 registration and participation with the MEEIA DR program MWs in the 2022/2023 PRA where the benefit across all customers achieved approximately $8.0M and supports the reliability of the system through emergency calls.
- While it is true that opted out MEEIA DR customers will receive MEEIA funded incentives, while being excluded from paying the Rider EEIC, it is also true that the benefits (e.g., incremental capacity revenues) generated from their participation in the DR program provide an offset to the cost of these incentives.

The additional customers expected to participate in the program include universities, grocers, retail, manufacturers, data centers, hospitals, and food processing.

Demand Response Sector Charts

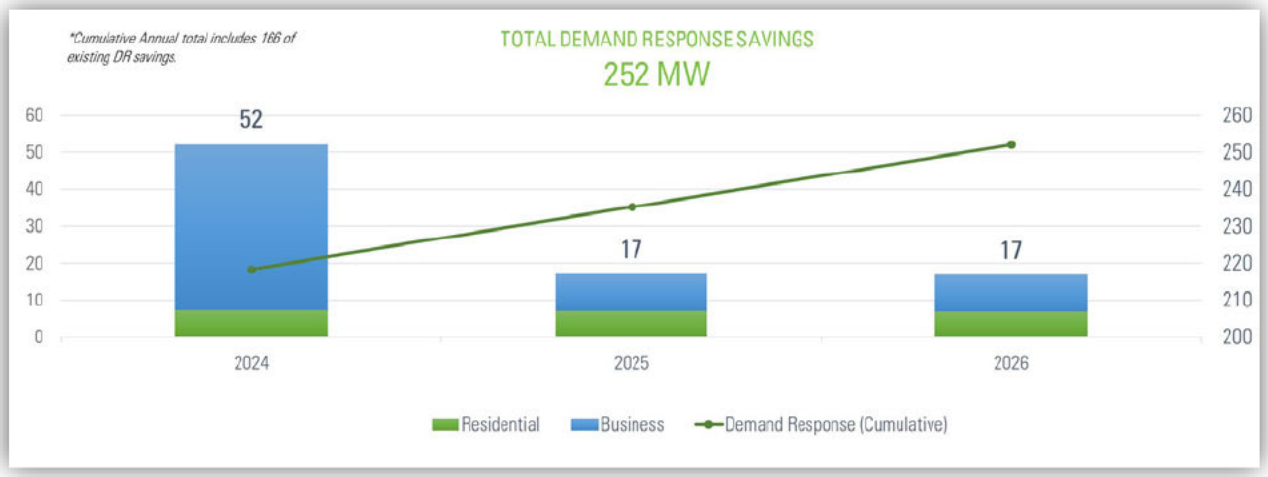
Of the 252 MW demand response obtained over the three-year term, 35% is achieved through residential customers and 65% business customers.

Figure 33 – Total Demand Savings



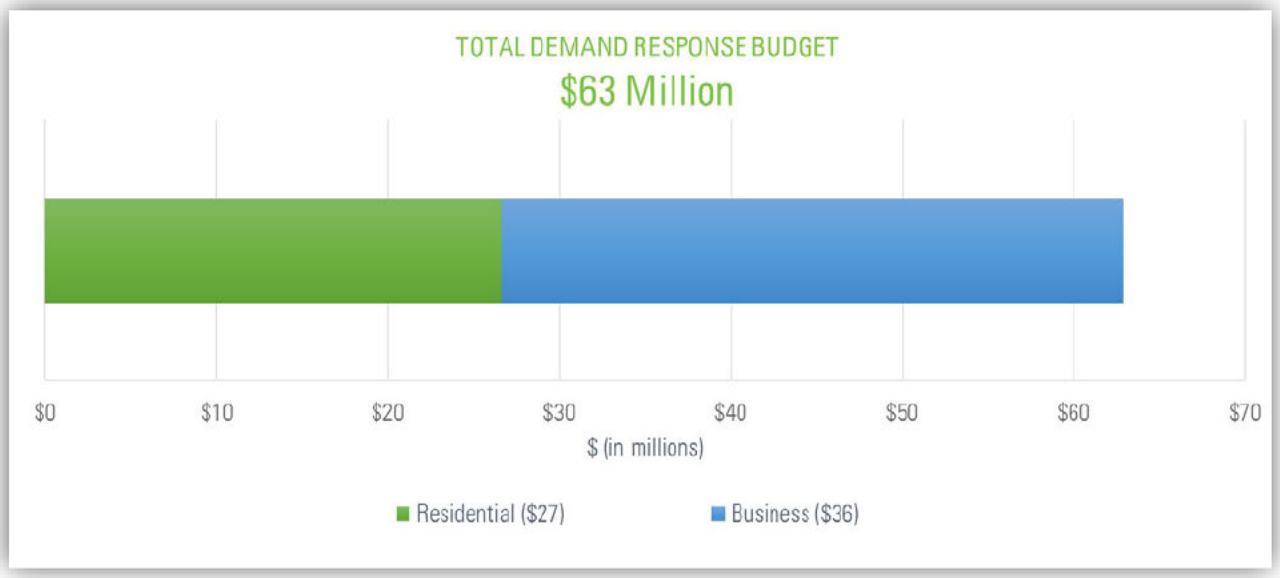
In years 2024 and 2025 shown below 50 MW of the 69 MW is achieved through opt-out customer participation in the business program.

Figure 34 – Incremental Demand Savings by Program by Year



Over the three-year term, total budgets for residential and business DR programs increase slightly with the forecast of 87 MW for residential and 165 MW for business.

Figure 35 – Total Demand Response Budget



Annual incremental growth is consistent throughout the three-year term.

Figure 36 –Demand Response Budget by Program by Year

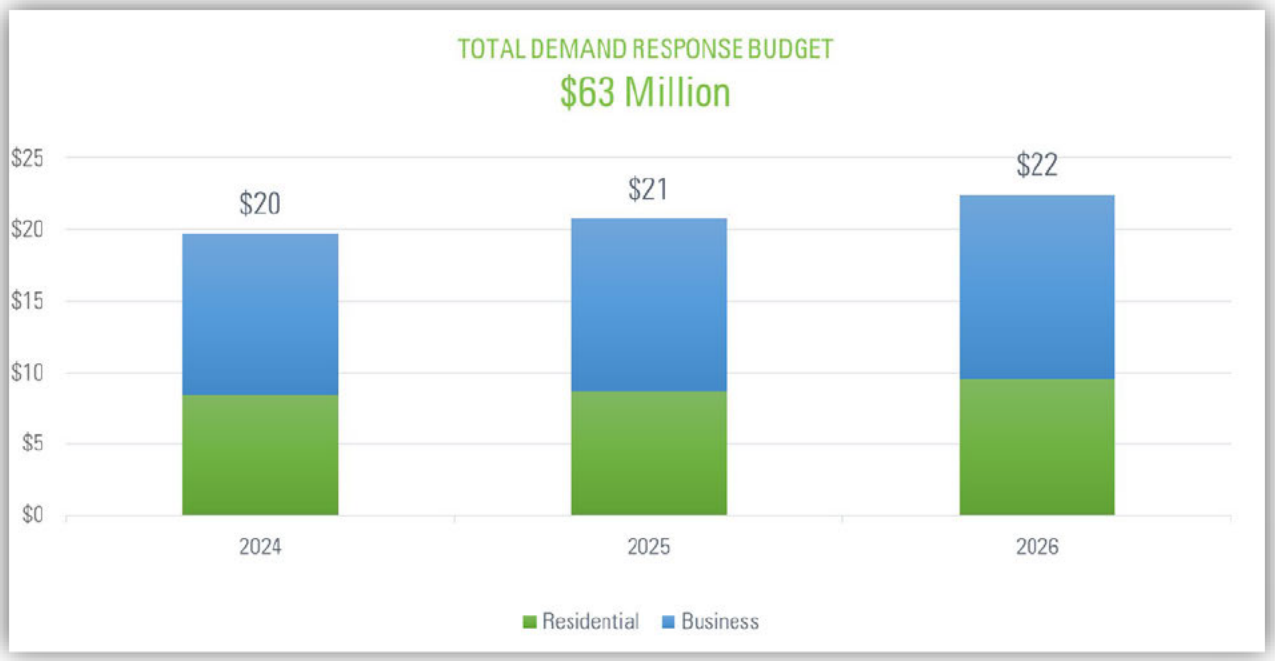


Table 6 – Demand Response Cost-effectiveness Summary (NPV)

Demand Response Cost Effectiveness		
	Utility Cost Test	Total Resource Cost Test
Benefits	$ 267,449,903	$ 267,449,903
Costs	$ 148,832,793	$ 148,832,793
Net Benefits	$ 118,617,109	$ 118,617,109
UCT Benefits/Costs Ratio	1.80	
TRC Benefits/Costs Ratio		1.80

Smart Meter Data

As Ameren Missouri moves towards completing the rollout of smart meters by the end of 2024, there are continued opportunities to use this data in the MEEIA programs. The main uses of AMI data are in targeted marketing, innovative programs, and in the evaluation of programs.

Marketing

AMI data can be used to augment targeted marketing to customers. AMI data can be disaggregated to provide data to determine which customers have specific high usage measures. This data can then be used to send targeted marketing to those customers. Potential measures that could be identified through disaggregation include electric heating, electric water heating, and inefficient air conditioners. These customers would be more likely to participate in those programs, resulting in higher conversion rates and lower marketing costs.

Innovative Programs

AMI data provides the opportunity for customers to save energy and be paid for their performance in energy efficiency programs. One program that would use this model is Smart Meter Commissioning which will begin implementation in 2023. This is an add-on to the existing Retro-commissioning program and will allow small and medium businesses to participate. AMI data will first be used to identify accounts which appear to have unusual energy usage, making them potential candidates for energy savings. Once a customer is enrolled, their AMI data is analyzed to identify savings opportunities. The type of savings opportunities that can be identified include:

- Adjusting heating and cooling schedules to better match actual occupancy
- Turning off unneeded equipment overnight
- Managing equipment start-up and shut-down schedules to reduce waste

AMI data can be analyzed again after the changes are made to verify savings and to pay the customer for their performance.

Evaluation

The evaluation of the Residential Demand Response Program has historically relied on telemetry data, the signal sent from the thermostat to the HVAC system telling it whether to operate based on room temperature and setpoint. As significant numbers of residential AMI meters are installed, the evaluation has begun to transition to using AMI data instead. This offers several improvements over telemetry data:

- Telemetry data provides information on run-time and must be converted to demand savings using assumptions on the HVAC systems connected load. AMI data will more accurately provide demand savings at the time of the event.
- Telemetry data is typically anonymized by the equipment manufacturer. AMI will allow us to tie savings back to the individual customer.
- Telemetry data has been plagued by data issues including misalignments or missing data for day type assignment to treatment and control groups and delays in obtaining data. AMI data will avoid or reduce these issues.

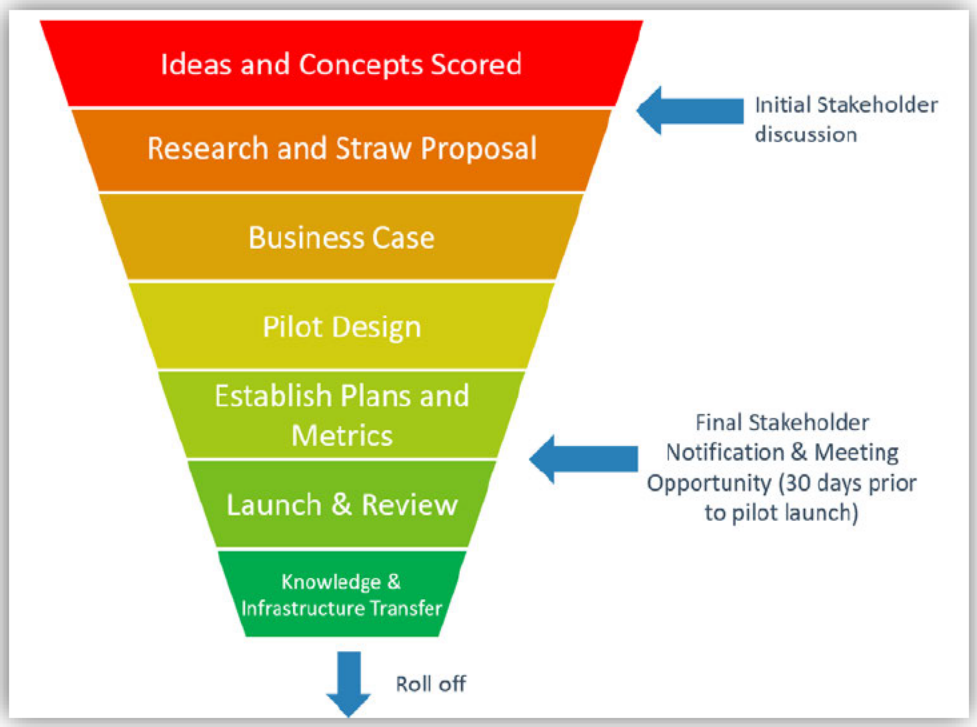
Pilot Programs

Technology and the development of efficiency equipment and delivery channels is ever changing at a faster pace. For this reason, this plan includes an initiative to foster innovation by testing and expediting the advancement of ideas and technologies across the market through pilot programs. The pilot programs will run through a defined process aimed at identifying potential pilot concepts and emerging technologies that can generate cost-effective energy savings, validating their market potential and ultimately, as appropriate, integrating them as new programs or as new channels within existing programs.

The proposed process for these pilots provides a balance between the flexibility needed to react to a quickly changing market with the desire to keep Stakeholders involved in the approval process. Potential pilots will go through a process to screen, research, evaluate and prioritize ideas for potential inclusion in the research and Pilot program:

- Pilot programs will be evaluated on a variety of parameters, including expected energy savings, program cost, customer interest, and the ability to develop the pilot into a program or channel within an existing program
- Results of the initial analysis and next steps for concepts will be discussed at quarterly Stakeholder meetings.
- Concepts agreed to at the quarterly Stakeholder meeting will be further developed into a business case and pilot design to include a program description, target segments that the offering serves, anticipated budget, energy savings, and estimated participants.
- A meeting will be held with interested stakeholders to discuss any new pilots at least 30 days prior to deployment.

