2025 ANNUAL REPORT FOR ENERGY EFFICIENCY PROGRAMS
PROGRAM YEAR 2024

NMPRC EFFICIENT USE OF ENERGY RULE 17.7.2 NMAC

MAY 30, 2025

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Section I. Executive Summary

Introduction

El Paso Electric Company ("EPE") submits its annual report on the performance of EPE's Energy Efficiency Programs for calendar year 2024 ("2024 Programs"). This Annual Report for Energy Efficiency Programs ("Annual Report") covers the program period from January 1, 2024, through December 31, 2024, and relies on the statewide independent evaluator's report, *Evaluation of the 2024 El Paso Electric Energy Efficiency Programs* ("M&V Report") prepared by EcoMetric Consulting LLC ("EcoMetric"). The M&V Report is included as Attachment A. The programs evaluated in this Annual Report were approved by the New Mexico Public Regulation Commission ("NMPRC" or "Commission") as part of EPE's 2022-2024 Energy Efficiency and Load Management Plan ("EE/LM Plan") in accordance with 17.7.2.8(A) NMAC. The Commission Final Order approving EPE's EE/LM Plan was issued November 30, 2022, in NMPRC Case No. 21-00114-UT. As more fully reported below, EPE's 2024 EE/LM Portfolio achieved cost effectiveness of 1.11 as measured by the Utility Cost Test ("UCT").

Summary of Results

The following 2024 Programs are included in this Annual Report:

- Smart Students Program
- Residential Comprehensive Program
- Residential Lighting Program
- ENERGY STAR® New Homes Program
- Residential Marketplace Program
- Residential Load Management Program
- EnergySaver (Low Income) Program
- Energy$mart (Low Income) Program
- Commercial Comprehensive Program
- SCORE Plus Program
- Commercial Load Management Program

Results are based upon the M&V Report by EcoMetric.

The following is a summary of the overall results[1]:

- EPE's 2024 EE/LM Portfolio achieved cost effectiveness of 1.11 as measured by the UCT.[2] The majority of the 2024 Programs were cost effective.
- The total annual net energy savings were 9,485,156 kilowatt-hours ("kWh") at the customer meter.
- The total 2024 Programs expenditures were $4,650,832.
- The total amount collected through Rate No. 17 – Efficient Use of Energy Recovery Factor ("EUERF") was $5,317,287.

[1] Totals in tables may not tie due to rounding.
[2] A UCT of greater than or equal to one indicates the cost effectiveness of the energy efficiency portfolio or program.

Table 1 shows the total number of participants or units, the verified annual demand and energy savings, the lifetime energy savings, and the total program costs for the 2024 Programs.

Table 1 - Verified 2024 Results Summary

Program	Participants or Units	Annual Savings (kW)**	Annual Savings (kWh)**	Lifetime Savings (kWh)	Total Program Expenses*
Educational Low Income					
Smart Students Program	2,503	10	205,658	1,665,830	$ 138,896
Residential					
Residential Comprehensive Program	726	392	694,380	14,841,426	$ 528,554
Residential Lighting Program***	112,706	140	832,418	7,308,632	$ 439,487
ENERGY STAR New Homes Program	333	84	329,172	5,997,514	$ 341,338
Marketplace Program	794	19	153,744	1,402,119	$ 121,989
Residential Load Management	9,320	3,158	75,905	759,052	$ 315,884
Low Income					
EnergySaver Program	1,431	322	586,766	8,461,583	$ 496,900
Energy$mart Program	1,384	43	83,966	1,082,225	$ 185,313
Commercial					
Commercial Comprehensive Program	90	177	991,549	13,701,540	$ 162,227
SCORE Plus Program	2,507	959	5,526,232	64,659,096	$ 1,768,932
Commercial Load Management	1	539	5,367	5,367	$ 151,313
TOTAL	**131,795**	**5,844**	**9,485,156**	**119,884,383**	**$ 4,650,832**

* Internal administration costs of $211,956 are recovered through base rates and included in the Total Program Expenses of EPE's Commission-approved 2022-2024 Plan.
** Numbers may not tie to EMV Report or foot, due to rounding.
***112,706 bulbs were sold at 6 participating retail locations.

Table 2 presents the 2024 Benefit-Cost Analysis by Program based on the net present value ("NPV") of the 2024 Programs' benefits, expenses, and the program and portfolio UCT ratios. In accordance with the New Mexico Efficient Use of Energy Act ("EUEA") NMSA 1978 Section 62-17-5, EPE's portfolio of programs meets the UCT cost-effectiveness standard.

Table 2 - 2024 Benefit-Cost Analysis by Program

Program	NPV of Benefits (a)	NPV of Expenses (b)	UCT (a ÷ b)
Educational Low Income			
Smart Students Program	$ 50,021	$ 139,508	0.36
Residential			
Residential Comprehensive Program	$ 673,199	$ 574,145	1.17
Residential Lighting Program	$ 264,108	$ 467,736	0.56
ENERGY STAR New Homes Program	$ 208,706	$ 333,007	0.63
Marketplace Program	$ 43,283	$ 30,501	1.42
Residential Load Management Program	$ 388,748	$ 293,938	1.32
Low Income			
EnergySaver Program	$ 651,514	$ 531,983	1.22
Energy$mart Program	$ 95,767	$ 45,569	2.10
Commercial			
Commercial Comprehensive Program	$ 434,360	$ 236,268	1.84
SCORE Plus Program	$ 2,036,820	$ 1,689,019	1.21
Commercial Load Management Program	$ 64,026	$ 95,222	0.67
PORTFOLIO UCT	**$ 4,910,553**	**$ 4,436,895**	**1.11**

*NPV is provided by EcoMetric Consulting, LLC in their independent evaluation results in Attachment A.

2024 Cumulative Program Goals and 2021-2025 Program Goals

Table 3 provides the annual and cumulative energy savings achieved from 2008 through 2024. The EUEA required that EPE achieve cumulative savings of 65,815,596 kWh by 2014, which was equal to five percent (5%) of EPE's 2005 retail sales, and 105,304,953 kWh by 2020, which was equal to eight percent (8%) of EPE's 2005 retail sales. EPE's cumulative energy savings of 72,485,216 kWh through 2014 exceeded the 2014 savings requirement specified in the EUEA. EPE's cumulative energy savings of 163,517,159 through 2020 exceeded the 2020 savings target by approximately 55%.

The 2019 amendment to the EUEA requires that EPE achieve energy savings of not less than five percent (5%) of EPE's 2020 retail sales from its EE and LM programs implemented in years 2021 through 2025. Based on actual 2020 retail sales, EPE programs will have to achieve 78,872,865 kWh or, on average, 15,774,573 kWh of annual savings in the years 2021 through 2025 to meet the 2025 statutory goal.

The 2024 cumulative savings include all annual savings for program years 2008 through 2024, less the expired 2008 through 2011 kWh savings. By the end of 2024, EPE had achieved a total cumulative savings of 191,035,402 kWh.

Table 3 - 2024 Cumulative Energy Savings

Year	Portfolio EUL	Annual kWh Savings	Annual Expired	Cumulative kWh Savings	EUEA Goal
2008	7	**855,912**		855,912	
2009	11	4,667,928		5,523,840	
2010	13	5,169,908		10,693,748	
2011	13	14,728,590		25,422,338	
2012	13	13,537,655		38,959,993	
2013	11	12,832,995		51,792,988	
2014	13	20,692,228		72,485,216	65,815,596
2015	13	15,729,342		88,214,558	
2008 Expired			(855,912)	87,358,646	
2016	13	18,213,422		105,572,068	
2017	14	12,729,242		118,301,310	
2018	14	17,216,718		135,518,028	
2019	13	16,549,072		152,067,100	
2020	16	16,117,987		168,185,087	105,304,953
2009 Expired			(4,667,928)	163,517,159	
2021	17	12,520,086		176,037,245	
2022	12	7,743,502		183,780,747	
2010 Expired			(5,169,908)	178,610,839	
2023	12	17,667,997		196,278,836	
2024	13	9,485,156		205,763,992	
2011 Expired			(14,728,590)	191,035,402	
2025					78,872,865

* The 2025 statutory goal requires that EPE achieve savings of not less than 78,872,865 kWh or about 15,774,573 kWh of annual savings in 2021 through 2025.

Section II. Program Descriptions

Educational Program

Smart Students Program

The Smart Students Program consists of the LivingWise® educational kit and the new FutureWise educational kit. The LivingWise® kit is an effective community outreach tool that teaches fifth grade students to use energy more efficiently in their homes. The FutureWise kit serves as an effective outreach tool that helps high school students learn how to read utility bills, how to save money on energy usage and more. The LivingWise® and FutureWise kits are available at no cost to the teacher, school district or students and improve energy efficiency awareness. The Smart Students Program identifies and enrolls students and teachers; provides them with an educational kit that contains energy saving devices and educational materials. Students install the devices in their home and complete a home energy audit report. AM Conservation Group, Inc. implements and manages this program. In 2024, a total of 2,503 kits were provided to students and teachers with a net savings of 205,658 kWh.

Residential Programs

Residential Comprehensive Program

The Residential Comprehensive Program consists of residential rebates and appliance recycling rebates. Residential rebates are offered for building envelope and weatherization measures to include air infiltration, duct sealing, ceiling and floor insulation, solar screens, evaporative coolers, refrigerated air conditioners, heat pump water heaters, room air conditioners, as well as ENERGY STAR® cool roofs, windows, smart thermostats, solar attic fans, induction cooking, and pool pumps. The rebates are paid directly to the customer, or upon customer approval, can be paid to the contractors that perform the installation. Frontier Energy, Inc. administers the rebate process. EPE promoted this program through various outreach methods including advertising, customer newsletters and targeted outreach to contractors that install these measures. In 2024, a total of 726 rebates were processed with a net savings of 694,380 kWh.

Residential Lighting Program

The Residential Lighting Program provides incentives in the form of markdowns at retail locations. The program encourages customers to replace their existing inefficient light bulbs with more energy efficient Light Emitting Diodes (“LED”) lighting. CLEAResult Consulting, Inc. provides outreach and administration for this program. A total of 16 retail locations participated in this program. EPE promoted the Residential Lighting Program through social media, and point-of-purchase displays in stores. EPE and CLEAResult staff also supported the program by conducting outreach events at various participating retailers.

Pursuant to the Commission’s Final Order in Case No. 18-00116-UT, page 5, paragraph 13, CFLs and halogen lighting were phased out prior to 2019. 100% of the lighting products distributed through the Residential Lighting Program since 2019 were LEDs. EPE’s Residential Lighting Program continues to encourage the use of efficient LED lighting and remains cost effective. A total of 112,706 bulbs were sold and distributed through this program, with a net savings of 832,418 kWh.

