Income-Eligible Program-Specific Evaluation Plans

Multi-Family Income-Eligible

The Multi-Family Income-Eligible Program provides holistic energy savings to income qualified households through direct installation services, incentives for standard and custom common area and whole building efficiency improvements, and one-stop-shop engagement and services.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Program tracking database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Engineering desk reviews and analyses of savings based on TRM algorithms
Net Impacts	• Apply net-to-gross ratio ("NTGR") of 1.0 to gross savings per UMP Chapter 17
Process Evaluation	• Review and evaluate program materials, program theory/logic models, implementation plans, implementer progress reports, program Quality Assurance or Quality Control ("QA/QC") procedures and associated documentation • Tenant and property manager interviews • In-depth interviews with Ameren Missouri program staff, program implementation staff • Analysis of census program tracking data to assess historic participation rates in income-qualified communities • Non-participant interviews to assess barriers to participation
Non-Energy Benefits Assessment	• Estimate non-energy benefits associated with reduced arrearages and disconnections among program participants

Single Family Income-Eligible

The Single Family Income-Eligible Program provide holistic energy savings to income qualified households through direct installation services and through the distribution of discounted lighting and efficient kits through community organizations.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Program tracking database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Engineering desk reviews and analyses of savings based on TRM algorithms • Surveys of participants receiving kits or discounted lighting to determine in-service rates
Net Impacts	• Apply net-to-gross ratio ("NTGR") of 1.0 to gross savings per UMP Chapter 17
Process Evaluation	• Review and evaluate program materials, program theory/logic models, implementation plans, implementer progress reports, program Quality Assurance or Quality Control ("QA/QC") procedures and associated documentation • In-depth interviews with Ameren Missouri program staff, program implementation staff
Non-Energy Benefits Assessment	• Estimate non-energy benefits associated with reduced arrearages and disconnections among program participants in the direct installation channel

Business Social Services Program

The Business Social Services Program provides rebates for energy efficient products that are readily available in the marketplace and for which there are savings opportunities. Organizations that are eligible for the program include those that are predominately doing business to provide social services to the under-privileged and low-income public, including food banks, food pantries, soup kitchens, homeless shelters, employment services, worker training, job banks, and childcare facilities.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Measure verification through engineering desk review of representative sample of projects • Engineering desk reviews and analysis of savings based on TRM algorithms • Regression analysis of building consumption data as appropriate
Net Impacts	• Apply net-to-gross ratio ("NTGR") of 1.0 to gross savings per UMP Chapter 17
Process Evaluation	• Program logic review, data tracking and program material review, program staff interviews, program implementer interviews • Participant surveys • Participating and non-participating trade ally interviews and focus groups

Residential Program-Specific Evaluation Plans

Efficient Products

The Efficient Products Program continues Ameren Missouri's long-standing efforts to increase the presence of energy efficient products in the market. The program is an umbrella offering, incorporating various partners, products, and delivery strategies with the goal of increasing customer awareness of the benefits of high-efficiency products (ENERGY STAR®, Consortium for Energy Efficiency ("CEE") Tiers, or better). Through the program, Ameren Missouri will offer incentives for efficient products such as ENERGY STAR® appliances, water heaters, window air conditioning units, and learning thermostats (also called smart thermostats).

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Review measure savings algorithms and associated inputs (TRM Review) • Review of program tracking data to verify measure quantities
Net Impacts	• Estimate based on preponderance of evidence leveraging mixed method approach • Participant surveys to estimate free ridership and participant spillover
Process Evaluation	• Program theory/logic model review, program staff interviews, customer journey mapping, website usability testing, vendor interviews, participant surveys, and a program materials review

Heating and Cooling

The Heating and Cooling Program offers incentives for retrofit and replacement upgrades of air conditioners and heat pumps.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Program tracking database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Engineering desk reviews and analyses of savings based on TRM algorithms
Net Impacts	• Estimate based on preponderance of evidence leveraging mixed method approach • Participant survey to estimate free ridership and participant spillover • Contractor/distributor interviews to estimate non-participant spillover
Process Evaluation	• Program logic review, data tracking and program material review, program staff interviews, program implementer interviews, • Participating and non-participating trade ally interviews • Participant surveys

Energy Efficient Kits

The Energy Efficient Kits Program was designed with the goals of increasing customer awareness of the benefits of high-efficiency products (ENERGY STAR, CEE Tiers, or better), educating residential customers and their families about energy use, and providing resources for cost-effective energy savings. Through the program, Ameren Missouri provides energy efficiency kits containing energy efficient items through schools.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Program tracking database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Engineering desk reviews and analyses of savings based on TRM algorithms
Net Impacts	• Self-report NTGR questions in participant surveys to calculate free ridership and participant spillover.
Process Evaluation	• Survey research to evaluate participant knowledge gain, participant satisfaction with experience and measures, and teacher satisfaction with program support and curriculum (school kits only) • Program theory/ logic model review, program staff interviews, program partner and/or implementer interviews, and teacher interviews • Program materials, delivery, and QA/QC process review