- Results from pilots will be evaluated and reviewed to determine if they should be launched into a full program or added as a new channel in an existing program, revised and reviewed prior to a full launch, or canceled.



This plan includes a three-year budget of $10.94M for pilot programs: Potential pilot programs include:

Commercial washing machines lease	Incentivizes Multifamily properties and/or washer lease companies to upgrade commercial washers to Energy Star models.
Demand Response Backup Generator Control	Software for real-time grid-balancing platform that with a highly flexible approach for controllable and dispatchable energy resources. Energy optimization and control platform whose capabilities and use cases span energy flexibility opportunities.

Energy as a Service	Includes finance, develop, meter, and maintain energy efficiency solutions (lighting, HVAC, and refrigeration) and share a percentage of the metered savings achieved with the customer.
On-Bill PAYS Financing (Business)	Pay As You Save Program (PAYS®) helps customers make energy-efficient upgrades to their business with little or no upfront costs. It makes it easy to pay as you save with a fixed monthly charge on the Ameren Missouri bill.
Reverse Auction	Through a reverse auction, prequalified end-use customers or energy efficiency consulting providers (trade allies) bid for energy efficiency incentives. The auction is held using an online platform that allows providers to make real-time bids for incentives on a $/kWh or $/kW saved basis that will be used for anticipated energy efficiency projects.
Savings through Education	K-12 school districts building performance focused on schools to engage students and staff to drive savings in schools. Insights into actual operations at the actual school. Continuous monitoring identifies maintenance issues that can be covertly reducing a building's efficiency. Educating students helps better understand energy use at both school and at home.
Shade Trees	Increases the efficiency of homes through the education and proper placement of shade trees. Tree planting program for homes; comes with trees, and software to show the best place to plant trees for shade that will produce energy saving benefits to their home.
Strategic Energy Management	Strategic Energy Management ("SEM") program incorporates a set of processes, empowering organizations to implement energy management actions, consistently achieving energy performance improvements. Tracking and monitoring building energy and asset information is an integrated element of data-driven energy management.

Urban Heat Island - Multifamily	Helps end-users save energy, save money, increase roof service life, and improve indoor air comfort, while simultaneously reducing the urban heat island effect in the greater St. Louis area.
Zero Energy New Construction	Provides builders with incentives, design assistance, verification support and recognition for constructing projects better than code and on the pathway to Zero-Net Energy. The pilot will offer incentives based on the qualifying home type and certification achievement level. In addition to builder incentives, the pilot will offer incentives for HERS rating organizations to encourage partnerships with builder participants.

An exemplar tariff to allow pilot programs is included in Appendix J.

Evaluation, Measurement and Verification

Structure and Processes

A robust EM&V assessment of savings associated with a demand-side program is comprised of, at a minimum, an impact evaluation, and a process evaluation. The impact evaluation answers whether the program works by taking a systematic assessment of the relevant data relating to the operational outcomes of a program (e.g., the MWh saved). The process evaluation provides insights on how the program can be improved through careful examination of program implementation by reviewing existing procedures, and by interviewing program participants and program staff. This review attempts to determine whether procedures are being followed and how well the procedures are working.

Ameren Missouri will procure the services of an independent, third-party contractor to provide an objective assessment of the performance of the MEEIA 2024-26 portfolio. The completed evaluations will be performed in accordance with EM&V best practices like those documented in the International Performance Measurement and Verification Protocols and/or the Uniform Methods Project protocols. The use of established protocols reinforces the reliability of the assessed savings achieved by the energy efficiency programs.

The Commission rules require the use of an additional EM&V Auditor hired by the Commission to audit and report on the work of Ameren Missouri's independent EM&V contractors. Ideally, for the MEEIA 2024-26 programs, the Commission Auditor:

1. Monitors the planning, implementation, and analysis activities of Ameren Missouri's independent EM&V contractors;
2. Provides on-going feedback to Ameren Missouri's stakeholders on EM&V issues; and
3. Provides stakeholders with a copy of a final annual report in a timely manner.

A budget of 3% of the program administration and incentive costs has been established for the EM&V efforts during MEEIA 2024-26. Primary market research will be performed during the course of the EM&V program assessments. This will provide for an important, broader perspective on market/customer activities beyond the utility's programs, as well as an ongoing update to critical inputs used for program planning in a way that is internally consistent with the research conducted on utility demand-side resource programs.

Evaluation Contractor Role

In addition to the reporting of savings estimates, the evaluation contractors are expected to contribute meaningfully to operational efforts by:

- Suggesting or reviewing measures for possible addition to program offerings to increase the number of cost-effective measures offered;
- Assisting in the design of customer forms and materials to ensure customers understand program materials and that all necessary information is collected on forms;
- Assisting in the setup of the data tracking system to ensure all data necessary for the evaluation is tracked; and
- Suggesting program delivery modifications to make it easier for customers and trade allies to participate in programs.

Besides coordinating independent EM&V, Ameren Missouri requires implementation contractors to develop and implement internal Quality Assurance and Quality Control ("QA/QC"), inspection, and due diligence procedures. These procedures will vary by program and are in place to assure customer eligibility, completion of installations, and the reasonableness and accuracy of savings upon which incentives are based. Evaluators will review these QA/QC procedures. To be successful in these areas, it is important to maintain open lines of communication with both the evaluation contractors and the implementation contractors.

Evaluation Plans

The evaluation plans are work plans developed at the beginning of the program that fulfill the evaluation objectives and identify the planned activities undertaken in each program year with step-by-step action plans.

The sample evaluation plans found within Appendix E provide a high-level description of the EM&V effort that will take place for each of the MEEIA 2024-26 programs. The detailed evaluation plans for each program will be developed and shared with stakeholders at least 30 days prior to its implementation. As programs and markets evolve each year, the evaluation methods may need to change to ensure the evaluation method(s) being used continue to be appropriate. Findings from process evaluations and market assessments will help identify when to reassess impact evaluation methods. The regulatory stakeholders will be engaged with the development and review of the annual EM&V plans prior to its implementation and informed as modifications are made throughout the program cycle.

Impact Evaluation

One of the most important aspects of evaluation is the measurement of savings achieved by implemented energy efficiency measures. The impact evaluation estimates of gross measure savings may include engineering analyses and formulas, building simulation models, meter data, statistical models, and billing analysis. The evaluator is expected to complete annual impact evaluations of all programs. This will include any necessary measurement to recommend adjustments to the attributes of the measures, including changes/updates to measure inputs, incremental costs, and formulas to calculate savings and cost-effectiveness.

Prospective Evaluation

Ameren Missouri's prior MEEIA cycles have always used retrospective evaluation, where evaluation results are used to adjust the savings claimed by the implementers. This includes retrospective adjustments to deemed savings and net to gross ratios. This method of evaluation can be viewed as being punitive to implementers, who relied on historical net to gross ratios and deemed values as required in the TRM to claim savings. As a result, implementers increase the administration costs to cover the amount they consider to be at risk from the evaluation.

In comparison, prospective evaluation does not punitively impact the current year results. Instead, evaluation results are only used to update the deemed values for future years, including inputs to deemed savings algorithms and net to gross ratios. In this filing, Ameren Missouri is proposing to use prospective evaluation.

In their Guidance on Establishing and Maintaining Technical Reference Manuals for Energy Efficiency Measures, the State & Local Energy Efficiency Action Network explains the purpose of deemed savings in a TRM: "*A fundamental element of the deemed savings methods is an agreement, informed by prior evaluations, research, analysis, and expert judgment, between the involved parties to accept as "evaluated" the indicated savings value or a set of assumptions (e.g., deemed variables and factors) for use in determining the difference between the baseline and the reporting period energy consumption or demand. While there might be requirements such as verification of installation and*

performance, satisfactory commissioning results, and evidence of sufficient equipment or system maintenance, if these requirements are met, the project savings are considered confirmed. Thus, with the deemed savings method, typical industry practice is to hold the stipulated value constant, regardless of what the actual value is during the program's term. That is, any adjustments to reflect observed savings (as opposed to "deemed") are done on a prospective basis (for future projects), and not applied retrospectively."[11]

ACEEE recommends prospective evaluation: "*For judging program administrator performance (and perhaps for determining whether and how much performance incentive has been earned) we tend to support applying such changes prospectively. In general, where program designs and budgets have been constructed based on agreed-upon values for certain key factors like deemed savings per unit and net-to-gross ratios, we believe it is reasonable to not retroactively "change the playing field" and alter the credited accomplishments of the utility/program administrator."* [12] An ACEEE survey showed that of the states that use net savings, 61% stated that they apply new net savings results prospectively.[13]

Prospective evaluation allows implementers to reduce their costs due to lower risks from evaluation. It would allow the State Auditor to focus their efforts during the draft report review period and potentially reduce issues in finalizing evaluation reports. This would allow evaluation reports to be finalized faster and reduce the chances of Change Requests being filed, saving all Stakeholders both time and costs involved in the litigation of disputed evaluation results.

With prospective evaluation, evaluated results could still differ from implementer's claimed savings for reasons including data from the implementer's tracking system, verified measure counts, and review of custom savings calculations, but changes that result from evaluation activities, such as in-service rates and net-to-gross ratios, will not change between ex ante and ex post.

The amount of evaluation work could also be reduced by using deemed values. Agreement on which deemed values should be updated each year (instead of all values) would reduce the evaluation budget by agreeing that certain surveys or site visits would not need to happen every year and instead could be updated every other year or every third year. All values that are updated in a year would then be used to calculate both ex ante and ex post gross and net savings in subsequent years until they are updated again. Reduced evaluation budgets can either reduce the total MEEIA portfolio budget or allow more funds to be spent on programs while keeping the total MEEIA budget the same. The EM&V budget has been set at no more than 3% of program costs assuming that

[11] https://www.energy.gov/sites/default/files/2021-07/technical-reference-manuals.pdf
[12] National Survey of State Policies and Practices for Energy Efficiency Program Evaluation, https://www.aceee.org/sites/default/files/pdfs/u2009.pdf
[13] *Ibid*.

prospective evaluation is approved, rather than the 3-5% of budget assumption that has historically been used.

Net to Gross results from evaluation have been relatively stable over the last few years. Comparing PY2019, PY2020, and PY2021 shows that actual evaluated NTG ratios throughout the three years were very similar:

Table 7 – Historical MEEIA 3 NTG Results

Portfolio	PY2019 NTG	PY2020 NTG	PY2021 NTG
Income Eligible	100.0%	100.0%	100.0%
Residential	68.3%	74.7%	75.1%
Business	85.2%	83.3%	83.1%
Total	81.5%	79.0%	79.4%

The majority of programs included in this filing are core programs that have been implemented and evaluated in prior MEEIA cycles. With stable NTG ratios, the risk of net savings either being over or undercounted due to prospective evaluation is minimal.

Ameren Missouri is proposing this move to prospective evaluation due to the benefits of reduced evaluation and implementer administrative costs which will allow a greater percentage of the MEEIA 4 budget to go towards incentives paid to customers.

Demand Response Evaluation

Evaluations performed for a DR program differ from an evaluation done for an energy efficiency program. For DR, the evaluation will capture at least the following two measures of savings:

- The amount of demand reduced during an event and the associated energy savings; and
- Total kW under control by the program at program year-end and available to be called under Ameren Missouri's system peak conditions, known as the Resource Capability.[14]

For residential DR, the evaluation will include analysis of the time before an event to account for pre-cooling and after an event to account for snap back usage to return the home to a normal temperature setting. DR capability will be weather normalized to a design criteria consistent with the Company's peak forecasting weather assumptions. The normalized DR kW capability at this design criteria will then be multiplied by the total number of participants in the program at the end of the program year.

[14] This includes weather-normalized actual average event demand reductions (to system peak design conditions) and scaled to the total number of program participants at year end.

For business DR, the actual meter readings during a DR event will be compared to the customer's baseline to calculate the consumption and demand savings per event. The DR annual capacity will be the average demand savings across all events throughout the program year. Similar weather normalization and resource capability calculations will be performed on the Business DR to the extent they are relevant.

Process Evaluations

Ameren Missouri will again collaborate with its evaluators to identify appropriate process evaluation goals, procedures, and practices. These evaluations focus more on program design and delivery, market segments, and other societal factors that affect the program's performance. Additionally, the evaluations will address the requirements of 20 CSR 4240-22.070(8)(A), which include:

1. Identifying primary market imperfections common to the target market segment;
2. Identifying the adequacy of market segment definition, and the appropriateness of the market segments;
3. Identifying if the mix of end-use measures adequately addresses the market segment end-use needs and measure diversity;
4. Appropriateness of communication channels of market segment delivery mechanisms; and
5. Methods for overcoming identified market imperfections to increase customer acceptance and program effectiveness.

Further, the process evaluation will review the performance of the programs that are being delivered and make recommendations regarding improvements that can be made associated with the delivery of energy efficiency products.

Annual EM&V Reporting

As required by the Commission's MEEIA regulations, the evaluators will provide the regulatory stakeholders with a copy of the draft and the final EM&V report at the same time as they are provided to Ameren Missouri.

The reports will include energy savings and demand reductions for each of the programs and each of the residential and non-residential portfolios. The reports will also summarize *ex-ante* and *ex-post* measure level savings on which the updates for the Deemed Savings Table (Appendix F) and Technical Resource Manual ("TRM") (Appendices G – I) will be based.[15] Finally, the reports will include a summary of the process evaluation and will identify specific details regarding the impact methodologies and results as well as key findings, conclusions, and recommendations. A portfolio summary report will also be

[15] The Deemed Savings Table and Technical Resource Manual are discussed further below.

provided and will include the results of the cost-effectiveness analysis at the program and portfolio level. Similar to the process reflected in the Company's MEEIA 2013-15, 2016-18, and 2019-21 plans, as approved by the Commission, the below-described process is included in this Plan and shall govern review and finalization of annual EM&V:

- EM&V reports will be completed for each program year the Plan. Ninety (90) days after the end of each program year, the EM&V contractor will circulate a draft EM&V report to all parties to the MEEIA 2024-26 case ("evaluation stakeholders") and the Commission's Auditor.

