

6.2.1 Commercial Solutions Market Transformation Program

Table 87. Commercial Solutions Market Transformation Program Summary

Commercial Solutions MTP	Summary
Program description	<p>The Commercial Solutions MTP targets commercial, educational, and governmental customers. Incentives are paid to the project sponsors for certain measures installed in new or retrofit applications, which provide verifiable demand and energy savings. Assistance from the program includes technical assistance, communications support for public recognition, and financial incentives for projects that improve the energy efficiency of commercial facilities and result in peak kW reduction for Entergy. The program includes:</p> <ul style="list-style-type: none"> • a Commercial Solutions component designed for small, medium, and large for-profit commercial customers; • a Schools Concerned with Reducing Energy (SCORE) component to target local K–12 public school districts, universities, and colleges; • a CitySmart component to target local, state, and federal government customers; • prescriptive and custom measures; and • a midstream point-of-sale lighting component through local wholesale distributors.
Target markets	<ul style="list-style-type: none"> • Market segments: Commercial, educational, and governmental facilities • Eligibility criteria: Facilities within Entergy’s service territory • Applications: Retrofit or new construction projects
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: Entergy plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ 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 <p>Entergy began promoting the program by rolling out new program promotions through its website, social media, email blasts, radio promotions, and print media.</p> • Project sponsors: Entergy Texas
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: CLEAResult is the third-party implementer
Measures/products, services, offerings	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by a third-party implementer

Table 88 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 88. Commercial Solutions Market Transformation Program EM&V Plan

Commercial Solutions MTP	Description	2023
Evaluation priority	The Commercial Solutions MTP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures with some custom measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> • 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.	16
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	8

6.3 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.

6.3.1 Load Management Standard Offer Program (Commercial)

Table 89. 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 ETI and pays incentives to the customers for verifiable demand reductions. Each participant must participate in one scheduled curtailment and up to four unscheduled curtailments during the program year.
Target markets	<ul style="list-style-type: none"> Market segments: Large commercial customers Eligibility criteria: Small group of qualified commercial customers Applications: Existing
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Entergy will initially target several select customers for participation in the Load Management SOP. Project sponsors: Entergy/customer
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Entergy is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Conducted by Entergy

Table 90 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 90. Load Management Standard Offer Program (Commercial) EM&V Plan

Load Management SOP (Commercial)	Description	2023
Evaluation priority	The load management program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> Are sponsor-provided savings inputs and parameters accurate? Are utility verification regimes sufficient and reliable? 	
Program evaluation approach	<p>Program tracking data review: Review data for accuracy and alignment with demand interval metered data.</p> <p>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.</p>	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 provides a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census

6.4 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.

6.4.1 Residential Solutions Market Transformation Program

Table 91. Residential Solutions Market Transformation Program Summary

Residential Solutions MTP	Summary
Program description	<p>The Residential Solutions MTP is supported by training, education, and advertising components that encourage builders to build energy-efficient homes that are better than code. The builders are selected through an application process, and qualifying homes must be built to strict EPA standards or above.</p> <p>Incentives are separated into several tiers of home: base, prescriptive, and high-performance—an additional incentive offered for those builders who build ENERGY STAR®-certified homes or install ENERGY STAR smart thermostats.</p> <p>The program will require the builder to submit a home’s permit date to distinguish which code standards the home should be built to and an upload of the Fuel Summary Report (REM/Rate) or utility rebate submission package (Ekotrope) documenting the program home characteristics and savings.</p> <p>The program also provides incentives to A/C distributors who agree to facilitate the installation of high-efficiency (>16 SEER/12 EER) air conditioners and heat pumps (>8.2 HSPF) in existing single-family, small commercial, and multifamily homes within Entergy’s electric distribution service territory. Incentives increased to encourage sales of 17 SEER and higher, and incentives were reduced for 16 SEER. There is an incentive structure that has been implemented for heat pumps that are installed where there was preexisting electric resistance heat.</p>
Target markets	<ul style="list-style-type: none"> • Market segments: Homebuilders, HVAC contractors, and home energy raters • Eligibility criteria: <ul style="list-style-type: none"> ○ 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

Residential Solutions MTP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Entergy markets the availability of its programs in the following manner: <ul style="list-style-type: none"> 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. <p>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.</p> <ul style="list-style-type: none"> Project sponsors: Homebuilder and consumer outreach, HERS raters, homebuilders' sales agents, HVAC contractors, homebuilders associations, and media outlets.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Lockheed Martin is the third-party implementer; Frontier Energy is the data source.
Measures/products, services, offerings	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Lockheed Martin does QA/QC through either field inspections or energy model desk reviews.

Table 92 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 92. Residential Solutions Market Transformation Program EM&V Plan

Residential Solutions MTP	Description	2023
Evaluation priority	This program is a <i>high</i> priority for impact assessment for PY2023.	High

Residential Solutions MTP	Description	2023
Key researchable issues	<ul style="list-style-type: none"> • 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.	10
	Process Surveys: Interviews completed with builders, raters, and A/C distributors	8

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 93. Residential Standard Offer Program Summary

Residential SOP	Summary
Program description	The Residential SOP provides incentives for the retrofit installation of a wide range of measures that reduce energy costs, reduce peak demand, and save energy in residential facilities.
Target markets	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Marketing strategies: Entergy markets the availability of its programs in the following manner: <ul style="list-style-type: none"> ○ utilize mass email notifications to potential project sponsors 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; and

Residential SOP	Summary
	<ul style="list-style-type: none"> ○ 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 <p>Entergy began promoting its energy efficiency programs by rolling out new program promotions through its website, social media, email blasts, radio, and print media</p> <ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● Implementers: Entergy is the implementer
Measures/products, services, offerings	<ul style="list-style-type: none"> ● 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 customer at their discretion
QA/QC	<ul style="list-style-type: none"> ● Post-on-site inspections for at least three percent of invoices submitted by each contractor ● Conducted by Entergy

Table 94 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 94. Residential Standard Offer Program EM&V Plan

Residential SOP	Description	2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<ul style="list-style-type: none"> ● 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

6.6 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.

6.6.1 Hard-to-Reach Standard Offer Program

Table 95. Hard-to-Reach Standard Offer Program Summary

Hard-to-Reach SOP	Summary
Program description	<p>The Hard-to-Reach SOP pays project sponsors for certain measures to be installed in primarily retrofit applications, specifically for customers with total annual household incomes at or below 200 percent of the federal poverty level. The utility has a limited group of participating project sponsors determined through a selection process based on an application process, including customer feedback. Along with retrofit opportunities, the program encourages energy savings through education.</p>
Target markets	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Marketing strategies: Entergy markets the availability of its programs in the following manner: <ul style="list-style-type: none"> ○ utilize mass email notifications to potential project sponsors 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; 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 <p>Entergy began promoting its energy efficiency programs by rolling out new program promotions through its website, social media, email blasts, radio, and print media</p> • 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	<ul style="list-style-type: none"> • Implementers: Entergy is the implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> • 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

Hard-to-Reach SOP	Summary
QA/QC	<ul style="list-style-type: none"> • Post-on-site inspections for three percent of invoices submitted by each contractor • Conducted by Entergy

Table 96 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 96. Hard-to-Reach Standard Offer Program EM&V Plan

Hard-to-Reach SOP	Description	2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<ul style="list-style-type: none"> • 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

7.0 ONCOR

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

7.1 PORTFOLIO OVERVIEW

Table 97 shows the projected energy and demand savings for the Oncor programs for PY2023.

Table 97. PY2023 Projected Demand and Energy Savings—Oncor

Program category	Program name	Program type	2023 demand savings (kW)	Percentage of total portfolio (demand)	2023 energy savings (kWh)	Percentage of total portfolio (Energy)
Commercial MTP	Commercial Midstream MTP	Upstream/midstream Commercial MTP	1,588	1	2,964,683	1
Commercial MTP	Retail Products MTP	Retail Platform MTP	6,505	3	26,489,290	9
Commercial MTP	Small Business Direct Install MTP	Small Business DI	1,459	1	7,133,934	2
Commercial MTP	Strategic Energy Management MTP (Pilot)	Pilot Commercial SEM MTP	1,047	0	6,700,000	2
Commercial SOP	Commercial SOP	Commercial SOP	14,523	7	72,827,590	25
Commercial SOP	Solar PV SOP	PV Solar/SMART SOURCE PV SOP	1,534	1	4,979,022	2
Commercial	Master-Metered Smart Thermostat Direct Install (Pilot)	Commercial	0	0	1,000,000	0
LI/HTR SOP	Hard-to-Reach (HTR) SOP	HTR SOP	14,406	7	20,489,041	7
LI/HTR SOP	Targeted Weatherization Low-Income SOP	Low-Income/HTR Weatherization Programs SOP	3,779	2	7,018,449	2
LI/HTR MTP	Low-Income HVAC Tune-Up MTP (Pilot)	HTR MTP	877	0	3,690,000	1
LI/HTR	Low-Income MF Smart Thermostat Direct Install (Pilot)	HTR	0	0	1,000,000	0

Program category	Program name	Program type	2023 demand savings (kW)	Percentage of total portfolio (demand)	2023 energy savings (kWh)	Percentage of total portfolio (Energy)
Load Management	Commercial Load Management SOP	Load Management SOP	60,000	28	180,000	0
Load Management	Residential Load Management SOP	Load Management SOP	35,000	16	105,000	0
Load Management	Winter Commercial Load Management SOP (Pilot)	Pilot Winter Commercial Emergency Load Management SOP	35,000	16	105,000	0
Residential MTP	Residential New Home Construction MTP	Residential MTP	1,594	1	3,745,152	1
Residential MTP	Retail Products MTP	Retail Platform MTP	19,353	9	95,675,244	33
Residential SOP	Home Energy Efficiency SOP	Residential SOP	18,266	8	35,683,104	12
Residential SOP	Solar PV SOP	PV Solar/SMART SOURCE PV SOP	1,015	0	3,409,927	1
Residential	Multi-Family Smart Thermostat Direct Install (Pilot)	Residential	0	0	1,075,000	0

Next, we present two summary tables for each program in the portfolio. Each table provides a high-level overview of the applicable programs. The overview is based on 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?

7.2 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.

7.2.1 Small Business Direct Install Market Transformation Program

Table 98. Small Business Direct Install Market Transformation Program Summary

Small Business Direct Install MTP	Summary
Program description	<p>The Small Business Direct Install MTP offers small commercial customers cash and non-cash incentives for implementing energy efficiency improvements. The program targets small commercial customers with a demand equal to or less than 200 kW. Financial incentives are provided directly to the contractor, thereby reducing a portion of the project cost for the customer. The program focuses on improving the energy efficiency of small commercial facilities and the installation practices of participating contractors. The implementer helps the contractors improve their ability to identify, evaluate, and sell energy efficiency improvements to small business owners and assists consumers in evaluating vendor energy efficiency proposals. Small commercial customers with peak demands not exceeding 200 kW in the previous 12 consecutive billing months may qualify to participate in the program. Additionally, customers whose peak demand is less than or equal to 10 kW may qualify for incentives that would offset up to 100 percent of the cost of their project(s).</p>
Target markets	<ul style="list-style-type: none"> • Market segments: Small commercial facilities • Eligibility criteria: Small commercial facilities within Oncor’s service territory and with peak demands ≤200 kW, focusing on the non-metro counties served by Oncor. Dallas, Collin, Tarrant, Denton, and Rockwall counties are not eligible to participate in this program. • Applications: Retrofit or new construction projects
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: Oncor plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ Contract with a third-party program implementer to conduct outreach and planning activities; ○ identify and recruit contractors to develop a network of participating contractors who will deliver the program directly to customers; ○ maintain a website to provide information to potential participants; ○ develop a recruitment packet with outreach information and enrollment materials that participating contractors can use when marketing the program to customers; ○ conduct training as necessary to explain elements of the program, such as responsibilities of the 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: Contractors
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: CLEARResult is the third-party implementer.

Small Business Direct Install MTP	Summary
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: Lighting currently, with additional measures such as refrigeration measures as they are added to the field application tool. • Technical assistance: Provided by the contractor • Rebates/incentives: Provided by the contractor • Program direct install: Direct install approach
QA/QC	<ul style="list-style-type: none"> • Pre- and post-on-site inspections for 100 percent of the first five projects submitted by each contractor, and randomly selected pre- and post-inspections for 20 percent of each additional project submitted • Pre- and post-inspection conducted by a third-party implementer • In addition, some verification conducted by the utility

Table 99 documents the evaluation priority and methodologies for the Small Business Direct Install MTP.