ENERGY STAR® New Homes Program

The ENERGY STAR® New Homes Program provides incentives for homebuilders to construct energy efficient homes that exceed 2018 International Energy Conservation Code ("IECC") standards. EPE offered homebuilders two incentive paths depending on which best fits their needs. The Performance Path provides tiered incentive levels for new homes that exceed the current IECC building code goals by ten percent. The Prescriptive Path provides incentives for measures that exceed building code requirements. The installation of a combination of measures includes ENERGY STAR® lighting, refrigerators, radiant barriers, insulation, solar attic fans, induction cooking, pool pumps, and refrigerated air conditioning. ICF, Inc. implements and manages this program. EPE promoted this program through virtual informational training sessions for homebuilders and real estate agents in the area. EPE provided yard signs for homes in the Performance Path, advertising that their homes were more energy efficient than other homes in the area. EPE targeted its marketing efforts through the Las Cruces Home Builders Association and its trade magazine. In 2024, 333 homes participated in this program and had a net savings of 329,172 kWh.

Marketplace Program

The Marketplace Program provides eligible residential customers instant rebates through an online marketplace for installing energy efficiency measures. The EPE Marketplace will offer customers a variety of energy-efficient products including smart thermostats, lighting products, window air conditioners, air purifiers, energy saving kits, and advanced power strips. Uplight implements and manages this program. Residential customers are informed of products and promotions through social media, direct email marketing, and the monthly El Paso Electric Customer Newsletter. In 2024, 794 participants had a net savings of 153,744 kwh.

Residential Load Management Program

The Residential Load Management Program provides incentives to participating residential customers that provide voluntary load curtailment during the peak demand season of June 1 through September 30. EPE has the capability of remotely adjusting participating customers' internet-enabled smart thermostats during load management events to relieve peak load. Customers receive a $25 incentive for the purchase and enrollment of a new internet enabled smart thermostat or for registering an existing qualifying unit. Customers may also receive an additional $50 rebate for the purchase and enrollment of a new internet enabled smart thermostat through EPE's Online Marketplace. EPE and Uplight, Inc., the program implementer, targeted customers through online advertisements, email, direct mail, and social media. There were 9,320 units that participated in the load management season with a net savings of 75,905 kWh and 3,158 kW.

The times and durations of the residential load curtailment events are shown in Table 4.

Table 4 - Residential Load Management Events

Event Date	Start Time	End Time	Duration (Hr)
6/7/2024	4:00 PM	6:00 PM	2.0
6/13/2024	4:00 PM	6:00 PM	2.0
6/26/2024	4:00 PM	6:00 PM	2.0
7/9/2024	4:00 PM	6:00 PM	2.0
7/25/2024	4:00 PM	6:00 PM	2.0
7/30/2024	4:00 PM	6:00 PM	2.0
8/1/2024	4:00 PM	6:00 PM	2.0
8/8/2024	4:00 PM	6:00 PM	2.0
8/16/2024	4:00 PM	6:00 PM	2.0
8/20/2024	4:00 PM	6:00 PM	2.0
8/21/2024	4:00 PM	6:00 PM	2.0
11	**Events in 2024**		**22.0**

Low Income Programs

EnergySaver Program

The EnergySaver Program offers income-qualified customers a variety of energy efficiency measures at no cost. Qualification for the Program is based on an annual household income at or below 200 percent of the federal poverty guidelines. Frontier Energy, Inc. administered and tracked the results of this program, and EnergyWorks identified customers and implemented the direct installs. Homes with refrigerated air conditioning qualified for LEDs, ceiling insulation, air infiltration, duct sealing, advanced power strips and smart thermostats. Homes with evaporative coolers qualified for LEDs, advanced power strips and installation of a high-efficiency evaporative cooler replacement. In 2024, EPE continued to expand our efforts to help low-income customers by installing 126 evaporative coolers. Of those homes eligible for an evaporative cooler upgrade that had natural gas heat, ceiling insulation was also added. Homes with electric water heaters also qualified for low flow kitchen and bathroom faucet aerators, low-flow showerheads, and water heater pipe and tank insulation. Advanced power strips, smart thermostats and evaporative cooler upgrades, water heater pipe and tank insulation were measures added in 2019. El Paso Electric collaborates with a variety of community organizations, church groups, and low-income service providers, and continued to combine energy efficiency services with other utilities, when possible, to provide customers a more comprehensive whole-home approach to energy efficiency. EPE promoted this program through outreach utilizing referrals, advertising, and customer newsletters. EPE and EnergyWorks also targeted customers through educational events at various Community Senior Centers. The EnergySaver Program had 1,431 participants and had a net savings of 586,766 kWh.

The results are shown in Table 5.

Table 5 - 2024 NM EnergySaver Program Summary

	Unique Home Count	Home Count*	Measure Count **	Expected Gross kW Savings***	Expected Gross kWh Savings***
Building Envelope (Evap. Coolers, Insulation, Air Infiltration, Duct Efficiency)		184	184	318.377	515,516.83
Water Heating (Low Flow Showerheads, Aerators, Pipe Wrap, Water Heater Jackets)		186	222	2.150	34,526.60
LED Lighting		125	875	3.595	26,678.18
Small Energy Devices (Advanced Power Strips, Smart Thermostats)		138	150	0.721	12,847.89
Total	**170**	**633**	**1,431**	**325**	**589,570**

* Home Count - Homes may have multiple measures installed and thus counted more than once in this sum.
** Measure Count - Number of units based on measure type, i.e., individual bulbs, aerators, showerheads, etc. Ceiling insulation count = sq. ft. insulated, pipe wrap count = total feet of pipe wrapped.
*** Reference the M&V Report in Attachment A.

Energy$mart Program

The Energy$mart Program provides income-qualified customers energy efficiency measures for both single family homes and multi-family homes. NM Mortgage Finance Authority (“MFA”), a self-supporting quasi-governmental entity, implements and manages this program. MFA can access additional funding for our New Mexico community, leveraging federal incentives, tax credits and deductions, and energy financing to help pay for more expensive retrofits. The program had 1,384 participants and had a net savings of 83,966 kWh.

Commercial Programs

Commercial Comprehensive Program

The Commercial Comprehensive Program provides energy efficiency incentives and rebates for commercial customers whose annual average of monthly peak demand is up to and including 100 kilowatts (“kW”). Incentives and rebates are offered for lighting, lighting controls, heating, ventilation, and air conditioning (“HVAC”), HVAC controls, and more, as well as custom projects. Frontier Energy, Inc. implements the program, administers the incentive and rebate process, and tracks the results of the program. EPE advertised the Commercial Comprehensive Program through television, print, digital, and business events. To further promote this program, EPE and Frontier Energy, Inc. reached out to electrical and HVAC contractors and distributors, and property managers. A program kick-off meeting was organized to provide interested participants with program information. EPE’s Commercial Comprehensive Program continues to encourage the use of efficient LED lighting and remains cost effective. The Commercial Comprehensive Program had 90 participants and had a net savings of 991,549 kWh.

Table 6 shows the participation rates for each type of light in the Commercial Comprehensive program.

Table 6 - 2024 Commercial Comprehensive Lighting Participation Rates

Fixture Type	Expected Gross kWh Savings*	%
Halogen	0	0.0%
High Intensity Discharge (HID)	0	0.0%
Integrated-ballast CFL Lamps	0	0.0%
Integrated-ballast CCFL Lamps	0	0.0%
Modular CFL and CCFL Fixtures	0	0.0%
Integrated-ballast LED Lamps	78,803	11.6%
Light Emitting Diode (LED)	599,901	88.1%
Light Emitting Diode (LED) Fixtures	411,201	
Light Emitting Diode (LED) Tubes	188,700	
Linear Fluorescent	0	0.0%
Lighting Controls	2,247	0.3%
Total	**680,951**	**100.0%**

* Expected Gross kWh savings are only for the lighting and controls components of the Program.

SCORE Plus Program

The SCORE Plus Program offers customer incentives, technical support, and outreach services to commercial customers with an annual average of monthly peak demand greater than 100 kW, as well as schools and government facilities, regardless of their average demand. This program offers incentives for a range of energy efficiency measures including lighting, lighting controls, HVAC upgrades, HVAC controls, and more, as well as custom projects. CLEAResult Consulting, Inc. actively recruits eligible customers and identifies energy efficiency improvements that could be made to their facilities. CLEAResult also assisted customers in the program application process. EPE promoted this program through direct customer and contractor contact. In 2024, the SCORE Plus Program had a total of 2,507 participants and had net energy savings of 5,526,232 kWh through various energy efficiency measures.

Commercial Load Management Program

The Commercial Load Management Program provides incentives to participating commercial customers that provide voluntary load curtailment during the peak demand season of June 1 through September 30. Incentives are based on verified demand savings that customers achieve for participating in load management events called by EPE. Trane U.S. Inc. actively recruits eligible customers and provides a detailed evaluation of building operations to estimate optimal load shedding options, installation and integration of controls as needed, enabling real-time energy use monitoring. Trane calculates and verifies demand savings and dispenses incentive payments. An enrolled participant elected to opt out of the EPE load management season due to equipment failure for the second consecutive year. The 2024 load management season had one participant with five sites that had net savings of 5,367 kWh and a total demand reduction of 539 kW.

The times and durations of the load curtailment events are shown in Table 7.

Table 7 - Commercial Load Management Events

Event Date	Start Time	End Time	Duration (Hr)
6/13/2024	4:00 PM	6:00 PM	2.0
6/26/2024	4:00 PM	6:00 PM	2.0
7/1/2024	4:00 PM	6:00 PM	2.0
7/30/2024	4:00 PM	6:00 PM	2.0
8/1/2024	4:00 PM	6:00 PM	2.0
8/8/2024	3:00 PM	5:00 PM	2.0
8/16/2024	4:00 PM	6:00 PM	2.0
8/20/2024	4:00 PM	6:00 PM	2.0
8/21/2024	4:00 PM	6:00 PM	2.0
9	**Events in 2024**		**18.0**

Section III. Energy Efficiency Rule Reporting Requirements

Section III of the Annual Report provides program information to comply with the EUEA as required by the NMPRC Energy Efficiency Rule 17.7.2.14.

Documentation of Program Expenditures

Table 8 shows the 2024 expenses by program. The Commission approved EPE's 2024 Program budget in accordance with 17.7.2.8(A) NMAC. All 2024 Program expenses were tracked through a unique work order number. Likewise, all revenue collected through EPE's EUERF was booked to a separate work order number. The total 2024 program expenses were $4,650,832 of the approved $6,510,060 budget (not including an underage amount of $1,917,236) or about 71% percent of the budget.

