Filing Receipt

Filing Date - 2025-02-25 04:00:30 PM

Control Number - 38578

Item Number - 154

Public Utility Commission of Texas

Evaluation, Measurement, and Verification Plans for Outside-of-ERCOT Utilities' Energy Efficiency and Load Management Portfolios—PY2024

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January 2025

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ACKNOWLEDGEMENTS

The program evaluation plans contained in this document were developed based upon prior evaluation, measurement, and verification (EM&V) results and discussions with the Public Utility Commission of Texas (PUCT) staff, electric utilities program staff, and reviews of the utilities' program tracking and program documentation.

We would like to acknowledge the many individuals who contribute to the EM&V effort. This evaluation effort would not be possible without their assistance and support.

PUCT and electric utility staff provide input throughout the evaluation processes, starting with this EM&V Plan. The following individuals participated in ongoing evaluation deliverable reviews and discussions, attended multiple meetings, and responded to follow-up questions and program data and documentation requests:

- PUCT: Ramya Ramaswamy, Jenny DiLeo, Therese Harris, Patricia Garcia, Tugi Gotora, and James Harville;
- El Paso Electric: Desmond Machuca and Tony Reyes;
- Entergy: Kelly O'Donnell and Mark Delavan;
- Southwestern Electric Power Company (SWEPCO): Debra Miller and Steve Mutiso; and
- Xcel Southwestern Public Service (SPS): Grant Gervais, Derek Woods and Bryan Whitson.

We also wish to thank the staff at the following utility consulting firms who provide program data, documentation, and insight into program implementation: CLEAResult, Frontier Energy, ICF International, TRC, and Willdan Energy Solutions.

Please send any questions or comments on the report to PUCT Staff (energyefficiency@puc.texas.gov) and Lark Lee (lark.lee@tetratech.com).

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Description
AEP Texas	American Electric Power Texas—consolidation of AEP TCC and AEP TNC
C&I	Commercial and industrial
CATI	Computer-assisted telephone interview
CNP	CenterPoint Energy Houston Electric, LLC
CSOP	Commercial standard offer program
DI	Direct install
EEIP	Energy efficiency implementation project
EEPR	Energy efficiency plan and report
EESP	Energy efficiency service provider
EM&V	Evaluation, measurement, and verification
Entergy	Entergy Texas, Inc.
EPE	El Paso Electric Company
HTR	Hard-to-reach
IOU	Investor-owned utility
kW	Kilowatt
kWh	Kilowatt-hour
LI	Low-income
LM	Load management
M&V	Measurement and verification
mcf	1,000 cubic feet
MTP	Market transformation program
NTG	Net-to-gross
PUCT	Public Utility Commission of Texas
PV	Photovoltaic
PY	Program year
QA/QC	Quality assurance/quality control
RFP	Request for proposals
RSOP	Residential standard offer program
SOP	Standard offer program
SWEPCO	Southwestern Electric Power Company
TEESI	Texas Energy Engineering Services, Inc.
TNMP	Texas-New Mexico Power Company
TRM	Technical Reference Manual
Xcel Energy SPS	Xcel Energy Southwest Public Service, Inc.

1.0 INTRODUCTION

This document presents the evaluation, measurement, and verification (EM&V) plans for the outside-of-ERCOT utilities' energy efficiency and load management programs implemented in program year (PY) 2024 (PY2024)[1]. It builds upon the prior program years' statewide EM&V efforts conducted annually since PY2012. This is the first EM&V Plan in the four-year EM&V contract period covering PY2024–PY2027 and responds to new research priorities and needs.

The EM&V provides a broad due diligence verification of claimed savings for all programs with targeted in-depth activities based on prioritization, which maximizes the value of EM&V. Prioritization allocates EM&V activities, including (1) engineering desk reviews, (2) on-site measurement and verification (M&V), (3) participant surveys, (4) in-depth interviews, (5) interval meter data analysis, and (6) consumption analyses.

In 2011, the Texas Legislature enacted SB 1125, which required the Public Utility Commission of Texas (PUCT) to develop an EM&V framework that promotes effective program design and consistent and streamlined reporting. The EM&V framework is embodied in P.U.C. SUBST. R. 25.181, relating to the energy efficiency goal.

The PUCT selected an independent, third-party EM&V contractor for the PY2024–PY2027 programs through the Request for Proposals (RFP) 473-24-00003, Project No. 56788. The selected EM&V team is led by Tetra Tech and includes Texas Energy Engineering Services, Inc. (TEESI), Energy Bees, and Blink Energy Services. This document is the deliverable for Task 1B of the Scope of Work in the RFP.

The objectives of the EM&V effort are to:

- document gross and net energy and demand impacts of utilities' individual energy efficiency and load management portfolios;
- determine program cost-effectiveness;
- provide feedback to the PUCT, utilities, and other stakeholders on program portfolio performance; and
- prepare and maintain a statewide technical reference manual (TRM).

This document addresses the planning to meet the first three objectives above. EM&V research and results inform the fourth objective, maintenance of the TRM, along with a collaborative TRM working group composed of the EM&V contractor, PUCT staff, the electric utilities, and contractors invited by the utilities. This EM&V Plan is a living document; there may be scope changes to meet new PUCT priorities, portfolio and program changes, issues encountered during data collection, or interim evaluation findings. Any changes in scope will be documented in the EM&V team's biweekly status reports to the PUCT.

Outside-of-ERCOT Utility-specific evaluation plans are in Section 3**Error! Reference source not found.** through Section 6. Prior to the outside-of-ERCOT utility-specific sections, Section 2.0 discusses the Tetra Tech team's approach to evaluation activities that will be performed consistently statewide across all outside-of-ERCOT utility portfolios. The remainder of this section discusses evaluation prioritization and EM&V research. An overview of the EM&V prioritization is provided, followed by summary tables of prioritization by program type across the four years.

[1] This document is subject to change based on the needs of the PUCT, industry conditions or regulatory conditions.

1.1 EVALUATION PRIORITIZATION

The EM&V plans are based on the prioritization for the EM&V effort that includes both PY2024 and the four-year contract-proposed prioritization, which the PUCT approved. To briefly summarize, the EM&V team identified program types across utilities that have similar program design, delivery, and target markets. We reviewed each program type and prioritized (high, medium, low) based on the following considerations:

- magnitude of savings—the percentage of contribution to the portfolio of programs' impacts (e.g., more than ten percent of portfolio savings are from a measure or program or the measure is rapidly expanding),
- level of relative uncertainty in estimated savings,
- level and value of existing quality assurance/quality control (QA/QC), and verification data from on-site inspections completed by utilities or by their contractors,
- stage of the program or programmatic component (e.g., pilot, early implementation, mature),
- importance to future portfolio performance,
- and priorities for PUCT and utilities prior EM&V results, and upcoming changes in the markets in which the programs operate.

As discussed above, we propose to build on the use of consumption analyses in the previous evaluation cycles. The use of consumption analyses will continue to improve the accuracy of TRM deemed savings in estimating energy savings and demand reductions and allow us to assess how effectively individual measures and IOU programs are performing.

The priority given to each utility program is indicated at the top of its EM&V Plan in the utility-specific sections. A streamlined EM&V effort will be conducted that couples broad due diligence verification of savings for all programs with targeted in-depth activities, including engineering desk reviews, on-site M&V, interval meter data analysis, participant surveys and interviews, and consumption analyses based on the prioritization of the programs.

We carefully developed PY2024–PY2027 EM&V scopes that prioritize EM&V activities where they provide the greatest value. To continue the significant progress in improving IOU portfolios, programs, and the TRM, we propose the following prioritization and overview of the Portfolio EM&V Plan. The proposed Portfolio EM&V Plan, as summarized in Table 1 through Table 4, is based on our approach to implementing broad verification coupled with targeted in-depth evaluations[2].

1.1.1 PY2024 EM&V Prioritization Overview

For PY2024 EM&V to be completed in 2025, we propose a *high* priority for **HVAC tune-ups, smart thermostats, and major commercial end-uses** (e.g., lighting, HVAC, and custom). The number of HVAC tune-ups incentivized through the programs has increased rapidly in recent years, and more information on both gross and net savings (as measured through a net-to-gross ratio) is needed. A consumption analysis and participant survey for HVAC tune-ups for both residential and commercial customers is planned.

[2] Where sampling other than census is proposed, sample sizes will be designed to meet, at a minimum, the 90/10 confidence interval at the IOU portfolio level specified in the RFP.

The number of smart thermostats incentivized through the programs has also increased rapidly in recent years, necessitating more information on both gross and net savings. In addition, IOU program-incentivized smart devices can be utilized for demand response, which is relevant to broader PUCT initiatives. Participant surveys will be conducted for those receiving smart thermostats through retailer and online programs and delivery mechanisms.

Commercial projects delivered through Commercial Standard Offer Programs (CSOP) and Market Transformation Programs (CMTP) have seen increased complexity of projects where engineering desk reviews provide more information on the savings. In addition, through commercial participant surveys, we will verify measure installation, update the net-to-gross ratios used to calculate net savings for major end-uses and collect process information such as program satisfaction.

We have prioritized **residential retrofit measures and load management** as a *medium* priority for PY2024 EM&V. For residential retrofit measures, we will assess baseline documentation requirements that were added to the TRM to align better deemed savings with measured savings and complete desk reviews for measures that are heavily dependent on proper implementation such as air infiltration and duct sealing. These measures are implemented across Residential Standard Offer Programs (RSOPs), Residential Market Transformation Programs (RMPTs), Hard-to-Reach Programs (HTR SOPs) and Low-income Weatherization programs (LI programs). We will analyze interval meter data analysis for a census of load management, given that load management programs account for half or more of demand reductions across most IOU portfolios.

Table 1. Evaluation Prioritization and Plan Summary—PY2024 Completed in 2025

Measure, end-use, or program type	Sector	Evaluation priority	Claimed savings verification approach	Project desk reviews	On[3]-sites	Surveys and Interviews	Interval meter/ consumption analysis
HVAC tune-ups and smart thermostats	Commercial and residential	High	Census sample	N/A	N/A	Participants[4] and contractors	Census sample
Commercial projects through CSOP and CMTP	Commercial	High	Sample by end-use	27	N/A	Participants, census or sample to meet 90/10	N/A
Retrofit measures across RSOP, RMTP, HTR,	Residential	Medium	Sample by end-use	20	N/A	N/A	N/A

[3] While on-sites are foundational to the EM&V research and will be conducted all four calendar years, there is not sufficient time before impact reporting to complete on-site M&V for PY2024. On-sites across all IOUs are planned to begin in 2025 with PY2025 participants.

[4] The EM&V team and PUCT Staff are exploring with IOUs the possibility of incorporating EM&V participant surveys into program delivery.

Measure, end-use, or program type	Sector	Evaluation priority	Claimed savings verification approach	Project desk reviews	On[3]-sites	Surveys and Interviews	Interval meter/ consumption analysis
and LI programs							
Load management	Commercial and residential	Medium	Census	N/A	N/A	N/A	Census
All other measures and programs		Low	Census, tracking system data	N/A	N/A	N/A	N/A

1.1.2 PY2025 EM&V Prioritization Overview

For PY2025 EM&V to be completed in 2026 (Table 2), we have prioritized **residential retrofit measures**—insulation, air infiltration, duct sealing, and central air conditioners—as a *high* priority. We propose conducting a consumption analysis for the three outside-of-ERCOT utilities because there was insufficient AMI data in the previous evaluation cycle to quantify PY2022-PY2023 program impacts. In addition, we will re-evaluate the two ERCOT utilities' where residential retrofit savings underperformed in the PY2023 consumption analysis.

Participant surveys for all IOU programs incentivizing residential retrofit measures will collect process information, update the net-to-gross factor for RSOP[5], and confirm measure installation. Desk reviews and on-sites will be conducted for residential retrofit IOU programs that are not included in the consumption analysis. Finally, as discussed further under Task 4, we propose developing a program participation metric for residential retrofit programs across outside-of-ERCOT IOU territories to provide the PUCT insight on the percentage of residential customers served.

We have prioritized **residential new homes, commercial projects, and load management** as a medium priority. For residential new homes, we will assess how well the programs have responded to the PY2025 TRM baseline update and new performance paths open to the program through engineering desk reviews and program staff interviews. Given the complexity and uncertainty of project savings described above, we will sample for commercial project engineering desk reviews and on-sites. We will continue census interval meter data analysis for load management programs.

Table 2. Evaluation Prioritization and Plan Summary—PY2025 Completed in 2026

Measure, end-use, or program type	Sector	Evaluation priority	Claimed savings verification approach	Project desk reviews or participation analysis	On-sites	Surveys and Interviews	Interval meter/ consumption analysis

[5] It is industry standard practice to deem the net-to-gross ratio for low-income customers at 1 given the affordability barriers faced and therefore NTG questions are not planned at this time for these households.

Measure, end-use, or program type	Sector	Evaluation priority	Claimed savings verification approach	Project desk reviews or participation analysis	On-sites	Surveys and Interviews	Interval meter/ consumption analysis
Retrofit measures across RSOP, RMTP, HTR, and LI programs	Residential	High	Census sample, tracking system, or consumption analysis as specified	16 and participation analysis for outside of ERCOT IOUs	16	Participants and contractors, sample to meet 90/10	Census analysis for outside-of-ERCOT programs
New Homes	Residential	Medium	Sample by M&V approach (see desk reviews)	5	N/A	N/A	N/A
Commercial projects through CSOP and CMTP	Commercial	Medium	Sample by end-use (see desk reviews)	54	27	N/A	N/A
Load management	Commercial and residential	Medium	Census	N/A	N/A	N/A	Census interval meter data analysis
All other measures and programs		Low	Census, Tracking system data	N/A	N/A	N/A	N/A

1.1.3 PY2026 EM&V Prioritization Overview

For PY2026 EM&V to be completed in 2027 (Table 3), we have prioritized **heat pumps, residential new homes, and load management** as a *high* priority. A consumption analysis is proposed to assess heat pumps and variable speed heat pumps; the latter is a new measure in the PY2025 TRM. We will again assess how well the new homes programs have responded to the PY2025 TRM baseline update and new performance paths option coupled with an update in the net-to-gross ratio for these programs at the IOU-level. Load Management will include cooperation rate analysis coupled with in-depth interviews to understand IOU load management planning and optimization to provide performance feedback in addition to census interval meter data analysis.

We have prioritized **commercial and residential retrofit projects** as *medium* priorities to continue to assess the issues discussed above and have specified specific desk reviews for **HVAC tune-ups** to follow up on the results of the consumption analysis. Tetra Tech is proposing a new sampling stratum—*geography*—to provide additional feedback to the PUCT and IOUs on the quality of implementation across territories.

Table 3. Evaluation Prioritization and Plan Summary—PY2026 Completed in 2027

Measure, end-use, or program type	Sector	Evaluation priority	Claimed savings verification approach	Project desk reviews and participation analysis	On-sites	Surveys and Interviews	Interval meter/ consumption analysis
Heat pumps	Commercial and residential	High	Census sample	Baseline heating source	N/A	N/A	Census sample
New Homes	Residential	High	Sample by M&V approach	10	N/A	Approx. 20 builder and rater interviews	N/A
HVAC tune-ups	Commercial and residential	Medium	Sample	7 Residential and 3 Commercial	5	N/A	N/A
Retrofit measures across RSOP, RMTP, HTR, and LI programs	Residential	Medium	Sample by geography[6]	44, update PY2025 participation analysis with PY2026	22	N/A	N/A
Commercial projects through CSOP and CMTP	Commercial	Medium	Sample by end-use and geography	52	26	N/A	N/A

[6] At this time, our proposed geography sampling strata approach is to group projects into 'metro', 'outside-of-metro' and 'rural' geographies to sample across population areas that may affect program services. Given competing priorities and condensed timeline at the beginning of the four-year contract period, we are proposing the geography sampling strata is discussed and first implemented starting with PY2026.

Measure, end-use, or program type	Sector	Evaluation priority	Claimed savings verification approach	Project desk reviews and participation analysis	On-sites	Surveys and Interviews	Interval meter/ consumption analysis
Load management	Commercial and residential	High	Census	N/A	N/A	Census program design and delivery staff in-depth interviews	Census interval meter data analysis
All other measures and programs		Low	Census, Tracking system data	N/A	N/A	N/A	N/A

1.1.4 PY2027 EM&V Prioritization Overview

For PY2027 EM&V to be completed in 2028 (Table 4), we have placed a *high* priority on **residential retrofit measures**—insulation, air infiltration, duct sealing, and central air conditioners—**and small business and expanding commercial offerings** such as strategic energy management, recommissioning, and food services projects. We will conduct a residential retrofit consumption analysis for the three IOUs (EPE, SWEPCO and Xcel) not included in the PY2025 consumption analysis and any programs found to be underperforming in the PY2025 consumption analysis. Desk reviews and on-sites will be conducted for residential retrofit IOU programs that are not included in the consumption analysis.

In addition, participant surveys for expanded commercial offerings will assess how effectively these programs serve commercial customers and update net-to-gross information. We will also evaluate how effectively programs reach the traditionally underserved small business customer segment. **Other commercial projects and load management** will continue as a *medium* priority for the above reasons.

Table 4. Evaluation Prioritization and Plan Summary—PY2027 Completed in 2028

Measure, end-use, or Program type	Sector	Evaluation priority	Claimed savings verification approach	Project desk reviews and participation analysis	On-sites	Surveys and Interviews	Interval meter/ consumption analysis
Retrofit measures across RSOP, RMTP, HTR, and LI programs	Residential	High	Census sample, tracking system, or consumption analysis as specified	16	16	N/A	Census analysis for IOUs not included in PY2025 and under-performing programs

Measure, end-use, or Program type	Sector	Evaluation priority	Claimed savings verification approach	Project desk reviews and participation analysis	On-sites	Surveys and Interviews	Interval meter/ consumption analysis
Expanding offerings	Commercial	High	Sample by end-use and/or geography	4	2	Participants, census or sample to meet 90/10	N/A
Small business	Commercial	High	Sample end-use and/or geography	10 desk reviews, census analysis of measure mix and/or geography	5	N/A	N/A
Commercial projects through CSOP and CMTP	Commercial	Medium	Sampled by end-use (see desk reviews)	38	19	N/A	N/A
Load management	Commercial and residential	Medium	Census	N/A	N/A	N/A	Census interval meter data analysis
All other measures and programs		Low	Census, tracking system data	N/A	N/A	N/A	N/A

1.2 EVALUATION ACTIVITIES

Below, we briefly describe the major research activities listed in the tables above.

Tracking system verification provides an independent third-party review of claimed savings; it assesses the accuracy of the data for all claimed savings in the outside-of-ERCOT utilities' annual Energy Efficiency Plans and Reports (EEPR). This verification includes a high-level review of programs' deemed measures to verify that all required tracking data is available and savings are calculated correctly for the applicable TRM. However, not all the information necessary to complete a census review of TRM-deemed savings calculations is in the tracking systems for residential and commercial programs; therefore, a sample of projects must be selected, and engineering desk reviews performed to verify savings.

