Evergy Services, Inc. Commercial & Industrial Evaluation, Measurement, and Verification Report – FINAL

MEEIA Cycle 3 - Program Year 1 (2020)

Prepared for:

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How to Use This Report

Guidehouse has constructed this report to consist of three key pieces:

- **Main Report:** This document—which provides the summary of our evaluation, measurement, and verification (EM&V) analyses and findings by program
- **Appendices:** The appendices are composed of a Word document, an Excel Databook file, and an Excel file that provides detailed cost-effectiveness results:
    - **Word Document:**
        - Detailed findings and recommendations by program
        - Methodology sections for each program that explain (in greater detail than in the main report) the Guidehouse team's approach to analyzing each program
        - Survey instruments fielded by the Guidehouse team
    - **Databook:** An Excel file that provides detail on the calculations and inputs used in the engineering analyses and summarizes the EM&V outputs.
    - **Cost-effectiveness Results:** An Excel file that provides detail on the inputs and outputs of the cost-effectiveness analysis.

Report Definitions

Note: Definitions provided in this section are limited to terms critical to understanding the values presented in this report.

Reporting Periods

Cycle 2

Refers to programs implemented in program years 2016-2019, which corresponds to April 2016-December 2019.

Cycle 3

Refers to programs implemented in program years 2020-2022, which corresponds to January 2020 – December 2022.

Savings Types

Gross Reported Savings

Savings reported in the Evergy Metro annual reports prior to any evaluation, measurement, and verification (EM&V) ex post gross adjustments and net-to-gross (NTG) adjustments. In previous Guidehouse EM&V reports, gross reported savings were referred to as ex ante gross savings.

Gross Verified Savings

Savings verified through Guidehouse's impact evaluation methods prior to NTG adjustments. In previous EM&V reports, gross verified savings were referred to as ex post gross savings.

Gross Realization Rates

The ratio of gross verified savings to gross reported savings.

Missouri Energy Efficiency Investment Act (MEEIA) Target

Three-year savings target approved by the Missouri Public Service Commission for a given program.

Net Verified Savings

Savings verified through Guidehouse's impact evaluation methods and inclusive of NTG adjustments.

Percentage of MEEIA Target Achieved

The ratio of net verified savings to the MEEIA target; reflects Evergy Metro's overall achievement toward the MEEIA target.

Net-to-Gross Components

Free Ridership (FR)

The program savings attributable to free riders—i.e., program participants who would have implemented a program measure or practice in the absence of the program.

Participant Spillover (PSO)

The additional energy savings 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.

Nonparticipant Spillover (NPSO)

The additional energy savings achieved when a nonparticipant implements energy efficiency measures or practices as a result of the program's influence (e.g., through exposure to the program) but that are not accounted for in program's gross verified savings.

Billing Analysis Approach to NTG

Approaches to estimating NTG that rely on the use of control groups, either through randomized control trials (RCTs) or quasi-experimental designs (e.g., the use of matching techniques to develop relevant nonparticipant comparison groups), and billing analysis to model participant net savings.

Key Report Sources

The following is a list of the most commonly referenced documents the evaluation team used for this year's analysis:

Illinois Technical Reference Manual Version 7.0. (Illinois TRM v7)
http://www.ilsag.info/il_trm_version_7.html

Illinois Technical Reference Manual Version 8.0. (Illinois TRM v8)
http://www.ilsag.info/il_trm_version_8.html

Illinois Technical Reference Manual Version 9.0. (Illinois TRM v9)
https://www.ilsag.info/technical-reference-manual/il-trm-version-9

Missouri Public Service Commission. Missouri Energy Efficiency Investment Act (MEEIA) Rules and the Stipulation and Agreement Issued December 16, 2019.

Missouri Code of State Regulations 20 CSR 4240-22.070 (8)

California Public Utilities Commission. *California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects.* October 2001.
http://www.cpuc.ca.gov/NR/rdonlyres/004ABF9D-027C-4BE1-9AE1-CE56ADF8DADC/0/CPUC_STANDARD_PRACTICE_MANUAL.pdf.

Daniel M. Violette and Pamela Rathbun. "Estimating Net Savings: Common Practices," Chapter 23 in *The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures*. 2014. http://energy.gov/sites/prod/files/2015/02/f19/UMPChapter23-estimating-net-savings_0.pdf.

Jane Peters and Ryan Bliss. *Common Approach for Measuring Free Riders for Downstream Programs.* Research Into Action. October 4, 2013.

California Public Utilities Commission. "2007 SPM Clarification Memo." 2007.
http://www.cpuc.ca.gov/NR/rdonlyres/004ABF9D-027C-4BE1-9AE1-CE56ADF8DADC/0/CPUC_STANDARD_PRACTICE_MANUAL.pdf.

Evaluation, Measurement, and Verification (EM&V) Plan for MEEIA Cycle 3 for Evergy Services, Inc. prepared by Guidehouse, Inc. December 2020.

Rachel Brailove, John Plunkett, and Jonathan Wallach. *Retrofit Economics 201: Correcting Commons Errors in Demand-Side Management Benefit-cost Analysis.* Resource Insight, Inc. Circa 1990.

Acronyms and Abbreviations

ASHP	Air Source Heat Pump
Btu	British Thermal Unit
C&I	Commercial & Industrial
CF	Coincident Factor
CFL	Compact Fluorescent Lamp
CSM	Customer Solution Manager
DR	Demand Response
EER	Energy Efficiency Ratio
EM&V	Evaluation, Measurement, and Verification
ESF	Energy Savings Factor
ETO	Energy Trust of Oregon
EUL	Effective Useful Life
FR	Free Rider(ship)
HOU	Hours of Use
HSPF	Heating Seasonal Performance Factor
HVAC	Heating, Ventilation, and Air Conditioning
IC	Implementation Contractor
IECC	International Energy Conservation Code
ISR	In-Service Rate
KCP&L	Kansas City Power and Light, now Evergy, Inc.
kW	Kilowatt
kWh	Kilowatt-Hour
LED	Light-Emitting Diode
MEEIA	Missouri Energy Efficiency Investment Act
NPSO	Nonparticipant Spillover
NTG	Net-to-Gross
O&M	Operations and Maintenance
OBEA	Online Business Energy Audit
PCT	Participant Cost Test
PITA	Program Influence on Trade Ally
PSO	Participant Spillover
PY	Program Year
RCx	Retrocommissioning
RIM	Ratepayer Impact Measure
RUL	Remaining Useful Life
SBL	Small Business Lighting
SCT	Societal Cost Test
SEER	Seasonal Energy Efficiency Ratio
SO	Spillover

SPM	Standard Practice Manual
TA	Trade Ally(ies)
TMY3	Typical Meteorological Year 3
TRC	Total Resource Cost
TRM	Technical Reference Manual
UCT	Utility Cost Test
WHF	Waste Heat Factor

1. Introduction

In accordance with the Missouri Energy Efficiency Investment Act (MEEIA) Rules and the Stipulation and Agreement, Evergy Services, Inc. (Evergy), on behalf of its affiliates Evergy MO West and Evergy Metro, has contracted with Guidehouse to evaluate, measure, and verify the information tracked by Evergy MO West and Evergy Metro for its portfolio of three commercial and industrial (C&I) demand-side management programs and one educational and behavioral program for the 3-year program cycle beginning January 1, 2020 through December 31, 2022. Specific Evergy programs covered by this evaluation include the following:

- C&I programs:
  - Business Energy Savings Program – Standard (Business Standard program)
  - Business Energy Savings Program – Custom (Business Custom program)
  - Business Energy Savings Program – Process Efficiency (Process Efficiency program)
- Educational and behavioral programs:
  - Online Business Energy Audit (OBEA)

Guidehouse conducted the following tasks as part of its impact evaluation, process evaluation, and cost-effectiveness analysis for program year (PY) 1:

- Evaluate the gross and net energy and peak demand savings from Evergy's energy efficiency C&I programs
- Evaluate the effectiveness of and develop actionable recommendations to improve the design of Evergy's suite of C&I programs
- Estimate the cost-effectiveness of Evergy's C&I programs.