Table 8 - 2024 Program Expenditures

Programs	Administration*	Marketing and R&D	M&V	Customer Incentives	Total Program Expenses
Educational Low Income					
Smart Students Program	$ 27,943	$ 12,027	$ 7,150	$ 91,776	$ 138,896
Residential		$ 0			
Residential Comprehensive Progran	$ 187,064	$ 37,017	$ 22,006	$ 282,466	$ 528,554
Residential Lighting Program	$ 191,819	$ 26,847	$ 15,960	$ 204,861	$ 439,487
ENERGY STAR New Homes Program	$ 179,682	$ 17,523	$ 10,417	$ 133,715	$ 341,338
Marketplace Program	$ 97,794	$ 2,623	$ 1,559	$ 20,013	$ 121,989
Residential Load Management	$ 166,306	$ 16,214	$ 9,639	$ 123,725	$ 315,884
Low Income	$ 0	$ 0			
EnergySaver Program	$ 144,559	$ 17,610	$ 10,469	$ 324,262	$ 496,900
Energy$mart Program	$ 89,600	$ 42,494	$ 25,262	$ 27,956	$ 185,313
Commercial	$ 0	$ 0			
Commercial Comprehensive	$ 22,006	$ 3,664	$ 2,178	$ 134,379	$ 162,227
SCORE Plus Program	$ 811,099	$ 103,828	$ 61,724	$ 792,281	$ 1,768,932
Commercial Load Management	$ 126,759	$ 2,662	$ 1,582	$ 20,310	$ 151,313
TOTAL	**$ 2,044,633**	**$ 282,509**	**$ 167,946**	**$ 2,155,743**	**$ 4,650,832**

* Administration includes EPE's internal administration costs of $211,955.51 recovered through base rates, therefore those costs are not Recovered in Rate No. 17 – EUERF.

Table 9 shows the breakdown of customer incentives by rate class.

Table 9 - Customer Incentives by Rate Class

Program	Residential NMRT01	Small Commercial NMRT03	General Service NMRT04	City and County NMRT07	Large Power NMRT09	State University NMRT26	Total Participant Incentives
Educational Low Income							
Smart Students Program	$ 91,776	$ -	$ -	$ -	$ -	$ -	$ 91,776
Residential							
Residential Comprehensive Program	$ 282,466	$ -	$ -	$ -	$ -	$ -	$ 282,466
Residential Lighting Program	$ 204,861	$ -	$ -	$ -	$ -	$ -	$ 204,861
ENERGY STAR New Homes Program	$ 133,715	$ -	$ -	$ -	$ -	$ -	$ 133,715
Residential Marketplace	$ 20,013	$ -	$ -	$ -	$ -	$ -	$ 20,013
Residential Load Management	$ 123,725	$ -	$ -	$ -	$ -	$ -	$ 123,725
Low Income							
EnergySaver Program	$ 324,262	$ -	$ -	$ -	$ -	$ -	$ 324,262
Energy$mart Program	$ 27,956	$ -	$ -	$ -	$ -	$ -	$ 27,956
Commercial							
Commercial Comprehensive	$ -	$ 126,200	$ 8,179	$ -	$ -	$ -	$ 134,379
SCORE Plus Program	$ -	$ 165,565	$ 279,011	$ 154,206	$ 193,105	$ 394	$ 792,281
Commercial Load Management	$ -	$ -	$ -	$ 20,310	$ 0	$ -	$ 20,310
TOTAL	**$ 1,208,773**	**$ 291,765**	**$ 287,190**	**$ 174,516**	**$ 193,105**	**$ 394**	**$ 2,155,743**

EPE did not make any adjustments to expenditures in plan year 2024. Table 10 shows the budgeted amounts, the program expenditures, and the variances for each program during 2024. The variances in individual program costs from the budgeted amounts were primarily due to customer participation being lower or higher than projected.

Table 10 - Budget Variances

Program	2024 Approved Budget	2024 Actual Expenses	Variance %
Educational Low Income			
Smart Students Program	$ 134,880	$ 138,896	3%
Residential			
Residential Comprehensive Program	$ 1,093,570	$ 528,554	-52%
Residential Lighting Program	$ 414,502	$ 439,487	6%
ENERGY STAR New Homes Program	$ 404,298	$ 341,338	-16%
Marketplace Program	$ 240,869	$ 121,989	-49%
Residential Load Management	$ 414,236	$ 315,884	-24%
Low Income			
EnergySaver Program	$ 859,291	$ 496,900	-42%
Energy$mart Program	$ 479,065	$ 185,313	-61%
Commercial			
Commercial Comprehensive Program	$ 501,453	$ 162,227	-68%
SCORE Plus Program	$ 1,599,804	$ 1,768,932	11%
Commercial Load Management Program	$ 368,091	$ 151,313	-59%
TOTAL	**$ 6,510,060**	**$ 4,650,832**	**-29%**

Estimated and Actual Customer Participation and Savings Levels

Table 11 presents the estimated and actual customer participation levels, annual energy savings, and annual peak demand savings for each program.

Table 11 - Estimated vs. Actual

Program	Estimated Participants or Units	Actual Participants or Units	Estimated Savings (kWh)	Actual Savings (kWh)	Estimated Savings (kW)	Actual Savings (kW)
Educational Low Income						
Smart Students Program	5,000	2,503	1,787,089	205,658	306	10
Residential Comprehensive Program	2,046	726	2,845,595	694,380	1,582	392
Residential Lighting Program	145,189	112,706	3,746,692	832,418	636	140
ENERGY STAR New Homes Program	490	333	510,271	329,172	238	84
Marketplace Program	10,910	794	947,495	153,744	143	19
Residential Load Management	6,797	9,320	443,859	75,905	5,489	3,158
EnergySaver Program*	1712	1,431	1,823,689	586,766	806	322
Energy$mart Program	150	1,384	961,229	83,966	384	43
Commercial Comprehensive Program	225	90	2,298,176	991,549	325	177
SCORE Plus Program	102	2,507	6,630,633	5,526,232	1,039	959
Commercial Load Management	10	1	80,559	5,367	4,056	539
TOTAL	**172,631**	**131,795**	**22,075,287**	**9,485,156**	**15,005**	**5,844**

* NM EnergySaver Program Estimated Participants or Units = Home count. Homes may have multiple measures installed and thus counted more than once in this sum.

Estimated and Actual Costs (Expenses) and Avoided Costs (Benefits)

Table 12 presents the net present value of estimated and actual monetary expenses and benefits for each program.

Table 12 - Estimated and Actual Costs (Expenses) and Avoided Costs (Benefits)

	Estimated NPV of Monetary Costs	Actual NPV of Monetary Costs	Estimated NPV of Monetary Benefits	Actual NPV of Monetary Benefits
Educational Low Income				
Smart Students Program	$ 134,880	$ 139,508	$ 150,496	$ 50,021
Residential				
Residential Comprehensive Program	$ 1,093,570	$ 574,145	$ 2,149,735	$ 673,199
Residential Lighting Program	$ 414,502	$ 467,736	$ 1,503,781	$ 264,108
ENERGY STAR New Homes Program	$ 404,298	$ 333,007	$ 427,042	$ 208,706
Marketplace Program	$ 240,869	$ 30,501	$ 320,115	$ 43,283
Residential Load Management	$ 414,236	$ 293,938	$ 659,821	$ 388,748
Low Income				
EnergySaver Program	$ 859,291	$ 531,983	$ 1,246,785	$ 651,514
Energy$mart Program	$ 479,065	$ 45,569	$ 749,675	$ 95,767
Commercial				
Commercial Comprehensive Program	$ 501,453	$ 236,268	$ 718,613	$ 434,360
SCORE Plus Program	$ 1,599,804	$ 1,689,019	$ 1,813,634	$ 2,036,820
Commercial Load Management	$ 368,091	$ 95,222	$ 445,493	$ 64,026
TOTAL	**$ 6,510,060**	**$ 4,436,895**	**$ 10,185,190**	**$ 4,910,553**

Cost Effectiveness Evaluation

Table 13 presents the UCT for each program for 2024. The UCT of the total portfolio of programs was 1.11. A UCT of greater than one indicates the cost effectiveness of the energy efficiency portfolio or program. UCTs are based on the weighted average cost of capital and avoided costs authorized by the Commission's Final Order in Case No. 21-00114-UT. EPE's 2024 total portfolio of programs passed cost effectiveness.

Table 13 - Cost Effectiveness by Program

Program	UCT
Educational Low Income	
Smart Students Program	0.36
Residential	
Residential Comprehensive Program	1.17
Residential Lighting Program	0.56
ENERGY STAR New Homes Program	0.63
Marketplace Program	1.42
Residential Load Management	1.32
Low Income	
EnergySaver Program	1.22
Energy$mart Program	2.10
Commercial	
Commercial Comprehensive Program	1.84
SCORE Plus Program	1.21
Commercial Load Management	0.67
PORTFOLIO UCT	**1.11**

Self-Directed Program Participation

EPE did not receive any applications for customer self-directed programs in 2024.

Independent Measurement and Verification Report

The statewide independent evaluator, EcoMetric, was selected by the NMPRC. EPE contracted with EcoMetric to conduct the independent evaluation of its 2024 Programs. The M&V Report is included as Attachment A to this report and includes:

- Documentation of expenses at both the individual and total portfolio program levels
- Measured and verified energy and demand savings
- Cost-effectiveness of all 2024 Programs
- Deemed savings and other assumptions used by EcoMetric; and
- Description of the M&V process used by EcoMetric

Program Expenditures Not Covered in the Independent M&V Report

All program-related expenditures are included in the M&V Report.

Annual Economic Benefits by Program

Table 14 presents the annual and lifetime energy savings, estimated useful life ("EUL"), and annual economic benefits for the 2024 Programs. The average EUL is calculated by dividing the total lifetime energy savings by the annual energy savings, resulting in an average estimate of how long measures will continue to provide savings.

Table 14 - Annual Economic Benefits

Program	Annual Energy Savings (kWh)	Lifetime Energy Savings (kWh)	Estimated Useful Life	Annual Benefits
Educational Low Income				
Smart Students Program	205,658	1,665,830	8	$ 6,175
Residential				
Residential Comprehensive Program	694,380	14,841,426	21	$ 31,497
Residential Lighting Program	832,418	7,308,632	9	$ 30,081
ENERGY STAR New Homes Program	329,172	5,997,514	18	$ 11,455
Marketplace Program	153,744	1,402,119	9	$ 4,769
Residential Load Management	75,905	759,052	10	$ 38,875
Low Income				
EnergySaver Program	586,766	8,461,583	14	$ 45,179
Energy$mart Program	83,966	1,082,225	13	$ 7,430
Commercial				
Commercial Comprehensive Program	991,549	13,701,540	14	$ 31,434
SCORE Plus Program	5,526,232	64,659,096	12	$ 174,081
Commercial Load Management	5,367	5,367	1	$ 64,026
TOTAL	**9,485,156**	**119,884,383**		**$ 388,519**

Non-Energy Benefits

Table 15 shows the estimated emissions savings, and Table 16 shows the estimated water savings associated with the 2024 Programs. The annual and lifetime avoided emissions are determined by multiplying the emission rates times the annual and lifetime megawatt-hours ("MWh") saved. The water savings are determined by multiplying EPE's average portfolio water consumption per MWh times the annual and lifetime energy savings.