- Forty-five (45) days after circulation of the draft EM&V report, the Auditor and each evaluation stakeholder can provide any comments and recommendations for report changes to the EM&V contractor and to all other evaluation stakeholders and the Auditor.

- Prior to issuing the Final EM&V Report, the EM&V contractor will host at least one conference call/meeting with the Auditor and the evaluation stakeholders to discuss the comments and recommendations for report changes. The EM&V contractor will determine what comments and/or changes are incorporated into the Final EM&V Report. Thirty-five (35) days after the deadline for comments and recommendations for report changes, a Final EM&V report will be provided to all evaluation stakeholders and the EM&V Auditor by the EM&V contractor. Fourteen (14) days following the Final EM&V report, the Commission's Auditor will issue its final report.

- Any evaluation stakeholder who wants a change to the impact evaluation portion of the Final EM&V Report will have twenty-one (21) days from the issuance of the Final EM&V Report to file a request with the Commission to make such a change ("Change Request"). Any evaluation stakeholder filing a Change Request will set forth all reasons and provide support for the requested change in its initial Change Request filing. Responses to a Change Request may be filed by any evaluation stakeholder and are due twenty-one (21) days after the Change Request is filed. The response must set forth all reasons and provide support for opposing or agreeing with the Change Request. Within seven (7) days after the deadline for filing a Change Request (if a Change Request is filed) the evaluation stakeholders will hold a conference call/meeting to agree upon a proposed procedural schedule that results in any evidentiary hearing that is necessary to resolve the Change Request to be completed within sixty-three (63) days of the filing of the Change Request. The proposed procedural schedule will also recommend to the Commission that a Report and Order resolving the Change Request be issued within thirty (30) days after the conclusion of such a hearing. The evaluation stakeholders will be parties to a Change Request resolution proceeding without the necessity of applying to intervene. The procedural schedule for such a Change Request proceeding will provide that data request objections must be lodged within seven (7) days and responses will be due within ten (10) days (notifications that additional time is required to respond will also be due within seven (7) days).

- For purposes of calculating achievements towards annual Earnings Opportunity metrics, the Company will utilize the impact evaluation energy and demand savings (kWh and kW) estimates of the Final EM&V Report, as it may be modified by the Commission's resolution (using the above-described process) of any issues related to the impact evaluation portion of the Final EM&V report.

Technical Resource Manual

The Ameren Missouri MEEIA 2024-26 TRM is based on the PY22 TRM, with updates for known changes to federal minimum standards that will go into effect prior to 2024. The Deemed Savings Table represents the application of the formulas in the TRM for discrete measures that are being offered and also reflects the inputs into those formulas based on utility-specific evaluation results. The Deemed Savings Table is attached as Appendix F and the TRM is attached in three volumes as Appendices G - I: TRM-Introduction and User Guide (Appendix G); TRM-Business Measures (Appendix H); and TRM-Residential Measures (Appendix I). Together, the TRM and the Deemed Savings Table are important to improve the transparency of savings calculations. To facilitate further transparency, the Deemed Savings Table has been created in Excel with working formulas for each measure and organized in a way to improve connection to the formulas specified in the TRM. The TRM and Deemed Savings Table are living documents that will be updated periodically throughout MEEIA 2024-26. Changes to the TRM will be submitted for Commission approval and will likely be a result of evaluations and/or the need to add additional measures. The Deemed Savings Table will be the primary source of savings used as inputs for the Throughput Disincentive calculations and will be updated regularly (roughly annually depending on evaluation cycles) to reflect updates to measure savings from evaluations. To the extent final EM&V results from program year 2022 of MEEIA 2019-21 require, the TRM and/or Deemed Savings Table included with this Plan will be updated before the start of the Plan's programs. To the extent the Deemed Savings Table requires only changes to measures and measure inputs, those updates will be achieved by following steps 2, 3, 4, 5, 6, 10, & 11 of the 11-Step Change Process outlined in the Company's tariffs.

As discussed in the Prospective Evaluation section above, Ameren Missouri is proposing that evaluations be prospective, and updates to the Deemed Savings Table will be used for both claiming deemed savings and in determining ex post gross savings in the evaluation in subsequent years.

Net-To-Gross

The TRM and Deemed Savings Table described above govern the estimation of the gross impacts of the measures delivered by Ameren Missouri's programs. However, a second and important part of the savings equation is the estimation of net savings based on

application of a Net-to-Gross ("NTG") ratio. The NTG ratio is what establishes the amount of savings that are attributable to utility programs.

The MEEIA 2024-26 equation for estimating the NTG ratio for energy efficiency programs is:

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

$$(where\ the\ denominator\ in\ each\ ratio\ is\ the\ gross\ savings)$$

Free-ridership is the program savings attributable to free-riders (program participants who would have implemented a program measure or practice in the absence of the program). There are two types of free-riders:

• Total free-riders: Participants who would have completely replicated the program measure(s) or practice(s) on their own and at the same time in the absence of the program.

• Partial free-riders: Participants who would have partially replicated the program measure(s) or practice(s) by implementing a lesser quantity or lower efficiency level or at a different time.

Spillover refers to additional reductions in energy consumption or demand that are due to program influences beyond those directly associated with program participation. As a result, these savings may not be recorded in the program tracking system and credited to the program. There are generally two types of spillover, participant spillover and non-participant spillover. Each can be described as follows:

- Participant spillover: This represents the additional energy savings that are achieved when a program participant—as a result of the program's influence—installs energy efficiency measures or practices outside the efficiency program after having participated.

  Evaluators have further defined the broad category of participant spillover into the following subcategories:

  - Like spillover: Refers to program-induced actions participants make outside the program that are of the same type as those made through the program (at the project site or other sites)

  - Unlike spillover: Refers to energy efficiency actions participants make outside the program that are unlike program actions (at the project site or other sites) but that are influenced in some way by the program

- Nonparticipant spillover: This represents the additional energy savings that are achieved when a nonparticipant implements energy efficiency measures or practices as a result of the program's influence (for example, through exposure to the program) but is not accounted for in program savings. Nonparticipant spillover can include both like and unlike spillover, although unlike nonparticipant spillover is often excluded from the calculation of Net to Gross as being too far removed from the programs to justify including.

As discussed above, Ameren Missouri is proposing that Net to Gross be deemed per program year based on prior year's evaluation results and that changes to Net to Gross based on evaluated results be used prospectively for both deemed savings and reported ex post net results.

Demand-side Investment Mechanism

The DSIM included in the MEEIA 2024-26 plan reflects a set of regulatory policies and practices that provide timely recovery of program costs, align the financial interests of the Company with helping its customers use energy more efficiently and in a manner that sustains or enhances its customers' incentives to use energy more efficiently, and provide an earnings opportunity. For the MEEIA 2024-26 plan, the DSIM from MEEIA 2019-21 provides a useful framework from which to begin. In fact, the basic structure of the DSIM proposed for MEEIA 2024-26 is very similar in most respects to the DSIM that is currently in place for the MEEIA 2019-21 programs. Ameren Missouri has updated its analysis to reflect new portfolio characteristics, new avoided costs, and new margin rates to produce updated throughput disincentive and earnings opportunity components of the DSIM. Overall, the existing framework has been effective in aligning incentives and otherwise discharging the Commission's obligations under MEEIA. As noted, the proposed DSM addresses three components: 1) program cost recovery; 2) throughput disincentive recovery; and 3) an earnings opportunity. These components and other terms of the DSIM are outlined further below. In addition, the operation of the DSIM and its defined terms, which are explained in this report, are also embedded into the Rider EEIC tariff, included with this report as part of Appendix J. Appendix K includes the proposed notice to explain the proposed DSIM to customers, while Appendix L shows a sample of how the DSIM line item will appear on a residential and non-residential bill.

Below are key elements of the proposed Rider EEIC that are also a continuation of the MEEIA 2019-21 DSIM framework:

1) The Company shall make a Rider EEIC filing each calendar year to become effective as of the subsequent calendar year's February 1. The Company is allowed, or may be ordered by the Commission, to make one other Rider EEIC filing in each calendar year with such subsequent filing to be effective beginning

with either the June or October billing month (to coincide with rate changes in the Company's Fuel Adjustment Clause rate).

2) The Energy Efficiency Investment Rate ("EEIR") will be the sum of the Net Program Costs (NPC), Net Throughput Disincentive ("NTD"), Net Earnings Opportunity (NEO), and Net Ordered Adjustments ("NOA") divided by the Projected Energy, in kWh, forecasted to be delivered to the customers to which the Rider EEIC applies during the effective period (typically the 12 billing months applicable to the Rider EEIC filing).
3) Each subcomponent of the EEIR will include a monthly reconciliation of actual costs to billed revenues with interest at the Company's short-term borrowing rate.
4) Any remaining reconciliation balances from MEEIA 2019-21 for program costs, throughput disincentive, and other Commission ordered amounts will be rolled into the respective reconciliation balances for MEEIA 2024-26 starting in February 2025, and any remaining reconciliation balance for earnings opportunity will be rolled into the respective reconciliation balance in February 2027.

Cost Allocations[16]

Residential program costs and throughput disincentive will be recovered from the residential service class, with the exception of income-eligible costs as explained below. Non-residential program costs will be allocated based on non-residential service classification retail sales (kWh) as adjusted for opt-out, while the non-residential throughput disincentive will be allocated based on MEEIA 2024-26 energy savings for each respective non-residential service classification. Portfolio-level common program costs, income-eligible program costs, income-eligible throughput disincentive, and the income-eligible Rider EEIC exemption will be allocated to each service classification based on retail sales (kWh) as adjusted for opt-out of eligible business customers. The earnings opportunity will also be allocated to each service classification based on retail sales (kWh) as adjusted for opt-out.

Program Costs

For the program cost recovery component of the DSIM, the coming year’s program expenses will be forecasted and included in Rider EEIC. Each month, the cumulative difference between actual program expenditures and actual revenues billed for program costs shall accrue short-term interest and be trued-up through Rider EEIC over the following year. In short, Rider EEIC reflects identical mechanics of program costs as reflected in the current Rider EEIC.

[16] Ameren Missouri is not proposing programs for its Lighting Service classifications, therefore no MEEIA 2024-26 costs will be allocated to or charged to those classes at this time.

Program costs to be recovered include the cost of customer incentives, administration and professional services (including business development, project analysis, trade ally management, planning, customer interaction, and unpaid PAYS charges[17]) incremental energy efficiency labor and benefits, marketing (including creative development, direct mail, television, radio, social media, collateral, and program literature), potential study, EM&V, data tracking, education (including energy efficiency awareness activities, programs to educate customers about energy efficiency and conservation), PAYS interest applicable to non-participants (difference between the pre-tax Plant In-Service Accounting [PISA] rate and the 3% financing cost charged to participants, when not transitioned to base rates), and other costs. These will be tracked by specific project codes within accounts 908 or 930 and an Activity Code of "M4PC" for each program in MEEIA 2024-26, as seen in Appendix M. Costs will be further delineated using Resource Types. For example, the Resource Type "CI" will be used for customer incentives, "EX" for administration and professional services, and other Resource Type for other costs, as specified in Appendix M.

Similar to MEEIA 2019-21, the MEEIA 2024-26 DISM includes The Company's internal incremental labor costs until those labor costs are included in base rates. This treatment of internal labor costs is directly related to the expected increase of internal resources due to the aggressive expansion of the portfolio. Incremental labor for MEEIA 2024-26 will be for employees hired by Ameren Missouri after Commission approval of the Plan who were 1) hired by Ameren Missouri after Commission approval of the MEEIA 2024-26 Plan that were (a) not hired to replace an Ameren Missouri or Ameren Services Company employee whose labor and benefit costs were accounted for in Ameren Missouri's prior general rate proceeding, (b) hired by Ameren Missouri and assigned exclusively to support Ameren Missouri's MEEIA programs; and 2) were not an Ameren Missouri or Ameren Services Company employee whose labor and benefit costs were accounted for in Ameren Missouri's prior general rate proceeding. For such qualifying employees, the accounting for their time will be fixed so that it is charged directly to the MEEIA programs using a unique project code for Incremental Labor and the M4PC activity code, which will result in such an employee's labor and benefit costs being charged to the MEEIA programs as a program cost and included in Rider EEIC.

Budget Variance

The variance of up to 20% between the budget approved by the Commission and the amount spent by the Company, which is allowed by 20 CSR 4240-20.094(5), will be set at 10% for the length of the MEEIA 2024-26 Plan.

[17] To the extent the PAYS® charge results in additional Gross Receipts Taxes, those additional taxes would follow the same process as typical retail revenues.

Throughput Disincentive

Over the Company's last two MEEIA Plans, the throughput disincentive has been extensively documented, analyzed, and included in the Commission-approved DSIM. It is well documented that energy efficiency savings cause negative impacts on utility earnings due to the combination of regulatory lag (the time it takes to incorporate changes in billing determinants into base rates) and through the reliance on volumetric rates to cover fixed costs. Throughput disincentive starts impacting the utility the moment an energy efficient measure is installed, so absent an appropriate solution, the negative earnings impact is immediate, cumulative, and continuous until base rates are updated to reflect the reduction in billing units. Therefore, in order to align utility incentives with helping customers use energy more efficiently, the reduction in revenues associated with covering fixed costs must be offset by allowing throughput disincentive recovery. The recovery of throughput disincentive is explicitly allowed by the updated MEEIA rules. In addition, to avoid a negative impact to utility earnings, the revenue from recovery of the throughput disincentive must meet a specific accounting standard due to the nature of what is being recovered (i.e., revenues that the Company would have received had it not implemented its MEEIA portfolio).

According to accounting rules that govern the types of revenues that come from Ameren Missouri's DSIM, in order to recognize the additional revenues to be billed in the future and to avoid a contemporaneous reduction in Company earnings, all the following conditions must be satisfied:

1) The demand-side program must be established by an order from the utility's regulatory commission that allows for automatic adjustment of future rates (verification of the accuracy of the adjustment to future rates by the regulator would not preclude the adjustment from being considered automatic);

2) The amount of additional revenues for the period must be objectively determinable and probable of recovery; and

3) The additional revenues must be collected within 24 months following the end of the annual period in which they are recognized.