Table 99. Small Business Direct Install Market Transformation Program EM&V Plan

Small Business Direct Install MTP	Description	2023
Evaluation priority	The Small Business Direct Install MTP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures.	Medium
Key researchable Issues	<ul style="list-style-type: none"> • 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
	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.	8
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	4

7.3 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.

7.3.1 Commercial Standard Offer Program

Table 100. Commercial Standard Offer Program Summary

Commercial SOP	Summary
Program description	<p>The Commercial SOP has two components—Custom and Basic Commercial. The Custom component of the Commercial SOP targets large commercial customers with new or retrofit projects that require M&V with an incentive of \$10,000 or larger. The Basic component of the Commercial SOP targets commercial customers with new or retrofit projects that do not require M&V who install approved energy efficiency measures with an incentive of \$500 or larger.</p> <p>Incentives paid to project sponsors for certain measures installed in new or retrofit applications. The utility has a limited group of participating project sponsors in the Custom component determined through a selection process based on (1) meeting minimum eligibility criteria, (2) complying with all program rules and procedures, (3) submitting documentation describing their projects, and (4) entering into a Standard Agreement with the IOU. The Basic component has an unlimited number of participating project sponsors.</p>
Target markets	<ul style="list-style-type: none"> • Market segments: Large and small commercial businesses • Eligibility criteria: <ul style="list-style-type: none"> ○ Basic: New or retrofit projects with incentives no more than 20 percent of the basis incentive budget for all projects combined in a given budget year. ○ Custom: M&V projects must have a \$10,000 minimum incentive; maximum incentives are no more than 20 percent of the custom incentive budget for all projects combined in a given budget year. • Applications: New or retrofit applications
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: Website, retailer partners, bill inserts, radio ads, billboards, and home shows • Project sponsors include: <ul style="list-style-type: none"> ○ national or local energy service companies (ESCOs), ○ national or local companies that provide energy-related services (e.g., contracting) or products (e.g., lighting and HVAC equipment), ○ REPs, and ○ individual customers with metered electrical demand exceeding 50 kW that implement energy efficiency measures in their own facilities.
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: Utility

Commercial SOP	Summary
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: HVAC, lighting, controls, refrigeration, motors, food service, window film, and other • 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 the end-use customer at their discretion • Incentives are calculated using a formula using the measure's M&V annual savings, its effective useful life, a net present value calculation, and, in applicable counties, a geographic multiplier.
QA/QC	<ul style="list-style-type: none"> • Pre- and post-on-site inspections at the discretion of the utility • Conducted by the utility or a third-party implementer or combination

Table 101 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 101. Commercial Standard Offer Program EM&V Plan

Commercial SOP	Description	2023
Evaluation priority	The Commercial SOP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures with some custom measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> • 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.	20
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	10

7.3.2 Commercial Midstream Market Transformation Program

Table 102. Commercial Midstream Market Transformation Program Summary

Commercial Midstream MTP	Summary
Program description	The Commercial Midstream MTP provides incentives to air conditioning distributors who agree to facilitate the installation of high-efficiency air conditioners and heat pumps in commercial facilities.
Target markets	<ul style="list-style-type: none"> Market segments: Commercial and small commercial customers Applications: Retrofit or new construction projects
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Oncor plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> Oncor plans to contract with major market distributors and manufacturers.
Implementation and delivery	Implementers: ICF is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: Air Conditioning, Heating, and Refrigeration Institute-rated energy-efficient air conditioners and heat pumps Technical assistance: N/A Rebates/incentives: Distributor discounts directly to the customer
QA/QC	<ul style="list-style-type: none"> TBD

Table 103 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 103. Commercial Midstream Market Transformation Program EM&V Plan

Commercial Midstream MTP	Description	2023
Evaluation priority	The Commercial Midstream MTP is a <i>high</i> priority in PY2023. The savings are from deemed measures.	High
Key researchable issues	<ul style="list-style-type: none"> 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? Which measures are included in the midstream implementation? 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 in order to adapt to the changing codes and standards climate to meet and exceed set goals given the new baselines? Are utility verification regimes sufficient and reliable? 	
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.	10

	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	5
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7.4 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.

7.4.1 Commercial Load Management Standard Offer Program

Table 104. Commercial Load Management Standard Offer Program Summary

Commercial Load Management SOP	Summary
Program description	Under the Commercial Load Management SOP, Oncor pays incentives to Service Providers and Aggregators who work with local commercial and manufacturing facilities and self-sponsored commercial premises to achieve documented summer demand reductions in those facilities. The program is designed to assist businesses in reducing their summer energy demand and help meet the state's energy efficiency goals. Oncor must verify the demand reductions for the incentives to be paid. This is accomplished by reviewing data recorded by meters and calculating the amount of demand savings achieved through “curtailment” during the summer season. The incentive is paid directly to the Service Provider, Aggregator, or self-sponsored commercial customer. Each project must achieve a total estimated demand savings of at least 100 kW during the summer demand period. Participating customer facilities must reduce load when called for by Oncor.
Target markets	<ul style="list-style-type: none"> • Market segments: Large commercial and industrial businesses • Eligibility criteria: <ul style="list-style-type: none"> ○ Each project must achieve a total estimated demand savings of at least 100 kW during the on-peak demand period, ○ A single project may involve the service provider identifying the total curtailable load at more than one customer facility, ○ The project must be serviced by an Oncor interval data recorder (IDR) or advanced meter, ○ The project must be located in Oncor’s service area. • Applications: Existing
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: Website and retailer partners • Project sponsors: National or local ESCOs, REPs, or individual customers that identify interruptible load in their own facilities
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: Third-party implementer or individual customer
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: N/A • Technical assistance: At the discretion of the project sponsor, not part of the program design • Incentives: Provided to EESP

Commercial Load Management SOP	Summary
QA/QC	<ul style="list-style-type: none"> Oncor does this by reviewing data recorded by electric meters and IDRs and calculating the demand savings achieved through the curtailment during the summer on-peak season.

Table 105 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 105. Commercial Load Management Standard Offer Program EM&V Plan⁷

Commercial Load Management SOP	Description	2023
Evaluation priority	The load management program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> Are sponsor-provided savings inputs and parameters accurate? Are utility verification regimes sufficient and reliable? 	
Program evaluation approach	<p>Program tracking data review: Review data for accuracy and alignment with demand interval metered data.</p> <p>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.</p>	Census
	<p>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 provides a comparison to similar-condition non-interrupt baseline days to validate impact estimates.</p>	Census

7.4.2 Residential Load Management Standard Offer Program

Table 106. Residential Load Management Standard Offer Program Summary

Residential Load Management SOP	Summary
Program description	Oncor's Residential Load Management SOP incentivizes participating Service Providers and Aggregators to reduce peak electric demand at residential premises. The program will engage Service Providers and Aggregators to provide demand response capability using remotely controlled load control devices in homes. The Service Providers will use various control strategies, such as pre-cooling and cycling, to reduce overall demand during the peak period. The participating providers are responsible for ensuring the presence of load control devices in participating residences. The actual demand savings will be determined by Oncor using advanced meter data.
Target markets	<ul style="list-style-type: none"> The program targets single-family residential homes with central air conditioning using at least 1,000 kWh per month during the summer season.

⁷ Includes Emergency Load Management Standard Offer Program.

Residential Load Management SOP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Program vendor: Local and regional trade allies leveraged to recruit participants through AC system maintenance and sales ally networks.
Implementation and delivery	<ul style="list-style-type: none"> The third-party vendor manages and controls implementation and DR event activation and utilizes trade ally subcontractors to sell and install DR thermostats.
Measures/products, services, offerings	<ul style="list-style-type: none"> The third-party vendor manages and may offer competing air conditioner cycling options (30 percent, 50 percent, or 100 percent cycling) and perhaps employ pre-cool options to aid thermal carry through to aid participant persistence.
QA/QC	<ul style="list-style-type: none"> Actual demand reductions will be determined by Oncor using advanced meter data.

Table 107 documents the key researchable issues to be addressed in the evaluation along with the impact methodologies and primary data collection activities.

Table 107. Residential Load Management Standard Offer Program EM&V Plan

Residential Load Management SOP	Description	2023
Evaluation priority	The residential demand response program is a <i>medium priority</i> in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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.	Census
	Interval metered data review: 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 in accordance with the TRM.	Census

7.5 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.

7.5.1 Home Energy Efficiency Standard Offer Program

Table 108. Home Energy Efficiency Standard Offer Program Summary

Home Energy Efficiency SOP	Summary
Program description	The Home Energy Efficiency (HEE) SOP targets existing residential customers. This program is designed to achieve energy and demand savings in the residential market with the installation of a wide range of energy efficiency measures in homes. Incentives are paid to EESPs to help offset the cost of these energy efficiency measures.

Home Energy Efficiency SOP	Summary
Target markets	<ul style="list-style-type: none"> Market segments: Residential customers
	<ul style="list-style-type: none"> Applications: Retrofit
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Oncor markets to trade organizations, and project sponsors develop their own marketing materials and their website; https://oncor.com/takealoadofftexas
	<ul style="list-style-type: none"> Project sponsors: General EESPs, REPs, contractors, energy service companies
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Oncor
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: Any Commission-approved measure included in the statewide Residential SOP template or any Commission-approved measure assigned a deemed savings value for the residential customer class is 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, window film, 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 rebates/incentives on at their discretion to end-use customer
QA/QC	<ul style="list-style-type: none"> Post-on-site inspections, with confidence level at the program manager's discretion, usually around 15 percent of sites per contractor per invoice Conducted by Oncor and contracted inspectors

Table 109 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 109. Home Energy Efficiency Standard Offer Program EM&V Plan

Home Energy Efficiency SOP	Description	2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<ul style="list-style-type: none"> 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings from	Census

	measures installed through this program and inform prospective updates to the TRM for PY2025.	
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7.6 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.

7.6.1 Hard-to-Reach Standard Offer Program

Table 110. Hard-to-Reach Standard Offer Program Summary

Hard-to-Reach SOP	Summary
Program description	The Hard-to-Reach SOP pays project sponsors for certain measures to be installed in primarily retrofit applications, specifically for customers with total annual household incomes at or below 200 percent of the federal poverty level. The utility has a limited group of participating project sponsors, determined through a selection process based on an application process, including customer feedback. Along with retrofit opportunities, the program encourages energy savings through education.
Target markets	<ul style="list-style-type: none"> • Market segments: Low-income residential 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	<ul style="list-style-type: none"> • Marketing strategies: Oncor markets to trade organizations, and project sponsors develop their own marketing materials
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: Oncor
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: Attic insulation, duct sealing, caulking/weatherstripping, HVAC (central air conditioning, heat pumps, window air conditioning), water heaters, refrigerators, solar screens, wall insulation, CFLs, water heater jackets, ceiling fans • 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 incentives to the end-use customers at their discretion
QA/QC	<ul style="list-style-type: none"> • Post-on-site inspections, with confidence level at the program manager's discretion • Conducted by Oncor and contracted inspectors

Table 111 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 111. Hard-to-Reach Standard Offer Program EM&V Plan

Hard-to-Reach SOP	Description	2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<ul style="list-style-type: none"> 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

7.6.2 Targeted Weatherization Low-Income Standard Offer Program

Table 112. Targeted Weatherization Low-Income Standard Offer Program Summary

Targeted Weatherization Low-Income SOP	Summary
Program description	The Targeted Weatherization Low-Income SOP provides weatherization and energy-efficiency measures to residential customers that meet the Department of Energy's Weatherization Assistance program income-eligibility guidelines and cost-effectiveness criteria (savings-to-investment ratio). The utility contracts program implementers to conduct outreach, participant targeting, and program delivery, including home audits and installations.
Target markets	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Marketing strategies: Project sponsors develop their own marketing materials. Project sponsors: Texas Department of Housing and Community Affairs (TDHCA) sub-recipients and other not-for-profit community action and government agencies Project sponsors: Designated federal Weather Assistance Program (WAP) sub-recipient agencies
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Texas Association of Community Action Agencies (TACAA)

Targeted Weatherization Low-Income SOP	Summary
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: Attic insulation, duct sealing, and caulking/weatherstripping around doors and windows, central air conditioning units, central heat pumps, window air conditioning units, replacement of electric water heaters, installation of ENERGY STAR refrigerators, solar window screens, wall insulation, CFLs, water-saving devices, and water heater jackets • 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 rebates/incentives to end-use customers at its discretion
QA/QC	<ul style="list-style-type: none"> • Post-on-site inspections, with confidence level at the program manager's discretion • Conducted by Oncor and contracted inspectors

Table 113 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 113. Targeted Weatherization Low-Income Standard Offer Program EM&V Plan

Targeted Weatherization Low-Income SOP	Description	2023
Evaluation priority	Senate Bill 1434 requires transmission and distribution utilities to spend ten percent of their energy-efficiency budget on targeted low-income weatherization programs. This program is a <i>high</i> priority for impact assessment in PY2023.	High
Key researchable issues	<ul style="list-style-type: none"> • 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

7.7 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.