Engineering desk reviews include reviewing the assumptions used for the savings calculations and, when available, utility M&V reports gathered through the supplemental data request for sampled projects.

On-site M&V checks the installation and equipment nameplate information to support the verification of claimed savings calculations and may include spot metering. Additional on-site metering will be completed when an enhanced level of rigor is warranted to validate key data inputs and assumptions. We expect to conduct metering or regression analyses for complex projects for which there is the greatest uncertainty in claimed savings in nonresidential applications or high-impact measures that represent a significant proportion of savings. We expect additional rigor in on-site M&V may be needed for project measures such as Strategic Energy Management projects, HVAC control system upgrades, fresh air pre-cooling, and air compressor upgrades, to name a few.

Consumption analyses of the utilities with interval meter data will be conducted to assess energy savings and demand reductions for several measures, end-uses, and programs, as described above in Table 1 through Table 4. These analyses will compare pre-program usage with post-program usage as well as comparisons with nonparticipant groups.

Interval meter data analyses will be conducted for all load management programs to recalculate kilowatt and kilowatt-hour savings from curtailment events as compared to the TRM baseline methodology.

Benchmarking research. Tetra Tech will conduct benchmarking research for net-to-gross ratios for similar upstream measures as offered through the Texas IOU programs when primary research is not warranted (e.g., small savings measures with low program uptake).

Participant analysis. Tetra Tech will work with PUCT Staff and IOUs to map multi-year program participation across IOU territories for specific customer segments as specified in the summary tables.

2.0 EVALUATION APPROACH

It is important to understand the energy efficiency and load management portfolios for each utility and the context in which they operate; this is necessary for the evaluation, measurement, and verification (EM&V) effort to result in actionable feedback that can be used to improve program performance and reporting accuracy. The EM&V team gathers information through meetings, program documentation, and data tracking reviews. The EM&V team reviews and compiles information from the annual Energy Efficiency Program Plans and Report (EEPR). In addition, the EM&V team collects and catalogs program documentation. Types of program-specific documentation reviewed included operating manuals, service provider applications, customer agreements, memoranda of understanding, sample customer reports (i.e., benchmarking), workshop presentations, and tools.

Scheduled biweekly status meetings between the EM&V team and the Public Utility Commission of Texas (PUCT) continue throughout the evaluation. Status reports are posted on the EM&V SharePoint site. The EM&V team and the PUCT will also hold periodic meetings with utilities and, when applicable, their implementation contractors throughout the evaluation period. The EM&V project manager will also email the utilities a monthly status update. In order to engage a wide range of stakeholders in the EM&V process in both up-front planning and the end results, an Energy Efficiency Implementation Project (EEIP) meeting will be held in the fall and spring, where the EM&V contractor presents.

Next, we discuss the EM&V team's approach to:

- the EM&V database,
- impact evaluations,
- performance feedback,
- cost-effectiveness testing, and
- reporting.

2.1 IMPACT EVALUATIONS

The impact evaluations will result in defensible lifetime and annual estimates of gross and net energy and demand impacts. The impact evaluations will be used to calculate realization rates; the realization rate is determined by dividing the evaluated savings by the utility-claimed savings.

We will complete program tracking system data verification for all demand reductions and energy savings. For a sample of projects, engineering desk reviews will verify that the measures installed are consistent with those listed in the tracking system, with a subset of on-site M&V for PY2025 through PY2027 to gain additional information and investigate areas of uncertainty found in the desk reviews. These impact evaluation activities are complemented by participant surveys and interviews to provide additional insight into program performance and to inform net-to-gross ratios to calculate net savings. Next, we discuss the proposed evaluation approaches by sector, programs, and measures designated as *high* or *medium* priorities in Section 1.1.

Commercial sector energy efficiency proposed plan approach. The commercial SOPs and MTPs are similar in the sites they serve and the energy efficiency and demand reduction solution categories. Both program types have resulted in a large number of lighting and HVAC system improvement projects and customer measures, as well as a smaller number of projects of other measures (e.g., solar/PV, motors, roofs). Therefore, evaluation activities will be similar across both program types to strengthen results across this sector.

For each of the PY2025–PY2027 evaluations, we budgeted 200 desk reviews and 100 on-sites to verify key savings parameters. The PY2024 evaluation will include 100 desk reviews and participant telephone verifications instead of on-sites because of the limited time period in the first contract year before reporting. Compared to the residential sector, commercial buildings have a much larger variety of uses and operate similar equipment differently; therefore, a targeted measure approach that rotates across program years will focus the scope to provide actionable results. For example, HVAC tune-ups will be a focus for commercial and residential in PY2024 to provide useful results for this measure in addition to the highest savings measures of HVAC, lighting, and custom, while later years will focus on expanded measure offerings, including recommissioning, strategic energy management, food services and behavioral.

Residential sector energy efficiency proposed plan approach. The recommended evaluation approaches for the residential sector measures vary as the programs have different goals, designs, and delivery strategies and have different levels of proposed priority given prior years' evaluations. For major programs and measures, we will conduct a consumption analysis, discussed in more detail below, to evaluate savings through changes in participants' AMI meter data.

We will also conduct desk reviews to ensure the programs collect appropriate documentation and apply the TRM correctly. For desk reviews in the PY2025–PY2027 evaluations, we budgeted 340 desk reviews and 175 on-sites to verify key savings parameters. The PY2024 evaluation will include 60 desk reviews but no on-sites because of the limited time period in the first contract year before reporting. For new homes and PV that employ M&V approaches outlined in TRM Volume 5, we will conduct in-depth reviews of the M&V approach coupled with participant surveys to evaluate the net-to-gross and assess performance.

Measure-level consumption analysis. Each year's consumption analysis, with 12-month pre- and 12-month post-installation AMI data, normalized for weather, will detail the expected targeted measures and IOU programs for the year. Consumption analysis results are expected to provide insight into the accuracy of the TRM assumptions and calculations related to real-world installations. This process will improve the accuracy of TRM deemed savings and the effectiveness of implementation at the IOU-level over the course of the evaluation contract.

The Tetra Tech team will conduct consumption analyses for programs that target measures of interest as proposed in Task 1B, Portfolio EM&V Plan, particularly HVAC tune-ups, HVAC equipment, and building envelope measures. As utilities update their portfolios, the programs included in these analyses might expand given the measure focus of the consumption analyses in the next evaluation contract period.

While previous consumption analyses focused on the four to five utilities that had AMI data available, as AMI meters become fully deployed across all IOUs, the Tetra Tech team will expand consumption analysis to all utilities as it makes sense based on program participation and the progress of AMI meter deployment. Conducting utility-specific consumption analyses is important to provide results specific to utilities to understand program effectiveness within their unique territories and support consistent performance across IOUs.

Load management programs proposed evaluation approach. As we have done in the past, the Tetra Tech team proposes to collect interval load data from all utilities for a census of load management program participants to verify their energy and demand savings impacts. We have also proposed participant surveys be conducted once during the four-year contract period to assess program performance and key information.

Specific sampling strategies for PY2024 will be part of the Detailed Research Plans (DRP) discussed in Section 2.3.

In implementing the impact evaluations, we consider the issues that could introduce potential bias and uncertainty. Biases can be introduced for a number of reasons within evaluation results. It is important to assess that there are no major systematic non-random errors embedded in the data that would bias the evaluation results. The EM&V team will make every effort to identify and address any potential biases occurring due to measurement errors resulting from inaccurate meters or errors in recording data; collection errors arising from non-representative sampling; refusal by some in the sample to participate in a survey; biased responses or interpretation of responses; poor questionnaire design; failure to take behavioral factors into account; modeling errors from the incorrect specification of relationships between variables; improperly included or excluded information or data; and other modeling deficiencies. Even when applying best research practices to address potential biases, some uncertainty will remain; the annual Investor Owned Utilities (IOUs) Energy Efficiency Report will discuss sources of biases and uncertainty associated with the evaluated savings estimates.

In addition to mitigating the biases, the impact evaluations will increase the confidence of results and reduce uncertainty by employing appropriate sampling approaches and reporting confidence intervals. A confidence interval is a range of values that describes the uncertainty surrounding an estimate. Confidence intervals are one way to represent how "good" an estimate is—the larger a confidence interval is for a particular estimate, the more caution is required when using the point estimate.

Demand-side management program evaluations routinely employ 90 percent confidence intervals with ±10 percent as the industry standard ("90/10"). The 90 percent in the confidence interval represents a level of certainty about the estimate. If we were to repeatedly obtain new estimates using exactly the same procedure (by drawing a new sample, conducting new interviews, calculating new estimates, and new confidence intervals), the confidence intervals would contain the true average of all the estimates 90 percent of the time. The EM&V activities will result in a maximum confidence interval of ±10 percent with 90 percent confidence at the utility portfolio level for gross evaluated savings estimates.

Next, we overview our impact evaluation approach, followed by a discussion of DRPs used for data collection and details of the EM&V data collection activities.

2.1.1 Overview of Impact Evaluation Approach

The EM&V team will use a combination of approaches to estimate and verify energy savings. Where standard offer programs (SOP), market transformation programs (MTP), and pilot programs are similar in terms of (1) the types of customers and sites they serve and (2) the end uses affected by the programs, the evaluation approaches will be similar to ensure the energy savings estimates are comparable for these program categories.

Below, we summarize the specific types of EM&V activities and analysis that the EM&V team will use to verify program impacts. The evaluated savings will be based on realization rate calculations; to calculate evaluated savings, we will apply the realization rates determined from the EM&V sample to the population of projects. Although the level of rigor varies by sector, program type, and measure, the following activities will be conducted by the EM&V team:

- **Tracking system review.** To review each utility's tracking system, which contains extensive information at the customer measure level, the EM&V team will use the technical reference manual (TRM) algorithms and deemed values to calculate aggregate savings at the utility program level. This review aims to verify that utilities have correctly applied these algorithms to all the programs' installed measures in the given program year. This tracking system review will allow the EM&V team to calculate the total program-deemed savings in order to conduct a final comparison to utilities' claimed savings. The tracking system review will be conducted for a sample of residential programs and commercial programs; utilities' tracking systems do not contain all of the information for a census review of commercial programs, and a supplemental data request to support desk reviews is needed.
- **Engineering desk reviews.** The EM&V team will review a sample of applications entered into the ERCOT utilities' tracking systems for accuracy and completeness. Our review will accomplish two primary objectives. First, it will ensure that the measures installed are consistent with those listed in the tracking system. For each program, the EM&V team will review the tracking system and its linkage to any deemed savings tools or methods used to estimate savings at the measure and site level. Second, the desk reviews will verify that the tracking system's savings estimates are consistent with those calculated in the "deemed" calculation tools, tables, or M&V methods used to estimate project savings. The EM&V team will review the assumptions used for the savings calculations. Our focus on this effort will be to review, if possible, available building simulation models and any work papers that were developed for the savings assumptions. Desk reviews will also include a review of the utility M&V reports gathered through the supplemental data request for sampled projects.
- **On-site M&V.** We will also conduct on-site M&V for a sample of participants. These on-site visits have two principal objectives: (1) to verify the installation and operation of the equipment/systems and (2) to verify key assumptions made in calculating claimed savings estimates.
    - Installations will be verified by collecting data on-site related to the number of measures installed, the location of the systems, equipment nameplate information, and a visual inspection to ensure the systems are working as intended. This basic inspection audit will take approximately one to two hours to complete.
    - Site measurements—and potentially spot metering—will be conducted to develop an independent estimate of savings to compare to the utility's claimed savings estimates. This more comprehensive audit seeks to verify key input assumptions used to develop ex-ante claimed savings estimates from deemed savings algorithms or M&V plans for custom projects (e.g., baseline energy use, operating hours, efficiency performance, and potentially interactive effects). For residential programs, blower door testing will also be performed.
- **Consumption analysis.** The EM&V team will conduct consumption analyses of the utilities with interval meter data to assess actual savings in comparison to the TRM for both commercial and residential high-impact measures. The consumption analyses will employ quasi-experimental designs that compare pre-participation and post-participation usage as well as comparisons with a representative nonparticipant group. Weather and outliers will also be addressed in the methodology. The primary goal of this analysis is to inform prospective updates to the TRM.

- **Interval meter data analysis.** For the load management programs, the EM&V team will perform interval meter data analysis to evaluate the energy and demand impacts of curtailment events compared to the TRM baseline methodology.
- **Benchmarking research.** Tetra Tech will conduct benchmarking research for net-to-gross ratios for similar upstream measures as offered through the Texas IOU programs.

2.2 EM&V DATABASE AND DASHBOARDS

The EM&V database provides an integrated multi-purpose solution. It includes key data from all ERCOT and outside-of-ERCOT utilities, which is critical for providing both the macro- and micro-level information needed to understand the programs and measures driving savings across the IOUs and allowing us to drill down to ERCOT and outside-of-ERCOT utility-, program- and measure-specific data. We will continue to use the EM&V database to sample across utilities' programs efficiently and maintain accuracy and consistency in reporting evaluated results. The EM&V database allows the EM&V team to conduct efficient sampling across utilities and programs, complete tracking system reviews across all programs, and sample projects for additional activities, as summarized in Section 1.0. In addition, the EM&V team reviews the utilities' final program tracking data to reconcile the EM&V's tracking system savings with the claimed savings that utilities report in their EEPRs.

In addition to the EM&V database, which manages the tracking data, the evaluation team plans to provide the PUCT with an interactive dashboard detailing the status of each program evaluation. Overall, the dashboard tracks progress toward goals across programs, including the number of completed desk reviews, surveys, and site verifications. At a more granular level, the dashboard allows the PUCT to examine all documentation and calculations the evaluation team used—by project or site—at any time.

Critical components of any successful evaluation include the secure collection, archival, organization, and maintenance of program and portfolio data. The Tetra Tech team has continuously improved the centralized, statewide EM&V database to carefully manage the data request process, which has improved the data quality and reduced the burden on utilities and their contractors. Data security protocols have also continuously improved to ensure secure transmission and storage.

2.2.1 Data Requests and Security

The EM&V team will periodically submit data requests to utilities, as indicated on the data request timeline maintained on the EM&V SharePoint site. Supplemental data requests will be sent for the *high* and *medium* priority programs to obtain additional documentation. Per the communication protocols agreed upon by the utilities for prior EM&V efforts, the EM&V team will direct data requests to the utilities as well as implementation contractors who host the data and have been authorized by the utilities to release data to the EM&V team.

Care needs to be taken to transfer and store customer data to ensure data integrity and security. The confidentiality of customer data and personally identifiable information (PII) relies on the following solid security plan:

- File transfers
    - All data are encrypted when in transit; Tetra Tech uses a secure OneDrive file transfer application that encrypts files during the transfer process, ensuring data integrity and security.

- Storage
  - Data containing PII are encrypted while at rest.
  - Data are stored on a server located in a physically secured data center.
- Access
  - Exposure to PII is limited to designated staff members.
  - Non-PII/clean data will be made available to the project team.
  - Database user access rights are limited in order to prevent exposure to PII.

2.2.2 Front- and Back-End Data Management

The first approach to ensure data integrity is front-end data management, which involves data collection and organization. Keeping data well-organized begins with how it is requested, collected, and saved. The EM&V team will continue to use two key software programs that will allow efficient and effective data requests, collection, and repository—a SharePoint server and a secure file transfer site.

Tetra Tech maintains a secure SharePoint site for broadcasting relevant information and documentation about the PUCT EM&V project. The site is accessible to utilities, all relevant contractors, PUCT staff, and stakeholders who have requested access. The site has a Wiki-style interface for users to share information in near-real-time. This documentation and information interface is editable, linkable by all users, and maintained by Tetra Tech staff.

As introduced above, Tetra Tech also maintains and hosts a secure file transfer website (OneDrive) for storing and transferring datasets and other project-related materials. The site is securely accessible to all relevant utilities, contractors, and PUCT staff. The site is used primarily for two purposes: (1) storing and sharing large datasets of relevant program information, such as contractor metering data and utility tracking and consumption data; and (2) sharing supporting documentation with other contractors and the PUCT. This site also allows the EM&V team to oversee and document the data as they come in, providing an extra quality control step to the evaluation process.

The second approach to ensure data integrity is through back-end data management, which involves dynamic data compilation, auditing, maintenance, algorithm development, and reporting. A critical element of our approach entails assessing each program's database at the earliest opportunity to determine whether the program implementers are collecting the data required for accurate evaluations. We use SQL Server as our core back-end technology.

2.2.3 Preliminary Data Validation

Identifying data issues in the program's evaluation as soon as possible is critical. Data quality issues can reduce the integrity of the evaluation results or impede conducting specific activities that rely on this data. We will, therefore, review the program data for data completeness as well as data quality.

To determine whether the relevant information is being collected, we will review each program's database as they are sent to the EM&V team. After comparing the information in the database to the information required to evaluate the program, we will offer recommendations regarding additions or changes as appropriate. Our review will assess the fields in the database and the quality and detail of the data itself. Although a data field may have been created for vital information, this information is not always collected or collected in sufficient detail.

The EM&V team will implement EM&V data validation tasks that can be efficiently accomplished through SQL procedures. In general, the EM&V team will review the data for:

- missing but required data fields, including ex-ante savings estimates, fields needed for calculations or engineering review, fields needed to contact participants for additional research, and date fields to verify the timing of participation;
- duplicate records;
- inconsistent terminology, such as inconsistent naming of measures, which can result in ambiguities about what measure has been installed; and
- values that appear to be out of the expected range within fields, such as participation dates, values used as inputs within savings calculations (such as square footage for homes or quantities installed), and ex-ante savings.

A visual representation of the data import, review, and validation process can be found in Appendix A.

2.3 DETAILED RESEARCH PLANS AND SUPPLEMENTAL DATA REQUESTS

This EM&V plan describes EM&V activities we will complete by utility program. The DRPs provide a more in-depth discussion of the sampling and specific research activities and supplemental program data needed for specific utility program-level evaluations implemented throughout the evaluation period. DRPs will only be completed for the *high-* and *medium-priority* programs with primary data collection.

DRPs will be distributed for utility review; the utilities' review of the savings and sample characterization in the DRPs is particularly critical. For example, a population mischaracterization could indicate issues with the data housed in the EM&V database or a misunderstanding of the program data itself.

Supplemental data requests (SDR) for the associated sampled projects will be distributed to each utility within one week of the DRPs. The SDRs will request documentation to support the desk review and on-site verification activities. Utilities will be asked to send complete project documentation for the EM&V sample of program participants. Project files should include any documentation related to the project and energy calculations, such as invoices, application forms, project sponsor specification sheets, the completed energy savings calculators for the project, and other relevant materials. The project files should also include the quality assurance/quality control (QA/QC) inspection reports if the sampled projects received QA/QC.