The Company's MEEIA 2016-18, and 2019-21 Rider EEIC met these accounting requirements, and the proposed MEEIA 2024-26 Rider EEIC continues the key elements necessary to meet these accounting requirements.

Based on a margin rate analysis (that analyzed all customer bills for 12 months) and rate class level energy and demand savings estimate by end use categories, the Company has estimated the total throughput disincentive for MEEIA 2024-26 of $75 million over six years (throughput disincentive continues until the first rate case with a true-up period both

that covers the last month of MEEIA 2024-26 and after evaluated results are approved).[18] Actual throughput disincentive will be based on actual measure installations and relevant updates to inputs (e.g. TRM and Deemed Savings Table, margin rates, rebasing amounts, etc.) based on actual future EM&V results as well as general rate proceeding timing and outcomes.

Estimating the throughout disincentive requires detailed modeling of energy savings by rate class and by end-use category, interacted with ratemaking fundamentals. The Company has developed this detailed modeling over the years and has consistently made it more granular and more accurate. In fact, the MEEIA 2016-18 and MEEIA 2019-21 throughput disincentive recovery mechanism reflects these mechanics, and the Company has used similar spreadsheets to estimate the throughput disincentive for MEEIA 2024-26. To forecast MEEIA 2024-26 throughput disincentive, the Company presumed that energy savings by rate class will follow the same split as the recent experience with MEEIA 2019-21 (based on evaluated results of 2020 and 2021 plan years).

With energy savings by rate class and end-use category, the next step is to convert those energy savings into dollars, which happens by multiplying rate class savings by a rate class margin rate (i.e. the rate portion associated with covering fixed costs). The marginal rate analysis needed to determine margin rates has been updated and the explanation of that update is below.

Marginal Rate Analysis

In order to quantify the financial impact on utility revenues and margins resulting from the decline in usage associated with the adoption of efficiency measures, it is necessary to identify the specific rate that is applied to usage of the customers that is reduced as such measures are implemented. This is more complicated than it may initially appear, as each customer class has a unique rate structure and not every kilowatt-hour of energy and kilowatt of demand is priced the same. To accurately assess the financial impacts of the throughput disincentive, the Company has performed a study to determine the marginal rate for the average customer in each tariff class. Because of the unique rate structures applicable to each class, customers might pay a different amount for marginal usage or for the last kWh consumed than they do on average for all their usage. This is relevant in the context of the throughput disincentive because customers that use less energy due to installation of energy efficient measures experience a reduction on their bill according to the price of the last kWh consumed (or the last kW of billing demand established for customers on a rate with demand charges). Therefore, using marginal rates will help accurately measure the bill savings to participants and of the throughput disincentive to the Company. To produce marginal

[18] For purposes of this analysis, the Company assumed a rate case is filed August 1, 2024 then every 24 months thereafter.

rates for each tariff class, every bill of every customer subject to Rider EEIC was analyzed.

The Company first downloaded the billing data for every customer from the 12-month period ending with the December 2020 billing month. Every bill was then calculated for every customer subject to Rider EEIC based on the applicable usage characteristics and tariff rate components.[19] Next, each bill's usage was reduced by 1%, 5%, and 10%. These usage declines were used to simulate the effect of various energy efficient measures. For example, replacing a couple of light bulbs at a customer premise that has a relatively large load might only impact that customers' consumption by a percent. Replacing the air conditioning unit for a customer might easily save 10% or more of their usage. By analyzing 1%, 5%, and 10% declines, we can see the marginal impact on the bill of assorted types of measures. For each scenario of usage reduction, the bill was recalculated. The result is to have a calculation representing the original bill and a bill after the implementation of various types of energy efficient measures. The total energy consumption and total billed revenues for each scenario were then summed from the individual customer bills. The three scenarios of usage reduction were compared to the base case by calculating the change in revenue and change in consumption relative to that base case. The division of those two components ($/kWh) results in the average customer's marginal rate. The table below shows the calculations for the residential rate class assuming a 1% usage decline induced by energy efficiency.

Table 8 – Marginal Rate Study: Residential Class 1% Energy Reduction

		Summer	Non-Summer	Total
Actual Bills	Class Usage (kWh)	4,727,329,772	7,873,523,463	12,600,853,235
	Class Revenue ($)	$612,661,938	$601,236,849	$1,213,898,788
	Average Rate	$0.1296	$0.0764	$0.0963
1% Energy Reduction Case	Δ Class Usage (kWh)	47,273,298	78,735,235	126,008,532
	Δ Class Revenue ($)	$6,126,619	$5,199,554	$11,326,173
	Marginal Rate	$0.1296	$0.0660	$0.0899
Marginal Rate vs. Average Rate		100%	86%	93%

[19] For the residential class, the analysis was based on the legacy "Anytime User" rate. Despite the existence of new Time of Use rate options, only approximately 120 residential customers were taking service on a rate other than Anytime User rate at any time during the 12-month period ending December 2020. In addition, all the other residential rates are designed to be revenue neutral to the Anytime User rate, and while different measures may have a different impact on usage in peak versus off-peak periods, the overall revenue impacts of energy efficiency programs broadly are expected to be reasonably represented by application of the legacy rate structure in this study. As adoption of advanced Time of Use rate options accelerates, it may become worthwhile to conduct additional study of the impact of various measures on the other rate options in the future.

Note that in the summer, the marginal and average rates are identical for this class. That is logical considering the legacy Anytime User rate structure. In the summer period, all kWh of residential usage is priced the same under that rate structure. If every energy unit has the same price, the average and marginal unit must have the same price. However, in the non-summer period, the first 750 kWh of consumption per customer per month are priced at one rate and any additional kWhs are priced at a lower rate. This is called a declining block rate structure.[20] Since the marginal usage for many customers occurs in the lower priced block, the bill reductions will occur at something less than the average energy rate. In this case, after analyzing all the bills from that one-year period, the marginal rate is 93% of the average rate (or 7% lower).

For the other rate classes, the results are noticeably different. Each tariff has distinctive features of rate design. For the Small General Service ("SGS") class, the rate design is similar to residential, with one notable exception: the size of the block after which the non-summer period declining rate structure is initiated is variable and customer specific. Each customer's May through October billing month usage is used to establish the cut off point for the declining block rate. When a customer uses less in the May-October time frame as they implement energy efficient measures, they establish for themselves a more favorable block cut off for the non-summer months, giving them a discount on more usage for the rest of the year. This unique feature of this rate causes the marginal rate to be higher than the average rate on an annual basis.

For the Large General Service ("LGS") and Small Primary Service ("SPS") rate classes, there is a common rate design that is sometimes referred to as an hours use rate. This more complex rate is not described fully here due to the technical complexity, but the workpapers with the filing have all of the supporting details. The notable feature of this rate is that, because it is applicable to a wide range of usage levels of customers and incorporates interactions between a demand and energy charge, the hours use rate causes the average and marginal rates to be identical for all customers and usage levels that have a constant load factor.[21] The only way the marginal rate and average rate can be different is if the energy efficiency measure impacts the customer's billing demand differently than its energy. To assess the relative impacts of energy

[20] The rationale for this type of rate structure is grounded in the fact that Ameren Missouri's maximum load occurs in the summer. Capacity is built to meet that load, but often results in excess capacity in the winter. The declining block winter rate reflects lower costs associated with more efficient utilization of the Company's existing fixed assets.

[21] The load factor is the ratio of the average usage level to the maximum usage level. It is informative about how efficiently a load utilizes capacity. A high load factor is indicative of a customer that has a relatively flat usage profile. This results in a lower average rate for the high load factor customer, since there isn't a need to build as much excess capacity that will remain idle during the customer's lower usage periods.

efficiency on energy consumption relative to demand, the Company used the actual demand and energy savings impacts by end-use category during the same period over which the marginal rate analysis was performed (the twelve months ending December 2020). The analysis incorporated this data and end use load shape information to determine the estimated percent reduction in customer billing demand for a given percentage energy reduction. This relationship between demand and energy was applied to the usage reduction scenarios (1%, 5% and 10% savings) to determine corresponding reductions to billing demands to be used when recalculating customer bills.

Even though the rate design is slightly different, a similar method of analyzing energy savings by end use categories was utilized for the Large Primary Service ("LPS") rate class to determine demand savings given a kWh or energy savings.

Once the marginal revenue reductions have been calculated associated with each kWh of savings, the marginal rate is reduced by a factor derived from the Company's Fuel Adjustment Clause ("FAC"). Due to the mechanics of the FAC, the portion of the foregone marginal revenue from each kWh of load reduction that was designed to cover net energy costs is subject to a reconciliation that allows the Company to recover 95% of the foregone net energy-related amount of revenue. As such, the marginal rate calculated above is adjusted to just reflect the portion of that revenue that contributes to the fixed (non-energy-related) cost recovery of the Company.

The resulting margin rates are different on a class-by-class basis and a month-by-month basis due to the load characteristics of that class and how they interact with the demand and energy savings associated with efficient measures. The margin rates determined by the marginal rate analysis for each class are presented in the table below.

Table 9 – Net Margin Rate by Rate Class and Month[22] [23]

Class	RES	SGS	LGS	SPS	LPS
January	$0.051041	$0.055283	LGS, SPS, and LPS Net Margin Rates are calculated for each specific end use and therefore an end-use agnostic net margin rate is not available.		
February	$0.051569	$0.055595			
March	$0.052598	$0.057380			
April	$0.054791	$0.063914			
May	$0.056398	$0.068912			
June	$0.115657	$0.099557			
July	$0.115657	$0.099557			
August	$0.115657	$0.099557			
September	$0.115657	$0.099557			
October	$0.055871	$0.063349			
November	$0.055909	$0.063200			
December	$0.052723	$0.059422			

It should be noted that the various cases (i.e. 1%, 5%, and 10% reductions) produced extremely similar results to each other, to the point of being immaterial in terms of the differences. This indicates that regardless of the size of the impact of the energy efficient measure, the margin rate is similar. With each general rate proceeding, the process above will be repeated to produce updated margin rates to reflect the outcome of the rate proceeding with regards to potential changes to items such as: customer usage data, demand and energy savings by end use category, underlying costs, and class rate designs. Updated margin rates resulting from general rate proceedings will be updated in Rider EEIC and used for throughput disincentive calculations from that point forward until the results of the subsequent general rate proceeding.

Throughput Disincentive Calculation for Rider EEIC

The throughput disincentive ("TD") calculation will largely follow the same procedure as what is being used in MEEIA 2019-21.

The first input required for the monthly throughput disincentive calculation is the kWh savings by end-use category by rate class. Monthly load shapes by end-use category are used to distribute types of energy savings (which are reported as annualized kWh savings) across the months in the year to better reflect the seasonality of the savings that were achieved. For example, the cooling category has most of its savings during the

[22] If the Company's base rates change (e.g., due to tax reform or otherwise) before the Plan's programs commence, these margin rates will need to be updated to reflect a marginal rate analysis using the new base rates.

[23] End use specific net margin rates for LGS, SPS, and LPS customers can be seen on sheet no. 91.19 and 91.20 of the Company's currently effective tariff.

summer months while the lighting category has savings spread out more evenly with an increase in the winter months. The end-use categories and load shapes are detailed in volume 1 of the TRM (Appendix G). The conversion to monthly savings data allows the Company to determine current month energy savings[24] as well as cumulative monthly energy savings from prior month energy savings activities. As energy savings are incorporated into base rates, the cumulative monthly savings are reduced to avoid double counting. The process of including savings into base rates and rebasing the throughput disincentive is discussed further below. Next, the savings are multiplied by a NTG factor. Each program year will use an initially assumed NTG of 0.799 until such time as a NTG factor is determined through EM&V for that program year. Thereafter, for each given program year, the NTG factor determined through EM&V will be used. This net monthly savings (current month plus cumulative savings less savings included in base rates) by rate class is then multiplied by the appropriate margin rate to arrive at the monthly dollar value of throughput disincentive by rate class.

When base rates are adjusted, upon the conclusion of a general rate proceeding or otherwise, the cumulative, annualized, and normalized (at a net-to-gross factor of 1.0) kWh savings from all active MEEIA programs, except for Demand Response Event Net Energy, will be reflected in the unit sales and retail revenues used in setting the rates through the rate case true-up period.[25] Additionally, the rate case test period hourly loads used for fuel modeling will be adjusted to reflect the annualization of kWh for MEEIA Programs, except those listed above, using hourly end-use category load shapes. Upon the adjustment for the kWh savings in the rate case, the throughput disincentive will be rebased to subtract the kWh savings that are reflected in the billing units used to establish new rates from the cumulative kWh savings when the rates take effect. The rebasing adjustment will be applied for each program year vintage accordingly with the relevant vintage portfolio-level net-to-gross factor.

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[24] Current month savings are divided by 2 to reflect a "half-month" convention which reflects the fact that not all measures were installed on day 1 of a month just as all measures were not installed on the last day of the month.

[25] The Procedure for computing the MEEIA annualization adjustment for billing units is as follows:

Step 1: Begin with estimated actual hourly load per class;

Step 2: Compute hourly weather normalized energy per class for Step 5;

Step 3: Compute calendar month EE annualization adjustment based on the difference between the actual monthly EE savings realized and the annualized EE savings for each end-use measure category and rate class;

Step 4: Compute hourly EE annualization adjustment by using the applicable end-use hourly shape for each measure category applied to the results of Step 3;

Step 5: Apply the hourly EE annualization adjustments from Step 4 to the hourly weather normalized energy from Step 2 (as adjusted for growth). The results of this step are to be used in the hourly loads used for fuel modeling; and

Step 6: Convert calendar month EE annualization adjustments from Step 3 to billing month EE annualization adjustments by computing a weighted average of the calendar months based on billing cycle percentages

Demand Response Event Net Energy ("DRENE") savings resulting from a demand response event are treated differently than first year savings from EE measures (including demand response annual energy savings). The DRENE savings are for a specific period and would not be allocated by load shape across the whole year. The savings also do not continue into any subsequent months. All of the throughput disincentive is occurring within a month and will be recovered within the same month. Any DRENE savings occurring in the test period used to establish base rates will be added back to the observed loads in those periods and the throughput disincentive associated with future DRENE savings will be recovered through the DSIM.