7.7.1 Residential New Home Construction Market Transformation Program

Table 114. Residential New Home Construction Market Transformation Program Summary

Residential New Home Construction MTP	Summary
Program description	The Residential New Homes Construction MTP incentivizes builders of residential new homes to include energy-efficient measures in the construction to reduce overall energy usage.
Target markets	<ul style="list-style-type: none"> Market segments: Residential home builders Applications: New construction
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Oncor plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> TBD.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: TRC Engineers, Inc
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: TBD Technical assistance: N/A Rebates/incentives: TBD
QA/QC	<ul style="list-style-type: none"> TBD

Table 115 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 115. Residential New Home Construction Market Transformation Program EM&V Plan

Residential New Home Construction MTP	Description	2023
Evaluation priority	The Residential New Home Construction MTP will receive a <i>high</i> priority for PY2023.	High
Key researchable issues	<ul style="list-style-type: none"> 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 homes, review the energy model inputs, savings claims, and supporting documentation.	5
	Process surveys: Builder and rater interviews	3

7.8 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.

7.8.1 Retail Platform Market Transformation Program

Table 116. Retail Platform Market Transformation Program Summary

Retail Platform MTP	Summary
Program description	The Retail Platform MTP incentivizes residential and small commercial customers through in-store discounts for qualifying ENERGY STAR-rated LED lighting and energy-efficient appliances.
Target markets	<ul style="list-style-type: none"> Market segments: Residential and small commercial customers Applications: In-store purchases
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Oncor plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> Oncor plans to contract with major market manufacturers and their retailer alliance partners.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: CLEAResult
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: ENERGY STAR-rated LEDs, energy efficiency appliances Technical assistance: N/A Rebates/incentives: In-store discounts directly to the customer
QA/QC	<ul style="list-style-type: none"> Monitoring progress or project through reservation period and post on-site inspections for 100 percent of projects Progress monitoring and post-inspection conducted by a third-party implementer

Table 117 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 117. Retail Platform Market Transformation Program EM&V Plan

Retail Platform MTP	Description	2023
Evaluation priority	The Retail Platform MTP will receive <i>high</i> priority for PY2023.	High
Key researchable issues	<ul style="list-style-type: none"> 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.	8

7.8.2 Solar Photovoltaic Standard Offer Program

Table 118. Solar Photovoltaic Standard Offer Program Summary

Solar PV SOP	Summary
Program description	The Solar Photovoltaic (PV) SOP has a Residential and Commercial component. Incentives are paid to EESPs. The utility has a limited group of service providers

Solar PV SOP	Summary
	determined through a selection process based on (1) meeting minimum eligibility criteria, (2) complying with all program rules and procedures, (3) submitting documentation describing their projects, and (4) sign the umbrella contract to register and use the Energy Efficiency Program Management system.
Target markets	<ul style="list-style-type: none"> Market segments: Residential and nonresidential Eligibility criteria: Residential system size between 1 kW_{DC STC} to 15 kW_{DC STC}, nonresidential system size between 5 kW_{DC STC} to 300 kW_{DC STC} Applications: Retrofit
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Rely upon the marketing capabilities of the service providers to sell or lease the solar PV systems to eligible Oncor customers. Project sponsors include: <ul style="list-style-type: none"> national or local ESCOs, national or local companies that provide energy-related services (e.g., contracting) or products, REPs, and self-sponsors whose commercial peak demand exceeds 50 kW.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Utility
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: Solar PV Technical assistance: At the discretion of the project sponsor, not part of the program design Rebates/incentives: Provided to the service provider, who then passes the rebates/incentives to the end-use customer at their discretion Incentive values are calculated based on the annual energy and peak demand AC electrical production. Only solar PV systems that result in net reductions of the host customer's energy and demand usage qualify for incentives.
QA/QC	<ul style="list-style-type: none"> Pre-desk reviews for a census of projects Post-on-site inspections for a census of projects Conducted by utility The earlier pilot program required, "<i>All projects must include an electrical meter to measure the energy produced by the solar electric system.</i>" This data may be useful in evaluating the full program since the pilot and Solar PV SOP performance should be comparable.

Table 119 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 119. Solar Photovoltaic Standard Offer Program EM&V Plan

Solar PV SOP		2023
Evaluation priority	The Solar SOP is a <i>low</i> priority in PY2023. The savings are from deemed measures.	Low

Solar PV SOP		2023
Key researchable issues	<ul style="list-style-type: none"> 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

7.9 PILOTS

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.

7.9.1 Strategic Energy Management Market Transformation Program (Pilot)

Table 120. Strategic Energy Management Market Transformation Program (Pilot) Summary

Strategic Energy Management MTP	Summary
Program description	The Strategic Energy Management (SEM) MTP (Pilot) program is a comprehensive program for business customers to impact all capital and operational energy efficiency measures and build organizational capabilities to continually improve energy management.
Target markets	<ul style="list-style-type: none"> Market segments: large commercial, industrial, and agricultural customers who have not opted out of the EECRF tariff.
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: primarily driven through an outreach campaign to the Oncor account managers
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Leidos
Measures/products, services, offerings	<ul style="list-style-type: none"> Technical support, customer coaching, and financial project incentives are provided to program participants (Participants), including commercial, industrial, and agricultural customers Uses an Energy Concierge approach for customers with under 5 MW demand that uses key elements of SEM, like Treasure Hunts and Energy Action Plans, to engage customers in projects and to encourage a continual improvement approach For larger customers with greater than 5 MW demand, the program uses a full SEM approach to teach the customers the elements of SEM and coaches them to implement them continually Provides specific assistance in uncovering and supporting operational efficiency improvements Incentives are based on either standard incentives or actual energy savings from custom projects
QA/QC	The inspection process will verify based on the type, quantity, and performance of existing and new systems, including taking pictures of equipment, systems, and existing

Strategic Energy Management MTP	Summary
	and new equipment or process nameplates. The inspection report will summarize the pre- and post-savings.

Table 121 documents the evaluation priority and methodologies for the Strategic Energy Management Market Transformation (Pilot) program.

Table 121. Strategic Energy Management Market Transformation Program (Pilot) EM&V Plan

Strategic Energy Management MTP	Description	2023
Evaluation priority	The Strategic Energy Management MTP (Pilot) is a <i>medium</i> priority in PY2023. The majority of savings are from custom measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> • Is the implementation appropriate for the number of projects planned to be completed in the program in 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.	4
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	2

7.9.2 Winter Commercial Load Management Standard Offer Program (Pilot)

Table 122. Winter Commercial Load Management Standard Offer Program (Pilot) Summary

Winter Commercial Load Management SOP	Summary
Program description	The Winter Commercial Load Management SOP incentivizes participating service providers, aggregators, retail electric providers, or end-use customers to curtail electric demand in the winter season. Participants must be available to curtail 24 hours a day, seven days a week, and be capable of curtailing load within 30 minutes' notice. The minimum load reduction that may be subscribed in the Program is 100 kW. Participants must curtail a minimum of 90% of their contracted demand reduction across all events to be eligible for payment. Final program payments are determined by established program rules and TRM calculations.
Target markets	<ul style="list-style-type: none"> • Market segments: Large commercial and industrial businesses • Eligibility criteria: <ul style="list-style-type: none"> ○ Each participant must subscribe at least 100 kW of load reduction. ○ Capable of curtailing within 30 minutes of notification. ○ The project must be serviced by an Oncor interval data recorder (IDR) or advanced meter. ○ The project must be located in Oncor's service area.
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: Direct outreach to customers, aggregation groups, and Retail Electric Providers (REPs). Account management organization to offer to managed accounts.
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: Third-party implementer or individual customer
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: N/A • Incentives: Provided to customers or aggregation groups
QA/QC	<ul style="list-style-type: none"> • Oncor does this by reviewing data recorded by electric meters and IDRs and calculating the demand savings achieved through the curtailment during the winter peak season.

Table 123 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 123. Winter Commercial Load Management Standard Offer Program (Pilot) EM&V Plan

Winter Commercial Load Management SOP	Description	2023
Evaluation priority	The load management program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> • Are sponsor-provided savings inputs and parameters accurate? • Are utility verification regimes sufficient and reliable? 	

Winter Commercial Load Management SOP	Description	2023
Program evaluation approach	<p>Program tracking data review: Review data for accuracy and alignment with demand interval metered data.</p> <p>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.</p>	Census
	<p>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 provides a comparison to similar-condition non-interrupt baseline days to validate impact estimates.</p>	Census

7.9.3 Residential Multi-Family Smart Thermostat Pilot Market Transformation Program

Table 124. Residential Multi-Family Smart Thermostat (RMFST) Pilot Market Transformation Program Summary

Residential Multi-Family Smart Thermostat Pilot MTP	Summary
Program description	<p>The RMFST MTP is one of three programs included in Oncor’s Multi-Family Smart Thermostat Program. Each program will be reported separately in Oncor’s EEPR filing but will follow the same requirements, design, and outreach efforts.</p> <p>The RMFST MTP is focused on replacing existing HVAC thermostats with DOE-listed Smart Thermostats in residential multifamily dwellings. The program’s primary objective will be to replace old non-efficient thermostats that control central HVAC systems with DOE-listed Smart Thermostats.</p>
Target markets	<ul style="list-style-type: none"> Market segments: multifamily property owners, managers, and service providers, as well as HVAC contractors, housing agencies, and community organizations. Eligibility criteria: premises identified as residential multi-family complexes.
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Outreach to leading property management companies in Texas, HVAC contractors that specialize in multifamily replacements, community organizations, and HVAC equipment manufacturers
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Program implementer (TBD)
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: DOE Smart Thermostats meeting ENERGY STAR Final Version 1.0 requirements Incentives: TBD
QA/QC	<ul style="list-style-type: none"> Inspections conducted by the utility; alternative: photo of unit installed or another pre-approved method of installation verification. If the project is low-income, then the Program implementer will review the documentation to validate the project’s low-income status in compliance with the requirements listed in Texas TRM Volume 5.

Table 123 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 125. Residential Multi-Family Smart Thermostat Pilot Management Market Transformation Program EM&V Plan

Residential Multi-Family Smart Thermostat Pilot MTP	Description	2023
Evaluation priority	The Residential Multi-Family Smart Thermostat Pilot MTP program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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 utility verification regimes sufficient and reliable? 	
Program evaluation approach	Program tracking data review: Review data for accuracy and alignment with demand interval metered data.	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.	4

7.9.4 Low-Income Multi-Family Smart Thermostat (LIMFST) Pilot Market Transformation Program

Table 126. Low-Income Multi-Family Smart Thermostat Pilot Market Transformation Program Summary

Low-Income Multi-Family Smart Thermostat Pilot MTP	Summary
Program description	<p>The LIMFST MTP is one of three programs in Oncor's Multi-Family Smart Thermostat Program. Each program will be reported separately in Oncor's EEPR filing but will follow the same requirements, design, and outreach efforts.</p> <p>The LIMFST MTP is focused on replacing existing HVAC thermostats with DOE-listed Smart Thermostats in low-income multifamily dwellings. The program's primary objective will be to replace old non-efficient thermostats that control central HVAC systems with DOE-listed Smart Thermostats for multifamily complexes that qualify as low-income under Texas TRM Volume 5 requirements.</p>
Target markets	<ul style="list-style-type: none"> Market segments: multifamily property owners, managers, and service providers, as well as HVAC contractors, housing agencies, and community organizations. Eligibility criteria: premises identified as qualified low-income multifamily complexes per the low-income validation requirements listed in Texas TRM Volume 5.
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Outreach to leading property management companies in Texas, HVAC contractors that specialize in multifamily replacements, community organizations, and HVAC equipment manufacturers
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Program implementer (TBD)
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: DOE Smart Thermostats meeting ENERGY STAR Final Version 1.0 requirements Incentives: TBD

Low-Income Multi-Family Smart Thermostat Pilot MTP	Summary
QA/QC	<ul style="list-style-type: none"> • Inspections conducted by the utility; alternative: photo of unit installed or another pre-approved method of installation verification. • If the project is low-income, then the Program implementer will review the documentation to validate the project's low-income status in compliance with the requirements listed in Texas TRM Volume 5.