2.4 COST-EFFECTIVENESS TESTING

The EM&V team will conduct cost-effectiveness testing using the program administrator cost test (PACT), also known as the utility cost test, using actual results except for LI programs, as discussed below. Cost-effectiveness tests will be run using a uniform model for all utilities; the EM&V team will collect required inputs for the model from several sources, including program tracking data, deemed savings, and the PUCT and utilities. Table 5 lists the required inputs to the cost-effectiveness model and the sources of information.

Table 5. Cost-Effectiveness Model Inputs and Sources

Model input	Measurement level	Source
Reported energy/demand savings	Measure type	EM&V database
Summer/winter peak coincidence factors	Measure type	Deemed savings
Effective useful life	Measure type	Deemed savings
Incentive payments	Program	EEPRs
Administrative and research and development (R&D) costs	Program/portfolio	EEPRs
EM&V costs	Program/portfolio	EM&V team budgets
Performance bonus[7]	Portfolio	EEPRs
Avoided costs	Statewide	PUCT (utilities)
Weighted average cost of capital	Utility	Utilities
Line loss factor (outside-of-ERCOT utilities only)	Utility	Utilities
Realization rates	Program	Evaluation results
NTG rates	Program	Evaluation results

The EM&V team will conduct cost-effectiveness tests separately using claimed gross savings, evaluated gross savings, and evaluated net savings. The model produces results at the portfolio, program category,[8] and program levels.

All benefits and costs are expressed in PY dollars. Benefits resulting from energy savings occurring in future years are net-to-PY dollars using the utility's weighted average cost of capital (WACC) as the discount rate.

When tests are conducted at a more disaggregated level than data are available, allocations will be made proportionate to costs. For example, the performance bonus will be calculated for the overall portfolio and allocated to individual programs proportionate to the programs' costs associated with meeting demand and energy goals. Program costs include program administrative and incentive costs; portfolio-level costs include the performance bonus; and EM&V, administrative, and R&D costs.

[7] Performance bonuses as an input into cost-effectiveness testing came into effect in 2012.

[8] Program categories are currently defined as *nonresidential*, *residential*, *low-income*, *load management*, and *pilot*.

LI programs are evaluated using the savings-to-investment ratio (SIR). This model only includes net incentive payments under program costs. The SIR methodology is only used when specifically testing LI programs.

Portfolio-level cost-effectiveness analyses are based on the PACT and will be shown both including and excluding LI programs.

The calculations used for the PACT cost-effectiveness methodology are in Appendix B.

In addition, the EM&V team will report the cost per lifetime kilowatt-hours and kilowatts; this is calculated by attributing costs to energy savings and avoided demand based on their portion of total benefits and then applying that proportion to the total program costs.

2.5 PERFORMANCE FEEDBACK

Savings and cost-effectiveness alone do not completely explain a program or portfolio's effectiveness. Other factors, including internal and external utility operations, program maturity, service provider and implementation contractor activities, and markets, can influence a program's effectiveness. Identifying program process improvements is a best practice in EM&V and is critical to maximizing the value provided. Due to the emphasis placed on a broad reach of impact evaluation activities within a limited EM&V budget, the EM&V team will work with PUCT staff to prioritize process issues so that resources are spent on the areas of the highest importance. For PY2024, process issues will include timing of savings progress toward program goals, customer segment analysis, support for a potential future energy efficiency rulemaking if needed, and other process items identified throughout the program year.

2.6 REPORTING AND PROJECT MANAGEMENT DELIVERABLES

There are two EM&V report deliverables per program year: (1) Interim Impact Evaluation Reports and (2) the annual Investor Owned Utilities (IOUs) Energy Efficiency Report. The EM&V team will also deliver status reports, ad hoc data collection, and sampling deliverables as needed.

The Interim Impact Evaluation Reports will be separate for each utility and present detailed impact results for each utility's portfolio. For example, the reports will include detailed desk reviews and M&V results for the specified utility. The Interim Impact Evaluation Report findings will be discussed with the PUCT and each utility *prior* to drafting the annual IOUs Energy Efficiency Report; this will allow the EM&V team to discuss the impact results with the PUCT and utilities, receive their input, and conduct supplemental analysis if needed prior to the final annual IOUs Energy Efficiency Report.

The annual IOUs Energy Efficiency Report is a comprehensive report across all utility portfolios. It will include an overarching section presenting statewide findings and recommendations. The following quantitative metrics will be used as the basis for recommendations in the reports as well as others: gross savings realization rates, NTG ratios, and program cost-effectiveness.

Accuracy and transparency are a priority in the reporting of results. All reports will clearly document drivers of differences and consistencies between evaluated and utility-claimed savings; the reliability of evaluated savings values, precision levels, threats to validity, and approaches used to increase the reliability of the findings; and the feasibility and trade-offs inherent in program recommendations.

Additional deliverables that will be provided to the PUCT include:

- biweekly progress reports that summarize the status of current evaluation activities, key issues identified and their resolution, problems requiring resolution and proposed solutions, tracking of the schedule of deliverables, and any action items requiring PUCT or utility input before the EM&V team can proceed with specific tasks;
- guidance memorandums;
- data collection tools, including on-site data collection forms, participant and market actor surveys, and utility interview guides;
- any ad hoc interim reports as requested by the PUCT or utilities or deemed necessary by the EM&V team;
- on-site and desk review reports documenting the claimed savings, observations while on-site, on-site methods employed, and any adjustments resulting from the on-site visit; and
- the EM&V database and dashboard.

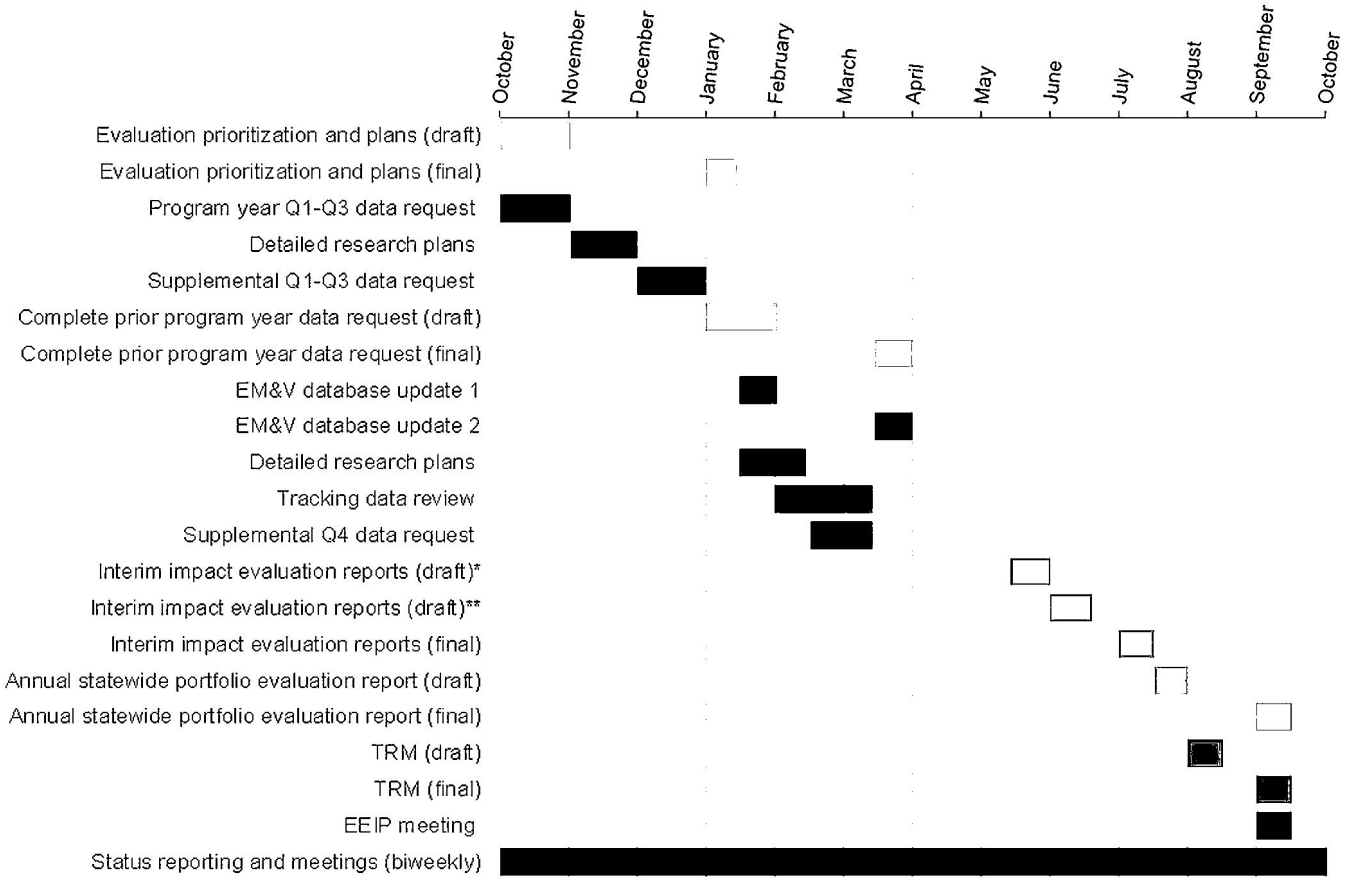
2.7 EM&V TIMELINE

The EM&V team maintains an EM&V SharePoint site to facilitate communication with all relevant stakeholders throughout the evaluation process and house EM&V deliverables and documents. Detailed timelines for data requests, data collection activities, and deliverables are on the EM&V SharePoint under the *EM&V Communications* folder and are regularly updated.

Periodic tracking data requests and evaluation planning deliverables (DRPs and SDRs) ensure the EM&V team can meet reporting deadlines. Interim impact evaluation reports are scheduled to be delivered to utilities corresponding to the date of their Energy Efficiency Cost Recovery Factor (EECRF) filings. This allows sufficient time to complete data collection for sampled projects and discuss interim results individually with utilities prior to their EECRF filings and the annual IOUs Energy Efficiency Report.

Figure 1 shows the annual timeline for EM&V activities and TRM updates for PY2025–PY2027. For PY2024, Evaluation Prioritization and Planning will occur in December and January with the complete prior program year data request due to the contract start date of January 1, 2025. The remainder of the January through December deliverables will follow the same schedule as shown below for PY2025-P2027.

Figure 1. PUCT Annual Evaluation, Measurement, and Verification Timeline



*Activities that include draft and final deliverables are shown using the same color.

3.0 EL PASO ELECTRIC

This section addresses the energy efficiency and load management portfolio for El Paso Electric. The overall portfolio[9] is summarized below, followed by details for each program in the portfolio.

3.1 PORTFOLIO OVERVIEW

Table 6 shows the projected energy and demand savings for the El Paso Electric programs for PY2024.

Table 6. El Paso Electric—PY2024 Projected Demand and Energy Savings

Program category	Program name	Program type	2024 demand savings (kW)	Percentage of total portfolio (demand)	2024 energy savings (kWh)	Percentage of total portfolio (energy)
Commercial MTP	Large Commercial Plus Solutions MTP	Commercial Solutions MTP	2,631	10	14,100,096	58
Commercial MTP	Residential Marketplace Pilot MTP	Pilot Marketplace MTP	50	0	150,000	1
Commercial MTP	Small Commercial Solutions MTP	Small Commercial Solutions MTP	730	3	3,197,400	13
LI/HTR MTP	Hard-to-Reach(HTR) Solutions MTP	HTR MTP	800	3	1,051,200	4
Load Management SOP	Commercial Load Management SOP	Load Management SOP	7,000	26	21,000	0
Load Management MTP	Residential Load Management MTP	Load Management MTP	13,972	52	817,048	3
Residential MTP	FutureWise MTP	Education Kit High School Programs (FutureWise)	106	0	494,000	2

[9] See El Paso Electric's Application to Adjust Its Energy Efficiency Cost Recovery Factor filed on May 1, 2024 under Docket Number 56553.

Program category	Program name	Program type	2024 demand savings (kW)	Percentage of total portfolio (demand)	2024 energy savings (kWh)	Percentage of total portfolio (energy)
Residential MTP	LivingWise MTP	Education Kit 6th grade Programs (LivingWise)	200	1	727,600	3
Residential MTP	Residential Marketplace Pilot MTP	Pilot Marketplace MTP	950	4	2,850,000	12
Residential MTP	Residential Solutions MTP	Residential Solutions MTP	545	2	954,840	4

Next, we present two summary tables for each program in the El Paso Electric portfolio. Each table provides a high-level overview of the applicable programs. The overview is based on a program documentation review and discussions with utilities, PUCT, and implementation contractors. This information is followed by the Evaluation, Measurement, and Verification (EM&V) Plan for the program, which includes the evaluation priority, key researchable questions, and EM&V activities. In addition to program-specific researchable questions listed in the EM&V Plan, the following researchable issue will be investigated portfolio-wide:

- What are the drivers of differences, if any, between claimed and evaluated savings?

3.2 COMMERCIAL MARKET TRANSFORMATION

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Commercial Market Transformation program in the utility's portfolio.

3.2.1 Large Commercial Plus Solutions Market Transformation Program

Table 7. Large Commercial Plus Market Transformation Program Summary

Large Commercial Plus Solutions MTP	Summary
Program description	The Large Commercial Plus Solutions MTP offers incentives to large commercial and industrial customers, schools, higher education, and government customers with an annual average peak demand of 100 kW or greater at one facility or an aggregate annual peak demand of 250 kW or greater at multiple facilities operated by the same customer. The program pays a cash incentive of up to $240 per kW reduced to customers for eligible measures that are installed in new or retrofit applications. This program also provides non-cash incentives that include technical assistance, education, and marketing materials. In addition to capturing demand and energy savings, the program's implementer helps participating customers improve their ability to identify and evaluate energy efficiency improvements and understand how to leverage their energy savings to finance projects. The implementer also provides measurement and verification for projects, as necessary. EPE merged the Large C&I Solutions Program and the Texas SCORE Program in 2024 and 2025.

Large Commercial Plus Solutions MTP	Summary
Target markets	• Market segments: Commercial and industrial facilities, education and government facilities • Eligibility criteria: Commercial facilities ≥100 kW and education and government facilities within El Paso Electric's service territory • Applications: Retrofit or new construction projects
Marketing strategies and project sponsors	• Marketing strategies: El Paso Electric plans to market the availability of this program in the following manner: ○ Maintain a website with detailed information regarding requirements for project participation, project eligibility, end-use measure eligibility, incentive levels, application procedures, program manuals, and available funding; ○ offer outreach workshops and webinars to explain elements such as the responsibilities of the project sponsors, project requirements, incentive information, and the application and reporting processes; ○ gauge customer and EESP interest in its workshops by participation levels and, if warranted, offer workshops dedicated to specific programs; ○ local companies contacted and projects identified, and the company selects contractors to do the work; ○ utilize mass electronic mail (email and webinar) notifications to keep potential project sponsors interested and informed; ○ participate in statewide outreach activities as may be available; and ○ attend appropriate industry-related meetings to generate awareness and interest. Marketing includes outreach to active contractors, architectural firms, engineering firms, and other building industry players to raise overall energy efficiency practices across the marketplace. • Project sponsors: Utility/contractors
Implementation and delivery	• Implementers: CLEAResult is the third-party implementer
Measures/products, services, offerings	• Measure offerings: HVAC, lighting, roofing, or others (motors, air compressors, cooling towers, data centers, etc.) that may require M&V planning and metering; new construction: HVAC and lighting • Technical assistance: Includes communications support in addition to assistance in the identification and evaluation of energy efficiency measures • Rebates/incentives: Provided to the end-use customer
QA/QC	• Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by a third-party implementer

Table 8 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 8. Large Commercial Plus Solutions Market Transformation Program EM&V Plan

Large Commercial Plus Solutions MTP	Description	2024
Evaluation priority	The Large Commercial Plus Solutions MTP is a *high* priority in PY2024. The majority of savings are from deemed measures with some custom measures.	High
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	6
	Participant surveys: Interviews will be completed with participants for smart thermostats and HVAC tune-ups	Census sample to meet 90/10

3.2.2 Small Commercial Solutions Market Transformation Program

Table 9. Small Commercial Solutions Market Transformation Program Summary

Small Commercial Solutions MTP	Summary
Program description	The Small Commercial Solutions MTP offers incentives to commercial customers with an annual peak demand of less than 100 kW at one facility or a total annual peak demand of less than 250 kW at multiple facilities operated by the same customer. The program pays a cash incentive to customers of up to $400 per kW reduced, generally through participating contractors, for eligible measures that are installed in new or retrofit applications. Additionally, the program pays a $500 cash incentive per unit for the installation of eligible high-efficient evaporative air conditioning units. This program also provides non-cash incentives that include technical assistance, education, and marketing materials. The program helps small business owners and contractors improve their ability to identify and evaluate energy efficiency improvements.

Small Commercial Solutions MTP	Summary
Target markets	• Market segments: Small commercial facilities • Eligibility criteria: Small commercial facilities <100 kW within El Paso Electric's service territory or <250 kW at all facilities • Applications: Retrofit or new construction projects
Marketing strategies and project sponsors	• Marketing strategies: El Paso Electric plans to market the availability of this program in the following manner: ○ Maintain a website with detailed information regarding requirements for project participation, project eligibility, end-use measure eligibility, incentive levels, application procedures, program manuals, and available funding; ○ offer outreach workshops and webinars to explain elements such as the responsibilities of the project sponsors, project requirements, incentive information, and the application and reporting processes; ○ gauge EESP's interest in its workshops by participation levels and, if warranted, offer workshops dedicated to specific programs; ○ utilize mass electronic mail (email and webinar) notifications to keep potential project sponsors interested and informed; ○ participate in statewide outreach activities as may be available; and ○ attends appropriate industry-related meetings to generate awareness and interest. Marketing includes outreach to active contractors, architectural firms, engineering firms, and other building industry players to raise overall energy efficiency practices across the marketplace. • Project sponsors: Utility/contractors
Implementation and delivery	• Implementers: CLEAResult is the third-party implementer
Measures/products, services, offerings	• Measure offerings: Air conditioners, lighting, food service equipment, refrigeration, building envelope, HVAC tune-ups, and roofing; new construction: air conditioning, lighting, and food service equipment • Technical assistance: Provided by contractor/third-party implementer • Rebates/incentives: Provided to contractor/customer • kW (demand savings): $400 for every kW saved
QA/QC	• Pre- and post-on-site inspections for 100 percent of first five projects by contractor, then 15 percent of ongoing projects • Pre- and post-inspection conducted by a third-party implementer • Desk reviews conducted by a third-party implementer

Table 10 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 10. Small Commercial Solutions Market Transformation Program EM&V Plan

Small Commercial Solutions MTP	Description	2024
Evaluation priority	The Small Commercial Solutions MTP is a *low* priority in PY2024. The majority of savings are from deemed measures.	Low
Key researchable issues	• What are the challenges and opportunities to serve this hard-to-reach business sector? • How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census

3.3 LOAD MANAGEMENT

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Load Management program in the utility's portfolio.