Table 15 - Emissions Savings

Emission Type	Avoided Electric Emmision Rate (lbs/MWh)	Annual Avoided Emissions (tons)	Lifetime Avoided Emissions (tons)
SO_2	0.0050	0.02	0.30
NO_X	0.88	4.21	52.81
CO_2	959	4,586	57,495
Particles	0.0758	0.36	4.54

Table 16 - Water Savings

Water Impact	EPE Portfolio Water Consumption (gal/MWh)	Annual Water Saved (gal)	Lifetime Water Saved (gal)
Water Saved	387.0	3,700,933	46,398,552

Tariff Reconciliation

Table 17 presents the calculation for EPE's 2024 tariff reconciliation based on the 2024 program expenditures plus the approved 2024 utility incentive, less EPE's internal administration costs, and less the cost recovery through EPE's EUERF from January through December 2024. The costs recovered through the EUERF are not recovered through EPE's base rates.

EPE's 2024 utility incentive is based on its program costs and satisfactory program performance. Utilizing the sliding scale utility incentive approved by the Final Order (with modification to use the 7.18 percent WACC approved in EPE's last general rate case and to accept Staff's suggested sliding scale Utility Incentive Mechanism with a baseline incentive of 6.6 percent of program costs for verified annual savings of at least 16 gigawatt-hours ("GWh") with an adder incentive of 0.075 percent for each 1.0 GWh of additional energy savings, up to a maximum of 7.18 percent). EPE did not earn a utility incentive for its verified annual energy savings of 9.49 GWh.

Table 17 - Energy Efficiency Historical (Underage)/Overage Recovery

Description	Total Program Expenses	6.675% Utility Incentive	Internal Admin Costs Recovered Through Base Rates	EUERF Recovery	(Underage)/ Overage
Beg. Bal. (PY2021-2023)					$ (1,917,236)
2024 Energy Efficiency Activity	$ 4,650,832	$ 0	$ 211,956	$ 5,317,287	$ (2,795,647)
Ending Balance					**$ (2,795,647)**

EPE's beginning balance originated from an underage of ($1,917,236) due to activities from Program Years 2021 to 2023. The total program expenses ($4,650,832 + $0 utility incentive = $4,650,832) was less than the revenues collected ($211,956 + $5,317,287 = $5,529,243) in 2024, resulting in a cumulative underage amount of $2,795,647.

Table 18 presents the month-by-month reconciliation of EPE's tariff reconciliation.

Table 18 - EPE Tariff Reconciliation

Month	Total Program Expenses	Utility Incentive	Internal Admin Costs Recovered Through Base Rates	EUERF Recovery	(Underage)/ Overage of Expenses
Beg. Bal. (PY2021-2023)					(1,917,236)
Jan 2023	$ 42,500	$ 0	$ 17,663	$ 387,519	(2,279,918)
Feb 2023	$ 128,001	$ 0	$ 17,663	$ 337,204	(2,506,784)
Mar 2023	$ 137,599	$ 0	$ 17,663	$ 272,320	(2,659,168)
Apr 2023	$ 231,464	$ 0	$ 17,663	$ 269,135	(2,714,502)
May 2023	$ 398,248	$ 0	$ 17,663	$ 273,865	(2,607,783)
Jun 2023	$ 478,567	$ 0	$ 17,663	$ 546,336	(2,693,214)
Jul 2023	$ 311,147	$ 0	$ 17,663	$ 753,798	(3,153,530)
Aug 2023	$ 292,727	$ 0	$ 17,663	$ 787,716	(3,666,182)
Sep 2023	$ 599,723	$ 0	$ 17,663	$ 714,865	(3,798,987)
Oct 2023	$ 217,589	$ 0	$ 17,663	$ 383,553	(3,982,614)
Nov 2023	$ 509,696	$ 0	$ 17,663	$ 304,416	(3,794,995)
Dec 2023	$ 1,091,615	$ 0	$ 17,663	$ 286,560	(3,007,604)
Total	**$ 4,438,876**	**$ 0**	**$ 211,956**	**$ 5,317,287**	

Estimated Program Expenditures Expected in 2025

Table 19 shows estimated program expenditures for 2025. EPE's Program Year 2025 budget of $6,794,712 was approved in NMPRC Case No. 24-00154-UT.

Table 19 - Estimated Program Expenditures Expected in 2025

2025 Program	Budget
Educational	
Smart Students Program	$134,880
Residential	
Residential Comprehensive Program	$ 924,705
Residential Lighting Program	$ 414,502
ENERGY STAR New Homes Program	$ 537,642
Marketplace Program	$ 220,223
Residential Load Management	$ 452,830
Low Income	
EnergySaver Program	$ 886,248
Energy$mart Program	$ 452,108
Commercial	
Commercial Comprehensive Program	$ 460,099
SCORE Plus Program	$ 1,988,690
Commercial Load Management	$ 322,784
TOTAL	**$ 6,794,712**

Attachment A

PY2024 EVALUATION OF ENERGY EFFICIENCY PROGRAMS

EL PASO ELECTRIC

Date:	May 27, 2025
Prepared for:	El Paso Electric
Prepared by:	EcoMetric Consulting LLC

EcoMetric

Evergreen Economics

Demand Side Analytics
DATA DRIVEN RESEARCH AND INSIGHTS

ACKNOWLEDGEMENTS

The Evaluation team would like to acknowledge the many talented individuals who contributed to this evaluation, measurement, and verification (EM&V) report for El Paso Electric's portfolio of energy efficiency and load management programs.

The EPE's staff participated in ongoing evaluation deliverable reviews and discussions, attended regular meetings, and responded to follow-up questions, data requests and document requests. They are an ongoing partner in our evaluation efforts. We also wish to thank the implementation teams, and their staff, for their insights and information.

Additionally, we would like the evaluation staff who supported the creation of this report.

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ABBREVIATIONS

DLC	DesignLights Consortium
DR	Demand Response
EER	Energy Efficiency Ratio
EM&V	Evaluation, Measurement, and Verification
EPE	El Paso Electric
HSPF	Heating Seasonal Performance Factor
HVAC	Heating, Ventilation, and Air Conditioning
ISR	In-Service Rate
kW	Kilowatt (unit of power)
kWh	Kilowatt-hour (unit of energy)
NEAT	National Energy Audit Tool (used for estimating savings in weatherization)
NM TRM	New Mexico Technical Reference Manual
NTG	Net-to-Gross
PNM	Public Service Company of New Mexico (referenced for TRM methodology hierarchy)
PY2024	Program Year 2024
RCx	Retro-Commissioning
SEER	Seasonal Energy Efficiency Ratio
SEM	Strategic Energy Management
TRM	Technical Reference Manual

Gross and Net Impact Evaluation Research Objectives

- Verify total energy savings (kWh) and demand reductions (kW).
- Assess effectiveness of data tracking and ex-ante savings.
- Estimate net-to-gross ratios and realized savings.
- Assess opportunities to update deemed savings values.

Impact Evaluation Findings and Recommendations

Gross Key Findings	Recommendations
Deviating from the assumptions and methodologies in the NM TRM led to misalignment with evaluated savings	Savings algorithms and assumptions should **reference the TRM, unless M&V data is provided to develop custom inputs for measures with varied load**
Realized savings varied due to **inconsistency with units, and lack of documented support for custom inputs**	**Custom inputs should be supported by consistent documentation** such as customer email records, site observations, or schedules
The use of incandescent equivalent wattages led to deviations in savings estimates, notably for reflector bulbs	**Baseline wattages should be reported based on EISA specification** for installations after January 1, 2024
Agricultural lighting measures were based on inputs for the flowering stage instead of considering each unique stage	Agricultural lighting savings should be calculated using **inputs for each growth stage (flowering, vegetative, etc)**
Some lighting measures included the installation **non-qualified fixtures**	Savings should only be claimed for **qualified fixtures**, unless alternate support is provided

Net Key Findings
For programs directed to low-income customers, findings indicate that **services would not be available if not for the program contractors.** A NTG ratio of 1 was applied to all low-income programs for this reason, similar to the previous evaluation
The NTG ratio for the Home Lighting and Recycling program dropped from the previous study as **the price elasticity model (as price goes down demand goes up) suggests the standard bulbs are elastic and specialty are inelastic.**
The **NTG ratio for the Residential Comprehensive program increased** from the previous study as the measure of **free-ridership decreased**

Process Evaluation Research Objectives

- Identify insights into the effectiveness of marketing and outreach efforts to provide decision makers with information about improving energy efficiency
- Assess how to enhance program delivery to maximize participation to achieve program goals
- Assess drivers and barriers to customer participation.
- Develop near-term and long-term strategies to improve program delivery

Process Evaluation Research Findings and Recommendation

Successes Key Findings

- **Word of mouth and contractor influence drive awareness,** surpassing formal marketing channels
- **Contractors effectively communicate EPE's sponsorship and receive high satisfaction ratings,** reinforcing their role as essential program ambassadors

Opportunities for Outreach Key Findings	Recommendation
Utility led marketing efforts including mailing and online channels drive awareness	Continue to invest in **direct mailings and digital marketing**
9% of respondents reported **dissatisfaction with EPE as an energy provider**	**Leverage the positive experience of the Residential Marketplace program** to enhance utility-customer relationship
Home comfort, energy savings, and equipment reliability are strong motivators	**Emphasize practical benefits** in program marketing materials

Barriers Key Findings

- **Contractors struggle to identify new customer segments for program marketing,** indicating a need for improved outreach strategies
- While overall program satisfaction is high, only **62% of participants were satisfied with the rebate amount**

Cost-Effectiveness Evaluation Findings and Recommendation

Key Findings

- A total of 119,884 MWh in ex-post net lifetime savings and a portfolio EUL of 13 years.

E.1 EVALUATION OVERVIEW

This report presents the independent evaluation results for El Paso Electric's (EPE) energy efficiency programs for program year 2024 (PY) 2024. To accomplish this, EPE contracted with EcoMetric Consulting, Evergreen Economics, Demand Side Analytics, and MDC Research (herein referred to as 'the Evaluation team'). The team roles are as follows:

- EcoMetric was the prime contractor and managed all evaluation tasks and deliverables.
- EcoMetric provided engineering capabilities and led the review of EPE's savings estimates.
- Evergreen Economics conducted the process evaluation and conducted phone surveys.
- Demand Side Analytics conducted an impact evaluation of the load management programs.
- MDC fielded all the phone surveys that Evergreen did not complete.

The table below outlines an overview of the evaluation in PY2024.

Table 1-1 PY2024 Program Evaluation Summary

Sector	Program	Impact	Process	NTG Research
Residential	NM Energy Saver (LI)	✓	✓	
	Residential Lighting	✓	✓	✓
	Residential Comprehensive		✓	✓
	Residential Load Management	✓		
	Energy$mart (LI)	✓		
	Residential Marketplace		✓	✓
Commercial	Commercial Comprehensive	✓		
	SCORE Plus	✓		
	Commercial Load Management	✓		

For each of the evaluated programs, the Evaluation team estimated realized gross and net impacts (kWh and kW) and calculated program cost effectiveness using the UCT. Brief process evaluations were also conducted for the Residential Comprehensive, Residential Lighting, Residential Marketplace and NM Energy Saver (LI) programs. A summary of the analysis methods for each of the PY2024 programs that were evaluated is included in the section below.