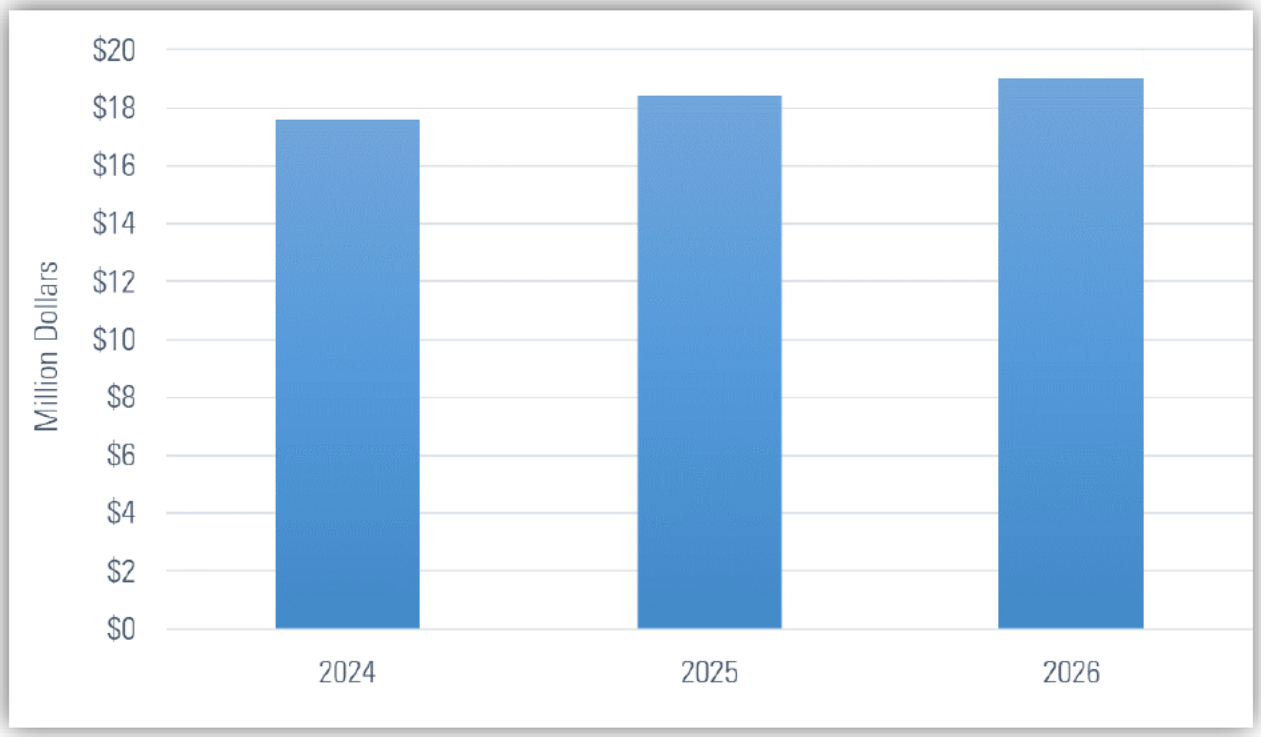
Earnings Opportunity

By passing MEEIA, the state of Missouri adopted the policy of valuing demand-side investments equal to traditional investments in supply and delivery infrastructure. In support of this policy, the Commission provides utilities with timely earnings opportunities associated with cost-effective efficiency savings. Furthermore, the Commission's resource planning rules require the utility to consider and analyze demand-side resources, renewable energy, and supply-side resources on an equivalent basis. The utilities in Missouri earn a return on investments they make in supply-side and delivery resources. Therefore, utility decision-makers evaluate the earnings implications of demand-side resources they would deploy and unless demand-side resources are afforded comparable earnings opportunities, those resources would no longer be valued on an equivalent basis with supply-side and/or delivery resources – circumstances that MEEIA was explicitly designed and enacted to prevent.

Earnings Opportunity Payouts

Based upon an extensive analysis of benchmarking to past MEEIA cycles and with other jurisdictions, the Company has included an annual average earnings opportunity of approximately $18.3 million, which equates to a total of $55 million for the life of the Plan. The chart below shows the target annual payout amounts based on the performance targets in each year. This section further provides details of the various performance targets and the justification of the earnings opportunity amount.

Figure 37 – Annual Earnings Opportunity Payout Targets



Earnings Opportunity Calculator

Consistent with the MEEIA 19-21 earnings opportunity, the Company is proposing the earnings opportunity be based on the performance of four key metrics and two performance bonus metrics that are explained in detail further below. To determine the annual earnings opportunity award, the Earnings Opportunity Calculator (included as Appendix N) will be used. The Earnings Opportunity Calculator is a spreadsheet with a sheet for each program year containing all necessary calculations and details to calculate the earnings opportunity award. The Earnings Opportunity Calculator also has the cells color-coded to identify which cells are formulas, static inputs that do not change (like performance targets), input cells for EM&V results, and the earnings opportunity award payout amounts. Each of the performance metrics are setup in the Earnings Opportunity Calculator such that the EM&V results for each program year are the only cells (highlighted in blue) that are to be updated and the spreadsheet will automatically calculate the annual earnings opportunity payout amount for each program year. Each performance metric also has a performance target and maximum performance cap built into the Earnings Opportunity Calculator. Ameren Missouri will instruct its EM&V contractor to include a separate section in a portfolio summary report with each input for each performance metric in the Earnings Opportunity Calculator.

The four key metrics used in the earnings opportunities:

1) Cumulative Demand Response Capability for demand response programs
2) Subtotaled Coincident Net Peak Demand Savings
3) Subtotaled Portfolio Net Energy Savings for energy efficiency programs (includes income eligible programs)
4) Subtotaled Budget Spend for income-eligible programs

The two performance bonus metrics used in the earnings opportunity:

1) Demand Response Events
2) Subtotaled financing total for PAYS program[26]

Inclusion of Throughput Disincentive True-up in the annual Earnings Opportunity

After the completion of each program year, the EM&V schedule will be followed and those evaluated results will be input into the Earnings Opportunity Calculator. The Earnings Opportunity Calculator will determine the annual earnings opportunity award, which will be included in the subsequent Rider EEIC filing for recovery. Along with the annual determination of the earnings opportunity award, a true-up of the throughput disincentive will be determined for the program year based on the EM&V results compared to what was included in Rider EEIC as deemed savings. NTG will be trued-up at the portfolio level. The true-up amount (positive or negative) will be added to the annual earnings opportunity award amount subject to a floor of $0 per year. Program year vintages of throughput disincentive shall be tracked and trued-up separately until they are included in base rates.

Performance Metrics for Earnings Opportunity

Below is an explanation of all of the earnings opportunity performance metrics. Details of the calculation of each performance metric are in Appendix N.

Cumulative Demand Response Capability

This performance metric will be based on the cumulative MW demand response capability at the end of each calendar program year ("Program Year"). First, demand response savings will be measured during the DR events[27] called each Program Year. Then those savings will be adjusted to reflect normal weather for peak conditions. Finally, peak demand savings will be adjusted to reflect enrollments through the end of the Program Year. For residential demand response, the cumulative demand response capability in each year will be the normalized average peak savings per participant multiplied by the

[26] The proposed budget for the PAYS program is expected to support $4 million in financing for participant projects.
[27] DR events is defined as all Residential and Business test and triggered DR events.

number of participants enrolled at the end of the Program Year. For business demand response, the cumulative demand response capability will be the evaluated MW from customers enrolled during each Program Year's MISO season events plus tested[28] MW from new enrollees before the end of the program year. Each MISO season within each program year will be evaluated separately, and the maximum season demand response capability will be the capability metric. The cumulative demand response capability will be reported each year in the EM&V report. The reported cumulative MW capability for each program year will be input into the Earnings Opportunity Calculator to determine the earnings opportunity award amount for this performance metric. This performance metric has an annual cap of 125% performance compared to the annual target.

Subtotaled Coincident Peak Demand Savings

The performance metric for this performance measure will be the first-year incremental MW coincident peak demand savings determined by multiplying the MWh energy savings by the relevant measure category energy-to-peak-demand-conversion-factor specified in the TRM/Deemed Savings Table and will be reported in the EM&V report. All Residential, Business and Income-Eligible programs demand savings will contribute. The EM&V report will include a subtotal of portfolio coincident peak demand savings matching the definition of this performance metric for each program year and that subtotal will be input into the Earnings Opportunity Calculator to determine the earnings opportunity award amount for this performance metric. This performance metric has an annual cap of 125% performance compared to the annual target.

Subtotaled Portfolio Energy Savings

Rationale for Performance Metric: Incentivizes energy savings from qualifying energy efficiency programs. Energy savings have an important impact on future resource requirements and therefore provide significant value to all customers.

The performance metric for the Energy Efficiency Energy Savings will be the first-year incremental MWh energy savings reported in the EM&V report. All Residential, Business and Income-Eligible programs demand savings will contribute. The EM&V report will include a subtotal of portfolio energy savings matching the definition of this performance metric for each program year and that subtotal will be input into the Earnings Opportunity Calculator to determine the earnings opportunity award amount for this performance metric. This performance metric has an annual cap of 125% performance compared to the annual target.

[28] Tested MW's will be determined by simulating a 1-hour event for a new participant. 2-week window will be scheduled in which the test(s) event will occur. The parameters for the event will be the same as if it were a real DR event. The notification, the baseline, the expectation of the participant's performance, and the evaluation of the participant's performance will be as if it were a real event.

Subtotaled Budget Spend for Income-Eligible programs

The performance metric for the Income-Eligible Budget Spend consists of exceeding a threshold criterion of at least 50% of the Commission approved annual budget (administrative cost-plus customer incentive cost) for the program year in question is spent. Each program year's budget, along with the calculation of the 50% threshold, has already been included in the Earnings Opportunity Calculator and will not change. The only input needed for this metric is the actual spend for each program year of the Income Eligible Sector programs. The actual budget spend includes spend on dual fuel measures as part of co-delivery implementation with natural gas utilities. The actual budget spend excludes spend and credits on gas only measures, as well as credits on the gas portion of dual measures reimbursed by natural gas utilities. That actual spend will be reported directly out of the Company's accounting system and included in the EM&V report. If the Company's actual spend on the Income-Eligible Portfolio is less than the 50% threshold amount, then the Company is eligible for 0% of the earnings opportunity award for that specific performance metric for that program year. Otherwise, the Company is eligible for 100% of the earnings opportunity award amount subject to its performance. This performance metric has an annual cap of 125% performance compared to the annual target.

Earnings Opportunity Performance Bonus Metrics

Below is an explanation of all of the earnings opportunity performance metrics. Details of the calculation of each performance metric are in Appendix N.

Demand Response Events

The earnings opportunity bonus metric for Demand Response events consist of the following criteria:

- The maximum earnings opportunity performance bonus is $800,000 per year ($80,000 per event).
- No more than five (5) test events will be included, unless those test events are specifically called for:
    - Locational demand purposes
    - Off-peak capability, such as during a winter peaking period

Subtotaled Financing Total for PAYS Program

The earnings opportunity bonus metric for PAYS program is to support efforts to increase participation of moderate income customers to complete comprehensive energy efficient upgrades to best manage their energy usage. The maximum earnings opportunity is $200,000 per year and is based on the total budget of projects financed. The max bonus earnings opportunity equates to $2,000,000 in financed projects annually. The actual

finance total includes financing on all electric and dual fuel measures as part of co-delivery implementation with natural gas utilities.

Forgone Earnings Opportunity

IRP Analysis

The Company's IRP filing provides a useful context for discussion of the impacts of demand-side programs on utility investment in supply side resources, and therefore earnings opportunities. Ameren Missouri filed its 2020 IRP on September 27, 2020. In that filing, Ameren Missouri communicated its preferred plan, which includes RAP-level energy efficiency and demand response programs throughout the planning horizon, provided that the constructive regulatory treatment for demand-side management continues and utility incentives are aligned with helping customers use energy more efficiently as required by the MEEIA. The Company subsequently filed its 2022 Change in Preferred Plan in June 2022 to update the plan for a number of changes in circumstances that have arisen since the 2020 IRP was filed. However, the commitment to RAP level energy efficiency was unchanged in this update.

The 2020 IRP and 2022 Change in Preferred Plan each represented significant changes in the Company’s plan to meet its customers’ energy and capacity needs over the planning horizon. The 2020 IRP identified the need for a sustained investment in renewable energy in order to transition the generation mix to cleaner resources as the existing coal fired fleet reaches the end of its useful life. The 2022 Change in Preferred Plan included, among other things, the Company’s decision to advance the retirement of the Rush Island Energy Center in response to a court ruling impacting the plant. This plan change further advanced the timeline for planned renewable generation development, increased the planned utilization of battery storage, and identified the need for a combined cycle gas plant to help maintain the reliability of the system. This evolution of the preferred plan over the 2020 and 2022 filings reflects a significant paradigm change that will initiate a sustained period of investment in generation and storage supply-side resources in order to execute the clean energy transition. It is evident that for the duration of the planning horizon, significant and sustained new construction and/or acquisition of supply side resources will be necessary.

The RAP portfolio of energy efficiency and demand response programs included in the preferred plan is expected to reduce the Company’s system coincident peak demand by almost 24% by the end of the planning horizon relative to a scenario with an absence of demand side programs based on the 2020 IRP. This represents over 2,000 MW of peak demand savings by 2040. Energy reductions associated with the RAP plan by the end of the same timeframe exceed 4 million MWh per year and 12% of annual retail energy sales. These demand side impacts of the Company’s MEEIA programs are game changers in terms of the ultimate amount of supply side resources that will be needed.

There is no doubt that the sustained investment in the supply side resource mix needed to meet the Company's load requirements will look markedly different with and without these RAP level demand side savings. Absent the Company's sustained commitment to DSM, it would clearly be investing in a substantially higher level of supply-side resources, despite the already significant investment that will be required regardless. This is a significant part of the real value proposition for customers of demand side management efforts.