3.3.1 Commercial Load Management Standard Offer Program

Table 11. Commercial Load Management Standard Offer Program Summary

Commercial Load Management SOP	Summary
Program description	The Commercial Load Management SOP allows participating customers to provide on-call, voluntary curtailment of electric consumption during peak demand periods in return for incentive payments. A commercial customer equipped with an EPE demand interval meter capable of curtailing a minimum of 100 kW—and not deemed critical load—that takes service at the distribution level is eligible to participate. Critical load customers with back up generation are eligible to participate. EPE will notify its current participants of the 2024 Commercial Load Management SOP via email in April to inform them of the opening of the program. All applications are considered on a first-come, first-served basis and reviewed for eligibility. Demand savings and incentives are based on verified average demand savings that customers achieve due to EPE's voluntary curtailment events. EPE was not able to obtain metered interval data for one participant, AT&T, but rather utilized AT&T's 2022 Load Management events data, 2022 non-interval metered data for the months of the events, 2023 non-interval metered data for the months of the events, and AT&T's logged 15-minute interval generator data for 2023.

Target markets	• Market segments: Large commercial/industrial businesses
	• Eligibility criteria:
	  ○ The customer must be a nonresidential El Paso Electric customer taking service at the distribution level.
	  ○ The customer must be equipped with an El Paso Electric interval demand meter.
	  ○ The customer must be capable of curtailing a minimum of 100 kW during the summer peak periods at each contracted site.
	  ○ Customers who have contracted rates or are taking service at 69,000 volts or greater are not eligible for this program.

Marketing strategies and project sponsors	• Marketing strategies: Website and direct utility contact • Project sponsors: National or local EESPs or individual customers that identify interruptible load in their own facilities
Implementation and delivery	• El Paso Electric manages and controls implementation and load management event activation.
Measures/products, services, offerings	• Measure offerings: N/A • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: El Paso Electric will pay a participating customer (or the project sponsor, if different)
QA/QC	• El Paso Electric will verify actual demand savings from interruptions.

Table 12 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 12. Commercial Load Management Standard Offer Program EM&V Plan

Commercial Load Management SOP	Description	2024
Evaluation priority	The load management program is a *medium* priority in PY2024.	Medium
Key researchable issues	• Are sponsor-provided savings inputs and parameters accurate? • Are utility verification regimes sufficient and reliable?	
Program evaluation approach	Program tracking data review: Review data for accuracy and alignment with demand interval metered data. Metered data review: Program rules require the installation of demand interval metering to record real-time participant demand profiles. A review of these data will verify program tracking data.	Census
	Data reviews: Review participant interval-load data. Periods ahead of, during, and following load interruption notices will verify load reduction and persistence during demand response events and provide a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census

3.3.2 Residential Load Management Market Transformation Program

Table 13. Residential Load Management Market Transformation Program Summary

Residential Load Management MTP	Summary
Program description	The Residential Load Management Program targets a reduction in central refrigerated air conditioning load for residential customers. EPE has the capability of remotely adjusting participating customers' internet-enabled smart thermostats during load management events to relieve peak load. Customers receive a $25 incentive for enrolling a new or existing qualifying internet-enabled smart thermostat or for continued participation in the Program. Customers may also receive an additional $50 rebate for the purchase of a new internet-enabled smart thermostat through EPE's online marketplace.
Target markets	• The program targets residential homes with central air conditioning.
Marketing strategies and project sponsors	• Third-party vendors will implement outreach and planning activities.
Implementation and delivery	• A third-party vendor manages and controls implementation; EPE manages load management event activation.
Measures/products, services, offerings	• Third-party vendors manage and may offer competing air conditioner demand-response services through the bring-your-own-thermostat approach.
QA/QC	• Actual demand reductions will be determined by EPE using a deemed savings approach as outlined in the TRM.

Table 14 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 14. Residential Load Management Market Transformation Program EM&V Plan

Residential Load Management MTP	Description	2024
Evaluation priority	The load management program is a *medium* priority in PY2024.	Medium
Key researchable issues	• Are sponsor-provided savings inputs and parameters accurate? • Are incentive levels sufficient to attract participation? • Does participant purchase of the DR thermostat requirement affect program participation rates? • Are established goals reasonable? • What are the primary barriers to participation? • What other technology-customer opportunities may be available to develop a diverse, more reliable, effective demand-response portfolio?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Data reviews: Review participant interval-load data. Periods ahead of, during, and following load interruption notices will verify load reduction and persistence during demand response events and provide a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census
	Telemetry data will be used for meters with no interval-load data. Review telemetry data to validate reported performance. Review the number of participating devices for each event to calculate the savings (kW and kWh) and review enrollment to the program through the utility's e-commerce site (kWh).	Census

3.4 RESIDENTIAL MARKET TRANSFORMATION

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Residential Market Transformation program in the utility's portfolio.

3.4.1 LivingWise® Market Transformation Program

Table 15. LivingWise® Market Transformation Program Summary

LivingWise® MTP	Summary
Program description	The LivingWise® MTP teaches sixth-grade students to use energy more efficiently in their homes. The program is available at no cost to the teacher, school district, and students and serves as an effective community outreach program to improve energy efficiency awareness. The program enrolls students and teachers and provides them with educational materials and a LivingWise® kit that contains energy-saving devices. The students install the devices in their homes and, with the help of their parents, complete a home energy audit report. As part of the program, children take home a LivingWise® Kit that contains energy savings devices. With the help of their parents, students install the devices in their homes and complete a home energy audit report.
Target markets	• Market segments: Residential customers • Eligibility criteria: Schools within El Paso Electric's Texas service territory • Applications: Educational and retrofit applications
Marketing strategies and project sponsors	• Marketing strategies: AM Conservation Group takes care of all marketing, including public relation-type events (one to two per year, depending on the jurisdiction), print promotions, and outreach to teachers and schools • Project sponsors: Schools
Implementation and delivery	• Implementers: AM Conservation Group is the third-party implementer and the data source
Measures/products, services, offerings	• Measure offerings: This program provides a kit with two LEDs, a low-flow showerhead, kitchen and bathroom faucet aerators, and educational materials for the families of the participating students on how to best use the provided equipment, as well as suggestions for behavioral changes to save energy • Technical assistance: N/A • Rebates/incentives: The kit is provided free to schools and students
QA/QC	• AM Conservation Group

Table 16 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 16. LivingWise® Market Transformation Program EM&V Plan

LivingWise® MTP	Description	2024
Evaluation priority	Due to program design, the evaluation can really only focus on a secondary review of impacts; there will be no primary data collection.	Low
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are program goals established appropriately, and will they be met?	
Program evaluation approach	Program tracking system review: Review the program tracking system for data and accuracy and consistency with claimed savings	Census

3.4.2 Residential Solutions Market Transformation Program

Table 17. Residential Solutions Market Transformation Program Summary

Residential Solutions MTP	Summary
Program description	The Residential Solutions Program offers incentives and rebates to residential customers for installing eligible energy efficiency measures. This program also provides participants with noncash incentives, which include technical assistance, education, and marketing materials. In addition to capturing demand and energy savings, the program's implementer helps participating customers improve their ability to identify and evaluate energy efficiency improvements.
Target markets	• Market segments: Residential customers • Eligibility criteria: Homeowners must use participating contractors; eligibility varies by measure; see *Measure Offerings* below. • Applications: Retrofit applications
Marketing strategies and project sponsors	• Marketing strategies: El Paso Electric promotes through various outreach methods, including their website, monthly newsletters, radio, and a dedicated energy efficiency phone line to provide program information to customers and contractors. • Project sponsors: HVAC, window, insulation, solar screen, and air and duct sealing contractors
Implementation and delivery	• Implementers: CLEAResult is the third-party implementer and the data source

Residential Solutions MTP	Summary

Measures/products, services, offerings	• Measure offerings:
	  ○ duct sealing—incentives available for homes with refrigerated air or evaporative cooling and central heating with either a gas or electric furnace or a heat pump;
	  ○ insulation—incentives available for increasing attic insulation levels to R-30;
	  ○ window replacement—incentives available for ENERGY STAR® windows and sliding doors;
	  ○ solar screens—incentives available for solar screens;
	  ○ refrigerated air upgrades—incentives are available for customers switching from evaporative to refrigerated A/C;
	  ○ evaporative coolers;
	  ○ water heater tank and pipe insulation;
	  ○ cool roofs;
	  ○ HVAC tune-ups; and
	  ○ pool pumps.
	• Technical assistance: The program provides technical support to help contractors identify and evaluate energy efficiency opportunities and administrative program management.

QA/QC	• Conducted by CLEAResult and El Paso Electric

Table 18 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 18. Residential Solutions Market Transformation Program EM&V Plan

Residential Solutions MTP	Description	2024
Evaluation priority	This program will receive a *medium* priority for PY2024 as the program has recently responded to TRM updates.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are goals established appropriately, and will they be met?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2

3.5 LOW-INCOME/HARD-TO-REACH MARKET TRANSFORMATION

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Low-Income and Hard-to-Reach program in the utility's portfolio.

3.5.1 Hard-to-Reach Solutions Market Transformation Program

Table 19. Hard-to-Reach Solutions Market Transformation Program Summary

Hard-to-Reach Solutions MTP	Summary
Program description	The Hard-to-Reach Solutions MTP offers incentives for providing energy efficiency measures and education to qualifying low-income customers.
Target markets	• Market segments: Residential HTR • Eligibility criteria: Residential customers at or below 200 percent of the federal poverty level • Applications: Retrofit applications

Marketing strategies and project sponsors	• El Paso Electric marketing strategies:
	  ○ Maintain websites (www.epesavings.com and www.epelectric.com). El Paso Electric's websites are one method of communication used to provide customers and potential project sponsors with program updates and information. The websites contain detailed information regarding requirements for project participation, project eligibility, end-use measure eligibility, incentive levels, application procedures, program manuals, and available funding.
	  ○ Offer one-on-one outreach with EESPs, given the relatively small number of participating contractors. El Paso Electric explains elements such as the responsibilities of project sponsors, project requirements, incentive information, and the application and reporting processes.
	  ○ Utilize electronic mail (email and webinar) notifications to keep potential project sponsors interested and informed.
	  ○ Participate in statewide outreach activities as may be available and attend appropriate industry-related meetings to generate awareness and interest.
	• Participating contractors represent a range of EESPs.

Implementation and delivery	• Implementers: CLEAResult
Measures/products, services, offerings	• Measure offerings: ENERGY STAR windows and doors, attic insulation, air infiltration, duct sealing, solar screens, high-efficiency A/C replacements and conversions (based directly on the efficiency level of the old unit), evaporative coolers, water heater tank and pipe insulation, cool roofs, HVAC tune-ups, and pool pumps. • Technical assistance • Rebates/incentives: Provided to the project sponsor, who then passes on the rebates/incentives to the end-use customer

Hard-to-Reach Solutions MTP	Summary
QA/QC	• Pre- and post-on-site inspections for the first three projects for each new contractor, then 10–15 percent after that. • Inspections conducted by CLEAResult

Table 20 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 20. Hard-to-Reach Solutions Market Transformation Program EM&V Plan

Hard-to-Reach Solutions MTP	Description	2024
Evaluation priority	This program will receive a *medium* priority for PY2024 as the program has recently responded to TRM updates.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data on the census of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2

3.6 PILOT

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Pilot program in the utility's portfolio.

3.6.1 Residential Marketplace Pilot Market Transformation Program

Table 21. Residential Marketplace Pilot Market Transformation Program Summary

Residential Marketplace Pilot MTP	Summary
Program description	The Residential Marketplace Program provides eligible residential customers instant rebates through an online marketplace for installing energy efficiency measures. The EPE Marketplace will offer customers a variety of energy-efficient products, including smart thermostats, lighting products, window air conditioners, air purifiers, energy-saving kits, and advanced power strips.
Target markets	• Eligible residential customers • Application: Rebate

Residential Marketplace Pilot MTP	Summary
Marketing strategies and project sponsors	• Website redirect
Implementation and delivery	• Implementers: Simple Energy
Measures/products, services, offerings	• Measure offerings: Thermostats, LEDs, smart power strips
QA/QC	• TBD

Table 22 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 22. Residential Marketplace Pilot Market Transformation Program EM&V Plan

Residential Marketplace Pilot MTP	Description	2024
Evaluation priority	The Residential Marketplace Pilot MTP will receive a *high* priority for PY2024.	High
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are program goals established appropriately, and will they be met?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2

3.6.2 FutureWise® Pilot Market Transformation Program

Table 23. FutureWise® Pilot Market Transformation Program Summary

FutureWise® Pilot MTP	Summary
Program description	The FutureWise Pilot MTP teaches high-school students about the importance of saving energy, understanding an energy bill, and careers in the field of energy. The program is available at no cost to the teacher, school district, and students and serves as an effective community outreach program to improve energy efficiency awareness. The program enrolls high school students and teachers and provides them with educational materials and a FutureWise kit that contains energy-saving devices. The students install the devices in their homes and complete a home energy audit report.

FutureWise® Pilot MTP	Summary
Target markets	• Market segments: Residential customers • Eligibility criteria: Schools within El Paso Electric's Texas service territory • Application: Educational and retrofit applications
Marketing strategies and project sponsors	• Marketing strategies: AM Conservation Group takes care of all marketing, including public relation-type events (one to two per year, depending on the jurisdiction), print promotions, and outreach to teachers and schools • Project sponsors: Schools
Implementation and delivery	• Implementers: AM Conservation Group
Measures/products, services, offerings	• Measure offerings: This program provides a kit with LEDs, a low-flow showerhead, kitchen and bathroom faucet aerators, and educational materials for the families of the participating students on how to best use the provided equipment, as well as suggestions for behavioral changes to save energy • Technical assistance: N/A • Rebates/incentives: The kit is provided free to schools and students
QA/QC	• TBD

Table 24 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 24. FutureWise® Pilot Market Transformation Program EM&V Plan

FutureWise® Pilot MTP	Description	2024
Evaluation priority	The FutureWise® Pilot MTP will receive a *low* priority for PY2024.	Low
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are program goals established appropriately, and will they be met?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census

4.0 ENTERGY

This section addresses Entergy's energy efficiency and load management portfolio. The overall portfolio[10] is summarized below, followed by details for each program in the portfolio.

4.1 PORTFOLIO OVERVIEW

Table 25 shows the projected energy and demand savings for the Entergy programs for PY2024.

Table 25. Entergy—PY2024 Projected Demand and Energy Savings

Program category	Program name	Program type	2024 demand savings (kW)	Percentage of total portfolio (demand)	2024 energy savings (kWh)	Percentage of total portfolio (energy)
Commercial MTP	Commercial Solutions MTP	Commercial Solutions MTP	4,935	28	21,704,831	71
LI/HTR SOP	Hard-to-Reach (HTR) SOP	HTR SOP	1,218	7	2,192,510	7
Load Management	Load Management SOP	Load Management SOP	8,333	48	8,333	0
Residential MTP	Residential Solutions MTP	Residential Solutions MTP	1,509	9	3,855,372	13
Residential SOP	Residential SOP	Residential SOP	1,415	8	2,741,249	9

Next, we present two summary tables for each program in the Entergy portfolio. Each table provides a high-level overview of the applicable programs. The overview is based on a review of program documentation and discussions with utilities, PUCT, and implementation contractors. This information is followed by the Evaluation, Measurement, and Verification (EM&V) Plan for the program, which includes the evaluation priority, key researchable questions, and EM&V activities. In addition to program-specific researchable questions listed in the EM&V Plan, the following researchable issue will be investigated portfolio-wide:

- What are the drivers of differences, if any, between claimed and evaluated savings?

[10] See Entergy Texas' Application to Adjust Its Energy Efficiency Cost Recovery Factor filed on May 1, 2024 under Docket Number 56553.

4.2 COMMERCIAL MARKET TRANSFORMATION

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Commercial Market Transformation program in the utility's portfolio.

4.2.1 Commercial Solutions Market Transformation Program

Table 26. Commercial Solutions Market Transformation Program Summary

Commercial Solutions MTP	Summary
Program description	The Commercial Solutions MTP offers technical support and incentives for a suite of offerings that help eligible customers overcome market barriers to adopt energy efficiency measures. Using a combination of utility staff, third-party program implementer expertise, and a local network of qualified contractors, Entergy helps nonresidential customers identify energy efficiency opportunities, complete projects, and capture savings. A commercial CoolSaver HVAC tune-up component targets small businesses, nonprofits, and school districts to promote HVAC equipment health and peak summer demand savings.
Target markets	• Market segments: Commercial, educational, and governmental facilities • Eligibility criteria: Facilities within Entergy's service territory Applications: Retrofit or new construction for the program. This approach is flexible depending on the customer, project type, and market sector to effectively reach and deliver energy savings to the broadest audience possible. The Commercial Solutions MTP program includes: • The Commercial Solutions component is designed to target small, medium, and large for-profit commercial customers in the service territory (this includes midstream and contractor direct install components). • The Schools Concerned with Reducing Energy (SCORE) component targets local K-12 public school districts, universities, and colleges in the service territory (including a Continuous Energy Improvement (CEI) component driving behavioral changes in public schools). • The City Smart component targets local, state, and federal governmental and non-profit customers in the service territory. • Prescriptive and custom measures to address both standard and unique opportunities for energy savings; • A midstream point-of-sale lighting and HVAC component through local wholesale distributors to achieve long-term coincident peak demand reduction and annual energy savings; • and projects

Commercial Solutions MTP	Summary
Marketing strategies and project sponsors	• Marketing strategies: Entergy plans to market the availability of this program in the following manner: ○ utilize mass electronic mail (email) notifications to keep potential project sponsors interested and informed; ○ maintain a website with detailed project eligibility, end-use measures, incentives, procedures, and application forms; ○ attend appropriate industry-related meetings to generate awareness and interest; ○ participate in state-wide outreach activities as may be available; ○ conducts workshops and webinars to explain elements such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process Entergy began promoting the program by rolling out new program promotions through its website, social media, email blasts, radio promotions, and print media. • Project sponsors: Entergy Texas
Implementation and delivery	• Implementers: CLEAResult is the third-party implementer
Measures/products, services, offerings	• Measure offerings: HVAC, lighting, motors, refrigeration, roofing, or others that may require M&V planning and metering • Technical assistance: Includes communications support in addition to identification and evaluation of energy efficiency measures • Rebates/incentives: Provided to the project sponsor
QA/QC	• Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by a third-party implementer

Table 27 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 27. Commercial Solutions Market Transformation Program EM&V Plan

Commercial Solutions MTP	Description	2024
Evaluation priority	The Commercial Solutions MTP is a *high* priority in PY2024. The majority of savings are from deemed measures with some custom measures.	High

Commercial Solutions MTP	Description	2024
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	
Program evaluation approach	Program tracking system review: Review tracking data on the census of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations and other available project documentation to independently estimate energy savings and develop project-level realization rates.	9
	Participant surveys: Interviews will be completed with participants for smart thermostats and HVAC tune-ups	Census sample to meet 90/10

4.3 LOAD MANAGEMENT

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Load Management program in the utility's portfolio.