E.2 SAVINGS RESULT

The Evaluation team compared the verified savings (ex-post) to the EPE program claimed savings (ex-ante) to determine the realization rate (RR) which we portray as the Engineering Adjustment Factor calculated as the

ratio between verified and estimated savings. Each realization rate is a percentage showing how accurately the program estimated the savings. Projects or measures with a realization rate above 100% indicate that the customer is achieving more savings than initially predicted by EPE. Conversely, those projects with a realization rate of less than 100% show that customers did not realize the estimated savings amounts. The kilowatt-hour savings results of the PY2024 impact evaluation are shown in the table below, with the programs evaluated in 2024 bolded.

Table 1-2 PY2024 Savings Summary – kWh

Program	Sub-Program	# of Projects	Expected Gross kWh Savings	Engineering Adjustment Factor	Realized Gross kWh Savings	NTG Ratio	Realized Net kWh Savings
Smart Students		2,503	205,658	100	205,658	100.00%	205,658
ENERGY STAR New Homes		333	464,735	100	464,735	70.83%	329,172
Residential Marketplace	Lighting	518	104,828	100	104,828	67.00%	70,235
	Non-Lighting	276	121,028	100	121,028	69.00%	83,509
Commercial Comprehensive		90	1,221,196	99.6%	1,215,729	81.56%	991,549
SCORE Plus		2,507	6,824,077	110%	7,503,370	73.65%	5,526,232
Commercial Load Management		1	9,115	100	9,115	100.00%	9,115
Residential Load Management		9,320	149,458	100	149,458	100.00%	149,458
Residential Comprehensive		726	1,259,303	100	1,259,303	55.14%	694,380
Residential Lighting		112,706	1,594,501	87%	1,387,363	60.00%	832,418
NM Energy Saver LI		1,431	589,570	99.5%	586,766	100.00%	586,766
Energy$mart LI		1,384	82,237	102%	83,965	100.00%	83,965
Total			10,311,581	104%	13,091,319	73.04%	9,562,456

Similarly, the Evaluation team compared the verified kilowatt (kW) savings to EPE's claimed kW savings to determine the RR, represented as the Engineering Adjustment Factor, for the kilowatt savings. An RR above 100% indicates greater-than-expected savings, while an RR below 100% suggests lower-than-expected savings. The table below presents the PY2024 impact evaluation kW savings results, with evaluated programs in PY2024 bolded.

Table 1-3 PY2024 Savings Summary – kW

Program	Sub-Program	# of Projects	Expected Gross kW Savings	Engineering Adjustment Factor	Realized Gross kW Savings	NTG Ratio	Realized Net kW Savings
Smart Students		2,503	9.97	100%	10.0	100.00%	10.0
ENERGY STAR New Homes		333	118.9	100%	118.9	70.83%	84.2
Residential Marketplace	Lighting	518	17.4	100%	17.4	67.00%	11.6
	Non-Lighting	276	10.3	100%	10.3	69.00%	7.1
Commercial Comprehensive		90	207.4	105%	216.8	81.56%	176.8
SCORE Plus		2,507	1,280.5	102%	1,302.7	73.65%	959.4
Commercial Load Management		1	507.7	100%	507.7	100.00%	507.7
Residential Load Management		9,320	4,039.2	100%	4,039.2	100.00%	4,039.2
Residential Comprehensive		726	710.4	100%	710.4	55.14%	391.7
Residential Lighting		112,706	268.9	87%	234.0	60.00%	140.4
NM Energy Saver LI		1,431	325.0	99.2%	322.3	100.00%	322.3
Energy$mart LI		1,384	98.5	44%	43.3	100.00%	43.3
Total			7,594.1	99%	7,532.9	88.86%	6,693.8

The impact evaluation, which included engineering desk reviews for a sample of Commercial Comprehensive, SCORE Plus, and Energy$mart (LI) projects, and a review of deemed savings values for Residential Lighting, NM Energy Saver (LI), and SCORE Plus resulted in engineering adjustment factors that varied from 1.000 for realized gross savings. Adjustments to savings based on the Commercial Comprehensive, and SCORE Plus desk reviews resulted in minor changes at the program or portfolio level.

The process evaluation activities included phone surveys with NM Energy Saver (LI), Residential Comprehensive, and Residential Marketplace participants and interviews with one NM Energy Saver (LI) participating contractor. Based on the data collection and analysis conducted for this evaluation, the Evaluation team found that overall, EPE is operating programs that are resulting in energy and demand savings and satisfied participants.

1 Introduction

The EPE programs and evaluation requirements were first established in 2005 by the New Mexico legislature's passage of the 2005 Efficient Use of Energy Act (EUEA).[1] The EUEA requires public utilities in New Mexico, in collaboration with other parties, to develop cost-effective programs that reduce energy demand and consumption. Utilities are required to submit their proposed portfolio of programs to the New Mexico Public Regulation Commission (NMPRC) for approval. As a part of its approval process, the NMPRC must find that the program portfolio is cost effective based on the Utility Cost Test (UCT).

An additional requirement of the EUEA is that each program must be evaluated at least once every three years. As part of the evaluation requirement, EPE must submit to the NMPRC a comprehensive evaluation report prepared by an independent program evaluator. As part of the reporting process, the evaluator must measure and verify energy and demand savings, determine program cost effectiveness, assess how well the programs are being implemented, and provide recommendations for program improvements as needed.

1.1 GROSS IMPACT RESULTS

The following report outlines El Paso Electric's (EPE) Program Year (PY) 2024 Preliminary Evaluation Results and Findings. The intention of this memo is to provide EPE with early findings to help improve energy efficiency programs in PY2025 and beyond. The PY2024 results are derived from evaluated projects sample chosen from projects completed in the calendar year of 2024.

The impact evaluation primarily involves engineering desk reviews of a stratified sample of projects, designed to encompass diverse measure types and energy savings levels. The Evaluation team verified gross realized impacts through engineering desk reviews. The team primarily reviewed EPE's Excel-based calculators to estimate savings for lighting, refrigeration, HVAC and many other types of

[1] NMSA §§ 62-17-1 et seq (SB 644). Per the New Mexico Public Regulation Commission Rule Pursuant to the requirements of the EUEA, the NMPRC issued its most recent Energy Efficiency Rule (17.7.2 NMAC) effective September 26, 2017, that sets forth the NMPRC's policy and requirements for energy efficiency and load management programs. This Rule can be found online at http//164.64.110.134/parts/title17/17.007.0002.html

projects, as well as the review of deemed savings for each applicable program. The factors and assumptions used in these calculators were reviewed by the Evaluation team and compared to source material methodologies provided. Project files were cross-referenced with sources, such as the New Mexico Technical Reference Manual (NM TRM), to validate their reasonableness and ensure reliable realized energy and demand savings estimates.

Evaluation efforts prioritize evaluation of savings calculation methodologies to ensure accuracy and consistency. The NM TRM or documented custom savings are prioritized over other resources if calculations are sufficiently sourced or applied. When applicable, evaluators rely on established TRMs in the following order: NM TRM, Texas TRM, and the Illinois TRM with appropriate weather adjustments. In instances where these resources are insufficient, other TRMs or credible sourced references are utilized to validate savings.

1.1.1 Realization Rates

Program realization rates are shown in Table 1-1. Program summaries are highlighted in brown. The program results, table rows italicized and white, are provided to give EPE and implementors insight to subprogram performance to understand underlying discrepancies leading to program realization rates.

Table 1-1 PY2024 Program Evaluation Summary

Program	Engineering Adjustment Factor (kWh)	Engineering Adjustment Factor (kW)
Commercial Comprehensive	99.6%	105%
SCORE Plus	110%	102%
Residential Lighting	87%	87%
NM Energy Saver LI	99.5%	99.2%
Energy$mart LI	102%	44%

The SCORE Plus and Residential Lighting programs demonstrate the largest deviations from reported and verified savings. Additional information is provided in Section 3. Other programs are within normal ranges of recent evaluations with notable changes also provided in Section 3 below.

1.2 NET IMPACT RESULTS

The impact evaluation moved to applying new net-to-gross (NTG) ratios prospectively in future years, rather than retrospectively as had been done in prior years. Therefore, the Evaluation team will apply

the PY2023 calculated NTG ratios to the PY2024 realized evaluated savings. The NTG ratios calculated in PY2024 will then be applied to the PY2025 results.

1.2.1 Net-to-Gross Ratios

The table below summarizes the updates to the NTG ratios for PY2024, with the updated values bolded.

Table 1-2 Net-to-Gross Ratios for PY2024

Program		PY2024 NTG	PY2025
Smart Students		1.0000	1.0000
ENERGY STAR New Homes		0.7083	0.7083
Residential Marketplace	Lighting	0.6700	0.5355
	Non-Lighting	0.6900	0.7954
Commercial Comprehensive		0.8156	0.8156
SCORE Plus		0.7365	0.7365
Commercial Load Management		1.0000	1.0000
Residential Load Management		1.0000	1.0000
Residential Comprehensive		0.5514	0.6532
Residential Lighting		0.6000	0.5100
NM Energy Saver (LI)		1.0000	1.0000
Energy$mart (LI)		1.0000	1.0000

1.3 PROCESS EVALUATION FINDINGS

The PY2024 process evaluation assessed the effectiveness and implementation quality of El Paso Electric's (EPE) portfolio of energy efficiency programs. Using participant surveys, contractor interviews, and a review of program documentation, the evaluation aimed to understand customer satisfaction, awareness channels, market engagement, and implementation strengths and challenges. Across the portfolio, participants expressed high satisfaction with their program experiences—particularly in programs like NM Energy Saver and the Residential Marketplace—highlighting strong contractor performance and ease of participation. However, limited awareness beyond contractor referrals and mixed marketing effectiveness indicated opportunities to enhance outreach and customer communication.

Program-specific findings revealed actionable insights, such as the urgency of equipment needs in income-qualified households, financial motivations driving marketplace participation, and moderate awareness in lighting initiatives. Based on these insights, evaluators recommended expanding outreach beyond contractors, improving rebate clarity, and standardizing messaging across program partners. Overall, the process evaluation provided a clear roadmap for refining program delivery, improving equity in participation, and leveraging high-performing practices across the broader portfolio.

1.4 COST-EFFECTIVENESS RESULTS

Using net realized savings from this evaluation and cost information provided by EPE, the Evaluation team calculated the ratio of benefits to costs for each of EPE's programs and for the portfolio overall. The Evaluation team calculated cost effectiveness using the UCT, which compares the benefits and costs to the utility or program administrator implementing the program.[2] The Evaluation team conducted this test in a manner consistent with the California Energy Efficiency Policy Manual.[3] EPE's portfolio was found to be cost effective with a UCT ratio of 1.11. Table 1-3 shows cost effectiveness results by program. The UCT ratios under the "Base" column reflect our primary cost effectiveness analysis, and the UCT ratios under the "Alternative" column reflect an alternative analysis where we include an avoided carbon emissions benefit.