Table 123 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 127. Low-Income Multi-Family Smart Thermostat Pilot Management Market Transformation Program EM&V Plan

Low-Income Multi-Family Smart Thermostat Pilot MTP	Description	2023
Evaluation priority	The Low-Income Multi-Family Smart Thermostat Pilot MTP program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> • 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 utility verification regimes sufficient and reliable? 	
Program evaluation approach	Program tracking data review: Review data for accuracy and alignment with demand interval metered data.	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.	4

7.9.5 Master-Metered Smart Thermostat (MMST) Pilot Market Transformation Program

Table 128. Master-Metered Smart Thermostat Pilot Market Transformation Program Summary

Master-Metered Smart Thermostat Pilot MTP	Summary
Program description	<p>The MMST MTP is one of three programs in Oncor's Multi-Family Smart Thermostat Program. Each program will be reported separately in Oncor's EEPR filing but will follow the same requirements, design, and outreach efforts.</p> <p>The MMST MTP is focused on replacing existing HVAC thermostats with DOE-listed Smart Thermostats in master-metered multifamily complexes. The program's primary objective will be to replace old non-efficient thermostats that control central HVAC systems with DOE-listed Smart Thermostats in locations identified as master-metered complexes by the premise.</p>
Target markets	<ul style="list-style-type: none"> • Market segments: multifamily property owners, managers, and service providers, as well as HVAC contractors, housing agencies, and community organizations. • Eligibility criteria: premises identified as master-metered complexes.

Master-Metered Smart Thermostat Pilot MTP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Outreach to leading property management companies in Texas, HVAC contractors that specialize in multifamily replacements, community organizations, and HVAC equipment manufacturers
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Program implementer (TBD)
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: DOE Smart Thermostats meeting ENERGY STAR Final Version 1.0 requirements Incentives: TBD
QA/QC	<ul style="list-style-type: none"> Inspections conducted by the utility; alternative: photo of unit installed or another pre-approved method of installation verification. If the project is low-income, then the Program implementer will review the documentation to validate the project's low-income status in compliance with the requirements listed in Texas TRM Volume 5.

Table 123 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 129. Master-Metered Smart Thermostat Pilot Management Market Transformation Program EM&V Plan

Master-Metered Smart Thermostat Pilot MTP	Description	2023
Evaluation priority	The Master-Metered Smart Thermostat Pilot MTP program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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 utility verification regimes sufficient and reliable? 	

Master-Metered Smart Thermostat Pilot MTP	Description	2023
Program evaluation approach	Program tracking data review: Review data for accuracy and alignment with demand interval metered data.	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.	4

7.9.6 Low-Income Air Conditioning Tune-up Pilot Market Transformation Program

Table 130. Low-Income Air Conditioning Tune-up (LIACTU) Pilot Market Transformation Program Summary

Low-Income Air Conditioning Tune-up Pilot MTP	Summary
Program description	The LIACTU Pilot MTP is designed to overcome market barriers that prevent low-income residential customers from receiving high-performance air-conditioning system tune-ups. The program offers system tune-ups to low-income qualified customers at little to no additional cost to the customer to help alleviate the energy burden that most low-income customers face during the summer months.
Target markets	<ul style="list-style-type: none"> Market segments: residential Eligibility criteria: hard-to-reach residential customers per the low-income validation requirements listed in Texas TRM Volume 5
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: The program implementer’s marketing approach for the program includes: <ul style="list-style-type: none"> Marketing the program through contractors Working with existing low-income weatherization program participants Marketing the programs through market allies Collaborate with Oncor on marketing campaigns.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Program Implementer (TBD)
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: Residential air conditioner and heat pump tune-ups measure listed in the Texas TRM volume 2 and airflow correction services. Incentives: Paid to contactors for the
QA/QC	<ul style="list-style-type: none"> The program implementer will contact the customer directly to verify the system was serviced according to the Program requirements. A statistically significant percentage of projects (estimated at five to eight percent) submitted by program-enrolled contractors selected randomly will be inspected. In addition, automated error checks are incorporated into the program applications and the program’s project database. The program implementer will review and process 100 percent of the completed applications, isolating any documentation deficiencies or engineering issues before approving an incentive.

Table 123 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 131. Low-Income Air Conditioning Tune-up Pilot Management Market Transformation Program EM&V Plan

Low-Income Air Conditioning Tune-up Pilot MTP	Description	2023
Evaluation priority	The Low-Income Air Conditioning Tune-up Pilot MTP program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> • 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.	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.	4

8.0 SWEPCO

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

8.1 PORTFOLIO OVERVIEW

Table 132 shows the projected energy and demand savings for the SWEPCO programs for PY2023.

Table 132. PY2023 Projected Demand and Energy Savings—SWEPCO

Program category	Program name	Program type	2023 demand savings (kW)	Percentage of total portfolio (demand)	2023 energy savings (kWh)	Percentage of total portfolio (energy)
Commercial MTP	COMPASS Small Business MTP	Commercial MTP	219	2	827,998	7
Commercial MTP	COMPASS Large Commercial MTP	Commercial MTP	362	3	1,713,708	14
Commercial MTP	COMPASS for Schools MTP	Commercial MTP	1,120	10	2,791,758	22
Commercial SOP	Commercial SOP	Commercial SOP	789	7	3,576,416	29
LI/HTR SOP	Hard-to-Reach (HTR) SOP	HTR SOP	787	7	1,444,483	12
Load Management	Load Management SOP	Commercial Load Management SOP	7,228	63	109,883	1
Residential SOP	Residential SOP	Residential SOP	1,037	9	2,082,541	17

Next, we present two summary tables for each program in the portfolio. Each table provides a high-level overview of the applicable programs. The overview is based on 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?

8.2 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.

8.2.1 COMPASS for Small Business Market Transformation Program

Table 133. 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 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 proven to be successful for larger business owners. The program offers a turnkey approach, including marketing, energy education, site-specific energy analysis, financial incentives, and equipment procurement and installation.
Target markets	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Marketing strategies: SWEPCO plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ 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 ○ 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	<ul style="list-style-type: none"> • Implementers: Frontier is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection is conducted by a third-party implementer

Table 134 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 134. COMPASS for Small Business Market Transformation Program EM&V Plan

COMPASS for Small Business MTP	Description	2023
Evaluation priority	The COMPASS for Small Business MTP is a <i>medium</i> priority in PY2023. The savings are from deemed measures.	Medium

COMPASS for Small Business MTP	Description	2023
Key researchable issues	<ul style="list-style-type: none"> • 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
	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
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	3

8.2.2 COMPASS for Large Commercial Market Transformation Program

Table 135. 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. Assistance from the program includes communications support, administrative program management, and technical assistance to identify, assess, and implement energy efficiency measures. Financial incentives are provided for eligible energy efficiency measures that result in verifiable demand and energy savings.
Target markets	<ul style="list-style-type: none"> • Market segments: Commercial facilities (other than education) • Eligibility criteria: Commercial facilities within SWEPCO's service territory • Applications: Retrofit or new construction projects

Commercial Solutions MTP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: SWEPCO plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ contract with a third party to implement outreach and planning activities; ○ maintain a website to provide information to potential participants; ○ 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	<ul style="list-style-type: none"> • Implementers: Frontier
Measures/products, services, offerings	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> ○ kW (demand savings): \$225–\$305 per kW (varies by measure type)
QA/QC	<ul style="list-style-type: none"> • Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by a third-party implementer

Table 136 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 136. COMPASS for Large Commercial Market Transformation Program EM&V Plan

Commercial Solutions MTP	Description	2023
Evaluation priority	The COMPASS for Large Commercial MTP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures with some custom measures.	Medium

Commercial Solutions MTP	Description	2023
Key researchable issues	<ul style="list-style-type: none"> • 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.	4
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	2

8.2.3 COMPASS FOR SCHOOLS Market Transformation Program

Table 137. 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.
Target markets	<ul style="list-style-type: none"> • Market segments: Education facilities • Eligibility criteria: Education facilities within SWEPCO's service territory • Applications: Retrofit or new construction projects
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: SWEPCO plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ contract with a third party to implement outreach and planning activities;

SCORE MTP	Summary
	<ul style="list-style-type: none"> ○ maintain a website to provide information to potential participants; ○ identify customer participants; ○ 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. <ul style="list-style-type: none"> ● Project sponsors: Utility
Implementation and delivery	<ul style="list-style-type: none"> ● Implementers: Frontier is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● Pre- and post-on-site inspections for 100 percent of projects ● Pre- and post-inspection conducted by a third-party implementer

Table 138 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 138. COMPASS for Schools Market Transformation Program EM&V Plan

SCORE MTP	Description	2023
Evaluation priority	The COMPASS for Schools MTP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures with some custom measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> ● 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? 	

SCORE MTP	Description	2023
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.	4
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	2

8.3 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.

8.3.1 Commercial Standard Offer Program

Table 139. Commercial Standard Offer Program Summary

Commercial SOP	Summary
Program description	The Commercial SOP provides new construction and retrofit installation incentives for a wide range of measures that reduce demand and save energy in nonresidential facilities. Installed measures must have the potential to reduce peak summer demand by at least 5 kW, except for self-sponsored projects, for which there is no minimum kW. Incentives are paid to energy efficiency service providers (i.e., project sponsors) based on deemed savings or verified demand and energy savings at eligible commercial customers' facilities. The utility has a limited group of participating project sponsors determined through a selection process based on meeting minimum eligibility criteria such as complying with all program rules and procedures, submitting documentation describing their projects, and entering into a Standard Agreement with the IOU.
Target markets	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Marketing strategies: SWEPCO plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ 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 bill inserts, etc. • Project sponsors include: <ul style="list-style-type: none"> ○ 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

Commercial SOP	Summary
	<ul style="list-style-type: none"> ○ individual commercial customers within the eligible service territories who install measures in their own facilities.
Implementation and delivery	<ul style="list-style-type: none"> ● Implementers: SWEPCO
Measures/products, services, offerings	<ul style="list-style-type: none"> ● 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. <ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> ● Pre- and post-on-site inspections ● Conducted by SWEPCO

Table 140 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 140. Commercial Standard Offer Program EM&V Plan

Commercial SOP	Description	2023
Evaluation priority	The Commercial SOP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures with some custom measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> ● 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.	4
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	2

8.4 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.

8.4.1 Load Management Standard Offer Program (Commercial)

Table 141. 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 duration.
Target markets	<ul style="list-style-type: none"> • Market segments: Large commercial and industrial businesses • Eligibility criteria: <ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> • Marketing strategies: SWEPCO plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> • Implementers: SWEPCO
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: N/A • 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	<ul style="list-style-type: none"> • SWEPCO will verify actual demand savings from interruptions.

Table 142 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 142. Commercial Load Management Standard Offer Program EM&V Plan

Load Management SOP (Commercial)	Description	2023
Evaluation priority	The load management program is a <i>medium</i> priority in PY2023.	Medium

Load Management SOP (Commercial)	Description	2023
Key researchable issues	<ul style="list-style-type: none"> Are sponsor-provided savings inputs and parameters accurate? Are utility verification regimes sufficient and reliable? 	
Program evaluation approach	<p>Program tracking data review: Review data for accuracy and alignment with demand interval metered data.</p> <p>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.</p>	Census
	<p>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 provides a comparison to similar-condition non-interrupt baseline days to validate impact estimates.</p>	Census

8.5 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.

8.5.1 Residential Standard Offer Program

Table 143. Residential Standard Offer Program Summary

Residential SOP	Summary
Program description	The Residential SOP pays incentives to project sponsors for certain measures to be installed primarily in retrofit applications. The utility has a limited group of participating project sponsors determined through a selection procedure based on an application process, including customer feedback.
Target markets	<ul style="list-style-type: none"> Market segments: Residential single-family and multifamily homes over two years old Applications: Retrofit applications
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: SWEPCO plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> 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; 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; and conduct workshops to explain elements such as the responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process.