4.3.1 Load Management Standard Offer Program (Commercial)

Table 28. Load Management Standard Offer Program (Commercial) Summary

Load Management SOP (Commercial)	Summary
Program description	The Load Management SOP provides demand reduction opportunities to a small group of qualified commercial customers served by Entergy and pays incentives to the customers for verifiable demand reductions. Each participant must participate in one scheduled curtailment and up to three unscheduled curtailments. A maximum of four curtailment events per customer location can be called during the program year.
Target markets	• Market segments: Large commercial customers • Eligibility criteria: Small group of qualified commercial customers • Applications: Existing

Load Management SOP (Commercial)	Summary
Marketing strategies and project sponsors	• Marketing strategies: Entergy will initially target several select customers to participate in the Load Management SOP. • Project sponsors: Entergy/customer
Implementation and delivery	• Implementers: Entergy is the third-party implementer.
Measures/products, services, offerings	• Measure offerings: N/A • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Entergy will pay a participating customer (or the project sponsor, if different) $32.5 per kW of verified curtailed load each year of participation.
QA/QC	• Conducted by Entergy

Table 29 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 29. Load Management Standard Offer Program (Commercial) EM&V Plan

Load Management SOP (Commercial)	Description	2024
Evaluation priority	The load management program is a *medium* priority in PY2024.	Medium
Key researchable issues	• Are sponsor-provided savings inputs and parameters accurate? • Are utility verification regimes sufficient and reliable?	
Program evaluation approach	Program tracking data review: Review data for accuracy and alignment with demand interval metered data. Metered data review: Program rules require the installation of demand interval metering to record real-time participant demand profiles. A review of these data will verify program tracking data.	Census
	Data reviews: Review participant interval-load data. Periods ahead of, during, and following load interruption notices will verify load reduction and persistence during demand response events and provide a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census

4.4 RESIDENTIAL MARKET TRANSFORMATION

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Residential Market Transformation program in Entergy's portfolio.

4.4.1 Residential Solutions Market Transformation Program

Table 30. Residential Solutions Market Transformation Program Summary

Residential Solutions MTP	Summary
Program description	The Residential Solutions High Performance Homes MTP (NEW HOMES MTP) has been combined with the A/C Distributor MTP (DIST PROD MTP) into the Residential Solutions MTP (RES SOL MTP) for increased administrative efficiency and flexibility. Under the combined MTP, incentives are paid to builders, distributors, and contractors for installing certain measures in new and existing construction applications that provide verifiable demand and energy savings. TRC Companies is the implementing contractor for the RES SOL MTP. The NEW HOMES MTP portion of the RES SOL MTP helps promote the new construction of higher-efficiency homes in Entergy's service territory. The program pays incentives to the builder that installs the higher energy-efficiency equipment. The program requires the involvement of a third-party rating service to verify that the homes meet the current energy efficiency code in Texas (the 2015 International Energy Conservation Code (IECC 2015)). Further, the program provides incentives for builders and contractors who exceed the IECC 2015 with the ultimate aim of promoting construction to ENERGY STAR® standards or higher. The DIST PROD MTP portion of the RES SOL MTP helps promote the installation of higher efficiency air conditioning and variable speed pool pumps for residential customers throughout Entergy's service territory. The program pays incentives to select regional air conditioning and pool pump distributors to reduce the cost of the higher efficiency rated equipment to the local dealers with the goal that the dealer will pass the reduced cost along to customers. The Residential Marketplace launched in 2023 as part of the RES SOL MTP offering. This marketplace offers residential customers the option to purchase energy-efficient products (smart thermostats, advanced power strips, ENERGY STAR air purifiers, and smart plugs) to give customers an opportunity to reduce their energy consumption. In 2024, Entergy expanded the Residential Marketplace to include additional smart thermostat manufacturers. Entergy has also begun to offer a smart home device called "Sense Home Energy Monitor." This device provides energy use data, including details regarding the energy use of individual appliances. As part of the RES SOL MTP, Entergy included a pilot residential load management program in program year 2023, Demand Solutions (DEM SOL), that utilized residential smart thermostats to reduce load during peak events. The program was implemented by TRC Companies and utilizes Energy Hub to run the load curtailments. Energy Hub provides curtailment software to enroll customers in the program and call on customers to curtail load during peak events. A maximum of 15 events per thermostat may be called during the program year, and the events may last between one and four hours.

Residential Solutions MTP	Summary
	Curtailments take place during the Summer Peak (1:00 p.m. to 7:00 p.m. during the months of June, July, August, and September (excluding weekends and federal holidays)). During a curtailment event, the customer's HVAC system setpoint is modified to reduce the system's energy consumption for the duration of the event. Pre-cooling strategies may be incorporated to minimize customer discomfort during the disruption. Customers may opt out of events by manually adjusting the thermostat setpoint during the event. Going into 2024, the DEM SOL program device capacity was increased from 750 devices to 5,000 devices and includes two new smart thermostat manufacturers: Google Nest and ecobee.

Target markets	• Market segments: Homebuilders, HVAC contractors, and home energy raters
	• Eligibility criteria:
	  ○ All program homes must achieve ten percent kWh savings better than the IECC 2015 reference home.
	  ○ Homes may qualify for higher Tier 1, Tier 2, or High-Efficiency Tier incentives based on minimum kWh savings, percentage of kWh savings, or prescriptive home attributes.
	  ○ Homes certified as ENERGY STAR may receive a bonus incentive in addition to the tiered incentives above.
	  ○ Homes with an ENERGY STAR-certified smart thermostat may receive a bonus incentive in addition to the tier incentives above.
	• Applications: New home construction applications

Marketing strategies and project sponsors	• Marketing strategies: Entergy markets the availability of its programs in the following manner:
	  ○ Utilizing mass email notifications to keep potential builders interested and informed;
	  ○ maintaining a website with detailed builder eligibility, end-use measures, incentives, procedures, and application forms;
	  ○ attending appropriate industry-related meetings to generate awareness and interest;
	  ○ participating in state-wide outreach activities as may be available; and
	  ○ conducting workshops as necessary to explain elements such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process.
	Entergy began promoting its energy efficiency programs by rolling out some program promotions through its website, social media, email blasts, radio promotions, and print media.
	• Project sponsors: Homebuilder and consumer outreach, HERS raters, homebuilders' sales agents, HVAC contractors, homebuilders associations, and media outlets.

Implementation and delivery	• Implementers: Lockheed Martin is the third-party implementer; Frontier Energy is the data source.

Residential Solutions MTP	Summary
Measures/products, services, offerings	• Measure offerings: For new construction, the program takes a whole-home perspective; savings are often achieved through duct/air sealing, air infiltration, insulation, window replacement, and HVAC measures. • Technical assistance: Builders must work with raters. • Rebates/incentives: Align with the tiers described above.
QA/QC	• Lockheed Martin does QA/QC through either field inspections or energy model desk reviews.

Table 31 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 31. Residential Solutions Market Transformation Program EM&V Plan

Residential Solutions MTP	Description	2024
Evaluation priority	This program is a *high* priority for impact assessment for PY2024.	High
Key researchable issues	• How can the program adapt to the changing codes and standards climate? Are there viable strategies the program can adopt in order to meet and exceed set goals given the new baselines? Have changes in residential baselines affected the program's ability to meet goals? • How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are goals established appropriately, and will they be met? • To what degree is the program encouraging adopting energy-efficient technologies that would otherwise not have occurred?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2
	Data reviews: Review participant interval-load data. Periods ahead of, during, and following load interruption notices will verify load reduction and persistence during demand response events and provide a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census
	Participant surveys: Interviews will be completed with participants for smart thermostats and HVAC tune-ups	Census sample to meet 90/10

4.5 RESIDENTIAL STANDARD OFFER

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Residential Standard Offer program in the utility's portfolio.

4.5.1 Residential Standard Offer Program

Table 32. Residential Standard Offer Program Summary

Residential SOP	Summary
Program description	The Residential SOP (RES SOP) targets Entergy's residential customers. Participating Project Sponsors receive incentive payments for installing pre-approved measures that provide verifiable demand and energy savings. Project Sponsors are encouraged to install comprehensive measures in their projects, and only retrofit projects qualify for incentive payments. Deemed savings are accepted and widely used by Project Sponsors to measure and verify savings for projects submitted in this program. In 2024, Entergy will also deploy two sub-programs as part of the RES SOP. The first is an A/C tune-up program that gives contracts to project sponsors that have access to licensed HVAC contractors. The A/C tune-up program is referred to as the CoolSaver program and is implemented by CLEAResult Consulting, Inc. The second is a Multifamily HVAC Retrofit program that assists in replacing outdated HVAC equipment with energy-efficient heat pumps at apartment complexes. Apartment complexes are selected through an application process provided by ENERCHOICE, LLC.
Target markets	• Market segments: Residential customers • Eligibility criteria: Residential customers whose houses or apartments were built before January 2004 • Applications: Retrofit applications
Marketing strategies and project sponsors	• Marketing strategies: Entergy markets the availability of its programs in the following manner: o utilize mass email notifications to potential project sponsors to keep potential project sponsors interested and informed; o maintain a website with detailed project eligibility, end-use measures, incentives, procedures, and application forms; o attend appropriate industry-related meetings to generate awareness and interest; and o conduct workshops as necessary to explain elements such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process Entergy began promoting its energy efficiency programs by rolling out new program promotions through its website, social media, email blasts, radio, and print media. • Project sponsors: Owners or operators of multifamily residential buildings, not-for-profit housing and community service organizations, energy service companies, local contractors, national or local companies that provide energy-related products and services, and retailers
Implementation and delivery	• Implementers: Entergy is the implementer

Residential SOP	Summary
Measures/products, services, offerings	• Measure offerings: Any Commission-approved measure included in the statewide TRM for the residential customer class is eligible under the SOP, including attic insulation, duct sealing, caulking/weatherstripping, air conditioning, heat pumps, water heaters, ENERGY STAR windows, refrigerators, dishwashers, clothes washers, solar window screens, wall insulation, floor insulation, water heater jackets, and renewable energy sources • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Provided to the project sponsor, who then passes the rebate/incentive to end-use customers at their discretion
QA/QC	• Post-on-site inspections for at least three percent of invoices submitted by each contractor • Conducted by Entergy

Table 33 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 33. Residential Standard Offer Program EM&V Plan

Residential SOP	Description	2024
Evaluation priority	This program will receive a *high* priority for PY2024 as the program has recently responded to TRM updates.	High
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2

4.6 LOW-INCOME/HARD-TO-REACH STANDARD OFFER

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Low-Income and Hard-to-Reach program in the utility's portfolio.

4.6.1 Hard-to-Reach Standard Offer Program

Table 34. Hard-to-Reach Standard Offer Program Summary

Hard-to-Reach SOP	Summary
Program description	The Hard-to-Reach SOP (HTR SOP) targets low-income customers with an income at or below 200% of the federal poverty level. Participating Project Sponsors receive incentive payments for installing eligible retrofit measures that provide verifiable demand and energy savings. For 2024, Entergy will continue to provide incentives to Project Sponsors for installing Air Infiltration in addition to previously employed measures. The incentives will be offered at the standard incentive rate to encourage the implementation of this measure. In 2024, the HTR SOP will also deploy two sub-programs in RES SOP: an A/C tune-up program (which gives contracts to Project Sponsors that have access to licensed HVAC contractors) and the Multifamily HVAC Retrofit program (which assists in replacing all outdated HVAC equipment with energy efficient heat pumps at apartment complexes). The A/C tune-up program is referred to as the CoolSaver program and is implemented by CLEAResult Consulting, Inc. The Multifamily HVAC Retrofit program is implemented by ENERCHOICE, LLC.
Target markets	• Market segments: Residential HTR customers • Eligibility criteria: Participants must have a total annual household income at or below 200 percent of the federal poverty level • Applications: Retrofit applications
Marketing strategies and project sponsors	• Marketing strategies: Entergy markets the availability of its programs in the following manner: o utilize mass email notifications to potential project sponsors to keep potential project sponsors interested and informed; o maintain a website with detailed project eligibility, end-use measures, incentives, procedures, and application forms; o attend appropriate industry-related meetings to generate awareness and interest; and o conduct workshops as necessary to explain elements such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process Entergy began promoting its energy efficiency programs by rolling out new program promotions through its website, social media, email blasts, radio, and print media. • Project sponsors: Owners or operators of multifamily residential buildings, not-for-profit housing and community service organizations, energy service companies, local contractors, national or local companies that provide energy-related products and services, and retailers.
Implementation and delivery	• Implementers: Entergy is the implementer.

Hard-to-Reach SOP	Summary
Measures/products, services, offerings	• Measure offerings: Water heating, HVAC replacement (including window air conditioning), duct sealing, lighting, refrigeration, insulation, CFLs, and infiltration • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Provided to the project sponsor, who then passes the rebate/incentive to end-use the customer at their discretion
QA/QC	• Post-on-site inspections for three percent of invoices submitted by each contractor • Conducted by Entergy

Table 35 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 35. Hard-to-Reach Standard Offer Program EM&V Plan

Hard-to-Reach SOP	Description	2024
Evaluation priority	This program will receive a *high* priority for PY2024 as the program has recently responded to TRM updates.	High
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2

5.0 SWEPCO

This section addresses the energy efficiency and load management portfolio for SWEPCO. The overall portfolio[11] is summarized below, followed by details for each program in the portfolio.

5.1 PORTFOLIO OVERVIEW

Table 36 shows the projected energy and demand savings for the SWEPCO programs for PY2024.

Table 36. SWEPCO—PY2024 Projected Demand and Energy Savings

Program category	Program name	Program type	2024 demand savings (kW)	Percentage of total portfolio (demand)	2024 energy savings (kWh)	Percentage of total portfolio (energy)
Commercial SOP	Commercial SOP	Commercial SOP	751	5	3,815,036	27
Commercial MTP	COMPASS Large Commercial MTP	Commercial MTP	358	2	1,914,322	14
Commercial MTP	COMPASS for Schools MTP	Commercial MTP	301	2	1,809,731	13
Commercial MTP	COMPASS Small Business MTP	Commercial MTP	369	3	1,574,122	11
LI/HTR SOP	Hard-to-Reach (HTR) SOP	HTR SOP	1,295	9	2,208,921	16
Load Management	Load Management SOP	Commercial Load Management SOP	8,428	58	107,040	1
Residential SOP	Residential SOP	Residential SOP	1,435	10	2,710,801	19
Residential MTP	Bring You Own Device MTP (Pilot)	Residential MTP	1,480	10	4,440	0

Next, we present two summary tables for each program in the SWEPCO portfolio. Each table provides a high-level overview of the applicable programs. The overview is based on a review of program documentation and discussions with utilities, PUCT, and implementation contractors. This information is followed by the Evaluation, Measurement, and Verification (EM&V) Plan for the program, which includes the evaluation priority, key researchable questions, and EM&V activities. In addition to program-specific researchable questions listed in the EM&V Plan, the following researchable issue will be investigated portfolio-wide:

- What are the drivers of differences, if any, between claimed and evaluated savings?

[11] See SWEPCO's Application to Adjust Its Energy Efficiency Cost Recovery Factor filed on May 1, 2024 under Docket Number 56552.

5.2 COMMERCIAL MARKET TRANSFORMATION

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Commercial Market Transformation program in the utility's portfolio.

5.2.1 COMPASS for Small Business Market Transformation Program

Table 37. COMPASS for Small Business Transformation Program Summary

COMPASS for Small Business MTP	Summary
Program description	The COMPASS for Small Business MTP has been developed to offer energy efficiency services to small commercial customers with peak demands of less than 100 kW. This customer group is the segment least served by SWEPCO's SOPs or MTPs. The COMPASS for Small Business MTP is designed to overcome barriers unique to small commercial customers that prevent them from participating in energy efficiency programs that have proven to be successful for larger business owners. These barriers include: • Minimal technical knowledge among small business owners; • Concerns about performance uncertainty and hidden costs; • Owner/tenant challenges; • Lack of capital, expertise, and staff; and • Inadequate information or the inability to research costs. To overcome these barriers, the program offers a turnkey approach in which marketing, energy education, site-specific energy analysis, financial incentives, equipment procurement, and installation can be provided.
Target markets	• Market segments: Small commercial facilities • Eligibility criteria: Small commercial facilities within SWEPCO's service territory and with peak demands ≤100 kW • Applications: Retrofit or new construction projects

Marketing strategies and project sponsors	• Marketing strategies: SWEPCO plans to market the availability of this program in the following manner:
	  ○ maintain a website with project eligibility, end-use measures, incentives, and procedures;
	  ○ quarterly newsletters to customers highlighting program offerings;
	  ○ proactive communications with internal customer service representatives and key account managers to ensure they are knowledgeable about the program to provide accurate information to customers; and
	  ○ conduct workshops as necessary to explain elements such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process
	• Project sponsors: Contractors

Implementation and delivery	• Implementers: Frontier Energy is the third-party implementer.