The evaluation team consists of Guidehouse and NMR Group, Inc. (NMR). As the primary contractor, Guidehouse is the main point of contact for Evergy and the implementation contractors (ICs). Guidehouse has ultimate responsibility for managing the effort, quality control, and confirming deliverables are submitted on time and on budget. NMR led the Process Efficiency and OBEA program evaluations and assisted in Business Custom file reviews. Throughout this report, this team is referred to as Guidehouse or the evaluation team.

1.1 Document Structure

As agreed to with stakeholders and discussed during the Evergy Missouri-West DSM Advisory Group quarterly meetings (December 7, 2020 and January 27, 2021), Guidehouse (also referred to as the evaluation team throughout this document) is providing a condensed evaluation, measurement, and verification (EM&V) report that presents key impact evaluation findings and recommendations. This report also summarizes the program year 1 (PY1) process evaluation findings that address the five required questions per the Missouri Code of State 20 CSR 4240-22.070 (8) (Missouri regulations). This document is divided into the following sections:

- **Summary of Approaches:** Provides a summary of the evaluation approaches for the impact evaluation, including the process for using secondary sources. It also includes overviews of the approach for net-to-gross, cost-effectiveness and process research.
- **Portfolio Findings and Evaluation Results:** This section provides findings and recommendations at the portfolio and sector level for gross and net savings, cost-effectiveness, and overarching process findings.

In addition to the condensed report, Guidehouse prepared several appendices to accompany the evaluation and provide further insight and documentation:

- **Appendix A. Introduction:** Provides an overview of the evaluation approach, including impact and process evaluation activities and cost-effectiveness.
- **Appendix B. Summary of Program Findings and Recommendations:** Details the findings and recommendations that resulted from each program's evaluation.
- **Appendix C. Cross-Cutting Methodologies:** Covers Guidehouse's overall approach toward cross-cutting methodologies, namely determining cost-effectiveness and net-to-gross (NTG) savings.
- **Appendix D – G. Program-Specific Methodologies:** Details program-specific impact and process evaluation methodologies, including any differences between the cross-cutting methodologies and those the evaluation team used for each program.
- **Appendix H. Survey Instruments:** Provides detailed survey guides, including participant, trade ally, and supplier interview guides, when applicable.
- **Appendix I. Cost-Effectiveness Data – CONFIDENTIAL**: An Excel databook containing the following:
  - All measure-specific input assumptions
  - Program-level administrative costs incurred by the program administrator
  - Detailed benefit and cost breakdowns by cost test and program or portfolio
- **Appendix J. Excel Databook – CONFIDENTIAL:** Provides additional analytical data and figures for each program and summary results tables for the portfolio.

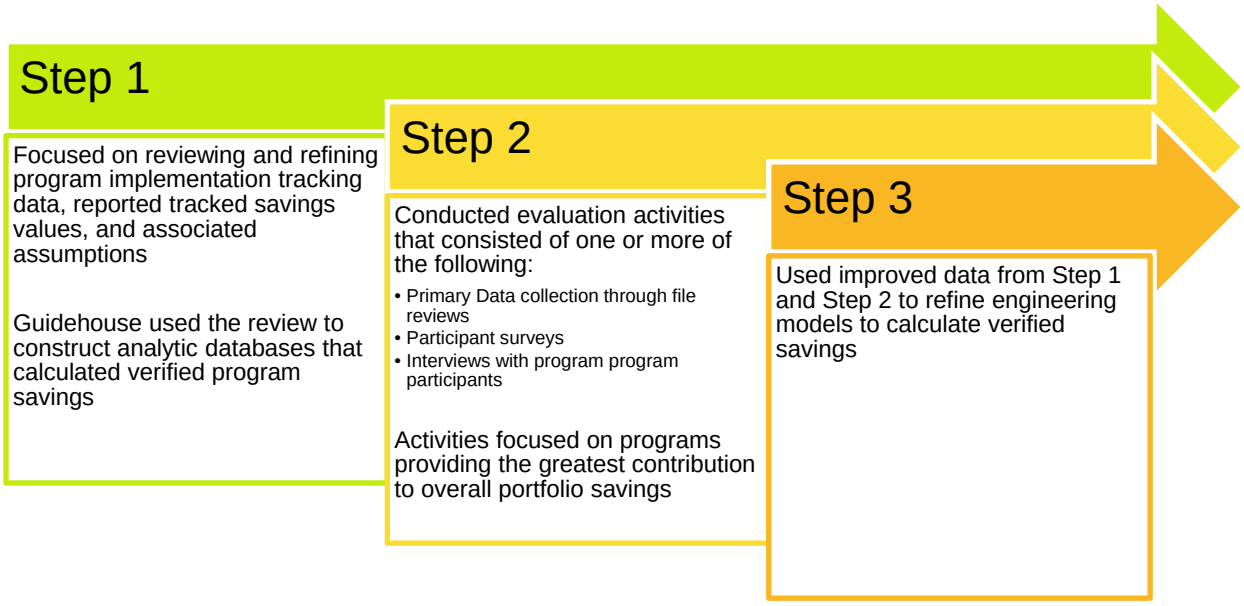
2. Summary of Approaches

The team summarizes the approach for gross impact, net savings analysis, and process evaluation below and describes the key methods in the following sections.

2.1 Impact Evaluation Approach

The evaluation team employed a variety of methods to evaluate, measure, and verify the energy and demand savings achieved by the three C&I DSM programs and the one C&I Educational and Behavioral program. Guidehouse's **gross impact** evaluation strategy had three basic components:

Figure 2-1. Gross Impact, Net Savings Analysis, and Process Evaluation Approach



Per Missouri regulations,[1] Evergy Metro and Evergy Missouri West (Evergy MO West) are required to complete an impact evaluation for each program using one or both of the methods and one or both of the protocols detailed as follows.

1. **Impact evaluation methods.** At a minimum, comparisons of one or both of the following types shall be used to measure program and rate impacts in a manner that is based on sound statistical principles:
    a. Comparisons of pre-adoption and post-adoption loads of program or demand-side rate participants, corrected for the effects of weather and other intertemporal differences.
    b. Comparisons between program and demand-side rate participants' loads and those of an appropriate control group over the same period.

[1] Missouri Code of State Regulations 20 CSR 4240-22.070 (8)

2. **Load impact measurement protocols.** The evaluator shall develop load impact measurement protocols designed to make the most cost-effective use of the following types of measurements, either individually or in combination:
    a. Monthly billing data, hourly load data, load research data, end-use load metered data, building and equipment simulation models, and survey responses.
    b. Audit and survey data on appliance and equipment type, size and efficiency levels, household or business characteristics, or energy-related building characteristics.

The evaluator will also be required to develop protocols to gather information and to provide estimates of program free ridership (FR), spillover (SO), and program net-to-gross (NTG) ratios.

Table 2-1 summarizes the evaluation team's methods and protocols, as they align with Missouri requirements, for the impact evaluation.

Table 2-1. MO Regulations Impact Evaluation Methods and Protocols

Program		Impact Evaluation Method	Impact Evaluation Protocol
Commercial and Industrial (C&I) Energy Efficiency (EE) Programs	Business Standard Program	1a	2a and 2b
	Business Custom Program	1a	2b
	Process Efficiency Program[2]	1a	2b
Educational/Behavioral Programs	OBEA*	N/A	N/A

**Guidehouse does not recommend conducting an impact evaluation for this program because Evergy does not report savings. However, this type of program would likely be evaluated using 1b and 2a.*
Source: Guidehouse analysis

2.1.1 Process for Using Secondary Sources

Evaluation results in MEEIA Cycle 3 reflect findings from research conducted concurrent with each program year. When all stakeholders and Evergy agree, these research findings are applied to current and following program years. For example, in PY1, Guidehouse conducted NTG research for the Business Custom program. The results from this research are applied to PY1 gross savings.