Residential SOP	Summary
	<ul style="list-style-type: none"> ○ Facilitate media opportunities to spotlight successful projects and interesting stories as applicable. <p>SWEPCO cannot directly market to customers but encourages project sponsors to do so and approves all marketing materials used by sponsors.</p> <ul style="list-style-type: none"> • Project sponsors: EESPs, contractors, national energy service companies
Implementation and delivery	<ul style="list-style-type: none"> • Implementer: SWEPCO
Measures/products, services, offerings	<ul style="list-style-type: none"> • 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; Higher incentives are available for customers in underserved counties and under-installed measures.
QA/QC	<ul style="list-style-type: none"> • Post-on-site inspections for approximately ten percent of sites for each sponsor • Blower door and duct blaster tests will be randomly conducted during inspections to verify the accuracy of post-treatment readings. • Conducted by SWEPCO

Table 144 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 144. Residential Standard Offer Program EM&V Plan

Residential SOP		2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<p>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?</p> <p>Which measures have been installed, and what type of equipment did they replace?</p>	
Program evaluation approach	Program tracking system review: Review tracking data for accuracy and confirm that estimated savings concur with TRM.	Census
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings resulting from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

8.6 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.

8.6.1 Hard-to-Reach Standard Offer Program

Table 145. Hard-to-Reach Standard Offer Program Summary

Hard-to-Reach SOP	Summary
Program description	The Hard-to-Reach SOP pays project sponsors for certain measures to be installed in retrofit applications for customers with total annual household incomes at or below 200 percent of the federal poverty level. The utility has a limited group of participating project sponsors determined through a selection procedure based on an application process, including customer feedback. Along with retrofit opportunities, the program encourages energy-saving education.
Target markets	<ul style="list-style-type: none"> • 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
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: SWEPCO plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ 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; ○ 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	<ul style="list-style-type: none"> • Implementers: SWEPCO

Hard-to-Reach SOP	Summary
Measures/products, services, offerings	<ul style="list-style-type: none"> • 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. Higher incentives are available for customers in underserved counties and for under-installed measures.
QA/QC	<ul style="list-style-type: none"> • Post-on-site inspections for approximately ten percent of sites for each sponsor • Blower door and duct blaster tests will be randomly conducted during inspections to verify the accuracy of post-treatment readings. • Conducted by SWEPCO

Table 146 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 146. Hard-to-Reach Standard Offer Program EM&V Plan

Hard-to-Reach SOP	Description	2023
Evaluation priority	This program will receive a <i>high</i> evaluation priority in PY2023.	High
Key researchable issues	<ul style="list-style-type: none"> • 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings resulting from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

9.0 TNMP

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

9.1 PORTFOLIO OVERVIEW

Table 147 shows the projected energy and demand savings for the TNMP programs for PY2019.

Table 147. PY2023 Projected Demand and Energy Savings—TNMP

Program category	Program name	Program type	2023 demand savings (kW)	Percentage of total portfolio (demand)	2023 energy savings (kWh)	Percentage of total portfolio (energy)
Commercial MTP	Commercial Solutions MTP	Commercial Solutions MTP	814	6	3,401,361	25
Commercial MTP	Open for Small Business MTP	Small Business DI	677	5	1,583,189	12
Commercial MTP	SCORE/CitySmart MTP	CitySmart/SCORE/ Government MTP	828	6	2,652,259	19
LI/HTR SOP	Hard-to-Reach (HTR) SOP	HTR SOP	440	3	966,000	7
LI/HTR SOP	Low-Income Weatherization	Low-Income/HTR Weatherization Programs	333	3	471,455	3
Load Management	Winter Load Management Pilot	Commercial Load Management SOP	6,250	48	6,250	0
Load Management	Summer Load Management	Commercial Load Management SOP	1,500	12	1,500	0
Residential MTP	High-Performance Homes MTP	New Home Construction MTP	396	3	831,156	6
Residential SOP	Residential SOP	Residential SOP	1,780	14	3,852,000	28

Next, we present two summary tables for each program in the portfolio. Each table provides a high-level overview of the applicable programs. The overview is based on 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 issues will be investigated portfolio-wide:

- What are the drivers of differences, if any, between claimed and evaluated savings?
- Are the program provisions for quality assurance and control adequate?

9.2 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.

9.2.1 Commercial Solutions Market Transformation Program

Table 148. Commercial Solutions Market Transformation Program Summary

Commercial Solutions MTP	Summary
Program description	The Commercial Solutions MTP targets commercial customers (other than governmental and 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. Assistance from the program includes communications support and technical assistance to identify, assess, and implement energy efficiency measures. Financial incentives are provided for eligible energy efficiency measures that result in verifiable demand and energy savings.
Target markets	<ul style="list-style-type: none"> • Market segments: Commercial facilities (other than government and education) • Eligibility criteria: Commercial facilities within TNMP’s service territory • Applications: Retrofit or new construction projects
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: TNMP plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ contract with a third-party implementer to conduct outreach and planning activities; ○ target a number of customer participants; ○ conduct workshops for program participants and industry professionals as necessary to explain elements of the program, such as responsibilities of the participants, project requirements, incentive information, and the application and reporting process; ○ participate in regional outreach activities as may be necessary; and ○ attend appropriate industry-related meetings to generate awareness and interest. • Project sponsors: Partner required
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: CLEARResult is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: HVAC, lighting, motors, window film, roofing, fuel switching, 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 or project sponsor <ul style="list-style-type: none"> ○ kW (demand savings): \$50–\$200 per kW (varies by measure type) ○ kWh (energy savings): \$0.02–\$0.04 per kWh (varies by measure type)
QA/QC	<ul style="list-style-type: none"> • Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by a third-party implementer • In addition, some verification conducted by the utility

Table 149 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 149. Commercial Solutions Market Transformation Program EM&V Plan

Commercial Solutions MTP	Description	2023
Evaluation priority	The Commercial Solutions MTP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures with some custom measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> • 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.	4
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	2

9.2.2 SCORE/CitySmart Market Transformation Program

Table 150. SCORE/CitySmart Market Transformation Program Summary

SCORE/CitySmart MTP	Summary
Program description	The SCORE/CitySmart MTP helps educational facilities (childcare, public and private schools K–12 and higher education) and local government institutions lower their energy use by educating and assisting with integrating energy efficiency into their short and long-term planning, budgeting, and operational practices. The program provides assistance in areas such as energy master planning; energy performance benchmarking; and identifying, assessing, and implementing energy efficiency measures. Energy efficiency improvements include capital-intensive projects and implementing operational and maintenance practices and procedures. Financial incentives are provided for energy efficiency measures that reduce peak electricity demand.

SCORE/CitySmart MTP	Summary
Target markets	<ul style="list-style-type: none"> • Market segments: Education and government facilities • Eligibility criteria: Education and government facilities within TNMP’s service territory • Applications: Retrofit or new construction projects
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: TNMP plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ contract with a third-party implementer to conduct outreach and planning activities; ○ target a number of customer participants; ○ conduct workshops for program participants and industry professionals as necessary to explain elements of the program, such as responsibilities of the participants, project requirements, incentive information, and the application and reporting process; ○ participate in regional outreach activities as may be necessary; and ○ attend appropriate industry-related meetings to generate awareness and interest. • Project sponsors: Utility
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: CLEARResult is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: HVAC, lighting, motors, variable frequency drives, window film, roofing, or others that may require M&V planning and metering • Technical assistance: Includes communications support, financing assistance, performance benchmarking, and energy master planning workshops, in addition to identifying energy efficiency measures. • Rebates/incentives: Provided to the end-use customer
QA/QC	<ul style="list-style-type: none"> • Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by a third-party implementer • In addition, some verification conducted by the utility

Table 151 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 151. SCORE/CitySmart Market Transformation Program EM&V Plan

SCORE/CitySmart MTP	Description	2023
Evaluation priority	The SCORE/CitySmart MTP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures with some custom measures.	Medium

SCORE/CitySmart MTP	Description	2023
Key researchable issues	<ul style="list-style-type: none"> • 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.	4
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	2

9.2.3 Open for Small Business Market Transformation Program

Table 152. Open for Small Business Market Transformation Program Summary

Open for Small Business MTP	Summary
Program description	The Open for Small Business MTP assists small business customers that do not have the in-house capacity or 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. Financial incentives are provided directly to the contractor, thereby reducing a portion of the project cost for the customer. Small commercial customers with peak demand not exceeding 150 kW at any facility, or 250 kW at all facilities owned by the same customer, may qualify to participate in the program.
Target markets	<ul style="list-style-type: none"> • Market segments: Small commercial facilities • Eligibility criteria: Small commercial facilities within TNMP's service territory and with peak demands ≤ 150 kW • Applications: Retrofit

Open for Small Business MTP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: TNMP plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> 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 small business associations, government agencies, and service providers to serve program customers. Project sponsors: Contractors
Implementation and delivery	<ul style="list-style-type: none"> Implementers: CLEARResult is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: HVAC (and controls), lighting (and controls), roofing, refrigeration, and food service Technical assistance: Energy assessment provided by the contractor Rebates/incentives: Provided to the contractor <ul style="list-style-type: none"> kW (demand savings): \$550–\$700 per kW (varies by measure type) Program direct install: Direct install approach
QA/QC	<ul style="list-style-type: none"> 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 153 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 153. Open for Small Business Market Transformation Program EM&V Plan

Open for Small Business MTP	Description	2023
Evaluation priority	The Open for Small Business MTP is a <i>medium</i> priority in PY2023. The savings are from deemed measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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 in order to 	

Open for Small Business MTP	Description	2023
	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
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	3

9.3 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.

9.3.1 Summer Load Management SOP

Table 154. Summer Load Management Standard Offer Program Summary

Summer Load Management SOP	Summary
Program description	The Summer Load Management Program ("SLMP"), formerly the Load Management SOP) was launched in 2009 in accordance with 16 TAC § 25.181, which authorizes participating Project Sponsors (customers or third-party sponsors) to provide on-call, voluntary curtailment of electric consumption during peak demand periods in return for incentive payments. The program has been renamed to avoid confusion with the Winter Load Management Pilot Program. Incentives are based on verified demand savings that occur at TNMP distribution sites or eligible institutional customers' sites as a result of calls for curtailment. Customers are not required to produce a specific level of curtailed load but will only receive payments for the lesser of the amount of curtailed load produced or contracted.
Target markets	<ul style="list-style-type: none"> • Market segments: Commercial and industrial businesses • Eligibility criteria: <ul style="list-style-type: none"> ○ TNMP prefers that project sponsors be capable of providing at least 50 kW of peak demand reduction at each site for which load reduction is offered into the program. However, TNMP may accept applications, including sites providing less than 50 kW of peak demand reduction to meet its peak load reduction targets. ○ Customers must have an interval data recorder or AMS meter. ○ All included project sites must be nonresidential customers of TNMP taking service at the distribution level or nonprofit customers or government entities, including educational institutions. • Applications: Accepted annually

Summer Load Management SOP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: TNMP plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> 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: National or local EESPs, REPs, or individual customers identifying interruptible load in their own facilities.
Implementation and delivery	<ul style="list-style-type: none"> TNMP is the program implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: N/A Technical assistance: At the discretion of the project sponsor, not part of the program design Rebates/incentives: TNMP will pay a participating customer (or the project sponsor, if different) \$40 per kW of verified curtailed load each year of participation
QA/QC	<ul style="list-style-type: none"> TNMP will verify actual demand savings from interruptions.

Table 155 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 155. Summer Load Management Standard Offer Program EM&V Plan

Summer Load Management SOP	Description	2023
Evaluation priority	The load management program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> Are sponsor-provided savings inputs and parameters accurate? Are utility verification regimes sufficient and reliable? 	
Program evaluation approach	<p>Program tracking data review: Review data for accuracy and alignment with demand interval metered data.</p> <p>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.</p>	Census
	<p>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 provides a comparison to similar-condition non-interrupt baseline days to validate impact estimates.</p>	Census

9.4 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.