As discussed at length in the Company's Change in Preferred Plan, however, the planning environment for supply side resources is becoming increasingly complex. The need to transition the fleet to a cleaner resource mix, and the changing reliability imperative of dealing with more variable resources, ensuring seasonal capacity and energy requirements all would influence the supply side mix that would need to be developed to meet the higher annual and seasonal peak demand and energy requirements that would exist without DSM in the equation. While it is nearly certain that the resources would include substantially greater level of renewables – given that the transition is focused on clean resources – there would be a variety of additional resources required, including more battery storage (particularly in the absence of RAP-level demand response), and perhaps additional energy or capacity resources as well.

In order to simplify this equation, and conservatively estimate the earnings opportunity that is forgone by the Company through the substitution of demand side measures for supply side resources, the Company conducted an analysis that focuses on capacity in its simplest and most cost effective (from a supply side perspective) form: construction of new combustion turbines. This is conservative, as just mentioned, because the reality of the supply-side mix that would be needed in the absence of DSM would include resource types with a much higher capital cost per unit of demand-serving capability. Wind, solar, batteries, combined cycle generators – any viable supply side alternatives, would come at a higher cost per kW than a simple cycle combustion turbine ("CT"). In fact, that is why MISO uses the cost of a CT as its measurement of "CONE" (the cost of new entry). When MISO is short capacity resources, it prices marginal capacity based on the cost of a CT, as the lowest cost supply-side resource to fill the capacity shortfall. By using the same capital cost assumptions MISO used to estimate the value of CONE for incremental capacity ($815/kW in 2022$ for 237 MW advanced CT),[29] and deconstructing it into its cost components, one can infer an earnings stream associated with a MW of supply-side capacity. This value can be viewed through the lens of the MW of peak demand savings associated with a plan, such as this MEEIA 2024-2026 plan to identify a conservative estimate of forgone earnings when supply-side capacity is displaced by DSM. Multiplying the demand savings from this MEEIA application with the annual $/kW earnings from a

[29] Please see "MISO 2021 Annual CONE filing595139.pdf", pages 5 and 9.

CT, Ameren Missouri estimates the NPV of after-tax earnings would be $94 Million, or an annuity of $40 Million over 3 years.

Earnings Opportunity Benchmarking

The IRP analysis described above demonstrates forgone utility earnings opportunity are material and observable, indicating a $31.6-$43 million annual earnings opportunity would allow utility decision makers to value demand-side resources equally to supply side. Benchmarking results from other states confirm the reasonableness of the earnings opportunity reflected in the Plan given the calculated forgone earnings the Plan produces.

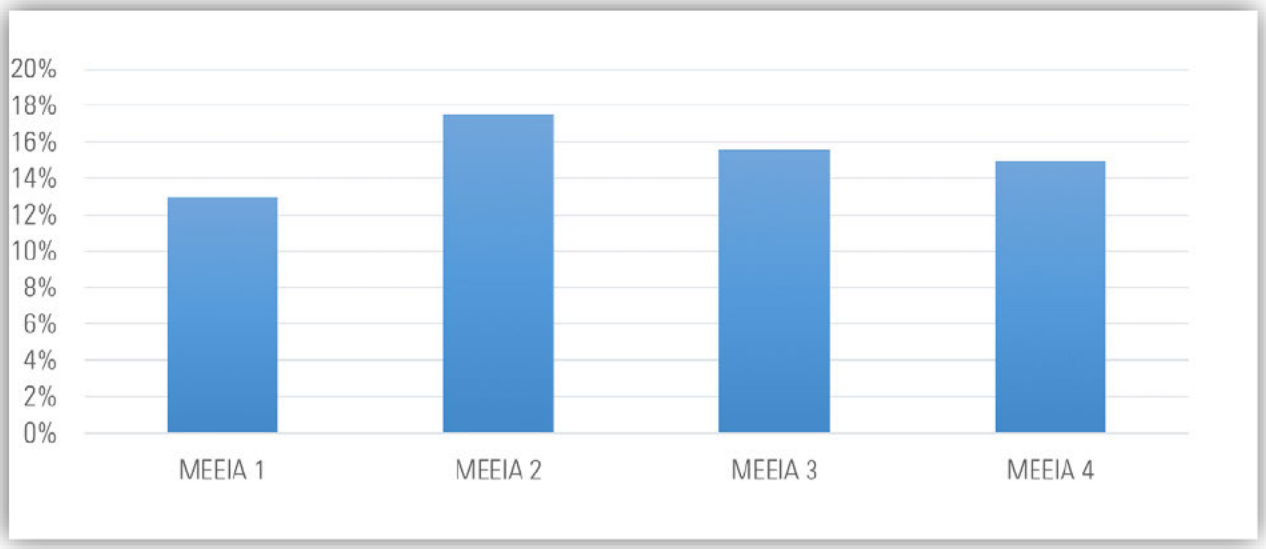
In an Institute for Electric Innovations ("IEI") report titled, “Energy Efficiency Trends in Electric Power Industry,” published in October 2021, almost 40 states have regulatory frameworks that support electric company investments in energy efficiency, with 38 states allowing some sort of performance incentive.

In an ESource article titled “The Evolution of Utility Performance Incentives” published in October 2022, 45 filings in 16 jurisdictions with performance incentives were reviewed. These utilities had a variety of approaches to calculating the performance incentive with:

- 50% using Shared Net Benefits;
- 31% using a combination of methods;
- 11% using a Percent of Spending or Sales; and
- 7% using an Adjustment to Return on Equity

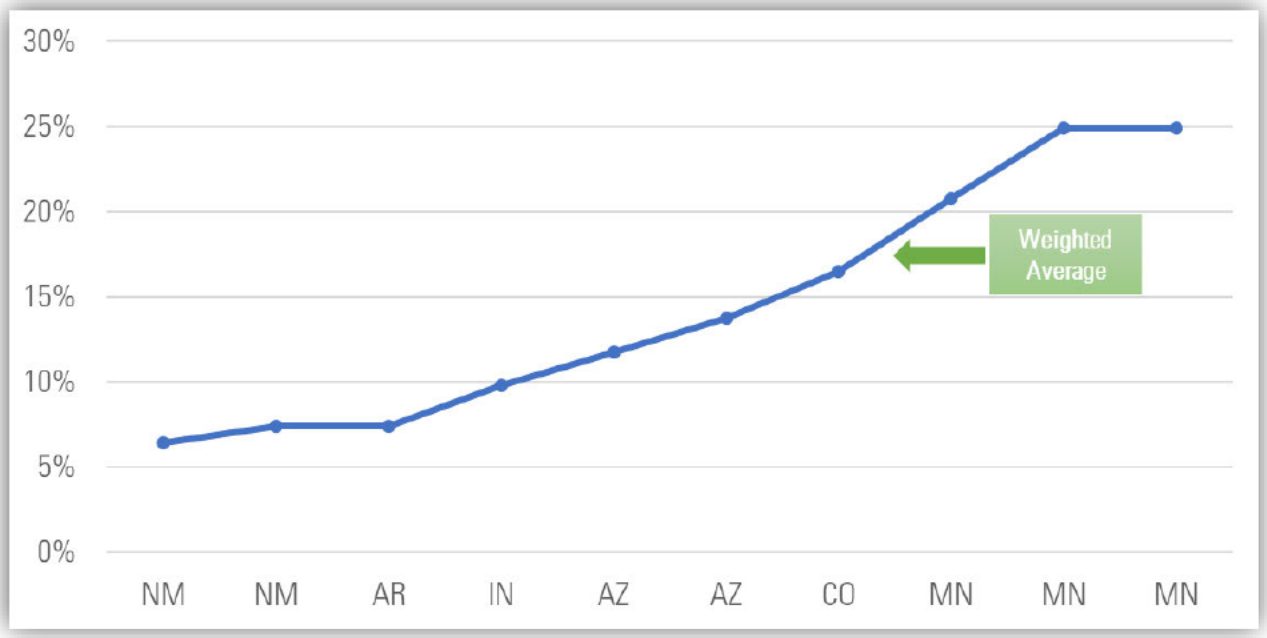
Ameren Missouri received an Earnings Opportunity target of 12.7% in MEEIA 1, 17.5% in MEEIA 2 (2016-2018) and 15.5% in MEEIA 3 (2019-21 plus PY22 and PY23 extensions). Ameren Missouri has modeled an EO target of 15% for its MEEIA 4 Plan.

Figure 38 – Historical MEEIA Earnings Opportunity as a % of Planned Budget



Per the ESource article, the proposed Earnings Opportunity is in line with those received in recent years at a comparison set of vertically integrated utilities:

Figure 39 –Earnings Opportunity as a % of Spend at Vertically Integrated Utilities

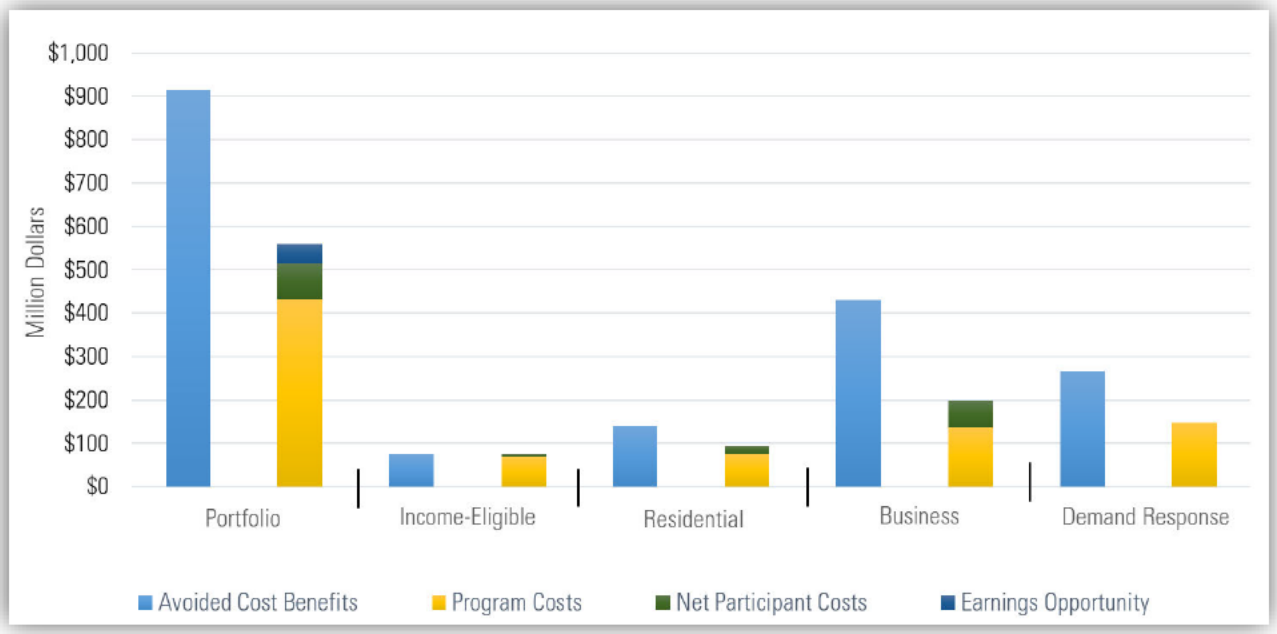


While the chart above serves as a high-level comparison, it is also important to point out some limitations in those comparisons. The utilities included above are all vertically integrated, but there may be differences such as whether the utility met all their goals for the year, whether the utility recovers a throughput disincentive, and, whether they have prospective evaluations.

Impact on Customers

MEEIA 2024-26 is expected to result in lifetime net benefits to all customers (participants and nonparticipants) of $439 million from the utility cost perspective and $355 million from the total cost perspective. The benefits for both tests include the following categories: avoided energy, generation capacity and transmission and distribution investment. The figure below illustrates the total cost perspective and demonstrates that the benefits of MEEIA 2024-26 far exceed the costs.

Figure 40 – TRC Cost-effectiveness Results

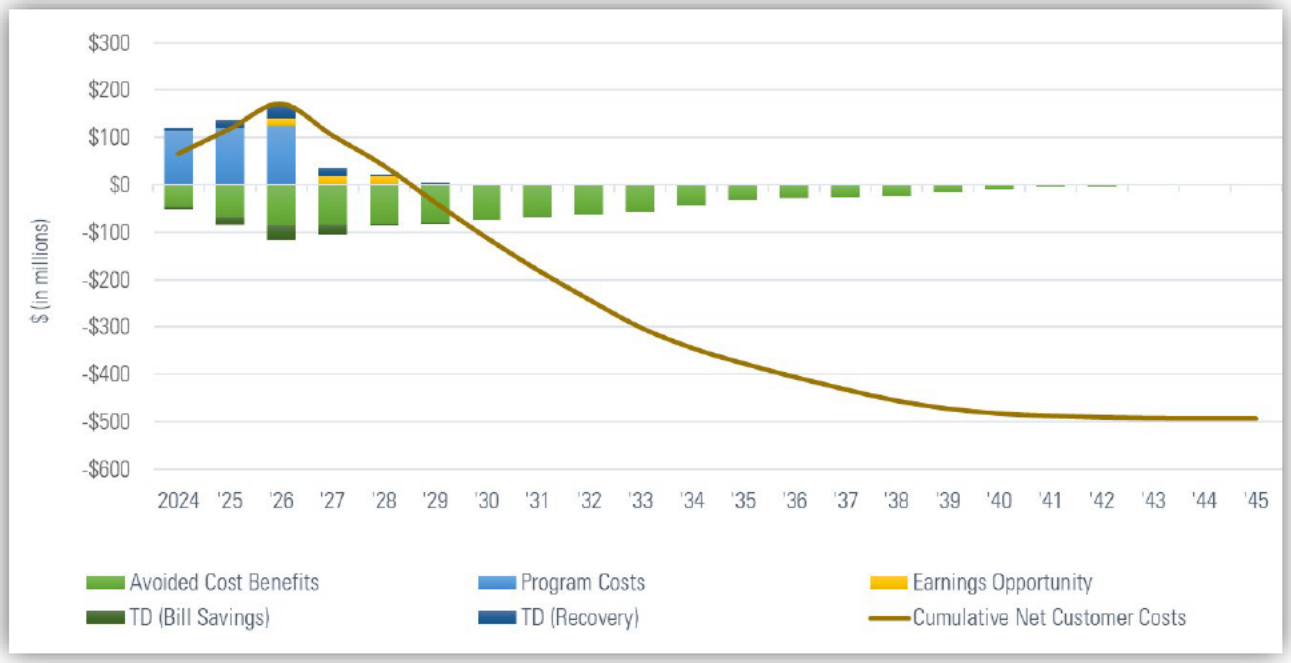


It is important to note that the figure above does not include the throughput disincentive or the throughput disincentive recovery. As a practical matter, the throughput disincentive is a subset of "lost revenues" included in the Ratepayer Impact Measure ("RIM") cost-effectiveness test. In short, the throughput disincentive represents the amount of "lost revenue" from the RIM test that is in between rate cases while the RIM test assumes perfect ratemaking (i.e. that utility costs and revenues automatically balance out). The "lost revenues" in the RIM test are the same amount as the "bill savings" from the participant cost test. The TRC and UCT do not include "lost revenues" because they are not incremental costs to demand-side resources and are a transfer payment between customers.