The evaluation team used primary in-state data when possible and when the team agreed with its applicability to Evergy's territories. Primary out-of-state data was used when primary in-state data was not available. Secondary out-of-state data was used when neither reliable primary in-state data or primary out-of-state data were available.

2.1.2 Net-to-Gross

Guidehouse used two primary methods to develop net savings for each program in PY1:

[2] The Process Efficiency program did not have an impact evaluation in PY1.

- **NTG ratios,** which involved the derivation of NTG components including FR and SO informed by participant and trade ally surveys.
- **Deemed NTG estimates,** which applied predetermined estimates that did not warrant data collection or were informed by MEEIA Cycle 2.

For programs where the NTG ratios were developed, the components were either based on data collected in MEEIA Cycle 2 and PY1 of MEEIA Cycle 3 from participants. Guidehouse used the following component definitions, provided by the Uniform Methods Project,[3] to calculate the NTG ratios:

- **FR:** The program savings attributable to free riders—i.e., program participants who would have implemented a program measure or practice in the absence of the program.
- **Participant SO (PSO):** The additional energy savings achieved when a program participant—as a result of the program's influence—installs energy efficient measures or practices outside the efficiency program after having participated.
- **Nonparticipant SO (NPSO):** The additional energy savings achieved when a nonparticipant implements energy efficient measures or practices as a result of the program's influence (for example, through exposure to the program) but that are not accounted for in program savings.

Using these definitions, the evaluation team calculated the NTG ratio as follows in Equation 2-1:

Equation 2-1. NTG Ratio

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

Where:

FR rate = Free ridership rate
PSO rate = Participant spillover rate
NPSO rate = Nonparticipant spillover rate

Participating end-use customers are in the best position to articulate the likelihood that they are able to afford the increased-efficiency equipment without rebates. Trade allies are best suited to comment on the influences of a program beyond the rebate (such as a program's influence on their technical knowledge, stocking patterns, and typical product specifications and recommendations). Participants are often unaware of how these non-rebate program influences may have shaped their experiences with the trade ally, so they may be prone to overestimating FR in self-report surveys. Programs that leverage the NTG component method include Business Standard and Business Custom.

To address the evaluation, measurement, and verification (EM&V) auditor's comments regarding free ridership estimates, Guidehouse has made the following adjustments to the participant surveys:

[3] Daniel M. Violette and Pamela Rathbun. *Estimating Net Savings: Common Practices*, Chapter 23 in *The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures*. 2014. http://energy.gov/sites/prod/files/2015/02/f19/UMPChapter23-estimating-net-savings_0.pdf.

- Added a question to the SO battery asking if they worked with the same contractor or a different contractor (or no contractor) to better assess the potential for SO double counting between PSO and NPSO.
- Added a question to the SO battery asking "how do you know the equipment is high efficiency?"

Additional detail on the NTG approach is provided in Appendix C.2.

2.2 Cost-Effectiveness Approach

Guidehouse calculated benefit-cost ratios and total net benefits at the program and sector level for the five standard benefit cost tests. These tests include the Total Resource Cost (TRC) test, Societal Cost Test (SCT), Utility Cost Test (UCT), Participant Cost Test (PCT), and Ratepayer Impact Measure (RIM) test. Benefit-cost ratios are informative as they show the value of monetary benefits relative to the value of monetary costs as seen from various stakeholder perspectives. Cost-effectiveness values were calculated using Guidehouse's ProCESS model and leverage Guidehouse-verified EM&V findings including energy and demand impacts, O&M savings, incremental costs, NTG ratios, participation numbers, program administrative costs, and measure lifetimes. Additionally, Evergy energy and demand avoided costs, end-use loadshapes, retail rates, discount and inflation rates, and line loss factors were provided by Evergy or characterized by Guidehouse to support cost-effectiveness calculations. The ProCESS model imports measure, program, and utility data where appropriate to determine granular cost-effectiveness results. These results are then summed to various levels of aggregation to yield ratios and net present value benefits. Where available, program and avoided cost data, and discount rates, are consistent with those used by Evergy in calculating cost-effectiveness as part of their annual filing. For inputs not accessible through Evergy's planning model, Guidehouse researched inputs consistent with previous Evergy cost-effectiveness evaluations. Guidehouse's ProCESS model formulation of the cost-benefit tests followed the 2001 California Standard Practice Manual (SPM)[4] and does not account for the subsequent 2007 SPM Clarification Memo.[5]

Table 2-2 summarizes how program costs and benefits are assigned to each of the cost tests consistent with the California SPM.

[4] California Public Utilities Commission. October 2001. "California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects." http://www.cpuc.ca.gov/NR/rdonlyres/004ABF9D-027C-4BE1-9AE1-CE56ADF8DADC/0/CPUC_STANDARD_PRACTICE_MANUAL.pdf.

[5] California Public Utilities Commission. 2007. "2007 SPM Clarification Memo." http://www.cpuc.ca.gov/NR/rdonlyres/004ABF9D-027C-4BE1-9AE1-CE56ADF8DADC/0/CPUC_STANDARD_PRACTICE_MANUAL.pdf.

Table 2-2. Cost and Benefit Assignments by Cost Test

Item	TRC Test	SCT	UCT	PCT	RIM Test
Avoided Costs	Benefit	Benefit	Benefit	N/A	Benefit
O&M Savings	Benefit	Benefit	N/A	Benefit	N/A
Incentives	Transfer	Transfer	Cost	Benefit	Cost
Lost Revenues	Transfer	Transfer	N/A	Benefit	Cost
Administrative Costs	Cost	Cost	Cost	N/A	Cost
Participant Equip. Costs	Cost	Cost	N/A	Cost	N/A

Source: Guidehouse analysis

2.2.1 Source of Benefit and Cost Assumptions

The sources of data used in the benefit-cost analysis are summarized in Table 2-3. Many of the input assumptions used in Guidehouse's analysis came directly from Evergy. Critical assumptions that differed in the evaluation team's analysis were energy and peak demand savings (derived from verified data rather than reported estimates), NTG ratios, O&M benefits, effective useful life (EUL) and remaining useful life (RUL) values, and participant equipment costs. Reference Appendix I for detailed inputs and outputs from Guidehouse's benefit-cost model.

Table 2-3. Sources of Benefit and Cost Data

Data*	Source
Avoided energy costs	Provided by Evergy
Avoided capacity costs	Provided by Evergy
Retail rates	Provided by Evergy
Load shapes	Developed by Guidehouse
Discount rates	Provided by Evergy and classified by Evergy as highly confidential
O&M Savings	Guidehouse analysis
Participant equipment costs	Business Standard Program: Illinois Technical Reference Manual (TRM) and Evergy-prescribed values Business Custom Program: Incremental or total project cost as reported in the tracking database. The IC determines which type of cost is most appropriate given the type of project.
Energy and peak demand savings	Guidehouse engineering analyses
EUL	Illinois TRM, program tracking data, Evergy-prescribed values
RUL	Guidehouse analysis based on lifetime of replaced equipment and related mortality analysis techniques
NTG	Guidehouse NTG analysis
Line loss factors	Provided by Evergy
Incentives	Program tracking database

Participation	Program tracking database
Administrative costs	Provided by Evergy

*Guidehouse did not provide the avoided energy and capacity costs in this report as they are confidential to Evergy.