[2] The Utility Cost Test is sometimes referred to as the Program Administrator Cost Test, or PACT.

[3] California Public Utilities Commission. 2020. California Energy Efficiency Policy Manual – Version 6. https//www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/e/6442465683-eepolicymanualrevised-march-20-2020-b.pdf

Table 1-3 PY2024 Cost Effectiveness by Program

Program	UCT Ratio	
	Base	Alternative
Smart Students	0.36	0.70
ENERGY STAR New Homes	0.63	1.04
Residential Marketplace	1.42	2.71
Commercial Comprehensive	1.84	3.27
SCORE Plus	1.21	2.19
Commercial Load Management	0.67	0.67
Residential Load Management	1.32	1.39
Residential Comprehensive	1.17	1.62
Residential Lighting	0.56	1.01
NM Energy Saver (LI)	1.22	1.62
Energy$mart (LI)	2.10	2.68
Overall Portfolio	**1.11**	**1.77**

2 Evaluation Methodology

This section describes the evaluation methods used to evaluate each program. An overview of evaluation activities by program is found in the table below. The Evaluation team estimated realized gross and net impacts (kWh and kW) and calculated program cost effectiveness using UCT.

Table 2-1 Summary of PY2024 Evaluation Methods by Program

Sector	Program	Impact	Process	NTG Research
Residential	NM Energy Saver (LI)	✓	✓	
	Residential Lighting	✓	✓	✓
	Residential Comprehensive		✓	✓
	Residential Load Management	✓		
	Energy$mart (LI)	✓		
	Residential Marketplace		✓	✓
Commercial	Commercial Comprehensive	✓		
	SCORE Plus	✓		
	Commercial Load Management	✓		

The portfolio evaluation included a combination of the following components listed below:

- Verify gross and net savings for both energy (kWh) and demand reductions (kW).
- Utilize PY2024 net-to-gross ratios as detailed in the PY2023 evaluation report.
- Calculate net-to-gross ratios for use in PY2025 and beyond.
- Identify process-related findings and advise on recommendations for improvement.
- Estimate program cost-effectiveness and report results.
- Assisting EPE as needed in providing real-time feedback on programs.
- Coordinate evaluation activities with the New Mexico Public Regulation Commission (PRC).

The evaluation report still summarizes programs that were not evaluated in PY2024. For any program that was not evaluated, the Evaluation team applied an engineering adjustment factor of 100% for that program as well as a net-to-gross (NTG) ratio that was specified in the PY2023 evaluation report. These programs have the following elements compiled and reported:

- Gross impacts (kWh, kW) using EPE's ex ante values for savings

- Net impacts calculated using the existing ex ante net-to-gross ratio
- Cost-effectiveness calculations using the ex-ante net impact values

2.1 PROGRAM DESCRIPTIONS

Different programs require leveraging different techniques for program evaluation based on measure type and program delivery. This section describes the program offerings the team evaluated in PY2024. The table below summarize the types of energy savings methodologies used in each of the evaluated programs.

Table 2-2 Summary of PY2024 Evaluation Methods by Program

Program	Surveys	Modeling	Prescriptive	Custom	Load Management
NM Energy Saver (LI)	✓		✓		
Residential Lighting		✓	✓		
Residential Comprehensive	✓				
Energy$mart (LI)			✓	✓	
Residential Marketplace	✓				
Commercial Comprehensive			✓	✓	
SCORE Plus			✓	✓	
Residential Load Management					✓
Commercial Load Management					✓

NM Energy Saver (LI). The NM Energy Saver (LI) program provides weatherization and other efficiency improvements at no cost to low-income customers. Other measures provided include LEDs and water conservation measures for customers with electric water heaters. These are prescriptive measures, so the focus of the evaluation for this program was a deemed savings review. This included a review of the source of deemed savings, whether that is the New Mexico TRM or another source, as well as verification that the deemed savings were applied correctly in the tracking data. The process evaluation included participant surveys and one contractor interview, which were used to assess how well the program operates and serves customers.

Residential Lighting. For the Residential Lighting program, the Evaluation team utilized an elasticity model to estimate net impacts based on the observed changes in bulb sales at different retail price points. The model was used to estimate the impact of the program rebate on bulb sales, which then

was used to estimate the program's free ridership. The deemed savings for each bulb type were reviewed as part of the gross impact analysis.

Residential Comprehensive. The Residential Comprehensive program is a prescriptive program serving EPE's residential customers, and offers the following measures: insulation, duct sealing, air infiltration, solar screens, evaporative coolers, refrigerated air conditioning, variable speed pool pumps, cool roofs, Energy Star® windows, Energy Star® smart thermostats, heat pump water heaters, and high-efficient room air conditioners. No impact activities have been planned for PY2024. For the process evaluation, the Evaluation team conducted participant surveys to assess how well the program is operating.

Energy$mart (LI). The Energy$mart (LI) program also provides weatherization and other efficiency improvements at no cost to low-income customers. Other measures include LEDs, thermostats, and water conservation measures for customers with electric water heaters. The Evaluation team reviewed NEAT software report outputs for a sample of projects.

Residential Marketplace. The Residential Marketplace program was launched in the spring of 2023. It features an online marketplace with residential energy efficient products including LEDs, smart thermostats, room air conditioners, air purifiers, advanced power strips, water fixtures, and kits. The Evaluation team conducted only process evaluation activities for this program. Participant surveys were utilized to assess how well the program is operating and serving customers.

Commercial Comprehensive. The evaluation of the Commercial Comprehensive program centered on deemed savings reviews, phone verifications, and project desk reviews. The deemed savings review focused on verifying that the appropriate savings values were applied based on the installed equipment and the referenced source of savings, whether the source is the New Mexico TRM or another source. The Evaluation team used phone surveys to verify that program-rebated measures are still installed and functional. Finally, engineers conducted desk reviews to examine the savings assumptions and calculations specific to each sampled project.

SCORE Plus. The SCORE Plus program evaluation approach resembles that of the Commercial Comprehensive program. The approach included a deemed savings review, phone survey, and project desk reviews. Engineers conducted follow-up calls during the desk review phase to confirm project details.

Residential Load Management. The Residential Load Management program provides incentives to residential customers, allowing EPE to remotely adjust program participants' smart thermostats during load management events. Like the Commercial Load Management program, the impacts from this program were calculated by comparing the actual energy use with estimated baseline usage during the load control events.

Commercial Load Management. The Commercial Load Management program allows participating customers to provide on-call, voluntary curtailment of electric consumption during peak demand periods in return for incentives. The impacts from this program were calculated by comparing the actual energy use with estimated baseline usage during the load control events.

2.2 PHONE SURVEYS

Phone surveys were fielded in October of 2024 through February of 2025 for participants in the Energy Saver, Residential Comprehensive, and Residential Marketplace programs. The phone surveys ranged from 15 to 20 minutes in length and covered the following topics:

- Verification of measures included in EPE's program tracking database.
- Satisfaction with the program experience.
- Survey responses for use in the free ridership calculations.
- Participation drivers and barriers.
- Customer characteristics.

The final survey instruments for the NM Energy Saver (LI), Residential Comprehensive, and Residential Marketplace are included in the Appendix A - D.

2.3 ENGINEERING DESK REVIEWS AND DEEMED SAVINGS REVIEWS

To verify gross savings estimates, the Evaluation team conducted engineering desk reviews for a sample of the projects in the Commercial Comprehensive, SCORE Plus, and Energy$mart programs while the Residential Lighting and Energy Saver programs received a deemed savings review.

Deemed, prescriptive, and custom savings reviews were completed for the PY2024 NM Energy Saver (LI), Residential Lighting, Energy$mart (LI), Commercial Comprehensive, and SCORE Plus programs. Both prescriptive and custom projects received desk reviews that included the following

- Review of project description, documentation, specifications, and tracking system data.
- Confirmation of installation using invoices and post-installation reports.
- Review of post-installation reports detailing differences between installed equipment and documentation, and subsequent adjustments made by the program implementer.

For those programs and projects that are used deemed savings values, the review process included the following

- Review of measures available in the New Mexico TRM to determine the most appropriate algorithms that apply to the installed measures.
- Recreation of savings calculations using TRM algorithms and inputs as documented by submitted specifications, invoices, and post-installation inspection reports.
- Review of New Mexico TRM algorithms to identify candidates for future updates and improvements.
- ISR calculations to determine rates at which provided kit measures were installed by kit recipients

2.4 NET IMPACT ANALYSIS

The Evaluation team estimated net impacts for some programs using the self-report approach. This method uses responses to a series of carefully constructed survey questions to learn what participants would have done in the absence of the utility's program. The goal was to ask enough questions to paint an adequate picture of the influence of the program activities (rebates and other program assistance) within the confines of what can reasonably be asked during a phone survey.

With the self-report approach, specific questions that were explored include the following:

- What were the circumstances under which the customer decided to implement the project (i.e., new construction, retrofit/early replacement, replace-on-burnout)?
- To what extent did the program accelerate installation of high efficiency measures?

- What were the primary influences on the customer's decision to purchase and install the high efficiency equipment?
- How important was the program rebate on the decision to choose high efficiency equipment?
- How would the project have changed if the rebate had not been available (e.g., would less efficient equipment have been installed, would the project have been delayed)?
- Were there other programs or utility interactions that affected the decision to choose high efficiency equipment (e.g., was there an energy audit done, had the customer participated before, was there an established relationship with a utility account representative, was the installation contractor trained by the program)?

The method for estimating free ridership (and NTG ratio) using the self-report approach is based on the 2017 Illinois (IL) TRM.[4] For the EPE programs, questions regarding free ridership were divided into several primary components

- A **Program Component** series of questions that asked about the influence of specific program activities (rebate, customer account representative, contractor recommendations, other assistance offered) on the decision to install energy efficient equipment.
- A **Program Influence** question, where the respondent was asked directly to provide a rating of how influential the overall program was on their decision to install high efficiency equipment.
- A **No-Program Component** series of questions, based on the participant's intention to carry out the energy-efficient project without program funds or due to influences outside of the program.

Each component was assessed using survey responses that rated the influence of various factors on the respondent's equipment choice. Since opposing biases potentially affect the main components, the No-Program Component typically indicates higher free ridership than the Program Component/Influence questions. Therefore, combining these opposing influences helps mitigate the potential biases. This framework also relies on multiple questions that are crosschecked with other

[4] IL TRM can be found at http//www.ilsag.info/il_trm_version_6.html

questions for consistency. This prevents any single survey question from having an excessive influence on the overall free ridership score.