COMPASS for Small Business MTP	Summary
Measures/products, services, offerings	• Measure offerings: Lighting, lighting controls, air conditioning, and refrigeration controls • Technical assistance: Energy assessment provided by the contractor • Rebates/incentives: Provided to the contractor • Program direct install: Direct install approach
QA/QC	• Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection is conducted by a third-party implementer

Table 38 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 38. COMPASS for Small Business Market Transformation Program EM&V Plan

COMPASS for Small Business MTP	Description	2024
Evaluation priority	The COMPASS for Small Business MTP is a *low* priority in PY2024. The savings are from deemed measures.	Low
Key researchable issues	• What are the challenges and opportunities to serve this hard-to-reach business sector? • How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census

5.2.2 COMPASS for Large Commercial Market Transformation Program

Table 39. COMPASS for Large Commercial Market Transformation Program Summary

Commercial Solutions MTP	Summary
Program description	The COMPASS for Large Commercial MTP targets commercial customers (other than educational entities) that do not have the in-house expertise to (1) identify, evaluate, and undertake energy efficiency improvements; (2) properly evaluate energy efficiency proposals from vendors; or (3) understand how to leverage their energy savings to finance projects. The COMPASS for Large Commercial MTP facilitates the identification of demand and energy savings opportunities, general operating characteristics, long-range energy efficiency planning, and overall measure acceptance by the targeted customers. Incentives are paid to EESPs or customers for eligible energy efficiency measures installed in new or retrofit applications, resulting in verifiable demand and energy savings.
Target markets	• Market segments: Commercial facilities (other than education) • Eligibility criteria: Commercial facilities within SWEPCO's service territory • Applications: Retrofit or new construction projects

Marketing strategies and project sponsors	• Marketing strategies: SWEPCO plans to market the availability of this program in the following manner:
	  ○ contract with a third party to implement outreach and planning activities;
	  ○ maintain a website to provide information to potential participants;
	  ○ quarterly newsletters to customers highlighting program offerings;
	  ○ conduct workshops as necessary to explain elements of the program, such as the responsibilities of participants, project requirements, incentive information, and the application and reporting process;
	  ○ utilize working relationships between customer account managers and customers to promote the program;
	  ○ participate in local, regional, and industry-related outreach activities as may be necessary;
	  ○ conduct specific project sponsor training sessions, as necessary, based on the energy efficiency programs being implemented; and
	  ○ facilitate media opportunities to spotlight successful projects or interesting stories as applicable.
	• Project sponsors: Utility

Implementation and delivery	• Implementers: Frontier Energy
Measures/products, services, offerings	• Measure offerings: HVAC, lighting, motors, window film, roofing, or others that may require M&V planning and metering • Technical assistance: Includes communications support in addition to identification and evaluation of energy efficiency measures • Rebates/incentives: Provided to the end-use customer ○ kW (demand savings): $225–$305 per kW (varies by measure type)
QA/QC	• Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by a third-party implementer and SWEPCO

Table 40 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 40. COMPASS for Large Commercial Market Transformation Program EM&V Plan

Commercial Solutions MTP	Description	2024
Evaluation priority	The COMPASS for Large Commercial MTP is a *high* priority in PY2024. The majority of savings are from deemed measures with some custom measures.	High
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	
Program evaluation approach	Program tracking system review: Review tracking data on the census of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations and other available project documentation to estimate energy savings and develop project-level realization rates independently.	2
	Participant surveys: Interviews will be completed with participants for smart thermostats and HVAC tune-ups	Census sample to meet 90/10

5.2.3 COMPASS FOR SCHOOLS Market Transformation Program

Table 41. COMPASS for Schools Market Transformation Program Summary

SCORE MTP	Summary
Program description	The COMPASS for Schools MTP provides energy efficiency and demand reduction solutions for public and private educational entities grades K-12 and colleges and universities. This program is designed to help educate and assist these customers in lowering their energy use by integrating energy efficiency into their short- and long-term planning, budgeting, and operational practices. The program assists with identifying demand and energy savings opportunities and provides detailed energy use, detailed building operational characteristics, and long-range energy efficiency planning. Incentives are paid to participating customers for eligible energy efficiency measures installed in new or retrofit applications that provide verifiable demand and energy savings.

SCORE MTP	Summary
Target markets	• Market segments: Education facilities • Eligibility criteria: Education facilities within SWEPCO's service territory • Applications: Retrofit or new construction projects

Marketing strategies and project sponsors	• Marketing strategies: SWEPCO plans to market the availability of this program in the following manner:
	  ○ contract with a third party to implement outreach and planning activities;
	  ○ maintain a website to provide information to potential participants;
	  ○ identify customer participants;
	  ○ quarterly newsletters to customers highlighting program offerings;
	  ○ utilize working relationships between customer account managers and customers to promote the program;
	  ○ conduct workshops as necessary to explain elements of the program, such as the responsibilities of participants, project requirements, incentive information, and the application and reporting process;
	  ○ participate in regional outreach activities as may be necessary; and
	  ○ participate in appropriate industry-related meetings to generate awareness and interest.
	• Project sponsors: Utility

Implementation and delivery	• Implementers: Frontier Energy is the third-party implementer.
Measures/products, services, offerings	• Measure offerings: HVAC, lighting, motors, window film, roofing, or others that may require M&V planning and metering • Technical assistance: Includes communications support, performance benchmarking, and energy master planning workshops in addition to identifying energy efficiency measures • Rebates/incentives: Provided to the end-use customer
QA/QC	• Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by a third-party implementer and SWEPCO

Table 42 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 42. COMPASS for Schools Market Transformation Program EM&V Plan

SCORE MTP	Description	2024
Evaluation priority	The COMPASS for Schools MTP is a *medium* priority in PY2024. The majority of savings are from deemed measures with some custom measures.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2

5.3 COMMERCIAL STANDARD OFFER

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Commercial Standard Offer program in the utility's portfolio.

5.3.1 Commercial Standard Offer Program

Table 43. Commercial Standard Offer Program Summary

Commercial SOP	Summary
Program description	The Commercial SOP targets commercial customers (other than public schools) of all sizes, providing incentives for new construction and retrofit installation of measures that reduce demand and save energy in nonresidential facilities. The CSOP encourages electric energy efficiency improvements that go above and beyond the efficiency gains typically achieved in retrofit or replacement projects. Energy and demand savings will be based only on reductions that exceed current state and federal minimum efficiency standards if such standards apply. Incentives are paid to EESPs or customers based on deemed savings or verified demand and energy savings.

Commercial SOP	Summary
Target markets	• Market segments: Large and small commercial and industrial businesses • Eligibility criteria: Customer must have the potential to reduce summer peak demand by at least 5 kW • Applications: New or retrofit applications

Marketing strategies and project sponsors	• Marketing strategies: SWEPCO plans to market the availability of this program in the following manner:
	  ○ maintain a website with project eligibility, end-use measures, incentives, and procedures;
	  ○ quarterly newsletters to customers highlighting program offerings;
	  ○ proactive communications with internal customer service representatives and key account managers to ensure they are knowledgeable about the program to provide accurate information to customers; and
	  ○ use of bill inserts, etc.
	• Project sponsors include:
	  ○ national or local energy service companies,
	  ○ local contractors,
	  ○ national or local companies that provide energy-related services or products (such as lighting or HVAC equipment), and
	  ○ individual commercial customers within the eligible service territories who install measures in their own facilities.

Implementation and delivery	• Implementers: SWEPCO

Measures/products, services, offerings	• Measure offerings: HVAC, lighting, controls, refrigeration, motors, variable frequency drives, food service
	• Technical assistance: At the discretion of the project sponsor, not part of the program design
	• Rebates/incentives: Provided to the project sponsor, who then passes on the rebates/incentives at their discretion to the end-use customer.
	  ○ kW (demand savings): $240–$350 per kW (varies by measure type)
	  ○ kWh (energy savings): $0.06–$0.09 per kWh (varies by measure type)

QA/QC	• Pre- and post-on-site inspections • Conducted by SWEPCO

Table 44 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 44. Commercial Standard Offer Program EM&V Plan

Commercial SOP	Description	2024
Evaluation priority	The Commercial SOP is a *high* priority in PY2024. The majority of savings are from deemed measures with some custom measures.	High
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2
	Participant surveys: Interviews will be completed with participants for HVAC tune-ups	Census sample to meet 90/10

5.4 LOAD MANAGEMENT

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Load Management program in the utility's portfolio.

5.4.1 Load Management Standard Offer Program (Commercial)

Table 45. Load Management Standard Offer Program (Commercial) Summary

Load Management SOP (Commercial)	Summary
Program description	The commercial Load Management SOP targets commercial customers with a peak electric demand of 500 kW or more. Incentive payments are based on measured and verified demand reduction of curtailed loads during the summer peak period. Load management events are dispatched by SWEPCO using a one-hour-ahead notice for load reduction periods of one to four hours.

Load Management SOP (Commercial)	Summary

Target markets	• Market segments: Large commercial and industrial businesses
	• Eligibility criteria:
	  ○ An interruptible load must be identified at a facility that is served by SWEPCO
	  ○ Customers must have an interval data recorder meter.
	  ○ Customers must have a minimum demand of 500 kW or more.
	• Applications: Existing

Marketing strategies and prog project ram sponsors	• Marketing strategies: SWEPCO plans to market the availability of this program in the following manner:
	  ○ maintain a website with project eligibility, end-use measures, incentives, and procedures;
	  ○ educate internal employees about the program to help increase the customers' awareness of the program; and
	  ○ use of customer account managers
	• Project sponsors: National or local EESPs or individual customers that identify interruptible load in their own facilities

Implementation and delivery	• Implementers: SWEPCO
Measures/products, services, offerings	• Measure offerings: Non-Residential Load Curtailment • Rebates/incentives: SWEPCO will pay a participating customer (or the project sponsor, if different) up to $40 per kW of verified curtailed load each year of participation.
QA/QC	• SWEPCO will verify actual demand savings from interruptions.

Table 46 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 46. Commercial Load Management Standard Offer Program EM&V Plan

Load Management SOP (Commercial)	Description	2024
Evaluation priority	The load management program is a *medium* priority in PY2024.	Medium
Key researchable issues	• Are sponsor-provided savings inputs and parameters accurate? • Are utility verification regimes sufficient and reliable?	

Load Management SOP (Commercial)	Description	2024
Program evaluation approach	Program tracking data review: Review data for accuracy and alignment with demand interval metered data. Metered data review: Program rules require the installation of demand interval metering to record real-time participant demand profiles. A review of these data will verify program tracking data.	Census
	Data reviews: Review participant interval-load data. Periods ahead of, during, and following load interruption notices will verify load reduction and persistence during demand response events and provide a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census

5.5 RESIDENTIAL STANDARD OFFER

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Residential Standard Offer program in the utility's portfolio.

5.5.1 Residential Standard Offer Program

Table 47. Residential Standard Offer Program Summary

Residential SOP	Summary
Program description	The Residential SOP targets all residential customers, paying incentives to project sponsors for eligible measures installed in new and retrofit applications that result in verified demand and energy savings. Project comprehensiveness is encouraged. The following requirements must be reported to claim early retirement savings from residential HV AC projects: • Photos of gauges showing the existing unit in full functional status; • The age of the existing unit; • Photo of the existing unit nameplate; • Model number, serial number, and manufacturer of the existing unit; • The sizing of the new unit must be less than or equal to that of the existing unit; and • Customer responses to a survey questionnaire documenting the condition of the existing unit and customer motivation for unit replacement.
Target markets	• Market segments: Residential single-family and multifamily homes • Applications: Retrofit and new construction

Residential SOP	Summary
Marketing strategies and project sponsors	• Marketing strategies: SWEPCO plans to market the availability of this program in the following manner: o utilize mass email notifications to inform and update potential project sponsors such as EESPs and national and local companies that provide energy-related services; o educate internal employees about the program to help increase the customers' awareness of the program; o maintain a website with detailed project eligibility, end-use measures, incentives, procedures, and application forms; o monthly residential newsletters highlighting program offerings; o participate in home product shows organized by local home builder associations to showcase program offerings and boost customer awareness; o video campaigns with local area TV stations sharing tips to help customers find ways to save; o participate in appropriate industry-related meetings to generate awareness and interest; o bill inserts; o send information to customers concerned about utility bills; o participate in statewide outreach activities as available; and o conduct workshops to explain elements such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process. o Facilitate media opportunities to spotlight successful projects and interesting stories as applicable. Project sponsors can market directly to customers upon SWEPCO approval of all marketing materials used by sponsors. • Project sponsors: EESPs, contractors, national energy service companies
Implementation and delivery	• Implementer: SWEPCO
Measures/products, services, offerings	• Measure offerings: Commission-approved measures included in the statewide TRM for the residential customer class are eligible under the SOP, including attic insulation, duct efficiency, caulking/weatherstripping, air conditioning, heat pumps, water heaters, ENERGY STAR® windows, refrigerators, dishwashers, clothes washers, wall insulation, floor insulation, water heater jackets, and water heaters. • CFLs, showerheads, faucet aerators, and PV or other distributed generation measures are not eligible measures. • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives are provided to the project sponsors, who then pass rebates/incentives to the end-use customer at their discretion.
QA/QC	• Post-on-site inspections for approximately ten percent of sites for each sponsor • Conducted by SWEPCO

Table 48 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 48. Residential Standard Offer Program EM&V Plan

Residential SOP		2024
Evaluation priority	This program will receive a *medium* priority for PY2024 as the program has recently responded to TRM updates.	Medium
Key researchable issues	How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2

5.6 LOW-INCOME/HARD-TO-REACH STANDARD OFFER

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Low-Income and Hard-to-Reach program in the utility's portfolio.

5.6.1 Hard-to-Reach Standard Offer Program

Table 49. Hard-to-Reach Standard Offer Program Summary

Hard-to-Reach SOP	Summary
Program description	The Hard-to-Reach SOP targets residential customers in existing homes with total annual household incomes at or below 200% of current federal poverty guidelines and who have properly completed a Public Utility Commission of Texas (Commission) approved income verification form, or who have been designated as HTR-eligible through another Commission-approved verification methodology. Incentives are paid to project sponsors for eligible measures installed in retrofit applications that result in verifiable demand and energy savings. Project comprehensiveness is encouraged, and customer education regarding energy conservation behavior is provided through materials distributed by project sponsors.
Target markets	• Market segments: HTR residential customers • Eligibility criteria: Participants must have a total annual household income at or below 200 percent of the federal poverty level, have properly completed a PUCT-approved income verification form, or have been designated as HTR-eligible through another PUCT-approved verification methodology. • Applications: Retrofit

Hard-to-Reach SOP	Summary

Marketing strategies and project sponsors	• Marketing strategies: SWEPCO plans to market the availability of this program in the following manner:
	  ○ utilize mass email notifications to inform and update potential project sponsors such as EESPs and national and local companies that provide energy-related services;
	  ○ educate internal employees about the program to help increase the customers' awareness of the program;
	  ○ maintain a website with detailed project eligibility, end-use measures, incentives, procedures, and application forms;
	  ○ monthly residential newsletters highlighting program offerings;
	  ○ participate in home product shows organized by local home builder associations to showcase program offerings and boost customer awareness;
	  ○ video campaigns with local area TV stations sharing tips to help customers find ways to save;
	  ○ bill inserts;
	  ○ participate in appropriate industry-related meetings to generate awareness and interest;
	  ○ send information to customers concerned about utility bills;
	  ○ participate in statewide outreach activities as available;
	  ○ conduct workshops to explain elements such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process;
	  ○ approve all marketing materials used by sponsors;
	  ○ facilitate media opportunities to spotlight successful projects and interesting stories as applicable; and
	  ○ contract with a third-party implementer to conduct outreach, planning activities, and recruit additional subcontractors.
	• Project sponsors: EESPs, contractors, national energy service companies

Implementation and delivery	• Implementers: SWEPCO
Measures/products, services, offerings	• Measure offerings: Any Commission-approved measure included in the statewide TRM for the residential customer class is eligible, including attic insulation, duct efficiency, caulking/weatherstripping, air conditioning, heat pumps, water heaters, ENERGY STAR windows, refrigerators, dishwashers, clothes washers, wall insulation, floor insulation, water heater jackets, and water heaters. • CFLs and PV or other distributed generation measures are not eligible measures. • $25,000 cap per sponsor for multifamily projects • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Provided to the project sponsors, who then pass rebates/incentives on at their discretion to the end-use customer.

Hard-to-Reach SOP	Summary
QA/QC	• Post-on-site inspections for approximately ten percent of sites for each sponsor • Conducted by SWEPCO

Table 50 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 50. Hard-to-Reach Standard Offer Program EM&V Plan

Hard-to-Reach SOP	Description	2024
Evaluation priority	This program will receive a *medium* evaluation priority in PY2024.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm estimated savings concur with TRM	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	2

5.7 PILOT

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Pilot program in the utility's portfolio.

5.7.1 Bring Your Own Device Pilot Market Transformation Program

Table 51. Bring Your Own Device Pilot Market Transformation Program Summary

Bring Your Own Device Pilot MTP	Summary
Program description	The Bring Your Own Device Pilot MTP is a voluntary program that targets a reduction in air conditioning load for residential customers. The program is designed to relieve peak load during periods of high demand. Customers who have eligible smart thermostats are eligible to participate in the program. Demand response events are dispatched by SWEPCO for load reduction periods of one to four hours duration.
Target markets	• Eligible residential customers • Application: Rebate

Bring Your Own Device Pilot MTP	Summary
Marketing strategies and project sponsors	• Website redirect • monthly residential newsletters highlighting program offerings; • participate in home product shows organized by local home builder associations to showcase program offerings and boost customer awareness; • video campaigns with local area TV stations sharing tips to help customers find ways to save; and • targeted marketing campaigns
Implementation and delivery	• Implementers: EnergyHub/Oracle
Measures/products, services, offerings	• Measure offerings: Residential Load Curtailment
QA/QC	• Actual demand reductions will be determined by SWEPCO using a deemed savings approach as outlined in the TRM.

Table 22 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 52. Bring Your Own Device Pilot Market Transformation Program EM&V Plan

Bring Your Own Device Pilot MTP	Description	2024
Evaluation priority	The Bring Your Own Device Pilot MTP will receive a *medium* priority for PY2024.	Medium
Key researchable issues	• Are sponsor-provided savings inputs and parameters accurate? • Are utility verification regimes sufficient and reliable?	
Program evaluation approach	Program tracking data review: Review data for accuracy and alignment with demand interval metered data. Metered data review: Program rules require the installation of demand interval metering to record real-time participant demand profiles. A review of these data will verify program tracking data.	Census
	Data reviews: Review participant interval-load data. Periods ahead of, during, and following load interruption notices will verify load reduction and persistence during demand response events and provide a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census

6.0 XCEL ENERGY

This section addresses Xcel Energy's energy efficiency and load management portfolio. The overall portfolio[12] is summarized below, followed by details for each program in the portfolio.

6.1 PORTFOLIO OVERVIEW

Table 53 shows the projected energy and demand savings for the Xcel Energy programs for PY2024.

Table 53. Xcel Energy—PY2024 Projected Demand and Energy Savings

Program category	Program name	Program type	2024 demand savings (kW)	Percentage of total portfolio (demand)	2024 energy savings (kWh)	Percentage of total portfolio (energy)
Commercial MTP	Home Lighting MTP	Buydown Home Lighting MTP	140	1	513,000	3
Commercial MTP	Retro-Commissioning MTP	Retro-commissioning MTP	900	10	3,969,000	24
Commercial MTP	Small Commercial MTP	Small Business DI	220	2	1,000,000	6
Commercial SOP	Commercial SOP	Commercial SOP	1,020	11	3,826,000	23
LI/HTR SOP	Hard-to-Reach (HTR) SOP	HTR SOP	450	5	1,180,000	7
LI/HTR SOP	Low-Income Weatherization	Low-Income/HTR Weatherization Programs	250	3	765,000	5
Load Management	Load Management SOP	Commercial Load Management SOP	5,000	53	20,000	0
Residential MTP	Home Lighting MTP	Buydown Home Lighting MTP	470	5	1,718,000	10
Residential MTP	Refrigerator Recycling MTP	Appliance Recycling MTP	50	1	395,000	2

[12] See Xcel Energy's Application to Adjust Its Energy Efficiency Cost Recovery Factor filed on May 1, 2024 under Docket Number 56553.