Source: Guidehouse analysis

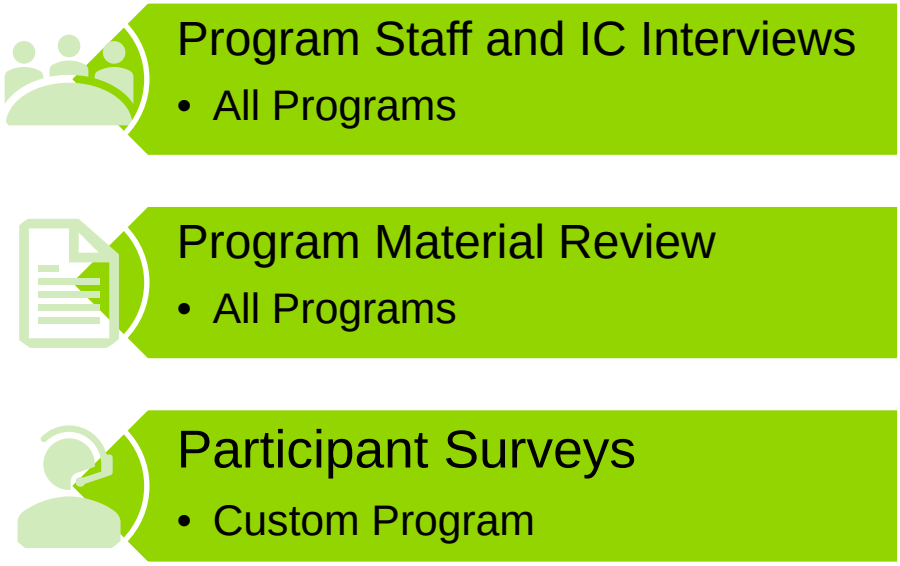
2.3 Process Evaluation Approach

The evaluation team's process evaluation focused on addressing the five required questions per the Missouri regulations as shown in Figure 2-2 and identifying program process improvements to increase program participation and savings.

Figure 2-2. Five Required Questions per Missouri Regulations

In PY1, Guidehouse performed the activities shown in Figure 2-3 to inform its process evaluation:

Figure 2-3. Process Evaluation Activities



In addition to the above activities, Guidehouse also reviewed the results of the participant survey conducted by Evergy at the completion of a project to develop process findings and recommendations. Guidehouse summarized findings for the Missouri-required process evaluation questions across all programs. PY1 program-specific process findings and recommendations are provided in Appendix B.

2.4 PY1 Evaluation Research Summary

This section presents Guidehouse's evaluation approach for the impact evaluation, process evaluation and NTG research in PY1.

2.4.1 Gross Impact Evaluation Summary

The evaluation team employed a variety of methods to evaluate, measure, and verify energy and demand savings achieved by each of Evergy's C&I EE DSM programs in PY1.

2.4.1.1 Impact Evaluation Methods

Guidehouse followed impact evaluation and data collection methods as required by Missouri Regulations (MO Regulations).

Guidehouse employed the evaluation methods shown in Table 2-4 below with varying levels of rigor and different objectives for evaluating impacts of Evergy's DSM programs.

Table 2-4 Summary of Impact Evaluation Activities

Sector	Program	Tracking System & Database Review	Deemed Savings Review	Analytic Database Devel & Eng Analysis	Desk/Phone Review
Commercial & Industrial Programs	Business Custom Program	All Programs		✓	✓
	Business Standard Program		✓	✓	
	Process Efficiency Program		No savings claimed in PY1		
Educational & Behavior Programs	OBEA	No expected savings claimed in MEEIA Cycle 3			

Source: Guidehouse

1. **Tracking System and Database Review**

   Guidehouse reviewed program implementation databases and identified additional data required for calculating gross energy and demand savings.

2. **Deemed Savings Review and Memo**

   Guidehouse reviewed the algorithms and assumptions supporting current reported savings for all programs and measures. We leveraged recent EM&V reports and other secondary sources for similar programs and measures to identify the operating characteristics that best reflect Evergy's service territories and program designs. These operating characteristics include operation hours, coincidence factors, and installation rates.

3. **Analytic Database Updating**

   Guidehouse updated the analysis tools that calculate savings based on engineering algorithms and project-specific equipment specifications and performance data provided in the implementation databases. Guidehouse's research from the MEEIA Cycle 2 through MEEIA Cycle 3 PY1 period was used to update these analytic databases.

   These savings verification tools will provide Evergy with an indication of how reported savings are tracking against verified values.

4. **Desk/Phone Review**

   For custom measures without deemed savings, we conducted a thorough review of the reported savings models used to estimate impacts. The results of this review resulted in refinements to the algorithm, the inputs to the algorithm, or an entirely new engineering model. We reviewed the algorithms and assumptions supporting reported savings for all programs and leverage recent EM&V reports and other secondary sources for similar programs and measures to identify the operating characteristics that best reflect the Evergy

service territories and program designs. These operating characteristics include operation hours, coincidence factors, and installation rates.

Additionally, Guidehouse conducted telephone interviews with some program participants with the primary objective of verifying the installation and operation of measures rebated through the programs or the delivery of a service rebated through the programs.

2.4.2 Process Evaluation Summary

The primary objective of the process evaluation was to help program designers and managers structure their programs to achieve cost-effective energy savings while maintaining high levels of customer and trade ally program satisfaction, especially for new programs. Timely process evaluations are critical for ensuring that (1) each program is implemented effectively and efficiently; (2) appropriate performance metrics are being collected for ongoing program management decision-making and for program evaluation; and (3) customer and trade ally marketing, recruitment, and onboarding processes support Evergy's long-term goal attainment. Leveraging insights from the past two MEEIA Cycles and our online survey approach, the Guidehouse team's process evaluation efforts provides new insights and recommendations to improve the future performance of each program as well as ensure the reliability of inputs to the impact evaluation in a timely manner.

The Guidehouse team implemented process evaluation research in tandem with the impact evaluation efforts in order to coordinate data collection efforts and capture operational efficiencies to the greatest extent possible. Such integration enabled the team to make a closer link between the observed program impacts and the actual operation of the programs and has the added benefit of minimizing the number of times respondents are contacted by the evaluation effort (i.e., minimize respondent fatigue). Additionally, Guidehouse worked with Evergy's overall survey efforts to also minimize the same targets being asked the same questions by different surveys by collaborating across Evergy, Guidehouse, and the implementation contractor on questions to be asked of targets.

For each program, our process evaluation activities for PY1 consisted of (1) program manager/implementation contractor interviews, and (2) a review of new program material and information. Participant surveys were conducted for the Business Custom program.

1. **Program Manager/Implementer Interviews**

   The process evaluation for each program included an in-depth, qualitative interview with Evergy program staff and implementers. The Guidehouse team used these interviews to develop a thorough understanding of the final program design, procedures, and implementation strategies for each program and to gain a deeper understanding of current issues for each continuing program. The team also used the interviews to identify research topics to include in future trade ally interviews and customer surveys and to discuss available program materials (e.g., marketing and outreach materials, print and radio advertising copy) that can be used to support the evaluation.

2. **Review of Program Information**

   The Guidehouse team also reviewed new or updated program materials including application forms, marketing and outreach materials, web-based promotional content, point of purchase materials, print and radio advertising copy, and any cooperative marketing materials. This review helped us to understand how the programs are being marketed, determine whether the materials are complete, and begin to explore other

efforts that could improve program participation and manage levels of free ridership to the extent these issues are observed.

3. **Participant Surveys**

   For the Business Custom program, Guidehouse conducted participant surveys. Guidehouse leveraged the surveys developed in MEEIA Cycle 2 with some modifications as recommended by the auditor to survey participants in PY1 to develop a net-to-gross ratio for the program. Due to the overlapping trade ally populations between the Business Standard and Business Custom programs, trade ally surveys are planned for PY2 in conjunction with Business Standard program participant surveys.

Table 2-5 provides a summary of all process evaluation activities planned for MEEIA Cycle 3 by Guidehouse. The Business Custom program underwent strategic design and implementation changes between MEEIA Cycle 2 and 3. For this reason, Guidehouse conducted Process/NTG research for the Business Custom program in PY1 in order to accurately capture key process and NTG findings to allow Evergy the opportunity to address these findings at the onset of the Cycle. The Business Standard program has remained relatively consistent from MEEIA Cycle 2 and Cycle 3 in the offered measures, incentives and program design. Guidehouse will conduct process and NTG research in PY2 of Cycle 3 for the Business Standard program.