2.5 GROSS AND NET REALIZED SAVINGS CALCULATIONS

The final step in the impact evaluation process is calculating the realized gross and net savings based on the program-level analysis described above. The Evaluation Team applied appropriate impact analysis methods described above and calculate gross realized savings by modifying the original ex-ante savings values from the participant tracking databases using an Installation Adjustment factor and an Engineering Adjustment factor

$$Gross\ Realized\ Savings\ =\ \alpha_{install} * \alpha_{engineer} * ExAnte\ Savings$$

Where:

- Installation Adjustment Factor ($\alpha_{install}$) installation rate verified by phone surveys
- Engineering Adjustment Factor ($\alpha_{engineer}$) factor from engineering analysis or desk reviews

Net realized savings were then determined by multiplying the Gross Realized Savings by a free ridership adjustment factor as described in the Net Savings Estimation section.

2.6 COST EFFECTIVENESS

The EUEA requires that utilities include in their publicly available annual reports "the most recent measurement and verification report of the independent program evaluator, which includes documentation, at both the portfolio and individual program levels of expenditures, savings, and cost-effectiveness of all energy efficiency measures and programs and load management measures and programs, expenditures, savings, and cost-effectiveness of all self-direct programs, and all assumptions used by the evaluator." [5] The UCT is the method used for cost-effectiveness testing. In the UCT, the primary benefit streams are energy-related and capacity-related costs avoided by EPE through their energy efficiency (EE) and load management offerings. The verified savings values were gathered as part of the primary impact evaluation analysis effort and used to calculate benefits for

[5] https//www.srca.nm.gov/parts/title17/17.007.0002.html, Section 17.7.2.14 - D1

each program. Utility companies in New Mexico can also claim utility system economic benefits for low-income programs equal to 20 percent of the calculated energy benefits. [6]

In preparation for the cost-effectiveness analysis, the Evaluation team requested key assumptions and inputs from EPE, including

- Avoided cost of energy – time differentiated production costs per kWh over a 20+ year time horizon.
- Avoided cost of capacity – estimated cost of adding a kW/year of generation, transmission, and distribution to the system. Used to monetize peak demand impacts.
- Discount rate – used to calculate the net present value of future savings.
- Program delivery costs – all incentive and non-incentive expenditures associated with program delivery.

Although EPE's EE offerings certainly contribute to the statewide goal of reducing greenhouse gas emissions by 45% (compared to 2005 levels) by 2030, the base cost-effectiveness framework used in New Mexico does not account for benefits associated with avoided CO_2 emissions. To account for the greenhouse gas reductions, the evaluation team put together an alternative set of cost-effectiveness results that include an avoided carbon emissions benefit. Inputs for calculating this benefit – an emissions rate and the social cost of carbon – are shown in Table 2-3. The emissions rate is drawn from EPE's 2022 Corporate Sustainability Report, and the social cost of carbon is drawn from the EPA's 2023 Report on the Social Cost of Greenhouse Gases.[7, 8] Multiplying the emissions rate in Table 2-3 by the social cost of carbon produces an avoided emissions benefit of $29.37 per MWh or $0.02937 per kWh (in 2020 dollars). These values are 'system-level' meaning the impacts from EE programs are scaled up for line losses before calculating the monetary value of avoided emissions.

[6] https//www.srca.nm.gov/parts/title17/17.007.0002.html, Section 17.7.2.9.B(4)

[7] See the table on page 25 of the report. Available at https://www.epelectric.com/files/html/Sustainability%20Report/2022%20Corporate%20Sustainability%20Report.pdf.

[8] See Table ES.1. The $130 value is halfway between the 2020 and 2030 social cost values (in 2020 dollars) at a 2.5% discount rate. For this analysis, we converted the social cost from dollars per metric ton to dollars per short ton using a conversion factor of 0.9071847. Report available at https://www.epa.gov/system/files/documents/2023-12/epa_scghg_2023_report_final.pdf.

Table 2-3: Inputs for Avoided Carbon Emissions Benefit

Input	Value
Emissions Rate	0.249 short tons (497 pounds) of CO_{2e} per MWh
Social Cost of Carbon*	$117.93 per short ton of CO_2 (2000 pounds)

* This metric is reported in 2020 dollars. We converted the value in the EPA report from metric tons to short tons.

3 Commercial Comprehensive

The Commercial Comprehensive program offers small commercial customers a broad range of energy efficiency opportunities, from prescriptive rebates on common equipment upgrades (e.g., lighting, HVAC, motors) to custom solutions for more specialized projects. Participants receive technical guidance and financial incentives to encourage deeper, cost-effective energy savings. This section provides an overview of the program's objectives, participation trends, and 2024 impact evaluation findings. It also summarizes the Evaluation team's recommendations for further enhancing measure offerings, documentation practices, and participant outreach strategies.

The evaluation of the Commercial Comprehensive program includes a gross assessment, which examined the installation of energy savings measures such as lighting, agriculture lighting, cooling, and evaporator fan motors and controls. The gross evaluation assessed energy savings across a sample of these installed measures, focusing on the performance and impact of each project.

3.1 GROSS IMPACTS

The impact evaluation process calculates the realized gross based on the program-level analysis described above. Most of the gross impact evaluation activities were devoted to engineering desk reviews of sampled projects. The sample was stratified to cover a range of different measure types so that no single measure (often lighting) would dominate the desk reviews. The sample was also stratified based on total energy savings within each measure group. Overall, the sampling strategy ensured that a mix of projects in terms of both project size and measure type would be included in the desk reviews.

The final sample design is shown in Table 3-1, where the majority of projects sampled were for lighting, which represented 55.8% of the population savings. The resulting sample achieved a relative precision of 90/1.53 overall.

Table 3-1 Commercial Comprehensive Desk Review Sample

Sub-Measure	Count	Expected Gross kWh Savings	Expected Gross kW Savings	% of savings	Current Sample
Agricultural Lighting	3	498,287	80.3	40.8%	3
HVAC	10	41,958	14.1	3.4%	3
Lighting	54	680,951	113.0	55.8%	11
Total	**67**	**1,221,196**	**207.4**	**100%**	**17**

3.1.1 Realized Gross Impacts

The gross realized savings are calculated by taking the original ex-ante savings values from the participant tracking databases and adjusting them using an Installation Adjustment factor (based on the count of installed measures verified through the phone surveys) and an Engineering Adjustment factor (based on the engineering analysis, desk reviews, etc.)

$$Gross\ Realized\ Savings = (Ex\ Ante\ Savings) * (Installation\ Adjustment) * (Engineering\ Adjustment\ Factor)$$

The ex-ante PY2024 impacts for the Commercial Comprehensive program are summarized in Table 3-2 and Table 3-3.

Table 3-2 PY2024 Commercial Comprehensive Savings Summary (kWh)

Program	# of Projects	Expected Gross kWh Savings	Engineering Adjustment Factor	Realized Gross kWh Savings
Commercial Comprehensive	90	1,221,196	99.6%	1,215,729
Total	**90**	**1,221,196**	**99.6%**	**1,215,729**

Table 3-3 Commercial Comprehensive Savings Summary (kW)

Program	# of Projects	Expected Gross kW Savings	Engineering Adjustment Factor	Realized Gross kW Savings
Commercial Comprehensive	90	207.4	105%	216.8
Total	**90**	**207.4**	**105%**	**216.8**

As discussed in the Evaluation Methods section, the Evaluation team determined gross realized impacts for the Commercial Comprehensive program by performing engineering desk reviews on the

sampled projects. EPE has developed Excel-based calculators to estimate savings for lighting and non-lighting projects including HVAC and refrigeration. The factors and assumptions used in these calculators were reviewed by the Evaluation team and compared to the New Mexico TRM. The EPE Excel-based calculators mostly appear to be in alignment with the New Mexico TRM. For the projects that received engineering desk reviews, the Evaluation team made updates to several projects which impact the engineering adjustment factor.

In the evaluation of prescriptive projects, the team reviewed the ex-ante approach against the methodology provided in the New Mexico TRM for consistency and completeness. If specific measures were not present within the TRM, the team relied on the methodology and algorithm inputs specified in the IL TRM. When feasible, the Evaluation team relied on non-prescriptive values, as described in the project files. To ensure the validity of these values, the Evaluation Team cross-referenced documented input parameters with sources like the TRM or posted business hours, to assess their reasonableness.

The evaluation identified several recurring issues contributing to discrepancies between ex-ante and verified savings. A key issue is the lack of consistency and documentation in assumptions and inputs used for savings calculations. These include inconsistencies in baseline and installed fixture wattages, differences in Hours of Use (HOU) assumptions, differences in coincidence factor, and improper or undocumented algorithm inputs. Specific findings highlighted errors in lighting hours of use assumptions based on the TRM, reporting installed fixture wattages per the Design Lights Consortium (DLC), and not utilizing baseline efficiencies for packaged air conditioners based on the TRM. Variations in savings estimates often stemmed from misalignment with the New Mexico TRM and inadequate documentation of custom inputs. Furthermore, analysis workbooks were either not provided, or explicit ex-ante inputs were not clearly defined, leading to discrepancies which are difficult to attribute to a specific input.

It is essential to standardize and document all algorithm inputs using NM TRM guidelines to address these challenges. For custom inputs, provide clear justifications with supporting evidence like equipment specifications or site details. These steps will ensure energy savings accuracy and consistency across the Commercial Comprehensive implementation.

A summary of the individual desk review findings for each of the reviewed projects are included in the Appendix E.

3.2 NET IMPACTS

3.2.1 Realized Net Impacts

The net-to-gross evaluation process calculates the Net-to-Gross (NTG) savings, which reflect the effectiveness of the program in achieving energy savings. The NTG ratio is calculated by comparing the Net Realized Savings (i.e., the savings that result directly from the program's influence on participants) to the Gross Realized Savings (the total savings from all measures installed from the impact evaluation above). This ratio accounts for factors such as free ridership (participants who would have implemented the measures without the program) and spillover (savings from participants who were influenced by the program but did not directly participate). The NTG ratio is crucial for assessing the overall impact of the program.

Net Realized Savings are then determined by multiplying the Gross Realized Savings by the NTG ratio:

$$Net\ Realized\ Savings = (Net - to - Gross\ Ratio) * (Gross\ Realized\ Savings)$$

Table 3-4 and Table 3-5 summarize the PY2024 net impacts using the prospective NTG ratios calculated by the evaluation team during the PY2023 evaluation.

Table 3-4 Commercial Comprehensive Net Impact Summary (kWh)

Program	# of Projects	Realized Gross kWh Savings	NTG Ratio	Realized Net kWh Savings
Commercial Comprehensive	90	1,215,729	81.56%	991,549
Total	**90**	**1,215,729**	**81.56%**	**991,549**

Table 3-5 Commercial Comprehensive Net Impact Summary (kW)

Program	# of Projects	Realized Gross kW Savings	NTG Ratio	Realized Net kW Savings
Commercial Comprehensive	90	216.8	81.56%	176.8
Total	**90**	**216.8**	**81.56%**	**176.8**

3.2.2 Net-to-Gross Ratio Update for PY2024

The evaluation of the Commercial Comprehensive program did not include a net-to-gross update for PY2024.