Program category	Program name	Program type	2024 demand savings (kW)	Percentage of total portfolio (demand)	2024 energy savings (kWh)	Percentage of total portfolio (energy)
Residential MTP	Smart Thermostat MTP Pilot	Pilot Residential Smart Thermostats MTP	0	0	600,000	4
Residential MTP	Residential HVAC MTP	Residential MTP	240	3	360,000	2
Residential MTP	Residential Codes MTP	Residential MTP	0	0	196,000	1
Residential SOP	Residential SOP	Residential SOP	360	4	810,000	5
HTR	Hard-to-Reach Food Bank	HTR	340	4	1,326,000	8

Next, we present two summary tables for each program in the Xcel portfolio. Each table provides a high-level overview of the applicable programs. The overview is based on a review of program documentation and discussions with utilities, PUCT, and implementation contractors. This information is followed by the Evaluation, Measurement, and Verification (EM&V) Plan for the program, which includes the evaluation priority, key researchable questions, and EM&V activities. In addition to program-specific researchable questions listed in the EM&V Plan, the following researchable issue will be investigated portfolio-wide:

- What are the drivers of differences, if any, between claimed and evaluated savings?

6.2 COMMERCIAL MARKET TRANSFORMATION

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Commercial Market Transformation program in the utility's portfolio.

6.2.1 Small Commercial Market Transformation Program

Table 54. Small Commercial Market Transformation Program Summary

Small Commercial MTP	Summary
Program description	The Small Commercial MTP is designed to assist small business customers with identifying and implementing cost-effective energy efficiency solutions for their workplace. Small business customers often encounter greater barriers to participation in energy efficiency programs that are not experienced by larger commercial and industrial (C&I) customers. Often, the two biggest barriers are a lack of access to capital and a lack of information about what energy efficiency measures and strategies are the most cost-effective for the customer's individual situation. The Small Commercial MTP seeks to assist customers in overcoming these challenges by providing increased guidance throughout the decision-making process to help small business customers plan for, prioritize, and implement energy-efficient measures. Successful program measures include LED lighting, lighting controls, and HVAC measures.

Small Commercial MTP	Summary
Target markets	• Market segments: Small commercial facilities • Eligibility criteria: Small commercial facilities within Xcel Energy's service territory with peak demands <100 kW for one facility and <250 kW for aggregate demand for multiple facilities • Applications: Retrofit

Marketing strategies and project sponsors	• Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner:
	  ○ maintain a website containing the requirements for project participation, forms required for project submission, and the links to databases containing the currently available funding; and
	  ○ leverage small business associations, government agencies, and service providers to serve program customers.
	• Project sponsors: Contractors

Implementation and delivery	• Implementers: Frontier Energy is the third-party implementer.
Measures/products, services, offerings	• Measure offerings: HVAC (and controls), lighting (and controls), and cool roofs • Technical assistance: Energy assessment provided by the contractor • Rebates/incentives: Provided to the contractor
QA/QC	• Pre- and post-on-site inspections for 100 percent of projects of the first five projects, and ongoing 100 percent of documentation and 20 percent of installations • Pre- and post-inspection conducted by a third-party implementer • In addition, some verification conducted by the utility

Table 55 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 55. Small Commercial Market Transformation Program EM&V Plan

Small Commercial MTP	Description	2024
Evaluation priority	The Small Commercial MTP is a *low* priority in PY2024. The savings are from deemed measures.	Low

Small Commercial MTP	Description	2024
Key researchable issues	• What are the challenges and opportunities to serve this hard-to-reach business sector? • How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census

6.2.2 Recommissioning Market Transformation Program

Table 56. Recommissioning Market Transformation Program Summary

Recommissioning MTP	Summary
Program description	The Recommissioning (RCx) MTP offers commercial customers the opportunity to improve operational performance in their facilities based on low-cost or no-cost measures identified by engineering analysis. The program targets facilities with a minimum of 50,000 square feet of conditioned space. Financial incentives are provided to facility owners and RCx agents to implement energy efficiency measures and complete projects by approved project deadlines.[13]
Target markets	• Market segments: Commercial facilities within Xcel Energy's service territory • Eligibility criteria: Commercial facilities ≥50,000 square feet of air-conditioned space • Applications: Existing facilities

[13] No program information was found on the website; therefore, this information is only an estimate, as information is limited in the Energy Efficiency Program Plan and Reports (EEPR).

Recommissioning MTP	Summary

Marketing strategies and project sponsors	• Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner:
	  ○ Utilize a third-party program implementer who will work with Xcel Energy account management to conduct outreach and identify suitable facilities;
	  ○ maintain a website with detailed information regarding requirements for project participation, project eligibility, end-use measure eligibility, incentive levels, application procedures, currently available funding, and application forms;
	  ○ participate in state-wide outreach activities as may be available;
	  ○ attend appropriate industry-related meetings to generate awareness and interest; and
	  ○ utilize mass email notifications to keep potential project sponsors interested and informed.
	• Project sponsors: Third-party RCx agents

Implementation and delivery	• Implementers: Willdan Energy Solutions is the third-party implementer.
Measures/products, services, offerings	• Measure offerings: May include HVAC temperature reset, outside air reduction, optimization of HVAC start-up, lighting (e.g., de-lamping, daylighting), etc. • Technical assistance: Includes technical energy analysis for identification of energy efficiency measures • Rebates/incentives: Provided to the end-use customer
QA/QC	• Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by the implementation contractor

Table 57 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 57. Recommissioning Market Transformation Program EM&V Plan

Recommissioning MTP	Description	2024
Evaluation priority	The Recommissioning MTP is a *medium* priority in PY2024. The savings are from both custom measures and deemed measures.	Medium

Recommissioning MTP	Description	2024
Key researchable issues	• Is the RCx implementation appropriate for the number of projects planned to be completed in the program for the long term? • Is the focus of low/no-cost measures affecting the participants' need for potentially more capital-intensive projects with further energy savings? • How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design, delivery, or data collection may improve program performance?	
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	3

6.3 COMMERCIAL STANDARD OFFER

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Commercial Standard Offer program in the utility's portfolio.

6.3.1 Commercial Standard Offer Program

Table 58. Commercial Standard Offer Program Summary

Commercial SOP	Summary
Program description	The Commercial SOP targets commercial customers with single-meter demand of at least 100 kW or aggregate meter demand of at least 250 kW. Incentives are paid to project sponsors based on verified deemed savings for a wide range of measures installed in new or retrofit applications. Typical eligible measures include light-emitting diode ("LD) lighting, lighting controls, commercial cooling and ventilation, commercial refrigeration enhancements, building envelope measures, and industrial process upgrades.
Target markets	• Market segments: Commercial businesses • Eligibility criteria: Commercial facilities within Xcel Energy's territory with >100 kW peak demand at one facility or a total demand of >250 kW at all facilities owned by the same customer • Applications: New or retrofit applications

Commercial SOP	Summary

Marketing strategies and project sponsors	• Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner:
	  ○ use of the Xcel Energy efficiency website (www.xcelefficiency.com);
	  ○ utilize mass email notifications, bill inserts, radio ads, billboards, home shows, etc.
	• Project sponsors include:
	  ○ national or local energy service companies (ESCO);
	  ○ national or local companies that provide energy-related services (e.g., contracting) or products (e.g., lighting and HVAC equipment);
	  ○ commercial property developers, design/build firms; and
	  ○ individual customers who implement energy efficiency measures in their own facilities.

Implementation and delivery	• Implementers: Utility
Measures/products, services, offerings	• Measure offerings: HVAC, lighting, controls, motors refrigeration, variable frequency drives • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Provided to the project sponsor, who then passes rebates/incentives to the end-use customer at their discretion
QA/QC	• Pre- and post-on-site inspections at the discretion of the utility • Conducted by utility or third-party implementer or combination

Table 59 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 59. Commercial Standard Offer Program EM&V Plan

Commercial SOP	Description	2024
Evaluation priority	The Commercial SOP is a *high* priority in PY2024. The majority of savings are from deemed measures with some custom measures.	High
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace? • Is the current mixture of rebated measures still appropriate, or could some measures be included or removed? • What changes to the program design and delivery may improve program performance? • Have the changes in equipment baselines affected the program's ability to meet goals? Are there viable strategies the program can adopt to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines?	

Commercial SOP	Description	2024
Program evaluation approach	Program tracking system review: Review tracking data for a sample of projects. Ensure all project activity is included and check for consistency with reported savings in annual utility reports.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	3
	Participant surveys: Interviews will be completed with participants for HVAC tune-ups	Census sample to meet 90/10

6.4 LOAD MANAGEMENT

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Load Management program in the utility's portfolio.

6.4.1 Commercial Load Management Standard Offer Program

Table 60. Commercial Load Management Standard Offer Program Summary

Commercial Load Management SOP	Summary
Program description	The Load Management SOP was developed in 2012 in accordance with 16 TAC § 25.181, which authorizes participating project sponsors (customers or third-party sponsors) to provide on-call, voluntary curtailment of electricity consumption during peak demand periods in return for incentive payments. Incentives are based on verified demand savings that occur at Xcel distribution sites taking primary or secondary service or at eligible institutional customers' sites. Customers are not required to produce a specific level of curtailed load, but they will receive payments for only the amount of load curtailed.

Target markets	• Market segments: Commercial and industrial businesses
	• Eligibility criteria:
	  ○ Customers must sign up to deliver a specified amount of load reduction either from a single location (project site) or by combining multiple locations (project sites).
	  ○ Ideally, individual project sites should be capable of delivering 100 kW of load reduction: applications from project sponsors with individual sites that provide less than 100 kW per site but at least 100 kW in total will be accepted.
	  ○ Customers must have an interval data recorder meter.
	• Applications: Existing

Commercial Load Management SOP	Summary

Marketing strategies and project sponsors	• Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner:
	  ○ maintain a website containing the requirements for project participation, forms required for project submission, and the links to databases containing currently available funding; and
	  ○ leverage of retail providers.
	• Project sponsors: Individual customers or other third parties with customer agreements.

Implementation and delivery	• Implementers: Utility
Measures/products, services, offerings	• Measure offerings: N/A • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Xcel Energy will pay a participating customer (or the project sponsor, if different) up to $50 per kW of verified curtailed load each year of participation.
QA/QC	• Xcel Energy verifies actual demand savings from interruptions.

Table 61 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 61. Commercial Load Management Standard Offer Program EM&V Plan

Commercial Load Management SOP	Description	2024
Evaluation priority	The load management program is a *medium* priority in PY2024.	Medium
Key researchable issues	• Are sponsor-provided savings inputs and parameters accurate? • Are utility verification regimes sufficient and reliable?	
Program evaluation approach	Program tracking data review: Review data for accuracy and alignment with demand interval metered data. Metered data review: Program rules require the installation of demand interval metering to record real-time participant demand profiles. A review of these data will verify program tracking data.	Census
	Data reviews: Review participant interval-load data. Periods ahead of, during, and following load interruption notices will verify load reduction and persistence during demand response events and provide a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census

6.5 RESIDENTIAL STANDARD OFFER

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Residential Standard Offer program in the utility's portfolio.

6.5.1 Residential Standard Offer Program

Table 62. Residential Standard Offer Program Summary

Residential SOP	Summary
Program description	The Residential SOP provides incentives to service providers for retrofit and new construction installations of residential measures that provide verifiable demand and energy savings. Successful measures include insulation and LED lighting measures. This program has two components: one for single-family residences and one for multi-family residences. Incentives and savings are tracked separately for these components but are reported together in this EEPR.
Target markets	• Market segments: Residential customers • Applications: New and retrofit applications
Marketing strategies and project sponsors	• Marketing strategies include: o the use of the Xcel Energy efficiency website (www.xcelefficiency.com); o outreach workshops for contractors, retailers, and local and national EESPs—workshops explain program elements, such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process; o participation in statewide outreach activities as may be available and attend appropriate industry-related meetings to generate awareness and interest; and o utilize mass email notifications to keep potential project sponsors interested and informed.
Implementation and delivery	• Implementers: Xcel Energy
Measures/products, services, offerings	• Measure offerings: Commission-approved measures included in the statewide TRM for the residential customer class are eligible under this SOP, including attic insulation, duct sealing, caulking/weatherstripping, air conditioning, heat pumps, water heaters, ENERGY STAR® windows, refrigerators, dishwashers, clothes washers, solar window screens, wall insulation, floor insulation, water heater jackets, and renewable energy sources • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Provided to the project sponsor, who then passes rebates/incentives to the end-use customer at their discretion
QA/QC	• Post-on-site inspections of ten percent of invoices submitted by each contractor or on-site contractor inspections • Conducted by Xcel Energy

Table 63 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 63. Residential Standard Offer Program EM&V Plan

Residential SOP	Description	2024
Evaluation priority	This program will receive a *medium* priority for PY2024 as the program has recently responded to TRM updates.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	1

6.6 RESIDENTIAL MARKET TRANSFORMATION PROGRAM

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Residential Market Transformation program in the utility's portfolio.

6.6.1 Residential HVAC Market Transformation Program

Table 64. Residential HVAC Market Transformation Program Summary

Residential HVAC MTP	Summary
Program description	The HVAC Market Transformation Program targets residential customers and participating HVAC contractors. The program seeks to install highly efficient HVAC equipment by influencing the dealers/contractors, distributors, and customers. The customer receives a rebate when they purchase qualifying equipment, and the contractor may also receive an incentive for installing the equipment. A third-party implementor will manage the program and assist the customers and HVAC contractors in obtaining rebates and marketing the program to all areas of Xcel's territory.
Target markets	• Market segments: residential • Eligibility criteria: • Applications: N/A

Residential HVAC MTP	Summary
Marketing strategies and project sponsors	• Marketing strategies include: ○ the use of the Xcel Energy efficiency website (www.xcelefficiency.com); ○ outreach workshops for contractors, retailers, and local and national EESPs—workshops explain program elements, such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process; ○ participation in statewide outreach activities as may be available and attend appropriate industry-related meetings to generate awareness and interest; and ○ utilize mass email notifications to keep potential project sponsors interested and informed.
Implementation and delivery	• Implementers: Third-party implementers
Measures/products, services, offerings	• Measure offerings: TBD
QA/QC	• TBD

Table 71 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 65. Residential HVAC Market Transformation Program EM&V Plan

Residential HVAC MTP	Description	2024
Evaluation priority	This program will receive a *medium* priority for PY2024 as the program has recently responded to TRM updates.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	1

6.6.2 Smart Thermostat Market Transformation Program

Table 66. Smart Thermostat Market Transformation Program Pilot Summary

Smart Thermostat MTP	Summary
Program description	The Smart Thermostat MTP is a program designed to provide customers discounts on ENERGY STAR-connected thermostats through Xcel Energy's online storefront, which is owned and managed by an independent third party. An instant rebate will be applied at the point of sale to qualifying customers, which can be combined with manufacturer-sponsored discounts to lower the purchase price further. All Xcel residential customers will be eligible to participate in this upstream offering, with a limit of two thermostat discounts per customer.
Target markets	• Market segments: Residential • Application: Buydown
Marketing strategies and project sponsors	• Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: ○ Contract with third-party internet marketplace and online portal companies.
Implementation and delivery	• Implementers: TBD
Measures/products, services, offerings	• Measure offerings: ENERGY STAR-connected thermostats • Rebates/incentives: A discount is applied to qualifying customers at the point of sale.
QA/QC	• Pending additional documentation from Xcel Energy

Table 67 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 67. Smart Thermostat Market Transformation Program Pilot EM&V Plan

Smart Thermostat MTP		2024
Evaluation priority	The Smart Thermostat MTP Pilot will receive a *high* evaluation priority for PY2024.	High
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are program goals established appropriately, and will they be met?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	0
	Participant surveys: Interviews will be completed with participants	Census sample to meet 90/10

6.6.3 Residential Codes Market Transformation Program

Table 68. Residential Codes Market Transformation Program Summary

Refrigerator Recycling MTP	Summary
Program description	The Residential Codes MTP will proactively encourage and support jurisdictions to ensure compliance with the latest state-wide building codes for the residential market. Support will be designed to meet each jurisdiction where they are in the code adoption and implementation cycle and work to build relationships with architects, builders, and city officials. Communities will be given tools and resources to help them realize the economic and energy performance benefits of energy-efficient buildings. Resources and training will be provided to assist with barriers such as limited code staff time, how to ensure compliance, misinformation about the costs and benefits, and homebuilder awareness and knowledge about how to meet the new codes efficiently and cost-effectively.
Target markets	• Market segments: Architects, builders, and city officials • Application:
Marketing strategies and project sponsors	• Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: ○ ; ○ ; and ○ .
Implementation and delivery	• Implementers: Xcel Energy, with data provided by ?
Measures/products, services, offerings	• Measure offerings: • Technical assistance: N/A • Rebates/incentives:
QA/QC	• Pending additional detail from Xcel Energy

Table 79 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 69. Residential Codes Market Transformation EM&V Plan

Refrigerator Recycling MTP	Description	2024
Evaluation priority	The Residential Codes MTP represents a small portion of the portfolio's current and future energy use and demand savings.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are program goals established appropriately, and will they be met?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with the TRM calculation approach. As this is a M&V methodology, supplemental data requests are expected to follow program tracking data review.	Census

6.7 LOW-INCOME/HARD-TO-REACH STANDARD OFFER

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Low-Income and Hard-to-Reach program in the utility's portfolio.