Table 2-5. Summary of Process Evaluation Activities

Sector	Program	Program Manager/ Implementer Interviews	Review of Program Information	Participant Surveys
Commercial & Industrial Programs	Business Custom Program	All Programs	All Programs	✓
	Business Standard Program			
	Process Efficiency Program			
Educational & Behavior Programs	OBEA			

Source: Guidehouse

2.4.3 Net-to-Gross PY1 Research Summary

As noted above, Guidehouse used two primary methods to develop net savings for each program in PY1:

- **Net to gross (NTG) ratios,** which involved the derivation of NTG components including free ridership (FR) and spillover (SO) informed by participant and trade ally surveys.
- **Deemed NTG estimates,** which applied pre-determined estimates that did not warrant data collection or were informed by MEEIA Cycle 2.

The Business Standard program applied a NTG ratio developed in MEEIA Cycle 2. The Business Custom program applied a NTG ratio developed in PY1 of MEEIA Cycle 3 informed by participant surveys. The evaluation team will conduct primary research for the Business Standard program in PY2 to provide an updated NTG value.

Guidehouse calculated net verified savings by multiplying gross verified savings by the NTG ratio. The evaluation team characterized savings as reported and verified. Reported savings represent project savings estimated at the time of measure installation and reported in the program tracking database. Verified savings represent energy savings verified at the time of the evaluation.

3. Portfolio Findings and Evaluation Results

3.1 Gross and Net Impact Savings Summary

This section summarizes the gross and net savings achievements for the Evergy C&I EE portfolio for PY1. Table 3-1 and Table 3-2 indicate that, at the close of PY1, the portfolio achieved 25% of its 3-year energy target, with Evergy Metro achieving 26% and Evergy MO West achieving 25%, respectively. Both territories achieved a higher portion of their MEEIA Cycle 3 demand targets at the close of PY1, with Evergy Metro achieving 37% and Evergy MO West achieving 35%, respectively. When the impact of COVID-19 is considered, in addition to the roll-out of a new program (i.e. the Process Efficiency program) which traditionally have initial low participation as the program is marketed and socialized to trade allies and participants, the C&I EE portfolio is well suited to achieve it's 3-year MEEIA target at the conclusion of the cycle.

Table 3-1. PY1 Energy Savings at the Customer Meter by Territory

Sector	Gross			Net		
	Reported Savings (kWh)	Verified Savings (kWh)	Realization Rate (%)	MEEIA Cycle 3 3-Year Target (kWh)	Verified 3 - Year Savings (kWh)	Percentage of MEEIA 3-Year Target Achieved
Evergy Metro	28,172,077	30,264,701	107%	103,671,720	27,006,087	26%
Evergy MO West	19,625,213	20,631,328	105%	77,133,113	18,991,091	25%
Evergy TOTAL	**47,797,290**	**50,896,029**	**106%**	**180,804,833**	**45,997,178**	**25%**

Source: Guidehouse analysis

Table 3-2. PY1 Demand Savings at the Customer Meter by Territory

Sector	Gross			Net		
	Reported Savings (kW)	Verified Savings (kW)	Realization Rate (%)	MEEIA Cycle 3 3-Year Target (kW)	Verified 3 - Year Savings (kW)	Percentage of MEEIA 3-Year Target Achieved
Evergy Metro	5,335	5,664	106%	13,538	5,023	37%
Evergy MO West	3,514	3,551	101%	9,328	3,275	35%
Evergy TOTAL	**8,849**	**9,215**	**104%**	**22,866**	**8,297**	**36%**

Source: Guidehouse analysis

Table 3-3 and Table 3-4 summarize the gross and net verified energy and demand savings at the customer meter for the Evergy Metro territory and Table 3-5 and Table 3-6 summarize the gross and net verified energy and demand savings for the Evergy MO West territory. Guidehouse has summarized the key PY1 impact findings below, first for Evergy Metro, then for Evergy MO West.

Evergy Metro PY1 Impact Results

In PY1, the C&I EE portfolio achieved 30,264,701 kWh and 5,664 kW in **gross energy and demand** savings at the customer meter. This corresponds to gross realization rates of 107% and 106%, respectively. The portfolio achieved 27,006,087 kWh and 5,023 kW in verified net energy and demand savings. This corresponds to the portfolio achieving approximately 26% and 37% of its 3-year MEEIA Cycle 3 energy and demand targets, respectively, in PY1. Table 3-3 and Table 3-4 provide energy and demand evaluation findings for the Evergy Metro territory. **The points below highlight key PY1 impact findings.**

Gross Energy Savings:
30,264,701 kWh

Gross Demand Savings:
5,664 kW

- **The Business Standard program achieved 31% and 35% of its 3-year MEEIA Cycle 3 target for energy and demand, respectively.** This program represented approximately 58% of verified gross energy savings and approximately 54% of verified gross demand savings of the C&I EE portfolio. The Business Standard program had realization rates of 108% and 105% for energy and demand, respectively. Realization rates for the Business Standard program were driven primarily by adjustments to assumed baseline fixture wattages based on the tracking database which indicated that the LED linear bulb and fixture market is shifting to include more T5HO lamps and fixture retrofits. Also, the tracking database indicated that T12 replacements continue to represent a small share of the LED linear measures. Guidehouse also leveraged the IC recorded efficient wattage for lighting measures in our analysis. Finally, Guidehouse leveraged the results of the long-term onsite verification lighting study concluded in MEEIA Cycle 2 in the verified lighting savings calculation.

Net Energy Savings:
27,006,087 kWh

Net Demand Savings:
5,023 kW

- **The Business Custom program continued to drive participation in a diverse selection of end-uses.** Lighting system upgrades accounted for 44% and 38% of verified gross energy and demand savings, respectively**.** Air conditioning and heating measures accounted for 30% and 33% of verified gross energy and demand savings, respectively. The program achieved approximately 34% and 43% of its 3-year MEEIA Cycle 3 energy and demand targets, respectively. The Business Custom program had realization rates of 107% for both energy and demand savings. Realization rates were primarily driven by the inclusion of a waste heat factor (WHF) for energy and demand savings. Additionally, the Guidehouse evaluation team conducted an engineering analysis for demand savings, whereas the IC applied a deemed demand factor to the energy savings. Finally, for non-lighting measures, we applied 8,760 hourly weather data to capture impacts based on time of day and seasonality.
- **PY1 was the first year for the Process Efficiency program offering.** COVID-19 continues to slow down the program rollout and limit the number of applications. Increased participation in PY2 and PY3 is expected.

Table 3-3. Energy Savings at the Customer Meter: Evergy Metro PY1

Sector	Program	Gross			Net		
		Reported Savings (kWh)	Verified Savings (kWh)	Realization Rate (%)	MEEIA 3-Year Target (kWh)	Verified Savings (kWh)	% of MEEIA 3-Year Target Achieved
Commercial & Industrial EE Programs	Business Standard Program	16,217,890	17,464,540	108%	53,977,377	16,765,958	31%
	Business Custom Program	11,954,187	12,800,161	107%	30,239,803	10,240,129	34%
	Process Efficiency Program	0	0	N/A	19,454,539	N/A	0%
Educational Programs	OBEA	Online Energy Audit programs are not part of MEEIA Targets for Energy or Demand Savings.					
Evergy Metro TOTAL		**28,172,077**	**30,264,701**	**107%**	**103,671,720**	**27,006,087**	**26%**

Source: Guidehouse analysis

Table 3-4. Coincident Demand Savings at the Customer Meter: Evergy Metro PY1

Sector	Program	Gross			Net		
		Reported Savings (kW)	Verified Savings (kW)	Realization Rate (%)	MEEIA 3-Year Target (kW)	Verified Savings (kW)	% of MEEIA 3-Year Target Achieved
Commercial & Industrial EE Programs	Business Standard Program	2,916	3,073	105%	8,523	2,950	35%
	Business Custom Program	2,420	2,591	107%	4,834	2,073	43%
	Process Efficiency Program	0	0	N/A	182	N/A	0%
Educational Programs	OBEA	Online Energy Audit programs are not part of MEEIA Targets for Energy or Demand Savings.					
Evergy Metro TOTAL		**5,335**	**5,664**	**106%**	**13,538**	**5,023**	**37%**