9.4.1 High-Performance Homes Market Transformation Program

Table 156. High-Performance Homes Market Transformation Program Summary

High-Performance Homes MTP	Summary
Program description	<p>The High-Performance Homes MTP provides financial incentives and other types of assistance to production and custom homebuilders who commit to constructing homes within the TNMP service territory that meet program specifications. The homebuilder's primary responsibility is to design, build, and market homes that comply with program requirements and achieve a five percent kWh savings or greater over the Texas baseline. The rater's primary responsibility is to work with homebuilders to facilitate the construction of ENERGY STAR®-certified and high-performance homes that meet the performance requirements for the program. Incentives are paid to builders to improve the home's overall efficiency compared to the Texas baseline home defined in the Texas TRM. The program includes an alternate qualification method for midstream HVAC installations that focuses solely on the HVAC systems in new homes.</p>
Target markets	<ul style="list-style-type: none"> • Market segments: Homebuilders, raters, and HVAC contractors • Eligibility criteria: TNMP's program is for builders and raters who build new homes in TNMP's service territory. To be eligible, builders must: <ul style="list-style-type: none"> ○ submit required documentation from energy-rating software, ○ provide a copy of Air Conditioning, Heating, and Refrigeration Institute certificates, and ○ provide ENERGY STAR certificates, if applicable. ○ Midstream HVAC homes must meet a minimum SEER/HSPF requirement. • To be eligible for payment, homes must: <ul style="list-style-type: none"> ○ be located within TNMP's service territory; ○ have achieved five percent kWh savings over the Texas residential baseline home, and ○ not have received an incentive from any other utility or another TNMP program. • Bonus incentives are available for: <ul style="list-style-type: none"> ○ foam encapsulated envelope, R-13 walls, and R-21 ceiling; ○ ENERGY STAR Version 3.1 certification; and ○ right-sized HVAC. • Applications: New home construction applications
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: TNMP markets the availability of its programs in the following manner: <ul style="list-style-type: none"> ○ utilizing mass electronic mail (email) notifications to keep potential builders interested and informed; ○ maintaining a website with detailed builder eligibility, end-use measures, incentives, and procedures; and ○ participating in statewide outreach activities, as may be available. • Project sponsors: N/A
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: ICF is the third-party implementer; Frontier Energy is the data source.
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: This is a whole-house program based on achieving a five percent kWh savings or having a valid ENERGY STAR Version 3.1 certificate.

High-Performance Homes MTP	Summary
	<ul style="list-style-type: none"> • Technical assistance: Builders must work with raters. • Rebates/incentives: Paid directly to participating builders (whole house option) or HVAC contractors (midstream option)
QA/QC	<ul style="list-style-type: none"> • QA/QC conducted by ICF; three percent post-on-site inspection; ten percent sample of all paperwork turned in.

Table 157 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 157. High-Performance Homes Market Transformation Program EM&V Plan

High-Performance Homes MTP	Description	2023
Evaluation priority	The program is receiving a <i>high</i> evaluation priority in PY2023.	High
Key researchable issues	<ul style="list-style-type: none"> • How is the program adapt to the changing codes and standards climate? Are there viable strategies the program can adopt 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 homes, review the energy model inputs, savings claims, and supporting documentation.	5
	Process surveys: interviews with builders and raters	3

9.5 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.

9.5.1 Residential Standard Offer Program

Table 158. Residential Standard Offer Program Summary

Residential SOP	Summary
Program description	The Residential SOP provides incentives for the retrofit installation of a wide range of measures that reduce energy costs, reduce peak demand, and save energy in residential facilities.
Target markets	<ul style="list-style-type: none"> • Market segments: Residential customers <100 kW maximum demand • Applications: Retrofit applications

Residential SOP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: TNMP markets the availability of its programs in the following manner: <ul style="list-style-type: none"> utilize mass email notifications to keep potential project sponsors interested and informed; maintain internet 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; 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 develop their own marketing materials. Project sponsors: A wide range of contractors, service companies, community agencies, and other organizations or local companies that provide energy-related products.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Frontier Energy
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: Commission-approved measures included in the statewide TRM for the residential customer class are eligible under this SOP, including attic insulation, 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 program manager, 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	<ul style="list-style-type: none"> Pre- and post-on-site inspections for ten percent of submitted invoices Conducted by Frontier Energy

Table 159 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 159. Residential Standard Offer Program EM&V Plan

Residential SOP		2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High

Residential SOP		2023
Key researchable issues	<ul style="list-style-type: none"> 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

9.6 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.

9.6.1 Hard-to-Reach Standard Offer Program

Table 160. Hard-to-Reach Standard Offer Program Summary

Hard-to-Reach SOP	Summary
Program description	The Hard-to-Reach SOP pays project sponsors for certain measures to be installed in primarily retrofit applications, specifically for customers with total annual household incomes at or below 200 percent of the federal poverty level. The utility has a limited group of participating project sponsors determined through a selection process based on an application process, including customer feedback.
Target markets	<ul style="list-style-type: none"> 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. Multifamily residences will qualify if at least 75 percent of residences qualify. Applications: Retrofit
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: TNMP markets the availability of its programs in the following manner: <ul style="list-style-type: none"> utilizes mass 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; 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.

Hard-to-Reach SOP	Summary
	<p>Project sponsors develop their own marketing materials.</p> <ul style="list-style-type: none"> Project sponsors: A wide range of contractors, service companies, community agencies, and other organizations.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Frontier Energy is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: Envelope measures (insulation, attic encapsulation, cool roof, windows), HVAC measures (air conditioning, A/C tune-ups, variable speed drives), water heating (clothes washers, low-flow showerheads and faucet aerators, heat pump water heater), refrigerators, LEDs. 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	<ul style="list-style-type: none"> Pre- and post-on-site inspections for ten percent of submitted invoices Conducted by Frontier Energy

Table 161 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 161. Hard-to-Reach Standard Offer Program EM&V Plan

Hard-to-Reach SOP	Description	2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<ul style="list-style-type: none"> 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? 	

9.6.2 Low-Income Weatherization Program

Table 162. Low-Income Weatherization Program Summary

Low-Income Weatherization Program	Summary
Program description	The Low-Income Weatherization program provides weatherization and energy-efficiency measures to residential customers that meet the Department of Energy's (DOE) Weatherization Assistance program income-eligibility guidelines and cost-effectiveness criteria (savings-to-investment ratio). The utility contracts with Frontier Energy, which then contracts with local government organizations and not-for-profit agencies to deliver weatherization services.

Low-Income Weatherization Program	Summary
Target markets	<ul style="list-style-type: none"> Market segments: Low-income residential customers Eligibility criteria: Receives electric power service through the utility's system; meets DOE income-eligibility guidelines (i.e., 200 percent of the federal poverty level); qualified through service provider's guidelines Applications: Retrofit applications
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Low-income advocates throughout TNMP's service territory will be called upon to participate. Workshops and database training will occur, and updates to policies and procedures will occur annually, as needed. Project sponsors: Texas Department of Housing and Community Affairs (TDHCA) sub-recipients and other not-for-profit community action and government agencies
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Frontier Energy
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: Attic insulation, central air conditioning replacement, CFLs, electric water heater measures, infiltration control, refrigerator replacement, solar screens, wall insulation, and window air conditioning replacement Technical assistance: At the discretion of the project sponsor, not part of 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	<ul style="list-style-type: none"> Pre- and post-on-site inspections for 100 percent of submitted invoices Conducted by Frontier Energy

Table 163 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 163. Low-Income Weatherization Program EM&V Plan

Low-Income Weatherization Program	Description	2023
Evaluation priority	Senate Bill 1434 requires transmission and distribution utilities to spend ten percent of their energy-efficiency budget on targeted low-income weatherization programs. This program is receiving a <i>high</i> priority for PY2023.	High
Key researchable issues	<ul style="list-style-type: none"> 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The	Census

Low-Income Weatherization Program	Description	2023
	PY2023 consumption analysis will help all stakeholders better understand the savings from measures installed through this program and inform prospective updates to the TRM for PY2025.	

9.7 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.

9.7.1 Winter Load Management Pilot Program

Table 164. Winter Load Management Pilot Program Summary

Winter Load Management Pilot Program	Summary
Program description	<p>The TNMP Winter Load Management Pilot Program ("WLMPP") was launched in December 2021 with an operating period of December 1, 2021-February 28, 2022 in accordance with Senate Bill 33, which, among other things, requires the Commission to "allow a transmission and distribution utility to design and operate a load management program for nonresidential customers to be used where the independent organization certified under [PURA] Section 39.151 for the ERCOT power region has declared a level 2 Emergency or higher level of emergency or has otherwise directed the transmission and distribution utility to shed load." The WLMPP operated from December 1, 2022-February 28, 2023, under the energy efficiency portfolio in accordance with 16 TAC § 25.181, which authorizes participating Project Sponsors (customers or third-party sponsors) to provide on-call, voluntary curtailment of electric consumption during peak demand periods in return for incentive payments. Incentives are based on verified curtailed demand savings that occur as a result of calls to request curtailment. Customers are not required to produce a specific level of curtailed load but will only receive payments based on verified demand savings of the contracted amount of curtailable load.</p>
Target markets	<ul style="list-style-type: none"> • Market segments: Commercial and industrial businesses • Eligibility criteria: <ul style="list-style-type: none"> ○ TNMP prefers that project sponsors be capable of providing at least 50 kW of peak demand reduction at each site for which load reduction is offered into the program. However, TNMP may accept applications, including sites providing less than 50 kW of peak demand reduction to meet its peak load reduction targets. ○ Customers must have an interval data recorder or AMS meter. ○ All included project sites must be nonresidential customers of TNMP taking service at the distribution level or nonprofit customers or government entities, including educational institutions. • Applications: Accepted annually

Winter Load Management Pilot Program	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: TNMP plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> Utilizes mass electronic mail (e-mail) notifications to keep potential participants interested and informed Maintain a website containing the requirements for project participation, forms required for project submission, and the links to databases containing currently-available funding; and Project sponsors: National or local EESPs, REPs, or individual customers identifying interruptible load in their own facilities.
Implementation and delivery	<ul style="list-style-type: none"> TNMP is the program implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: N/A Technical assistance: At the discretion of the project sponsor, not part of the program design Rebates/incentives: TNMP will pay a participating customer (or the project sponsor, if different) \$40 per kW of verified curtailed load each year of participation
QA/QC	<ul style="list-style-type: none"> TNMP will verify actual demand savings from interruptions.

Table 155 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 165. Winter Load Management Pilot Program EM&V Plan

Winter Load Management Pilot Program	Description	2023
Evaluation priority	The load management program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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.	Census
	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.	
	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 provides a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census

10.0 XCEL ENERGY

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

10.1 PORTFOLIO OVERVIEW

Table 166 shows the projected energy and demand savings for the Xcel Energy programs for PY2023.

Table 166. PY2023 Projected Demand and Energy Savings—Xcel Energy

Program category	Program name	Program type	2023 demand savings (kW)	Percentage of total portfolio (demand)	2023 energy savings (kWh)	Percentage of total portfolio (energy)
Commercial MTP	Home Lighting MTP	Buydown Home Lighting MTP	590	5	2,069,000	8
Commercial MTP	Retro-Commissioning MTP	Retro-commissioning MTP	900	7	3,969,000	15
Commercial MTP	Small Commercial MTP	Small Business DI	220	2	1,000,000	4
Commercial SOP	Commercial SOP	Commercial SOP	1,020	8	3,826,000	15
LI/HTR SOP	Hard-to-Reach (HTR) SOP	HTR SOP	500	4	1,310,000	5
LI/HTR SOP	Low-Income Weatherization	Low-Income/HTR Weatherization Programs	250	2	765,000	3
Load Management	Load Management SOP	Commercial Load Management SOP	5,000	41	20,000	0
Residential MTP	Home Lighting MTP	Buydown Home Lighting MTP	2,000	17	7,000,000	27
Residential MTP	Refrigerator Recycling MTP	Appliance Recycling MTP	50	0	395,000	2
Residential MTP	Smart Thermostat MTP Pilot	Pilot Residential Smart Thermostats MTP	0	0	600,000	2
Residential SOP	Residential SOP	Residential SOP	400	3	900,000	3

Program category	Program name	Program type	2023 demand savings (kW)	Percentage of total portfolio (demand)	2023 energy savings (kWh)	Percentage of total portfolio (energy)
HTR	Hard-to-Reach Food Bank	HTR	900	7	3,800,000	15
Residential MTP	Residential HVAC MTP	Residential MTP	240	2	360,000	1

Next, we present two summary tables for each program in the portfolio. Each table provides a high-level overview of the applicable programs. The overview is based on 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?

10.2 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.

10.2.1 Small Commercial Market Transformation Program

Table 167. 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. The program offers financial incentives for installing energy-efficient lighting and lighting controls, HVAC equipment, and cool roofs on the premises of eligible small businesses. Because the program demonstrated cost-effectiveness during its pilot phase in 2017, Xcel Energy continued the offering as a permanent program in PY2018.
Target markets	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ 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

Small Commercial MTP	Summary
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Frontier Energy is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 168 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 168. Small Commercial Market Transformation Program EM&V Plan

Small Commercial MTP	Description	2023
Evaluation priority	The Small Commercial MTP is a <i>medium</i> priority in PY2023. The savings are from deemed measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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
	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.	4
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation.	2

10.2.2 Recommissioning Market Transformation Program

Table 169. 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 projects completed by approved project deadlines. ⁸
Target markets	<ul style="list-style-type: none"> • 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
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> • Implementers: Willdan Energy Solutions is the third-party implementer.
Measures/products, services, offerings	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Pre- and post-on-site inspections for 100 percent of projects • Pre- and post-inspection conducted by the implementation contractor

Table 170 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

⁸ 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).