Pay As You Save®

The objective of the Pay As You Save® Program is to promote the installation of energy efficient Measures and increase deeper, long-term energy savings and bill reduction opportunities for Participants through a tariffed on bill charge tied to the meter for delivery of those measures.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Program tracking database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Engineering desk reviews and analyses of savings based on TRM algorithms • Customized engineering analysis such as building simulation modeling to estimate ex post savings for customers that install recommended measures
Net Impacts	• Self-report NTGR questions in participant surveys to calculate free ridership and participant spillover.
Process Evaluation	• Survey research to evaluate participant satisfaction with experience and measures • Program theory/ logic model review, program staff interviews, and program partner and/or implementer interviews • Program materials, delivery, and QA/QC process review • Survey customers that were targeted to participate but did not enroll to determine barriers to increased participation

Multi-Family Market Rate

The Multi-Family Market Rate Program provides energy savings to multifamily households through distribution of no and low-cost energy efficiency tenant unit measures and provides incentives for common area and whole building efficiency improvements.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Program tracking database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Engineering desk reviews and analyses of savings based on TRM algorithms
Net Impacts	• Self-report NTGR questions in surveys with participating property managers, and tenants (if applicable), to calculate free ridership and participant spillover.
Process Evaluation	• Program theory/ logic model review, program process mapping, program staff interviews, implementer interviews, multifamily property manager surveys, and tenant surveys • Program materials, delivery, and QA/QC process review

New Construction Whole Home

The New Construction Whole Home Program targets single family new construction including duplexes and townhomes. It provides a turnkey delivery approach by collaborating with builders and HERS raters to achieve energy efficiency savings through a combination of building shell, HVAC equipment, appliances, and other installed measures.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Program tracking database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Engineering desk reviews and analyses of savings based on TRM algorithms • Customized engineering analysis such as building simulation modeling to estimate ex post savings for customers that install recommended measures
Net Impacts	• Self-report NTGR questions in participant surveys to calculate free ridership and participant spillover.
Process Evaluation	• Survey research to evaluate participant satisfaction with experience and measures • Program theory/ logic model review, program staff interviews, and program partner and/or implementer interviews • Program materials, delivery, and QA/QC process review

Business Program-Specific Evaluation Plans

Custom

The Custom Program provides incentives for energy efficient products and services that reduce commercial and industrial ("C&I") customers' electricity use. Customized incentives are based on calculated savings for specific customer projects that can involve multiple measures with interactive effects, process improvements, and/or complex measures for which ex ante deemed savings/simple savings algorithms combined with standard incentives are not appropriate. This program may include higher incentives for certain customer segments such as Education (K-12) and Agriculture.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Database and custom project application review • Participant surveys for measure verification and baseline information • Savings and measure verification through engineering desk review of representative sample of projects • On-site M&V including short term metering • Regression analysis of building consumption data or building/system simulation modeling as appropriate
Net Impacts	• Participant survey to estimate free ridership and participant spillover • Contractor/distributor/key trade ally interviews to estimate non-participant spillover
Process Evaluation	• Program logic review, data tracking and program material review, program staff interviews, program implementer interviews • Participant surveys • Participating and non-participating trade ally interviews and focus groups • Participants in any specialized channels such as Education or Agriculture will be surveyed to determine the impact the higher incentives for those channels had on their ability to participate in the program.

Standard

The Business Standard Program provides rebates for energy efficient products that are readily available in the marketplace and for which there are savings opportunities for many customers. Commercial, government, institutional, and industrial customers of all sizes will be eligible for the program, but it is expected that many participants will be smaller customers undertaking simpler, single-measure projects. Measures targeted through the program are of two types.

- Measures for which energy savings can be reliably deemed or stipulated (e.g., premium efficiency motors, vending machine sensors, many lighting measures).
- Measures for which energy savings can be calculated using simple threshold criteria (e.g., variable frequency drives, air compressors, refrigeration measures).

This program may include higher incentives for certain customer segments such as Education (K-12) and Agriculture. This program may also include a midstream channel for HVAC and lighting measures.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Measure verification through engineering desk review of representative sample of projects • Engineering desk reviews and analysis of savings based on TRM algorithms • On-site Measurement and Verification ("M&V") including short term metering • Regression analysis of building consumption data as appropriate
Net Impacts	• Participant survey to estimate free ridership and participant spillover • Contractor/distributor/key trade ally interviews to estimate non-participant spillover
Process Evaluation	• Program logic review, data tracking and program material review, program staff interviews, program implementer interviews • Participant surveys • Participating and non-participating trade ally interviews and focus groups • Participants in any specialized channels such as Schools or Agriculture may be surveyed to determine the impact the higher incentives for those channels had on their ability to participate in the program.