Source: Guidehouse analysis

Evergy MO West PY1 Results

In PY1, the C&I EE portfolio achieved 20,631,328 kWh and 3,551 kW in **gross energy and demand** savings at the customer meter. This corresponds to gross realization rates of 105% and 101%, respectively. The portfolio achieved 18,991,091 kWh and 3,275 kW in verified net energy and demand savings. This corresponds to the portfolio achieving approximately 25% and 35% of its 3-year MEEIA Cycle 3 energy and demand targets, respectively, in PY1. Table 3-5 and Table 3-6 provide energy and demand evaluation findings for the Evergy MO West territory. **The points below highlight key PY1 impact findings.**

Gross Energy Savings:
20,631,328 kWh

Gross Demand Savings:
3,551 kW

- **The Business Standard program achieved 32% and 35% of its 3-year MEEIA Cycle 3 target for energy and demand, respectively.** This program represented approximately 75% of verified gross energy savings and approximately 76% of verified gross demand savings of the C&I EE portfolio. The Business Standard program had realization rates of 108% and 106% for energy and demand, respectively. Realization rates for the Business Standard program were driven primarily by adjustments to assumed baseline fixture wattages based on the tracking database which indicated that the LED linear bulb and fixture market is shifting to include more T5HO lamps and fixture retrofits. Also, the tracking database indicated that T12 replacements continue to represent a small share of the LED linear measures. In addition to the above adjustments, Guidehouse also leveraged the IC recorded efficient wattage for lighting measures in our analysis. Finally, Guidehouse leveraged the results of the long-term onsite verification lighting study concluded in MEEIA Cycle 2 in the verified lighting savings calculation.

Net Energy Savings:
18,991,091 kWh

Net Demand Savings:
3,275 kW

- **The Business Custom program continued to drive participation in a diverse selection of end-uses.** Lighting system upgrades accounted for 67% and 70% of verified gross energy and demand savings, respectively**.** Air conditioning and heating measures accounted for 17% and 14% of verified gross energy and demand savings, respectively. The program achieved approximately 41% and 42% of its 3-year MEEIA Cycle 3 energy and demand targets, respectively. The Business Custom program had realization rates of 97% and 89% for energy and demand savings, respectively. Realization rates were primarily driven by the Guidehouse evaluation team *conducting* an engineering analysis for demand savings, whereas the IC applied a deemed demand factor to the energy savings. Additionally, for non-lighting measures, we applied 8,760 hourly weather data to capture impacts based on time of day and seasonality.
- **PY1 was the first year for the Process Efficiency program offering.** COVID-19 continues to slow down the program rollout and limit the number of applications. Increased participation in PY2 and PY3 is expected.

Table 3-5. Energy Savings at the Customer Meter: Evergy MO West PY1

Sector	Program	Gross			Net		
		Reported Savings (kWh)	Verified Savings (kWh)	Realization Rate (%)	MEEIA 3-Year Target (kWh)	Verified Savings (kWh)	% of MEEIA 3-Year Target Achieved
Commercial & Industrial EE Programs	Business Standard Program	14,366,301	15,537,675	108%	46,646,197	14,916,168	32%
	Business Custom Program	5,258,912	5,093,653	97%	10,016,241	4,074,922	41%
	Process Efficiency Program	0	0	N/A	20,470,674	N/A	N/A
Educational Programs	OBEA	Online Energy Audit programs are not part of MEEIA Targets for Energy or Demand Savings.					
Evergy Metro TOTAL		**19,625,213**	**20,631,328**	**105%**	**77,133,113**	**18,991,091**	**25%**

Source: Guidehouse analysis

Table 3-6. Coincident Demand Savings at the Customer Meter: Evergy MO West PY1

Sector	Program	Gross			Net		
		Reported Savings (kW)	Verified Savings (kW)	Realization Rate (%)	MEEIA 3-Year Target (kW)	Verified Savings (kW)	% of MEEIA 3-Year Target Achieved
Commercial & Industrial EE Programs	Business Standard Program	2,565	2,710	106%	7,514	2,601	35%
	Business Custom Program	949	842	89%	1,587	673	42%
	Process Efficiency Program	0	0	N/A	227	N/A	N/A
Educational Programs	OBEA	Online Energy Audit programs are not part of MEEIA Targets for Energy or Demand Savings.					
Evergy Metro TOTAL		**3,514**	**3,551**	**101%**	**9,328**	**3,275**	**35%**

Source: Guidehouse analysis

Net Savings

Table 3-8. provides a summary of the final FR, participant spillover (PSO), and nonparticipant spillover (NPSO) estimates for each applicable program. In PY1 of MEEIA Cycle 3, Guidehouse conducted NTG research for the Business Custom program. The Business Custom program survey sample sizes and responses for PY1 and previous years is presented in Table 3-7. The results of the NTG research for the Business Custom program are presented in Table 3-8 below.

Table 3-7. Evergy Metro and Evergy MO West Business Custom Program Survey Sample Size and Responses

Year	Survey Type	Population Size	Completed Surveys	Response Rate
2020	Participant FR	69	13	19%
	Participant SO	135	21	16%
2019	Participant FR*	262	65	25%
	Participant SO	207	37	18%
	Trade Ally	57	18	32%
2018	Participant	270	63	23%
	Trade Ally	152	48	32%
2017	Participant	80	18	23%
	Trade Ally	56	11	20%

*Survey sent to MEEIA Cycle 2 PY3 participants (not surveyed in PY3) and MEEIA Cycle 2 PY4 participants.

Source: Guidehouse survey analysis

Guidehouse applied NTG research from MEEIA Cycle 2 for the Business Standard Program.

Guidehouse did not collect primary data for the Process Efficiency or the OBEA program, as either no savings were claimed (i.e. OBEA), or there was no participation in the program (i.e. Process Efficiency) in PY1.

Table 3-8. PY1 NTG Components by Program – Evergy Metro & Evergy MO West

Program Name*	FR	PSO	NPSO	NTG Ratio
Business Standard Program	0.05	0.00	0.00	96%
Business Custom Program	0.24	0.04	0.00	80%
Process Efficiency Program		N/A - Savings not claimed in PY1		
OBEA		N/A - Savings not claimed in PY1		

*NTG Ratios are rounded to the nearest whole number.

Source: Guidehouse analysis

3.2 Cost-Effectiveness Summary

Guidehouse calculated benefit-cost ratios and total net benefits at the program and sector level for the five standard benefit cost tests. For the purposes of this analysis the sector level results

incorporate the benefits and savings from the C&I EE portfolio of programs, including Business Standard, Business Custom, and Process Efficiency. Evaluated cost tests include the Total Resource Cost (TRC) test, Societal Cost Test (SCT), Utility Cost Test (UCT), Participant Cost Test (PCT), and Ratepayer Impact Measure (RIM) test. Table 3-9 and Table 3-10 present program and sector results for PY1. For the Business Standard program, based on Guidehouse's benefit-cost analysis, Evergy Metro achieves a cost test ratio greater than 1.0 in the TRC, societal cost test (SCT), utility cost test (UCT), and participant cost test (PCT). Evergy MO West achieves a TRC ratio of 0.95 and a SCT, UCT, and PCT above 1.0. For the Business Custom program, based on Guidehouse's benefit-cost analysis, Evergy MO West achieves a cost test ratio greater than 1.0 in the TRC, SCT, UCT, and PCT. Evergy Metro achieves a TRC ratio of 0.91 and a SCT, UCT, and PCT above 1.0. Higher than average cycle start-up costs and lower participation due to COVID-19 may have contributed to the TRC results presented below.

Table 3-11 and Table 3-12 present the net benefits and costs for PY1 from the UCT perspective. Evergy Metro's C&I EE portfolio of programs achieved $7,554,994 in net benefits. Evergy MO West's C&I EE portfolio of programs achieved $4,491,121 in net benefits.