The figure below shows the annual and cumulative costs and benefits of MEEIA 2024-26. It is apparent from the figure below that the costs of the programs are borne by customers up front, consistent with MEEIA's requirement for timely cost recovery, but benefits continue to accrue for a long period of time following the end of the program

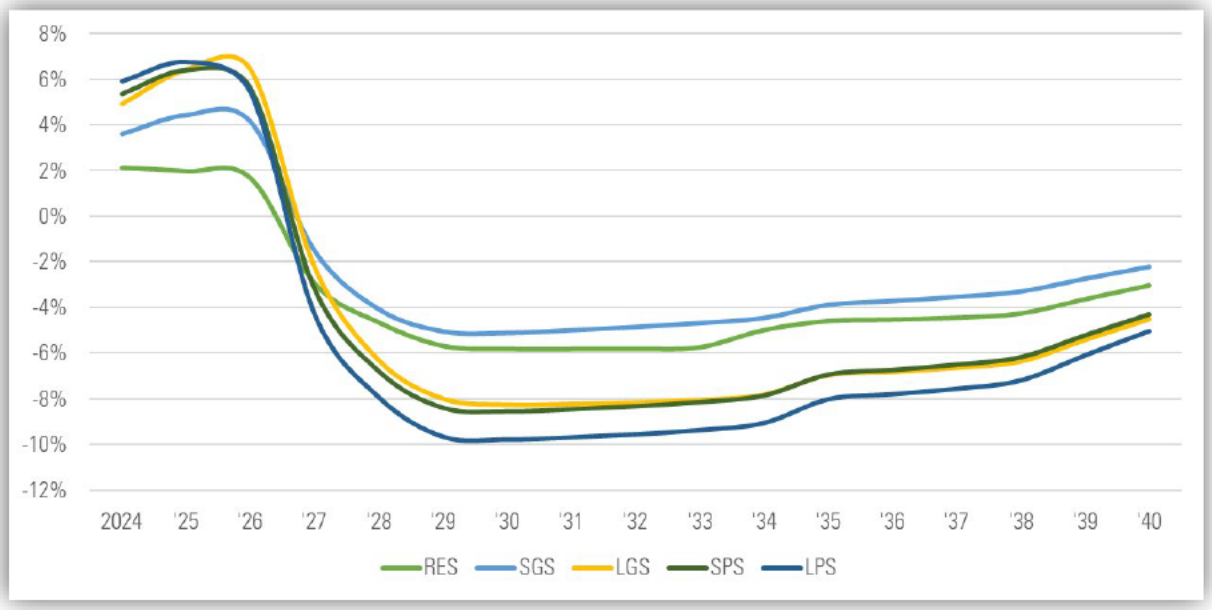
implementation. The benefits surpass the costs in total magnitude in 2027 and continue to grow for the useful lives of the installed measures.

Figure 41 – 25 Year Revenue Requirement Impact of MEEIA 2024-26



The projected bill impacts by rate class associated with the MEEIA 2024-26 programs are shown in the figure below.

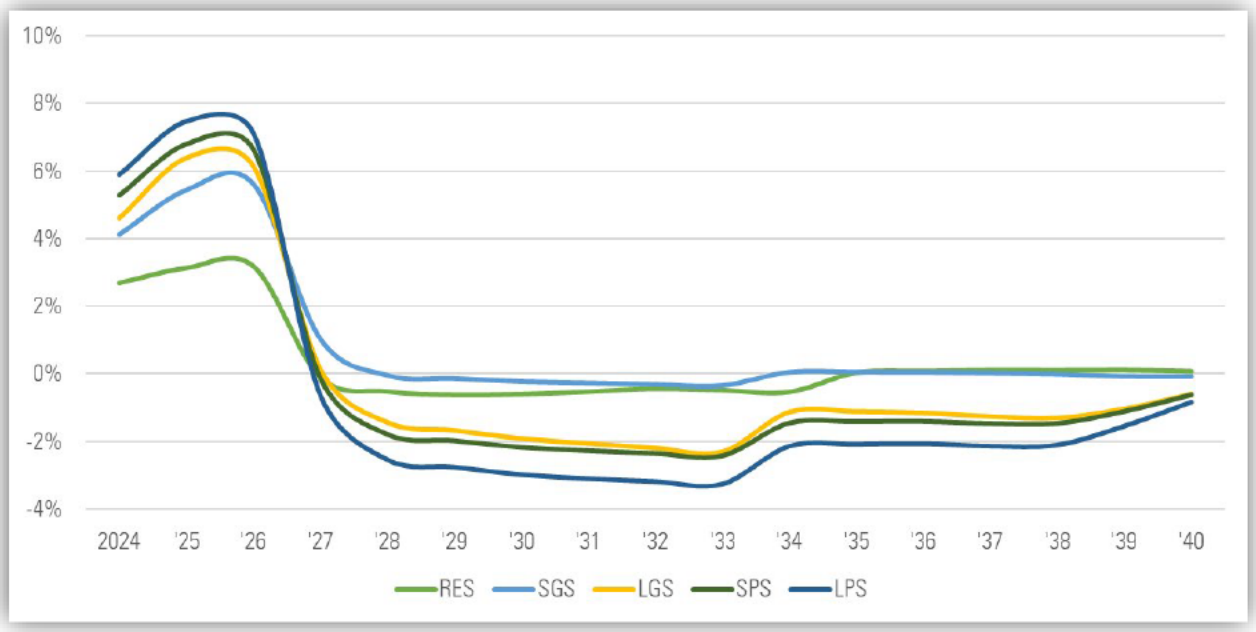
Figure 42 – DSIM Bill Impacts



Note that like the cumulative cost curve, the bill impacts cause an increase in total bills at first, as the program costs and throughput disincentive are paid as they occur and the EO is realized annually and collected the subsequent year. As soon as the implementation period concludes and the costs are paid, bills are immediately lower beginning in 2027 than they would otherwise have been absent from the programs. Depending on the rate class, by the time the earnings opportunity is paid in full, customers begin recognizing annual bill reductions of up to or exceeding 10% per year.

While bills trend lower over time, the same is not necessarily the case with average rates paid by customers. Keep in mind that, over time, customers receive bill savings even in the face of higher rates because the volumes of energy that they are purchasing at those rates are lower than they otherwise would have been. The rate impacts are still worth noting and are shown in the figure below.

Figure 43 – MEEIA 2024-26 Portfolio and DSIM Rate Impacts



The rate impacts also peak during the program years of 2024-2026 while costs are reflected in rates. After the programs end, rates are higher because the fixed costs of the utility revenue requirement are spread over fewer kWh of usage due to the energy savings customers recognize. It is imperative to recognize that despite higher rates, the total customer outlays for energy are fully expected to be lower with the implementation of the MEEIA 2024-26 programs, as shown previously on the bill impacts.

Impact on the Company

Financial Impact

To find that the Company's incentives are aligned with helping customers use energy more efficiently, the Commission should assess the financial impact of the Plan, including the proposed programs and the DSIM, on the Company's projected financial results. Specifically, from a financial perspective, there are two criteria that the Commission should use to establish a finding that it has discharged its obligations under MEEIA. The first is the finding that program costs are being recovered on a timely basis and the negative impacts of the throughput disincentive are also remedied on a timely basis. The second is that there is a timely earnings opportunity to replicate the earnings opportunity associated with what Ameren Missouri does not realize due to the impact this portfolio would have on otherwise needed supply side and other investments. The Company has presented several analyses and benchmarks, so the Commission has enough basis to find that the earnings opportunity aligns the Company's incentives with its customers' interest in using energy more efficiently. The table below presents the income statement impacts anticipated from the Plan assuming achievement of 100% of the savings goal.

Table 10 – MEEIA 2024-26 Plan Impacts on Net Income

	Total	2024	2025	2026	2027	2028	2029	2030	2031	2032
Revenue										
Program Cost Recovery	$366.8	$116.1	$123.0	$127.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TD (Bill Savings)	-$75.1	-$6.1	-$15.8	-$28.8	-$18.8	-$3.9	-$1.6	$0.0	$0.0	$0.0
TD (Recovery)	$75.1	$6.1	$15.8	$28.8	$18.8	$3.9	$1.6	$0.0	$0.0	$0.0
Earnings Opportunity	$55.0	$0.0	$17.6	$18.4	$19.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Revenue	**$421.8**	**$116.1**	**$140.6**	**$146.1**	**$19.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Costs										
Program Costs	$366.8	$116.1	$123.0	$127.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Costs	**$366.8**	**$116.1**	**$123.0**	**$127.7**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Gross Margin	$55.0	$0.0	$17.6	$18.4	$19.0	$0.0	$0.0	$0.0	$0.0	$0.0
Income Taxes	$14.6	$0.0	$4.4	$4.6	$4.8	$0.2	$0.2	$0.1	$0.1	$0.2
Net Income	**$40.4**	**$0.0**	**$13.2**	**$13.8**	**$14.3**	**-$0.2**	**-$0.2**	**-$0.1**	**-$0.1**	**-$0.2**

There are a few items worth observing in the table above. It is important to note that the TD bill savings equal the TD recovery, meaning that overall, the impact of TD is addressed adequately. Second, the accounting treatment of the incentive affords the Company the ability to record the associated revenues in the year in which the award is earned. For the purposes of this analysis, it is assumed that the award would be recorded as earnings each year as final EM&V results are available.

The table below looks at Ameren Missouri's current five-year business planning period and translates the financial impacts of MEEIA 2024-26 into the impacts on key credit metrics: FFO[30]/Debt and FFO/Interest.

[30] FFO stands for Funds From Operations and is a key metric associated with operating cash flows.

Table 11 – MEEIA 2024-26 Plan Impact on Key Credit Metrics (Confidential)

**

[redacted]

**

The table above demonstrates that overall impacts of the MEEIA 2024-26 plan and DSIM on credit metrics are small, but slightly supportive of credit quality. The credit metrics analysis provides support for the conclusion that the DSIM aligns the Company's incentives. Additionally, the small movement of the metrics in context with their baseline levels suggests a negligible impact on the financial risk of the Company.

Business Risk Impact

Recognition and management of risk is critical to the success of the Company. The Company has identified the highest enterprise risk as being modifications to major energy centers, greenhouse gas emission control requirements, cyber security, and nuclear event liability. In addition, the Company has identified load loss associated with energy efficiency (or other demand-side resources) outside of the Company's programs as an important business risk. The proposed DSIM does not directly impact the need for modifications to major energy centers, greenhouse gas emission control requirements, nor the likelihood of a nuclear event liability. In regard to cyber security, implementing the MEEIA 2024-26 plan will require the Company to share certain information with its contractors, but the Company has extensive policies and procedures in place to mitigate those risks. The MEEIA 2024-26 plan is meant to accelerate adoption of energy saving behaviors and measures; therefore, the Plan is more likely to increase the risk of load loss outside the program to the extent the programs are effective at market transformation without capturing those effects through EM&V. In summary, the proposed DSIM has a negligible impact on overall business risk.

2023 Market Potential Study Sensitivities

In addition to the development of the base case for Program Achievable potential in the 2023 MPS, sensitivity analyses were performed surrounding several key assumptions in the study. The final set of sensitivity options analyzed were the product of stakeholder discussions. A list and overview of the sensitivities, and their applicability across energy efficiency and demand response, are shown in Table 12 below.

Table 12: Overview of 2023 MPS Sensitivities

Sensitivity Option	Applicability	General Description
Avoided Costs	Residential & Business EE; Residential & Business DR	Avoided costs represent the primary benefit within the TRC Test, and higher/lower avoided costs can lead to greater/lesser potential. The analysis included two direct sensitivities related to avoided costs, including: a) avoided energy and capacity costs of +30%/-50%, and b) changes in T&D costs by 200%/0%, with no changes in avoided and capacity
Prolonged Economic Downturn	Residential & Business EE; Residential & Business DR	A reduction in load forecast by holding specific economic factors constant, and a complimentary reduction in short and long-term adoption rates reflecting negative impacts of economic conditions
COVID-19 Supply Chain Impacts	Residential & Business EE	A reduction in the near-term adoption levels to account for short-term supply chain constraints, with no change (relative to the base case) to the long-term adoption rates. No change to the existing long-term load forecast.
Volatile Weather	Residential & Business EE	Assuming heating and cooling degree days increase by 25%, which affects both the load forecast and weather-sensitive measure savings and cost-effectiveness.
High Touch Marketing	Residential & Business EE; Residential & Business DR	Assumes additional marketing raises program awareness and reduces the non-financial barriers to adoption. Assumed non-incentive program costs are increased to reflect additional marketing and education costs.
Large Customer Opt-Outs	Business EE; Business DR	Estimates potential both including and excluding all eligible opt-out customers in the analysis, for both a higher and lower estimate of business sector potential.
Utility Attribution (NTG Uncertainty)	Residential & Business EE	Net to gross (NTG) factors affect total program potential and net program benefits. Sensitivities assessed a 15% increase and a 30% decrease to the NTG factors used in the base case analysis.
Improved Technology Savings/Costs	Residential & Business EE	Assumed reduced measure costs (up to 35% reduction for emerging technologies and/or highest tier measures, and 5%-20% for all other measures), and a shift in program participation to the most efficient technologies over the study period.
Increased Income-Eligible Funding	Residential EE	Increased incentives to be equal to 100% of the full measure cost (rather than incremental, when the incentive was not already equal to full measure cost) and increased awareness factors for HVAC and Water Heating measures

PAYS Sensitivity	Residential EE	Increased program awareness factors to account for financing element of PAYS; market acceptance curve moved forward in time; 100% NTG ratios for measures assigned to PAYS.
Summer Planning Reserve Margin	Residential & Business EE; Residential & Business DR	Sensitivity to assess the impact of transitioning from ICAP to UCAP for Summer Planning Reserve Margin.