Business Midstream

The Business Midstream Program allows business customers to work through contractors to make it easy to receive an immediate standard incentive upon purchase of approved standard measures from participating vendors, distributors and/or manufacturers. To receive the immediate incentive, Applicant will provide the name and address of the participants business and qualifying project components. Midstream participating vendors will submit reoccurring proof of sales with the backup documentation for incentive reimbursement in a timely fashion.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Measure verification through engineering desk review of representative sample of projects • Engineering desk reviews and analysis of savings based on TRM algorithms • On-site Measurement and Verification ("M&V") including short term metering • Regression analysis of building consumption data as appropriate
Net Impacts	• Participant survey to estimate free ridership and participant spillover • Contractor/distributor/key trade ally interviews to estimate non-participant spillover
Process Evaluation	• Program logic review, data tracking and program material review, program staff interviews, program implementer interviews • Participant surveys • Participating and non-participating trade ally interviews and focus groups

Retro-Commissioning

The Retro-Commissioning Program will help C&I building owners identify building operating system performance improvements, and, where applicable, provide incentives to assist with their implementation. The program may also include Smart Meter Commissioning using smart meter data to determine energy savings from lighting schedule adjustments and changing HVAC setpoints.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Database and custom project application review • Participant surveys for measure verification and baseline information • Savings and measure verification through engineering desk review of representative sample of projects • On-site M&V including short term metering • Regression analysis of building consumption data or system energy simulation modeling as appropriate • Results from Smart Meter Commissioning will be reported separately from other Retro-Commissioning projects
Net Impacts	• Participant survey to estimate free ridership and participant spillover • Contractor/distributor/key trade ally interviews to estimate non-participant spillover • Results from Smart Meter Commissioning will be reported separately from other Retro-Commissioning projects
Process Evaluation	• Program logic review, data tracking and program material review, program staff interviews, program implementer interviews • Participant surveys • Participating and non-participating trade ally interviews and focus groups • Results from Smart Meter Commissioning will be reported separately from other Retro-Commissioning projects

Small Business Direct Install ("SBDI")

The Small Business Direct Install Program offers incentives (discounts) to encourage the completion of energy efficient equipment retrofits for facilities under the Small General Service (2M) rate class. The incentives allow for small business customers to implement low-cost and/or no-cost measures in their facilities through a group of pre-approved service providers. The objective of this program is to reduce participation barriers for small business through a simple and streamlined process. Eligible measures include HVAC, lighting, refrigeration, motors, and water heating.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Gross Impacts	• Database and TRM review, all savings algorithms and input parameters – update as appropriate • Participant surveys for measure verification and baseline information • Measure verification through engineering desk review of representative sample of projects • Engineering desk reviews and analysis of savings based on TRM algorithms • Regression analysis of building consumption data as appropriate
Net Impacts	• Participant survey to estimate free ridership and participant spillover • Contractor/distributor/key trade ally interviews to estimate non-participant spillover
Process Evaluation	• Program logic review, data tracking and program material review, program staff interviews, program implementer interviews • Participant surveys • Participating and non-participating trade ally interviews and focus groups

Demand Response Program-Specific Evaluation Plans

Residential Demand Response

This Residential Smart Thermostat Demand Response Program will provide Ameren Missouri with peak demand capacity from residential customers. It is expected that in return for a bill credit or a rebate towards the purchase of a smart thermostat, participating customers will allow Ameren Missouri to adjust the thermostat setting during a limited number of demand response events.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Process Evaluation	• Interviews with program and implementer staff to develop program theory narrative, assess program evaluability and data requirements • Participant surveys to assess program experience, barriers to reducing energy use during peak periods and validate load impact results
Load Impact Analysis	• Assess randomized control trial for each thermostat manufacturer through assignment of participants into treatment and control groups. • Assess event participation, including failures and opt-outs. • Conduct event regression modeling to estimate hourly and average event run-time, kW, and kWh impacts. • Assess average event kW impacts under normalized weather conditions for all participants enrolled in PY2022. • Conduct regression modeling to estimate non-event day kWh impacts for cooling season.

Business Demand Response

This Business Demand Response Program will provide Ameren Missouri with peak demand capacity reductions from business customers. The business demand response ("DR") program will engage customers to participate in DR events through direct load control, manual response, and the use of behind the meter assets. Participants will benefit from a customized energy reduction plan and may receive enhanced control technology.

The table below outlines potential evaluation approaches, some, or all of which will be used for the EM&V process.

Evaluation Component	Potential Methods
Process Evaluation	• Interviews with program and implementer staff to develop program theory narrative, assess program evaluability and data requirements • Participant surveys to assess program experience, barriers to reducing energy use during peak periods and validate load impact results • Eligible customer surveys to elicit barriers, perceptions, and characteristics of nonparticipating eligible customers to improve program targeting and marketing
Load Impact Analysis	• Conduct regression analysis or individual verification of baseline to estimate ex ante (forecasted) and ex post (actual) load reductions associated with dispatchable events (depending on program and business type). Data request, processing, aggregation of participant usage, weather, and event data