Table 170. Recommissioning Market Transformation Program EM&V Plan

Recommissioning MTP	Description	2023
Evaluation priority	The Recommissioning MTP is a <i>medium</i> priority in PY2023. The savings are from both custom measures and deemed measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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.	4
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	2

10.3 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.

10.3.1 Commercial Standard Offer Program

Table 171. Commercial Standard Offer Program Summary

Commercial SOP	Summary
Program description	The Commercial SOP incentivizes project sponsors for certain measures installed in new or retrofit applications. The utility has a limited group of participating project sponsors determined through a selection process based on meeting minimum eligibility criteria, such as complying with all program rules and procedures, submitting documentation describing their projects, and entering into a Standard Agreement with the IOU. Commercial customers with peak demand greater than 100 kW at any facility or 250 kW at all facilities owned by the same customer may qualify to participate in the program.

Commercial SOP	Summary
Target markets	<ul style="list-style-type: none"> 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
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Implementers: Utility
Measures/products, services, offerings	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Pre- and post-on-site inspections at the discretion of the utility Conducted by utility or third-party implementer or combination

Table 172 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 172. Commercial Standard Offer Program EM&V Plan

Commercial SOP	Description	2023
Evaluation priority	The Commercial SOP is a <i>medium</i> priority in PY2023. The majority of savings are from deemed measures with some custom measures.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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? 	

Commercial SOP	Description	2023
	<ul style="list-style-type: none"> 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
	On-site M&V: Conduct on-site M&V with a sample of the population to verify measure installation and operation. A portion of these on-site visits may include metering to verify key parameters as determined in the desk reviews.	3

10.4 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.

10.4.1 Commercial Load Management Standard Offer Program

Table 173. Commercial Load Management Standard Offer Program Summary

Commercial Load Management SOP	Summary
Program description	The Load Management SOP invites commercial class customers (including governmental, nonprofit, and institutional customers) receiving distribution-level service to provide on-call, voluntary curtailment of electric consumption during peak demand periods in return for incentive payments.
Target markets	<ul style="list-style-type: none"> Market segments: Commercial and industrial businesses Eligibility criteria: <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Implementers: Utility
Measures/products, services, offerings	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Xcel Energy verifies actual demand savings from interruptions.

Table 174 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 174. Commercial Load Management Standard Offer Program EM&V Plan

Commercial Load Management SOP	Description	2023
Evaluation priority	The load management program is a <i>medium</i> priority in PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> Are sponsor-provided savings inputs and parameters accurate? Are utility verification regimes sufficient and reliable? 	
Program evaluation approach	<p>Program tracking data review: Review data for accuracy and alignment with demand interval metered data.</p> <p>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.</p>	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 provides a comparison to similar-condition non-interrupt baseline days to validate impact estimates.	Census

10.5 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.

10.5.1 Residential Standard Offer Program

Table 175. Residential Standard Offer Program Summary

Residential SOP	Summary
Program description	The Residential SOP incentivizes suppliers of energy services to implement electric energy-efficiency projects at Xcel residential customers' facilities. The primary objective of these SOPs is to achieve a cost-effective reduction in peak summer demand.
Target markets	<ul style="list-style-type: none"> • Market segments: Residential customers • Applications: New and retrofit applications
Marketing strategies and project sponsors	<ul style="list-style-type: none"> • Marketing strategies include: <ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> • Implementers: Xcel Energy
Measures/products, services, offerings	<ul style="list-style-type: none"> • Measure offerings: Commission-approved measure included in the statewide TRM for the residential customer class is 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	<ul style="list-style-type: none"> • Post-on-site inspections of ten percent of invoices submitted by each contractor or on-site contractor inspections • Conducted by Xcel Energy

Table 176 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 176. Residential Standard Offer Program EM&V Plan

Residential SOP	Description	2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<ul style="list-style-type: none"> 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

10.6 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.

10.6.1 Residential HVAC Market Transformation Program

Table 177. 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 TX SPS.
Target markets	<ul style="list-style-type: none"> Market segments: residential Eligibility criteria: Applications: N/A

Residential HVAC MTP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies include: <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Implementers: Third-party implementers
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: TBD
QA/QC	<ul style="list-style-type: none"> TBD

Table 180 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 178. Residential HVAC Market Transformation Program EM&V Plan

Residential HVAC MTP	Description	2023
Evaluation priority	This program will receive a <i>medium</i> priority for PY2023 as the program has recently responded to TRM updates.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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.	6
	Process Surveys: interviews with distributors	4

10.7 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.

10.7.1 Hard-to-Reach Standard Offer Program

Table 179. Hard-to-Reach Standard Offer Program Summary

Hard-to-Reach SOP	Summary
Program description	The Hard-to-Reach SOP pays project sponsors for certain measures to be installed in primarily retrofit applications, specifically for customers with total annual household incomes at or below 200 percent of the federal poverty level. The utility has a limited group of participating project sponsors determined through a selection process based on an application process, including customer feedback. Along with retrofit opportunities, the program encourages energy-saving education. The Xcel Energy HTR SOP distinguishes contract awards between large and small project applications.
Target markets	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Marketing strategies include: <ul style="list-style-type: none"> ○ 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 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 ○ utilization of mass email notifications to keep potential project sponsors interested and informed.
Implementation and delivery	<ul style="list-style-type: none"> • Implementers: Xcel Energy
Measures/products, services, offerings	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Post-on-site inspections for ten percent of invoices submitted by each contractor or on-site contractor inspections • Conducted by Xcel Energy

Table 180 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 180. Hard-to-Reach Standard Offer Program EM&V Plan

Hard-to-Reach SOP	Description	2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<ul style="list-style-type: none"> 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
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

10.7.2 Hard-to-Reach Food Bank Market Transformation Program

Table 181. 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. SPS 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 a LED night light. Giving away free LED lighting kits gives customers an easy start to implementing energy efficiency in their homes.
Target markets	<ul style="list-style-type: none"> Market segments: residential Eligibility criteria: N/A Applications: N/A
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Local food bank distribution sites
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Third-party administrator and home lighting implementer
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: four-pack LEDs and LED night light
QA/QC	<ul style="list-style-type: none"> TBD

Table 180 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 182. Hard-to-Reach Food Bank Market Transformation Program EM&V Plan

Hard-to-Reach Food Bank MTP	Description	2023
Evaluation priority	This program will receive a <i>medium</i> priority for PY2023 as the program has recently responded to TRM updates.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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.	4

10.7.3 Low-Income Weatherization Program

Table 183. Low-Income Weatherization Program Summary

Low-Income Weatherization Program	Summary
Program description	The Low-Income Weatherization program provides weatherization and energy education to residential customers that meet the Department of Energy’s (DOE) Weatherization Assistance program income-eligibility guidelines and cost-effectiveness criteria (savings-to-investment ratio). The utility contracts with program implementer(s), who then subcontracts with local government organizations and not-for-profit agencies to deliver weatherization services.
Target markets	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Marketing strategies: <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Implementers: Frontier Energy
Measures/products, services, offerings	<ul style="list-style-type: none"> 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.

Low-Income Weatherization Program	Summary
QA/QC	<ul style="list-style-type: none"> Post-on-site inspections submitted by Frontier Energy

Table 184 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 184. Low-Income Weatherization Program EM&V Plan

Low-Income Weatherization Program	Description	2023
Evaluation priority	This program will receive a <i>high</i> priority for PY2023 as the program has recently responded to TRM updates.	High
Key researchable issues	<ul style="list-style-type: none"> 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 estimated savings concur with TRM.	Census
	Consumption analysis: The EM&V team will conduct a targeted consumption analysis to evaluate energy and demand impacts. The PY2023 consumption analysis will help all stakeholders better understand the savings resulting from measures installed through this program and inform prospective updates to the TRM for PY2025.	Census

10.8 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.

10.8.1 Home Lighting Market Transformation Program

Table 185. Home Lighting Market Transformation Program Summary

Home Lighting MTP	Summary
Program description	The Home Lighting MTP offers customers in-store discounts for purchasing LEDs through qualifying retailers.
Target markets	<ul style="list-style-type: none"> Market segments: Residential and small commercial customers Application: Buydown
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> use of the Xcel Energy efficiency website (www.xcelefficiency.com);

Home Lighting MTP	Summary
	<ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> ● Implementers: Xcel Energy
Measures/products, services, offerings	<ul style="list-style-type: none"> ● Measure offerings: Efficient LEDs ● Technical assistance: N/A ● Rebates/incentives: In-store discounts are provided directly to customers
QA/QC	<ul style="list-style-type: none"> ● Pending additional documentation from Xcel Energy

Table 186 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 186. Home Lighting Market Transformation Program EM&V Plan

Home Lighting MTP	Description	2023
Evaluation priority	The Home Lighting MTP will receive a <i>high</i> evaluation priority in PY2023.	High
Key researchable issues	<ul style="list-style-type: none"> ● 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
	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

10.8.2 Refrigerator Recycling Market Transformation Program

Table 187. Refrigerator Recycling Market Transformation Program Summary

Refrigerator Recycling MTP	Summary
Program description	The Refrigerator Recycling MTP offers customers no-charge pick-up services for old refrigerators and freezers. Incentives are provided for each unit picked up.
Target markets	<ul style="list-style-type: none"> ● Market segments: Residential and small commercial customers ● Application: Request for pick-up

Refrigerator Recycling MTP	Summary
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> maintain a website containing the requirements for project participation and the links to databases containing currently-available funding; and leverage of retail providers.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: Xcel Energy, with data provided by Frontier Energy
Measures/products, services, offerings	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Pending additional detail from Xcel Energy

Table 188 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

Table 188. Refrigerator Recycling Market Transformation Program EM&V Plan

Refrigerator Recycling MTP	Description	2023
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	<ul style="list-style-type: none"> 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

10.9 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.

10.9.1 Smart Thermostat Market Transformation Pilot Program

Table 189. Smart Thermostat Market Transformation Program Pilot Summary

Smart Thermostat MTP Pilot	Summary
Program description	The Smart Thermostat MTP pilot is a program designed to provide customers discounts on ENERGY STAR-connected thermostats through Xcel Energy's online storefront, owned and managed by an independent third party.

Smart Thermostat MTP Pilot	Summary
Target markets	<ul style="list-style-type: none"> Market segments: Residential Application: Buydown
Marketing strategies and project sponsors	<ul style="list-style-type: none"> Marketing strategies: Xcel Energy plans to market the availability of this program in the following manner: <ul style="list-style-type: none"> Contract with third-party internet marketplace and online portal companies.
Implementation and delivery	<ul style="list-style-type: none"> Implementers: TBD
Measures/products, services, offerings	<ul style="list-style-type: none"> Measure offerings: ENERGY STAR-connected thermostats Rebates/incentives: A discount is applied to qualifying customers at the point of sale.
QA/QC	<ul style="list-style-type: none"> Pending additional documentation from Xcel Energy

Table 190 documents the key researchable issues to be addressed in the evaluation, along with the impact methodologies and primary data collection activities.