As noted in the Table, demand response was evaluated against a subset of these sensitivities, but also included an additional scenario accounting for additional rate program options with enabling technology and other emerging DR programs.

In general, candidates for the sensitivity analysis were related to two overarching themes: factors which concern uncertainty of customer participation, and that which concern cost-effectiveness. Each sensitivity then altered specific modeling parameters that impacted these factors in a favorable and/or unfavorable manner. Last, Ameren Missouri then assigned weighting factors to each sensitivity to develop an overall uncertainty band around the base case program achievable point-estimates for savings and costs. Table 13 provides the initial weights for each sensitivity.

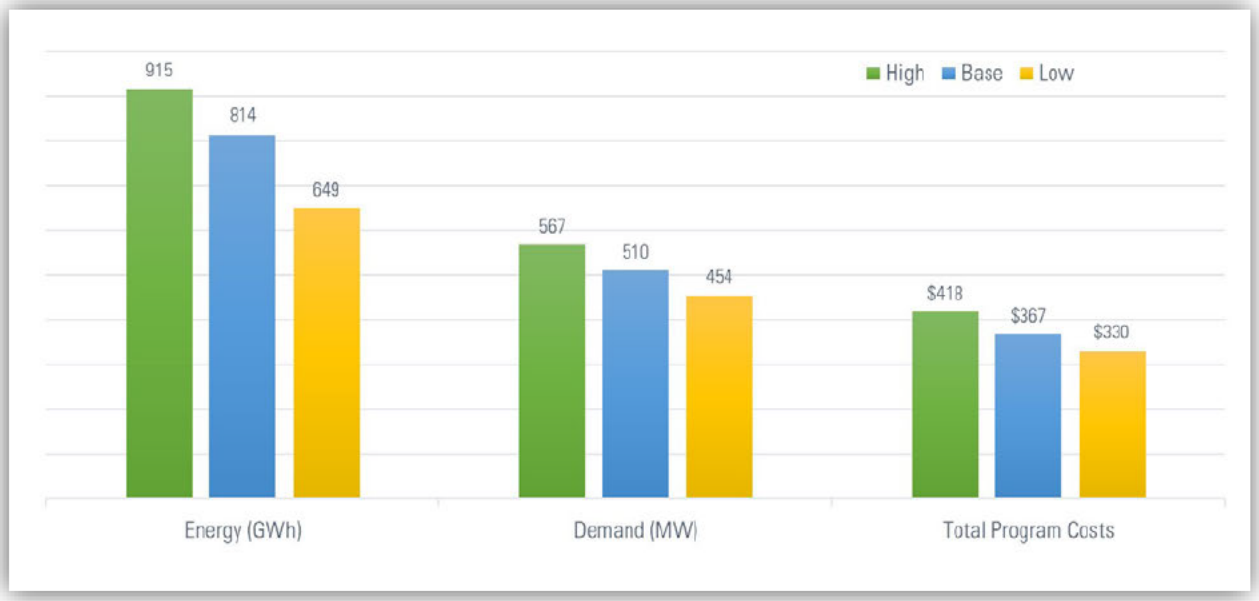
Table 13: 2023 MPS Sensitivity Overall Weights

Sensitivity Option	Weight (Unfavorable/Low)	Weight (Favorable/High)
Energy Efficiency		
Avoided Costs (a)	10.0%	3.8%
Avoided Cost (b)	2.5%	2.5%
Prolonged Economic Downturn	23.0%	-
COVID-19 Supply Chain Impacts	16.9%	-
Volatile Weather	28.8%	18.8%
High Touch Marketing	-	13.1%
Large Customer Opt-Outs	18.8%	15.6%
Utility Attribution (NTG Uncertainty)	-	15.6%
Improved Technology Savings/Costs	-	13.1%
Increased Income-Eligible Funding	-	11.9%
PAYS Sensitivity	-	5.6%
Summer Planning Reserve Margin	0.0%	-
Demand Response		
Avoided Costs (a)	18.8%	8.8%
Avoided Cost (b)	3.8%	7.5%

Prolonged Economic Downturn	56.3%	-
High Touch Marketing	-	26.3%
Large Customer Opt-Outs	21.3%	52.5%
Summer Planning Reserve Margin	0.0%	-
Additional DR Rates	-	5.0%

Although these sensitivities were initially developed to conduct a risk and uncertainty analysis surrounding demand-side savings projections for the 2023 IRP, a similar application to the projected 2024-2026 MEEIA 4 savings portfolio can help inform the potential impact of these uncertainties on projected savings. Figure 44 applies the weighted impacts of the sensitivities included in the 2023 MPS on the 2024-2026 MEEIA 4 GWh and MW savings and total program cost projections.

Figure 44: Potential Range of 2024-2026 MEEIA 4 Cumulative Savings (GWh and MW) and Costs ($ millions) Based on the 2023 MPS Sensitivities



2023 Market Potential Study Load Flexibility

In addition to the sensitivities noted above, the 2023 MPS also includes a separate “load-flexibility” scenario to help inform the ability of DSM resources (EE, DR, and DER) to modify the net consumption of electricity and serve as a time-differentiated resource. Many electric utilities, regional transmission organizations ("RTO’s"), and independent system operators (ISO’s") are considering how to address system resource constraints shifting to winter and the need for load flexibility. However, there is not an established market standard program or analysis methodology to address this changing environment.

As part of the 2023 MPS, Ameren Missouri is conducting a load-flexibility analysis that will analyze the base economic and achievable potential under an alternative scenario of avoided costs. This alternative scenario shifts the full value of avoided generation capacity (and to a lesser extent, avoided distribution) from the summer months to winter months. Additionally, variations in seasonal planning reserve margin requirements impact cost-effectiveness. As a direct result, the 2023 MPS analyzes the potential for savings from DSM measures and/or programs that primarily target the summer season versus DSM measures and/or programs that either provide winter season savings or provide savings across multiple seasons.

Figure 45 and Figure 46, below, demonstrate the expected load reductions, by end-use and sector, in the winter season compared to a MW saved during the summer season. In the residential sector, the potential for winter load reductions can be greater in the winter season across the end-uses, except for cooling-only measures and/or solar technologies. In the business sector, the potential impacts are more consistent across the seasons (except for cooling and/or water heating). It is important to note that for cost-effectiveness considerations, demand benefits (regardless of season) are typically secondary compared to avoided energy benefits for energy efficiency measures. However, demand response programs and other DER measures can be highly sensitive to variations in demand benefits by seasons.

Figure 45: Residential Sector Winter: Summer Ratio per Summer MW Saved by End-Use

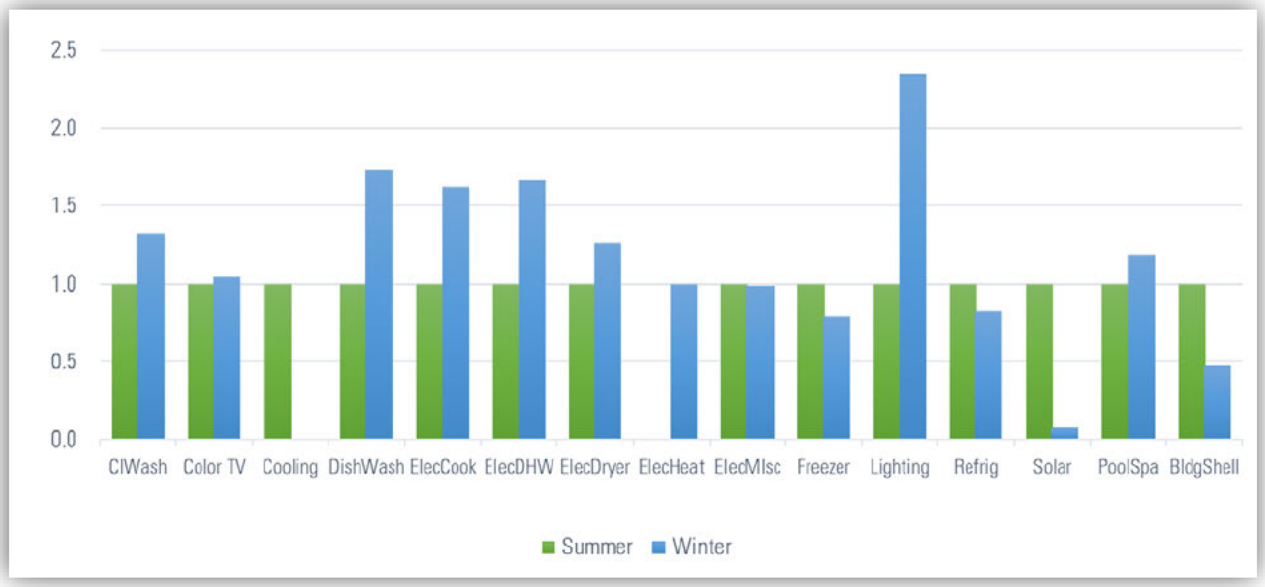
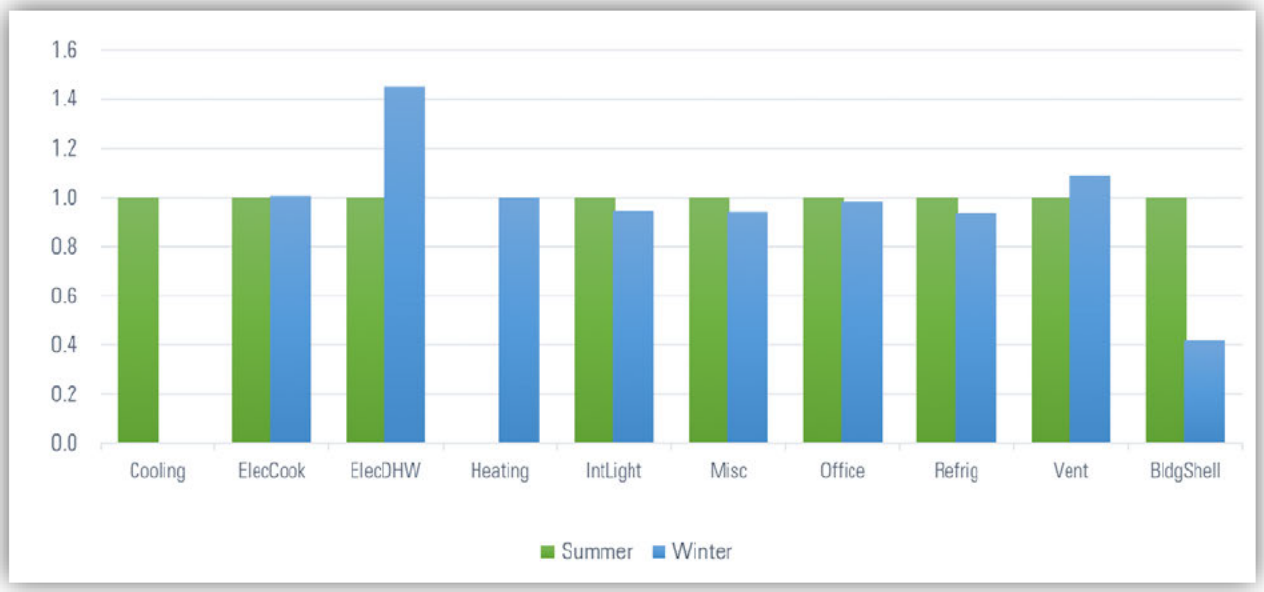


Figure 46: Business Sector Winter: Summer Ratio per Summer MW Saved by End-Use



In addition to an understanding of the changing potential for traditional energy efficiency and demand response under an alternative seasonal construct of avoided costs, the 2023 MPS load-flexibility analysis also considers the potential value related to flexible DER resources (including battery storage) and an assessment of emerging connected building programs that operate the interactive of bundled EE/DR programs. At the time of the 2024-2026 MEEIA Plan filing, this load flexibility analysis remains in draft format, but findings from the analysis are expected to be used as an input to at least one of the 2023 IRP resource portfolio scenarios where winter resource needs will drive the overall system need. The outcomes of this analysis will help inform any needed modifications to the proposed 2024-2026 MEEIA Plan filing should significant changes to how Ameren Missouri values avoided generation capacity in the future or need to re-define system resource needs.

Urban Heat Island

Research data consistently shows that urban and metropolitan areas are significantly warmer than surrounding rural areas due to human activities. The impact of this can be tremendous due to increased electric utility cost and heat related health issues, specifically within the income-eligible communities. As part of the Non-Unanimous Stipulation and Agreement Regarding the Implementation of Certain MEEIA Programs through Plan Year 2023, Ameren Missouri committed to a separate potential (baseline temperature/intervention) study to evaluate the opportunity of including an Urban Heat

Island (UHI) program in its next MEEIA filing for consideration based on the feedback from the participants in the UHI collaborative.

Ameren Missouri Partnered with East-West Gateway Council of Governments ("EWG"), to conduct an urban heat island preliminary analysis in the St Louis region. To complete the initial analysis, EWG utilized ground level surveying, local weather stations, and satellite imagery to support and identify if the St Louis area is impacted by UHI. The preliminary analysis attached as Appendix O, demonstrates that there is an urban heat island effect in the St Louis region. Ameren Missouri will continue to collaborate with EWG to identify impact on energy usage and identify potential energy efficient programs through the Pilot Program process identified in this report.

Appendices