6.7.1 Hard-to-Reach Standard Offer Program

Table 70. Hard-to-Reach Standard Offer Program Summary

Hard-to-Reach SOP	Summary
Program description	The Hard-to-Reach SOP provides incentives for the comprehensive retrofit installations of a wide range of measures (ceiling insulation, duet sealing, air infiltration, LEDs, shower heads, and others) that reduce demand and save energy. This program is split into two segments, one for single-family residences and one for multifamily residences. Incentives and savings are tracked separately for these segments but are reported together in this EEPR.
Target markets	• Market segments: HTR residential customers • Eligibility criteria: Participants must have a total annual household income at or below 200 percent of the federal poverty level. • Applications: Retrofits and new construction through the Affordable Single-Family component
Marketing strategies and project sponsors	• Marketing strategies include: o Use of the Xcel Energy efficiency website (www.xcelefficiency.com) o outreach workshops for contractors, retailers, and local and national EESPs—workshops explain program elements, such as responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process; o participation in statewide outreach activities as may be available and attend appropriate industry-related meetings to generate awareness and interest; and o utilization of mass email notifications to keep potential project sponsors interested and informed.
Implementation and delivery	• Implementers: Xcel Energy
Measures/products, services, offerings	• Measure offerings: Air infiltration control, CFLs, insulation, duct sealing, HVAC systems (central/window air conditioning, heat pump), water heaters, windows, refrigerators, showerheads, aerators, solar screens • Must install at least one of the following primary measures at each site: air infiltration control, insulation, duct sealing, HVAC systems (central/window air conditioning, heat pump), water heaters, windows, or refrigerators • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Provided to the project sponsor, who then passes rebates/incentives to the end-use customer at their discretion
QA/QC	• Post-on-site inspections for ten percent of invoices submitted by each contractor or on-site contractor inspections • Conducted by Xcel Energy

Table 71 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 71. Hard-to-Reach Standard Offer Program EM&V Plan

Hard-to-Reach SOP	Description	2024
Evaluation priority	This program will receive a *medium* priority for PY2024 as the program has recently responded to TRM updates.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	1

6.7.2 Hard-to-Reach Food Bank Market Transformation Program

Table 72. Hard-to-Reach Food Bank Market Transformation Program Summary

Hard-to-Reach Food Bank MTP	Summary
Program description	The Hard-to-Reach Food Bank program is designed to help income-qualified customers save money by providing free energy efficiency measures through local food bank distribution sites. Xcel works with a third-party administrator and our third-party home-lighting implementer to provide lighting kits for distribution through local food banks. Each kit consists of a four-pack of LEDs and an LED night light. Giving away free LED lighting kits gives customers an easy start to implementing energy efficiency in their homes.
Target markets	• Market segments: residential • Eligibility criteria: N/A • Applications: N/A
Marketing strategies and project sponsors	• Marketing strategies: Local food bank distribution sites
Implementation and delivery	• Implementers: Third-party administrator and home lighting implementer
Measures/products, services, offerings	• Measure offerings: four-pack LEDs and LED night light
QA/QC	• TBD

Table 71 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 73. Hard-to-Reach Food Bank Market Transformation Program EM&V Plan

Hard-to-Reach Food Bank MTP	Description	2024
Evaluation priority	This program will receive a *low* priority for PY2024 as the program has recently responded to TRM updates.	Low
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census

6.7.3 Low-Income Weatherization Program

Table 74. Low-Income Weatherization Program Summary

Low-Income Weatherization Program	Summary
Program description	The Low-Income Weatherization program is designed to cost-effectively reduce the energy consumption and energy costs of Xcel's low-income customers. Under this program, one or more program implementers contract with not-for-profit community organizations and government agencies to provide weatherization services to Xcel residential customers who meet the current Department of Energy income-eligibility guidelines. Implementation of Xcel's Low-Income Weatherization program provides eligible residential customers with appropriate weatherization measures and basic on-site energy education and satisfies the requirements of 16 TAC § 25.181(p).
Target markets	• Market segments: Low-income residential customers • Eligibility criteria: Residential customers that meet the Department of Energy's income-eligibility guidelines (i.e., 200 percent of the federal poverty level) and have electric air conditioning • Applications: Retrofit applications
Marketing strategies and project sponsors	• Marketing strategies: ○ the use of the Xcel Energy efficiency website (www.xcelefficiency.com); • Project sponsors: Frontier Energy (third-party implementer) contracts with sub-recipients and other not-for-profit community action and government agencies to provide weatherization services.
Implementation and delivery	• Implementers: Frontier Energy

Low-Income Weatherization Program	Summary
Measures/products, services, offerings	• Measure offerings: Weatherization, energy education • Technical assistance: At the discretion of the project sponsor, not part of the program design • Rebates/incentives: Provided to the project sponsor, who then passes rebates/incentives on at their discretion to the end-use customer.
QA/QC	• Post-on-site inspections submitted by Frontier Energy

Table 75 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 75. Low-Income Weatherization Program EM&V Plan

Low-Income Weatherization Program	Description	2024
Evaluation priority	This program will receive a *medium* priority for PY2024 as the program has recently responded to TRM updates.	Medium
Key researchable issues	• How are program data handled? Are all data being tracked accurately and effectively? How does the program manage and store supplemental data? Is there room for improvement to make the process of data entry and storage more streamlined and effective? • Which measures have been installed, and what type of equipment did they replace?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Desk reviews: For a sample of projects, review savings calculations, along with other available project documentation, to independently estimate energy savings and develop project-level realization rates.	1

6.8 CROSS-SECTOR PROGRAMS

This section includes a program summary and the details of the activities to be performed as part of the evaluation of each Cross-Sector program in the utility's portfolio.

6.8.1 Home Lighting Market Transformation Program

Table 76. Home Lighting Market Transformation Program Summary

Home Lighting MTP	Summary
Program description	The Home Lighting MTP offers Xcel's customers point-of-sale rebates to reduce the cost of purchasing new, efficient LED bulbs through qualifying retailers. Point-of-sale rebates occur when the bulb manufacturer, retailer, and Xcel combine efforts and/or funds to offer instant rebates on a variety of bulb models targeted mostly for residential use, enabling customers to purchase discounted LEDs without completing rebate forms. Since the program was rolled out in late 2016 as part of the company's R&D effort, the program has become one of Xcel's most cost-effective and popular programs for retail customers.

Home Lighting MTP	Summary
Target markets	• Market segments: Residential and small commercial customers • Application: Buydown

Marketing strategies and project sponsors	• Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner:
	  ○ use of the Xcel Energy efficiency website (www.xcelefficiency.com);
	  ○ utilize mass email notifications, bill inserts, radio ads, billboards, home shows, etc.
	• Project sponsors: Individual customers or other third parties with customer agreements

Implementation and delivery	• Implementers: Xcel Energy
Measures/products, services, offerings	• Measure offerings: Efficient LEDs • Technical assistance: N/A • Rebates/incentives: In-store discounts are provided directly to customers
QA/QC	• Pending additional documentation from Xcel Energy

Table 77 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 77. Home Lighting Market Transformation Program EM&V Plan

Home Lighting MTP	Description	2024
Evaluation priority	The Home Lighting MTP will receive a *medium* evaluation priority in PY2024.	Medium
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are program goals established appropriately, and will they be met?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm estimated savings concur with TRM	Census

6.8.2 Refrigerator Recycling Market Transformation Program

Table 78. Refrigerator Recycling Market Transformation Program Summary

Refrigerator Recycling MTP	Summary
Program description	The Refrigerator Recycling MTP The Refrigerator Recycling MTP is designed to decrease the number of inefficient refrigerators and freezers in the Company's service territory in an environmentally safe and compliant manner and, by doing so, achieve electric energy savings and peak demand reduction. Customers receive an incentive plus free pickup and disposal of their operable, inefficient refrigerator and freezer. A third-party implementer administers the product, including customer scheduling, pickup, recycling, and rebating.
Target markets	• Market segments: Residential and small commercial customers • Application: Request for pick-up
Marketing strategies and project sponsors	• Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: ○ maintain a website containing the requirements for project participation and the links to databases containing currently available funding; ○ primarily marketed through email, bill inserts, and online/social media efforts; and ○ leverage of retail providers.
Implementation and delivery	• Implementers: Xcel Energy, with data provided by Frontier Energy
Measures/products, services, offerings	• Measure offerings: Recycling refrigerators and freezers • Technical assistance: N/A • Rebates/incentives: Incentive per unit picked up and pick-up provided at no charge
QA/QC	• Pending additional detail from Xcel Energy

Table 79 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

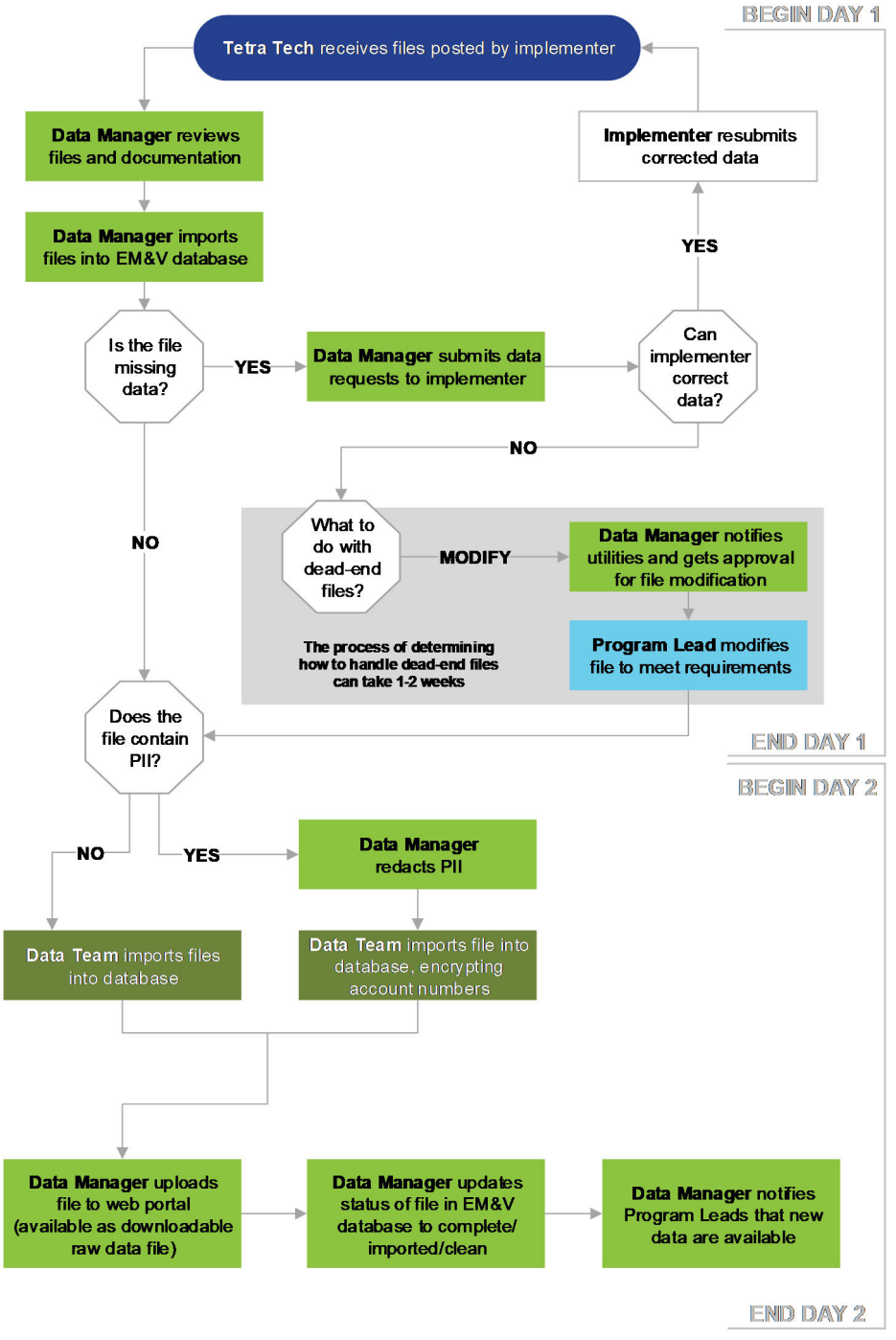
Table 79. Refrigerator Recycling Market Transformation Program EM&V Plan

Refrigerator Recycling MTP	Description	2024
Evaluation priority	The Refrigerator Recycling MTP represents a small portion of the portfolio's current and future energy use and demand savings.	Low
Key researchable issues	• How is program data handled? Is all data being tracked accurately and effectively? Is there room for improvement to make the data entry and storage process more streamlined and effective? • Are program goals established appropriately, and will they be met?	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census

APPENDIX A DATA MANAGEMENT PROCESS

Figure 2 details the data management process.

Figure 2. Data Management Process



APPENDIX B COST-EFFECTIVENESS CALCULATIONS

This appendix describes the calculations that will be used for modeling cost-effectiveness. This approach provides the PUCT with a consistent methodology for evaluating cost-effectiveness across the utilities.

A.1 APPROACH

The approach to the EM&V team's benefit-cost testing is based on 16 Tex. Admin. Code § 25.181, where costs and benefits are defined in section (d):

> *"The cost of a program includes the cost of incentives, measurement and verification, any shareholder bonus awarded to the utility, and actual or allocated research and development and administrative costs. The benefits of the program consist of the value of the demand reductions and energy savings, measured in accordance with the avoided costs prescribed in this subsection. The present value of the program benefits shall be calculated over the projected life of the measures installed or implemented under the program."*

This description is consistent with the PACT. Based on this definition, we will collect actual program year costs reported in the utilities' Energy Efficiency Plan and Reports. The program benefits must be calculated at a measure level in order to apply individual effective useful lives. Therefore, the savings will be derived from the EM&V database, which is a comprehensive, centralized source of the utilities' program tracking data.

The present value of the benefits is calculated separately for energy savings and demand reductions, as follows:

$$PV = \frac{AC}{WACC - E}\left[1 - \left(\frac{1+E}{1+WACC}\right)^{n}\right]$$

Where:

AC is the avoided cost of the benefit (energy savings or demand reductions).

The discount rate, *WACC*, is the utility's weighted average cost of capital.

E is the escalation rate.

n is the effective useful life of the measure.

The EM&V team has provided results for benefit-cost calculation using an escalation rate of two percent and without an escalation rate.

The benefit-cost ratio is calculated as:

$$BC = \frac{PV_e + PV_d}{C}$$

Where:

PV_e is the present value of the avoided energy costs.

PV_d is the present value of the avoided demand costs.

C is the total program cost, including incentives, administrative, EM&V, shareholder bonus, and research and development (R&D) costs.

Some costs are reported by the utilities at the portfolio level, such as R&D and shareholder bonus costs. These costs are attributed to individual programs based on each program's incentive costs as a percentage of the portfolio. EM&V costs are distributed among utility programs by the EM&V team based on the programs' share of energy savings and evaluation priority.

A.2 SAVINGS-TO-INVESTMENT RATIO

Targeted low-income energy efficiency programs run by all unbundled transmission and distribution utilities—specifically, the ERCOT utilities—may also be offered by outside of ERCOT utilities. Xcel SPS offers a targeted low-income energy efficiency program. These programs are evaluated using the savings-to-investment ratio (SIR) rather than the PACT described above.

The SIR is significantly different in both the benefits and costs included. The benefits are comprised of the customer's avoided energy costs, which means that the retail electric rate is used rather than the utility's avoided cost, and there is no cost associated with avoided demand. Rather than the WACC, the SIR uses a societal discount rate of three percent. The only costs included are the incentives paid to the weatherization agencies.

Average retail rates paid by customers will be updated annually based on data from the Energy Information Administration, the Bureau of Labor Statistics, and the PUCT.

A.3 NET SAVINGS

EM&V researched net-to-gross (NTG) ratios as described in this EM&V Plan will be used to calculate cost-effectiveness based on net savings at the IOU program-level.

APPENDIX C QA/QC PROTOCOLS

This appendix documents the quality assurance/quality control (QA/QC) protocols established for the PUCT Evaluation, Measurement, and Verification (EM&V) team for reporting claimed and evaluated impacts. Although quality control is a function of all evaluation stages (e.g., populating the EM&V database, sampling, and analysis), this appendix focuses on the QA/QC processes within the reporting stage. A QA/QC team, led by the Tetra Tech reporting lead, is developed and accountable for ensuring all QA/QC protocols are being followed.

Below, we summarize the specific activities that are subject to QA/QC processes. Note that these QA/QC processes focus on the accuracy of data; this section does not address methodological issues.

Accuracy of ex-ante program data. The EM&V team is housing data, analysis, and reporting functions within the EM&V database. Data is provided by program implementers, read into the database in raw form, and organized for analysis. The database centrally stores the claimed (ex-ante) savings, which are used for sampling and reporting those claimed savings. Data is provided to the EM&V team quarterly. The EM&V team characterizes the data received in terms of energy savings, demand reductions, and participants served, and reports the information within the detailed research plans; these detailed research plans are delivered to the utilities for review and confirmation that the population data is accurate. Inaccurate population data may indicate missing data, errors in the data importation process, or misunderstanding of the data fields.

- Responsibility: program leads
- Accountability: QA/QC team
- Consulted: utility staff, implementation contractors, and EM&V project manager

Application of verification rates and net-to-gross (NTG) ratios. The impacts are generated in the EM&V database. The database categorizes measure-level information in the format it was provided to the EM&V team per the data acquisition process. Although projects may be sampled and verified at the measure level, the EM&V team conducts impact evaluations to obtain and report verification and NTG estimates at the utility and program-type level, which is then aggregated and reported at the program-group level.

These impact estimates are provided by the program leads and stored in two locations. First, the program leads enter the impact results within an Excel tracking sheet stored on the SharePoint site. The Excel tracking sheet includes the following fields: program year (PY), utility, program group, program type, measure group, program lead, verification rate, NTG ratio, report source of verification rate, report source of NTG ratio, and modification date. Only one sheet maintains current impact information. If data is updated throughout the process, the outdated records are moved to a separate worksheet within that file. Doing so ensures that one sheet maintains the correct rates and any modifications are documented, including the reason for the modification.

Second, the EM&V database includes an interface where program leads directly enter their impact results. These results are then stored and applied against the claimed savings to calculate the evaluated gross and evaluated net results for the annual reporting.

By creating a two-stage impact reporting process, the EM&V team has built a point of verification of the data into the process. The evaluated and net savings results are directly calculated out of the EM&V database using the rates supplied within the web interface. The EM&V team then verifies that the results are as expected using the values documented within the Excel impact reporting file. Should the results differ, the QA/QC team may refer to the original source to verify the results.

- Responsibility: program leads
- Accountability: QA/QC team
- Consulted: impact leads, EM&V data lead, and project manager

Accuracy of reported savings. As documented in the report outline, program impacts are aggregated and reported in various ways. At the most aggregate level, the data is reported by program group overall and then by utility. At the most granular level, the data is reported by program group for each utility. The annual report, therefore, represents impacts in over 100 tables. It is critical to spend considerable time conducting QA/QC against those reported values.

The EM&V database calculates the full-year claimed savings by utility, program type, and program group. Although claimed savings are documented in quarterly detailed research plans, adjustments made in claimed savings often occur throughout the year. Therefore, it is necessary to calculate the full PY claimed savings and verify our results against the utility-claimed data, which is reported to the PUCT. The EM&V team requests that the utilities provide their draft claimed savings to verify against the reported claimed savings within the EM&V database. Any differences in the evaluation and utility claimed savings are clearly documented within the report.

All results tables are cross-referenced to ensure the results true up and are consistent with each other. For example, the sum of all residential MTPs evaluated net savings documented within the utility-specific sections should equal the residential MTP results captured in Technical Reference Manual (TRM) Volume 1. The QA/QC team develops a checklist of tables that are cross-checked against which sources (i.e., EM&V database, EEPRs, etc.) and systematically goes through this checklist throughout the report-proofing process.

Although not a specific QA/QC function, the team's development of these reporting functions with the overarching goal of ensuring transparency inherently allows for ad hoc QA/QC checks by the PUCT, utilities, implementation contractors, or other interested parties. For example, the EM&V database can export results and resulting calculations within easy-to-use Excel files. In addition, impact-related reports tie back to results clearly for a secondary review.

- Responsibility: utilities (for providing claimed savings) and program leads (for verifying claimed impacts provided)
- Accountability: QA/QC team (for final review and cross-checks of impact tables)
- Consulted: impact leads, EM&V data lead, utilities, and EM&V project manager