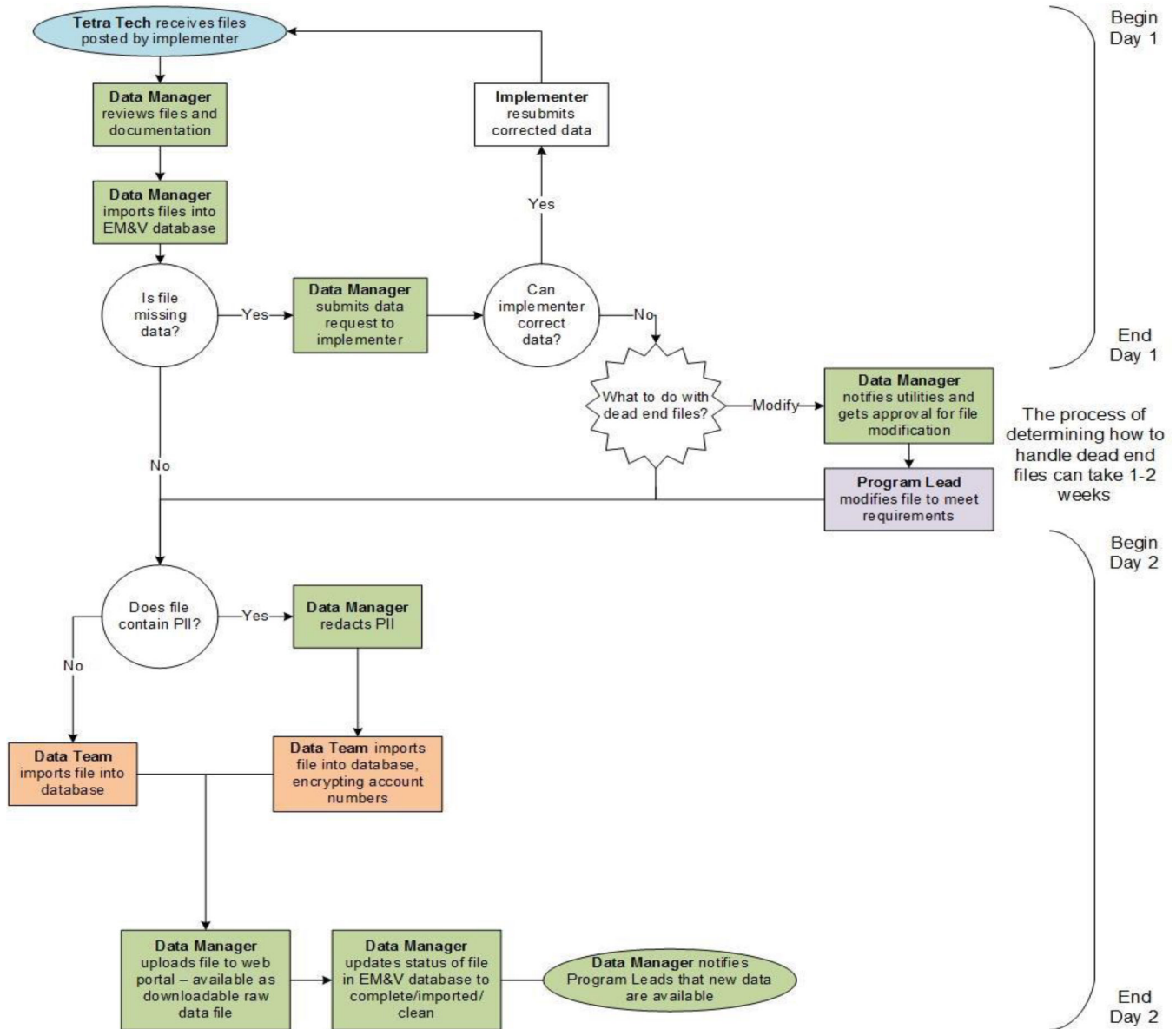
Table 190. Smart Thermostat Market Transformation Program Pilot EM&V Plan

Smart Thermostat MTP Pilot		2023
Evaluation priority	The Smart Thermostat MTP Pilot will receive a <i>medium</i> evaluation priority for PY2023.	Medium
Key researchable issues	<ul style="list-style-type: none"> 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.	3

APPENDIX A DATA MANAGEMENT PROCESS

Figure 2 details the data management process.

Figure 2. Data Management Process



APPENDIX B COST-EFFECTIVENESS CALCULATIONS

The Pair conditioning^T benefit cost (BC) results will be calculated using the following formula:

$$BC = \frac{EB_e + EB_d}{Inc + EMV + RD + PB}$$

Where:

EB_e is the economic benefits resulting from energy savings, calculated as:

$$EB_e = \left(\sum_{t=0}^n \frac{kWh/(1 - Line Loss)}{(1 + WACC)^t} \right) * AC_e$$

Where

- kWh is the annual energy savings for a measure
- $Line loss$ is the established line loss factor for the utility
- $WACC$ is the weighted average cost of capital (discount rate)
- AC_e is the avoided cost of energy for the program year in which the measure was installed
- N is the measure life
- t is the number of years since the base year (2012)

EB_d is the economic benefit from demand reduction, calculated similarly but using annual avoided peak demand and avoided cost of demand. The avoided cost of capacity is set at \$80 for both summer and winter.

All costs (incentives, EM&V, research and development, and performance bonus) are calculated as:

$$Net Cost = \frac{Gross Cost}{(1 + WACC)^{PY-2012}}$$

Where:

- $WACC$ is the weighted average cost of capital (discount rate)
- PY is the program year in which the cost was incurred

Using the same definitions as just described, the savings-to-investment ratio is calculated as:

$$SIR = \frac{EB_e + EB_d}{Inc^9}$$

⁹ Incentive.

APPENDIX C QA/QC PROTOCOLS

This appendix documents the quality assurance (QA) protocols established for the PUCT EM&V team for reporting claimed, evaluated gross, and evaluated net 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 processes within the reporting stage. A Quality Assurance team (QA team), which will be led by the Tetra Tech EM&V reporting and data lead, will be developed and accountable for ensuring all QA protocols are being followed.

Below we summarize the specific activities that will be subject to QA and processes. Note that these QA 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 will be 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 will be used for sampling and reporting those claimed savings. Data will be provided to the EM&V team quarterly. The EM&V team will characterize the data received in terms of energy and demand savings and participants served and report the information within the detailed research plans. These detailed research plans will be 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 team
- Consulted: Utility staff and implementation contractors and EM&V project manager.

Application of verification rates and net-to-gross (NTG) ratios. The impacts will be generated in the EM&V database. The database will categorize measure-level information in the format 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 will conduct impact evaluations to obtain and report verification and NTG estimates at the utility and program type level, which will then be aggregated and reported at the program group level.

These impact estimates will be provided by the program leads and stored in two locations. First, the program leads will enter the impact results within an Excel tracking sheet stored on the SharePoint site. The Excel tracking sheet will include the following fields: program year, 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 will maintain current impact information.* Should data be updated throughout the process, the outdated records will be moved to a separate worksheet within that file. Doing so will ensure one sheet will maintain the correct rates and that any modifications are documented, including the reason for the modification.

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

By creating a two-staged impact reporting process, the EM&V team builds a data verification point into the process. The evaluated and net savings results will be directly calculated from the EM&V database using the rates supplied within the web interface. The EM&V team will then verify that the results are as expected using the values documented within the Excel impact reporting file. Should the results differ, the Quality Assurance team will be able to refer to the original source to verify the results.

- Responsibility: Program leads
- Accountability: QA team
- Consulted: Impact leads, EM&V database lead, and project manager

Accuracy of reported savings. As documented within the report outline, program impacts will be aggregated and reported in various ways. At the most aggregate level, the data will be reported by program group overall and then by utility. At the most granular level, the data will be reported by program group for each utility. The annual report will therefore represent impacts within over 100 tables. Therefore, it will be critical to spend considerable time providing QA against those reported values.

The EM&V database will calculate the full year claimed savings by utility, program type, and program group. Although claimed savings will be documented in quarterly detailed research plans, adjustments made in claimed savings are likely to occur throughout the year. Therefore, it will be necessary to calculate the full program year claimed savings and verify our results against the utility-claimed data, which will be reported to the commission. The EM&V team will request 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 will be clearly documented within the report.

All results tables will be 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 Volume I of the report. The QA team will develop a checklist of tables to be cross-checked and against which sources and will systematically go through this checklist throughout the report proofing process.

Although not a specific QA function, the EM&V team's development of these reporting functions with the overarching goal of ensuring transparency will inherently allow for ad hoc QA 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. Impact-related reports will 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 team (for final review and cross-checks of impact tables)
- Consulted: Impact leads, EM&V database lead, utilities, and project manager

APPENDIX D EM&V TEAM STAFFING

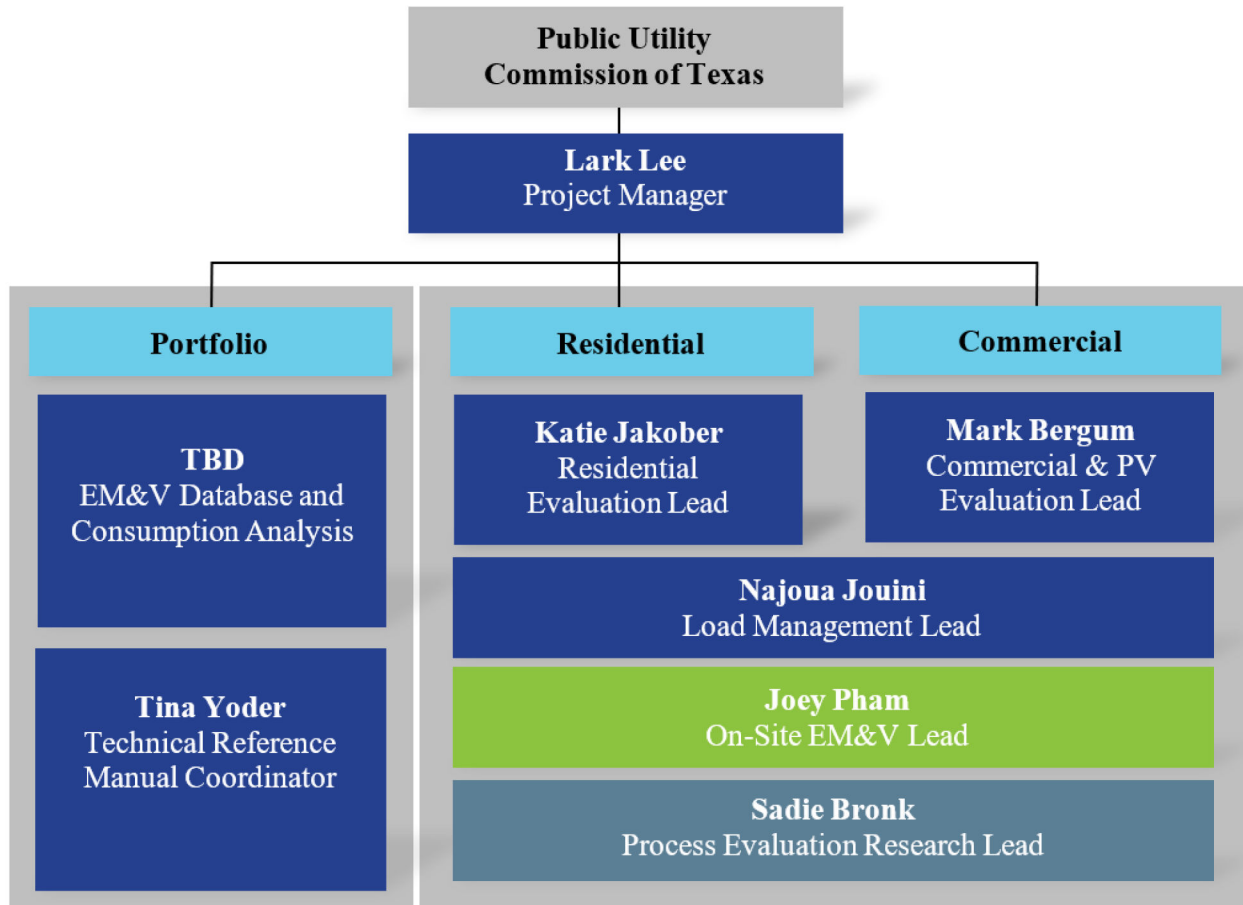
This appendix summarizes the EM&V team organization by task and team member for PY2023.

D.1 TEAM ORGANIZATION

The EM&V team brings substantial expertise and resources, but the effective structure of the EM&V team is equally important. Effective management ensures strong communication and responsiveness to the PUCT, utilities, and other stakeholders. Based on our experience managing other portfolio evaluations of similar size and scope and the strong, established working relationships among the EM&V team members, we developed a staffing and subcontracting plan to operate as one fully integrated team.

The management plan in the organizational chart below (Figure 3) was strategically developed to ensure quality and clear lines of responsibility and accountability.

Figure 3. EM&V Team Organizational Chart



COLOR KEY:



ENERGY BEES

The project manager is the primary point of contact for the PUCT and takes the lead in evaluation planning, reporting, and representing the EM&V team. She orchestrates the project by ensuring the EM&V team understands the PUCT's needs and that resources are in place to meet these needs. Due to the breadth and depth of the EM&V effort, the project manager is supported by the leads for the following areas: EM&V data, residential and nonresidential programs. This structure optimizes the use of our team's deep technical expertise while maintaining consistency and realizing cost efficiencies.