Table 3-9. Evergy Metro Benefit-Cost Ratios by Program and Cost Test: PY1

Sector	Program	TRC	SCT	UCT Guidehouse	PCT	RIM
Commercial EE Programs	Business Standard Program	1.01	1.19	2.31	1.57	0.59
	Business Custom Program	0.91	1.17	3.07	1.20	0.65
	Process Efficiency Program	N/A	N/A	N/A	N/A	N/A
Evergy Metro Commercial EE Program Totals		**0.96**	**1.17**	**2.53**	**1.38**	**0.61**

*Ratios are based on net savings.
**Guidehouse performed benefit-cost calculations for the Business Standard, Business Custom, and Process Efficiency programs. These programs represent the C&I EE portfolio.
Source: Guidehouse analysis

Table 3-10. Evergy MO West Benefit-Cost Ratios by Program and Cost Test: PY1

Sector	Program	TRC	SCT	UCT Guidehouse	PCT	RIM
Commercial EE Programs	Business Standard Program	0.95	1.12	2.21	1.60	0.53
	Business Custom Program	1.38	1.76	2.72	2.47	0.57
	Process Efficiency Program	N/A	N/A	N/A	N/A	N/A
Evergy MO West Commercial EE Program Totals		**1.01**	**1.21**	**2.24**	**1.75**	**0.53**

*Ratios are based on net savings
**Guidehouse performed benefit-cost calculations for the Business Standard, Business Custom, and Process Efficiency programs. These programs represent the C&I EE portfolio.
Source: Guidehouse analysis

Table 3-11. Evergy Metro Sector Level Costs and Benefits Summary (USD) – PY1

Sector	Rebate Costs	Direct Program Admin Costs	Total Costs	Benefits from Energy and Demand Savings	Total Net Benefits
Business Standard Program	$1,578,246	$1,354,399	$2,932,645	$6,775,172	$3,842,527
Business Custom Program	$1,148,577	$712,682	$1,861,259	$5,714,254	$3,852,995
Process Efficiency Program	$0	$140,529	$140,529	$0	-$140,529
Evergy MO West Commercial EE Program Totals	**$2,726,823**	**$2,207,610**	**$4,934,433**	**$12,489,426**	**$7,554,993**

Source: Guidehouse analysis

Table 3-12. Evergy MO West Sector Level Costs and Benefits Summary (USD) – PY1

Sector	Rebate Costs	Direct Program Admin Costs	Total Costs	Benefits from Energy and Demand Savings	Total Net Benefits
Business Standard Program	$1,680,649	$1,044,256	$2,724,905	$6,020,533	$3,295,628
Business Custom Program	$355,419	$410,903	$766,322	$2,081,406	$1,315,084
Process Efficiency Program	$0	$119,581	$119,581	$0	-$119,581
Evergy MO West Commercial EE Program Totals	**$2,036,068**	**$1,574,740**	**$3,610,808**	**$8,101,939**	**$4,491,131**

Source: Guidehouse analysis

3.3 Process Evaluation Summary

This section provides an overview of the MEEIA Cycle 3 PY1 process evaluation findings for the C&I EE programs.

Table 3-13 provides a summary of the 5 MO process questions and the overarching findings across Evergy's Business Standard and Business Custom programs. These are the two C&I programs that reported savings in PY1. These findings are intended to provide the reader with a broad understanding of how these programs addressed each of the MO process questions in PY1. For specific program findings for these programs as well as the other C&I programs evaluated, please refer to Appendix B.

Guidehouse also provides a summary of the process recommendations for Evergy's Business Standard and Business Custom programs in Table 3-14. Evergy could implement these process recommendations throughout the remainder of MEEIA Cycle 3 to reduce barriers to participation and to increase the diversity of participation from all the businesses served by Evergy. Please refer to Appendix B for specific program recommendations for all four C&I programs evaluated in PY1.

Figure 3-1 below summarizes Business Custom participant program satisfaction analyzed during PY1. Customers were asked to rank their satisfaction with the respective programs in which they participated (on a scale of 1 through 5, 1 being the lowest, 5 being the highest). The predominant response provided by survey respondents ranked was a five, or highly satisfied. All categories received an average ranking of 4.2 to 4.7. Satisfaction increased relative to PY4 of MEEIA Cycle 2 ratings in almost all categories, with particularly notable increases in program communications (4.2 to 4.6) and the pre-approval process (3.9 to 4.5).The consistently high satisfaction scores among program participants and the continued improvement year over year is indicative of Evergy's leadership, the product manager's, and the implementation contractor's focus on addressing the C&I sector's specific market needs, removing barriers to participation, offering an extensive and comprehensive array of measures through the Business Custom program and broadening means of communicating with customers.

Table 3-13. Summary of Process Findings for Business Standard and Business Custom Programs

Missouri Question	Guidehouse Findings	
	Business Standard Program	**Business Custom Program**
1. What are the primary market imperfections that are common to the target market segment?	The business sector faces a high barrier to participation due to the high upfront installation cost and a lack of understanding of lifetime value for energy efficient products. Evergy has developed targeted marketing materials, hosted webinars, and increased incentives in July 2020 to increase participation of smaller business customers in implementing energy efficiency measures.	Project types included in the Business Custom program can be complex and take many years to complete. Customers may not understand fully the available energy savings from these types of projects which requires utility education initiatives and incentives.
2. Is the target market segment appropriately defined, or should it be further subdivided or merged with other market segments?	Evergy has a well-defined target market of large and small commercial businesses for the Business Standard program. Evergy and their IC track activity by trade ally and have bi-yearly Trade Ally Advisory Board meetings. The TA Advisory Board meetings had to happen virtually in PY1. Evergy actively solicits feedback on the program by sending surveys to all customers that completed a project. Evergy reviews this feedback and incorporates it in the program design as warranted.	Guidehouse found that the target market is appropriately defined. All business customers are eligible to participate in the Business Custom program. The program could target small and medium sized customers. The small and medium business customers are highly targeted by the Business Standard program since the application process and incentives are easier to complete and receive.
3. Does the mix of end-use measures included in the program appropriately reflect the diversity of end-use energy service needs and existing end-use technologies within the target market segment?	The Business Standard program complements the Business Custom program by providing rebates for common energy efficiency upgrades which are primarily lighting measures. Evergy is working toward further aligning the Business Standard and Business Custom programs, so that multiple end-use energy saving projects can be easily served across the entire portfolio. Evergy and the IC are constantly evaluating the measure list to determine if it is meeting the needs of customers. The other Evergy Business programs primarily address the end-uses besides lighting, but also tend to be dominated by lighting projects.	Guidehouse thinks that the program participation does appropriately reflect the end-use needs within the target market segment. Due to the inclusion of some large new construction lighting projects in the Business Custom program, lighting projects made up more than half of the energy savings. New construction projects made up slightly less than half of the energy savings. The air conditioning and heating measures made up slightly over a quarter of savings with the rest of the savings achieved by savings in the appliances and other miscellaneous end-use categories such as refrigeration.

Missouri Question	Guidehouse Findings	
	Business Standard Program	Business Custom Program
4. Are the communication channels and delivery mechanisms appropriate for the target market segment?	Guidehouse finds that Evergy's marketing activities meet the program's needs. The IC for the Business Standard program works one on one with the larger customers and those larger customer's CSMs. The trade-ally network addresses medium and smaller customers. In PY1, the implementer hosted targeted webinars for the certain sectors such as schools and the public sector and end-use categories such as HVAC. These targeted webinars were in addition to general webinars for all business customers interested in energy efficiency upgrades available across all the business programs. The effectiveness of Evergy's marketing activities is further evidenced by a sharp increase in projects once an increase in incentives for a few measures for small businesses was enacted in July 2020 through the end of PY1.	Due to the COVID-19 pandemic, the marketing and promotion of the Business Custom program was primarily through emails and online webinars available to customers and trade allies. One in-person kickoff event for all the Cycle 3 business programs was held at the beginning of 2020 and had over 80 customer attendees. The online communications throughout the year provide information about Evergy's business programs and supplement the information available on Evergy's website. Customers indicated that the in-person kickoff event and the online communications led them to complete Business Custom projects. Also, the Business Custom program communicated closely with the CSMs who represent the larger Tier 1 customers. These customers continued to be a large part of the Business Custom program in PY1.
5. What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation of each end-use measure included in the program?	In PY1, Evergy continued to have strong success with the efficient lighting measures in the Business Standard program. The effect from other end-uses was around 2%, but other programs such as the Business Custom program covers many of those non-lighting measures.	Customers and the TAs that work with them need support in the identification and implementation of large and non-standard energy efficient projects that fall within the Business Custom program. There continued to be some confusion among TAs about certain Business Custom measures. Also, some customers indicated some misunderstanding about the amount of incentive they would receive.

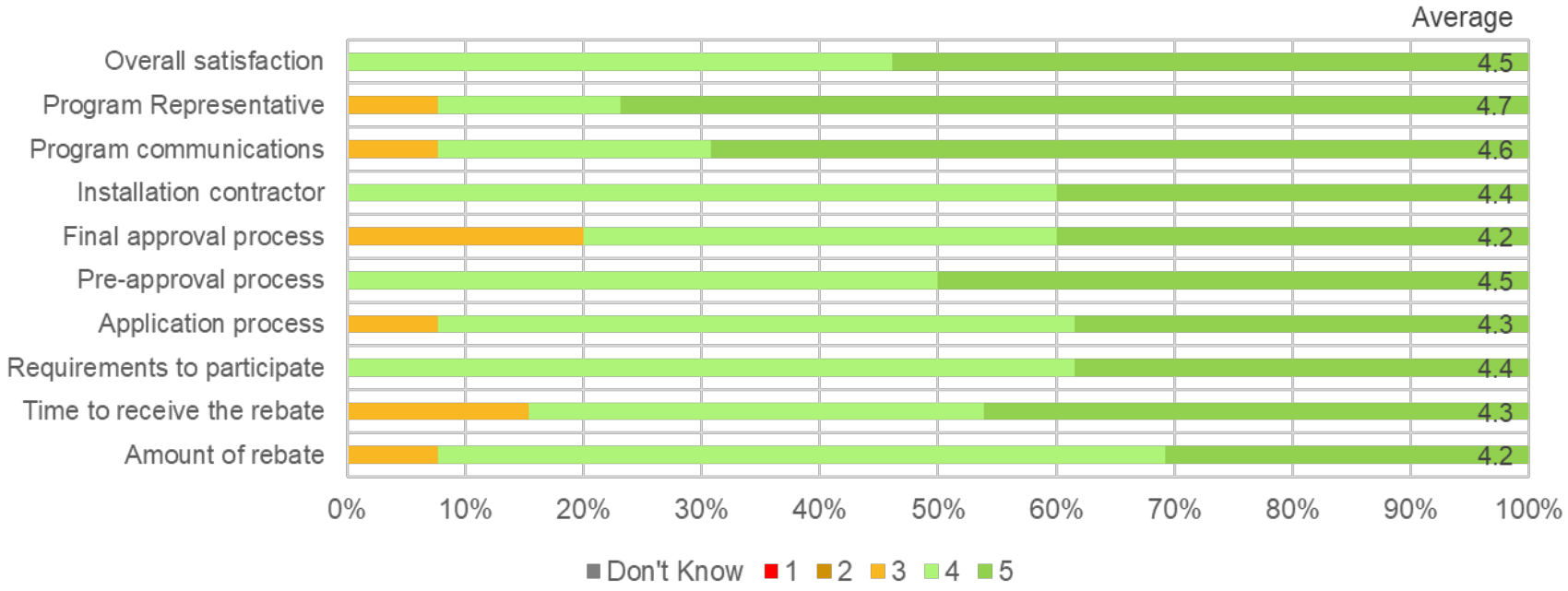
Source: Guidehouse analysis

Table 3-14. Summary of Process Recommendations for Business Standard and Business Custom Programs

Missouri Question	Guidehouse Recommendations	
	Business Standard Program	**Business Custom Program**
1. What are the primary market imperfections that are common to the target market segment?	The program could continue efforts to offer additional education, technical support and potentially new measure categories to: a) help customers identify energy efficient lighting projects, b) help customers and TAs with the application process such that they apply for the most appropriate measure category, and c) identify areas where there continues to be confusion and provide specific training and examples to address this confusion. The increase in incentives in July 2020 through the end of PY1 for small businesses could be repeated if participation decreases.	The program should continue efforts to offer additional technical support to: a) help identify non-standard energy efficiency projects that do not fall within the Business Standard or Process Efficiency programs, b) help customers with the application process including the preapproval and post phase, and c) develop new industry-specific outreach campaigns, which help customers understand how Business Custom projects benefit customers like them.
2. Is the target market segment appropriately defined, or should it be further subdivided or merged with other market segments?	The program could continue efforts deployed during PY1 that increased participation among the 'School' strata and small businesses such that certain business types do not dominate the program. These efforts included targeted webinars explaining the benefits of implementing energy conservation, increased incentives for small businesses, and direct outreach to public sector and municipal customers.	Evergy's Business Custom program should continue to work to identify new construction projects with potential for energy savings. These new construction projects may be in new business types such as indoor cannabis growing facilities, that have never participated in the program before because they did not exist prior to changes in legislation. Also, the IC should continue to work closely with the CSMs to identify opportunities to keep Tier 1 customers actively participating in Evergy's programs and meet the needs of these larger or national accounts.
3. Does the mix of end-use measures included in the program appropriately reflect the diversity of end-use energy service needs and existing end-use technologies within the target market segment?	The program could continue the marketing and outreach efforts that led to the increase in the number of HVAC and Cooling measures incentivized in PY1 compared to previous program years. The program could continue to research methods to increase participation in the cooking end-use category since that end-use is still seeing very low participation even though there is likely significant potential for energy savings.	TAs and customers should continue to be encouraged to install non-lighting measures. These efforts could expand in PY2 once COVID-19 restrictions are lifted to include different methods of outreach. Efforts should continue to educate customers and TAs about the availability of the peak load shift measure since it can lead to significant demand savings.

Missouri Question	Guidehouse Recommendations	
	Business Standard Program	**Business Custom Program**
4. Are the communication channels and delivery mechanisms appropriate for the target market segment?	The following recommendations are provided to improve the communication channels and delivery mechanisms of the program: • Continue education and training of new and existing TAs to reduce rebate application errors. • Create accessible targeted marketing materials that can be available on the program's website. • Continue efforts to streamline the rebate check delivery process.	Evergy should continue efforts to market and communicate about the Business Custom program as part of the broader marketing efforts of Evergy's business programs, including the Business Standard and Process Efficiency programs. This was shown in PY1 to lead to increased participation among smaller business customers in the Business Custom program.
5. What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation of each end-use measure included in the program?	The program saw low participation from some business types including those that may have been impacted by the COVID-19 pandemic such as hotels, motels, restaurants, entertainment centers, and other assembly building types. The program could work to develop targeted marketing and targeted incentive increases for measures such as air conditioners or food service for these building types to increase participation in PY2 and PY3.	Since some customers and TAs continue to express some confusion and miscommunication about the Business Custom program in PY1, Evergy and the IC should offer additional technical support and education that is accessible to all customers. The overall high satisfaction with the program in PY1 indicates that the communication mechanisms are appropriate for most of the target market but may not be accessible for all eligible customers and TAs. Further efforts to identify TA and customer communication issues through the TA Advisory Board meetings should be pursued. Guidehouse recommends that incentive levels for non-lighting end-uses are reviewed annually to ensure they are significant enough to not only increase participation in the program without increasing free ridership but to also consider the time and effort needed to complete the Business Custom application.

Figure 3-1. Participant Satisfaction with the Business Custom Program in MEEIA Cycle 3 PY1



n=13

Source: Guidehouse survey analysis

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