3.3 PROCESS EVALUATION

The evaluation of the Commercial Comprehensive program did not include a process component for PY2024.

3.4 CONCLUSIONS AND RECOMMENDATIONS

3.4.1 Gross Impact

EPE's Commercial Comprehensive program assists small commercial customers in the implementation of energy-efficient equipment. Through the program, both prescriptive and custom rebates are provided for the installation of measures including lighting, agricultural lighting, evaporative cooling, fans, and controls. Key issues include inconsistency in the use of inputs from the NM TRM, the use of unsupported custom inputs, and the reference for wattage from Design Lights Consortium (DLC) certificates. The following findings and recommendations detailed in Table 3-6 provides support to improve the accuracy of ex-ante estimates.

Table 3-6 Commercial Comprehensive Evaluation Findings and Recommendations

Finding	Recommendation
1. For 24LGT22 and 24LGT16, the primary discrepancy resulted from the use of the building weighted average value from the NM TRM to represent hours of use in the ex-post calculations for the building type "Retail – Small". Following NM TRM guidelines, in general, implementors and evaluators should use hours of use for specific area types in the TRM as opposed to the building weighted average. This approach increases the accuracy of energy savings estimates. However, if a project has specific area types, such as "Retail – Small, Restrooms" which are not supported in the TRM, then it is appropriate to use the building weighted average for the full project for consistency.	Recommendation: Use hours of use specific to an area type whenever possible, using values from the NM TRM. If the NM TRM lacks a specific area type for the space, then default to using the building weighted average value for the full project.
2. For lighting projects, the ex-ante analysis used the reported input wattages sources from DLC certifications to represent installed wattage. The ex-post analysis referenced the tested wattage when available to represent installed wattage.	Recommendation: When available, implementors and evaluators should reference the tested wattage sourced from DLC certificates to represent the installed wattage of a fixture or bulb. If tested wattage is not available, then reported wattage may be used.

Finding	Recommendation
3. For 24LG12, the ex-ante analysis approach used an HVAC interactive factor equal to "1" for both waste heat energy (WHf_e) and waste heat demand (WHF_d) for conditioned spaces with evaporative cooling. Considering the NM TRM does not specify HVAC interactive factors when space conditioning is provided by evaporative cooling, the evaluators applied interactive factors based on the building type.	**Recommendation:** If space conditioning equipment is not specified in the TRM for variables such as interactive factors, then we recommend to apply general factors based on the building type.
4. For 24CLG03, the ex-ante analysis did not utilize the baseline values for EER and SEER for Packaged DX Air Conditioner units under 5.4 tons, per the TRM. The ex-post analysis applied baseline efficiency values as provided in the TRM.	**Recommendation:** Implementors and evaluators should reference the NM TRM to source baseline efficiency values for the installation of HVAC measures.

4 Energy$mart (LI)

EPE's Energy$mart (LI) program provides weatherization and other efficiency improvement at no cost to low-income customers. Other measures provided include LEDs, thermostats, and water conservation measures for customers with electric water heaters. Savings for the program are developed using proprietary NEAT software, which provides a report detailing inputs and associated savings for the installed measures. The gross evaluation assessed the inputs provided on the NEAT software for consistency and completeness, and compared the inputs to what would be expected when using the New Mexico TRM.

Since the evaluators did not have access to the NEAT software, these updated inputs were used to determine ex-ante and ex-post savings using the TRM as the primary calculation methodology. An engineering adjustment factor was developed by taking the ratio of calculated ex-post and ex-ante savings, which represents potential differences in inputs and assumptions reported by the evaluators. This factor was then applied to the reported savings, which was initially calculated by the implementor using the NEAT software. This resultant value is the final ex-post savings, which represents estimated results as if the NEAT software were used by the evaluators. The primary assumption in this comparison is the resultant value should solely reflect changes in inputs and assumptions used to determine savings through the NEAT software.

4.1 GROSS IMPACTS

The impact evaluation process calculates the realized gross energy savings and peak demand reductions based on the program-level analysis described above. Most of the gross impact evaluation activities were devoted to engineering desk reviews of sampled projects. The sample was stratified to cover a range of different measure types so that no single measure (often lighting) would dominate the desk reviews. The sample was also stratified based on total energy savings within each measure group. Overall, the sampling strategy ensured that a mix of projects in terms of both project size and measure type would be included in the desk reviews.

The final sample design is shown in Table 4-1, where the majority of projects sampled were for lighting and agricultural lighting projects, which together consisted of 96.6% of the population savings. The resulting sample achieved a relative precision of 90/7.59 overall.

Table 4-1 Energy$mart Desk Review Sample

Sub-Measure	Count	Average kWh	Total kWh savings	% of savings	Current Sample
Attic Insulation	7	331	2,315	2.8%	4
DHW Pipe Insulation	12	161	1,928	2.3%	5
DHW Tank Insulation	18	476	8,560	10.4%	6
Duct Sealing	2	454	908	1.1%	1
Evaporative Cooler Replacement	1	3,878	3,878	4.7%	0
Floor Insulation	1	29	29	0.04%	0
General air sealing	9	508	4,571	5.6%	3
Heating System Replacement with Heat Pump	1	3,750	3,750	4.6%	1
LED	64	459	29,368	35.7%	20
Low E Window	13	370	4,805	5.8%	3
Low Flow Shower Heads	16	992	15,877	19.3%	5
Replacement ECM for Furnace	5	200	1,000	1.2%	3
Replacement Heater	1	4,249	4,249	5.2%	0
Replacement Heater ECM	5	200	1,000	1.2%	2
Total	**155**	**531**	**82,238**	**100%**	**20***

*Note, in total 20 unique samples were evaluated, which each encompassed multiple measures. The sample column represents the number of samples that included a specific sub-measure.

4.1.1 Realized Gross Impacts

The Gross Realized Savings are calculated by taking the original ex-ante savings values from the participant tracking databases and adjusting them using an Installation Adjustment factor (based on the count of installed measures verified through the phone surveys) and an Engineering Adjustment factor (based on the engineering analysis, desk reviews, etc.)

$$Gross\ Realized\ Savings = (Ex\ Ante\ Savings) * (Installation\ Adjustment) * (Engineering\ Adjustment\ Factor)$$

The ex-ante PY2024 impacts for the Energy$mart program are summarized in Table 4-2 and Table 4-3.

Table 4-2 PY2024 Energy$mart Savings Summary (kWh)

Program	# of Projects	Expected Gross kWh Savings	Engineering Adjustment Factor	Realized Gross kWh Savings
Energy$mart LI	1,384	82,237	102.1%	83,965
Total	**1,384**	**82,237**	**102.1%**	**83,965**

Table 4-3 Energy$mart Savings Summary (kW)

Program	# of Projects	Expected Gross kW Savings	Engineering Adjustment Factor	Realized Gross kW Savings
Energy$mart LI	1,384	98.5	44%	43.3
Total	**1,384**	**98.5**	**44%**	**43.3**

As mentioned earlier, the evaluators did not have access to the NEAT software to re-run simulations. Instead, the evaluators recalculated ex-ante savings and demand reductions, and determined ex-post results utilizing the inputs provided in the NEAT output files for each measure, and the methodology provided in the New Mexico TRM. The evaluators also took a step further to also recreate reported savings to be able to document changes in inputs and assumptions. There were several notable differences throughout all measures, such as differences in quantity, hours of use, and efficiency between what was used to simulate ex-ante savings compared to what was provided in the NEAT software. Further inconsistencies in the application of coincidence and HVAC interactive factors led to the reduction in realized demand savings.

It is imperative to ensure measure-level inputs such as installed quantity, equipment efficiency, and interactive factors are documented appropriately and consistently to ensure the accuracy of ex-ante estimates.

4.2 NET IMPACT

4.2.1 Realized Net Impacts

The net-to-gross evaluation process calculates the Net-to-Gross (NTG) savings, which reflect the effectiveness of the program in achieving energy savings. The NTG ratio is calculated by comparing the Net Realized Savings (i.e., the savings that result directly from the program's influence on participants) to the Gross Realized Savings (the total savings from all measures installed from the

impact evaluation above). This ratio accounts for factors such as free ridership (participants who would have implemented the measures without the program) and spillover (savings from participants who were influenced by the program but did not directly participate). The NTG ratio is crucial for assessing the overall impact of the program.

Net Realized Savings are then determined by multiplying the Gross Realized Savings by the NTG ratio:

$$Net\ Realized\ Savings = (Net - to - Gross\ Ratio) * (Gross\ Realized\ Savings)$$

Table 4-4 and Table 4-5 summarize the PY2024 net impacts using the prospective NTG ratios calculated by the evaluation team during the PY2023 evaluation.

Table 4-4 Easy Savings Net Impact Summary (kWh)

Program	# of Projects	Realized Gross kWh Savings	NTG Ratio	Realized Net kWh Savings
Energy$mart	1,384	83,965	100%	83,965
Total	**1,384**	**83,965**	**100%**	**83,965**

Table 4-5 Easy Savings Net Impact Summary (kW)

Program	# of Projects	Realized Gross kW Savings	NTG Ratio	Realized Net kW Savings
Energy$mart	1,384	43.3	100%	43.3
Total	**1,384**	**43.3**	**100%**	**43.3**

4.2.2 Net-to-Gross Ratio Update for PY2024

The program does not receive a Net-to-Gross (NTG) evaluation, so therefore the updated NTG ratio will continue as currently defined, 1.00 (100% net realization).

4.3 PROCESS EVALUATION

The evaluation of the Energy$mart program did not include a process component for PY2024.

4.4 CONCLUSIONS AND RECOMMENDATIONS

EPE's Energy$mart program assists low-income residential customers in the implementation of weatherization and other efficiency improvements at no cost. Measures supported through the program include LED lighting, thermostats, and water conservation measures. Savings for the program are primarily calculated using proprietary NEAT software. Key issues include inconsistency in the use of inputs from the NEAT software, and the deviation of expected inputs and assumptions compared to the NM TRM such as coincidence and HVAC interactive factors which led to the reduction in realized demand savings. The following findings and recommendations detailed in Table 4-6 provides support to improve the accuracy of ex-ante estimates.

Table 4-6 Energy$mart Evaluation Findings and Recommendations

Finding	Recommendation
1. Energy (kWh) and peak demand (kW) savings discrepancies arise from missing or inaccessible project data, differing assumptions (e.g., temperature, R-values, coincidence factors, HVAC interactive factors), and variations between customer-specific software (NEAT) and the evaluation team's use of the New Mexico Technical Reference Manual.	**Recommendation:** Consider collaborating with the evaluation team to reconcile differences and consider integrating customer-specific tools (e.g., NEAT) into the evaluation process to improve alignment between ex-ante and ex-post results.

5 NM Energy Saver (LI)

The evaluation of the Energy Saver program includes a gross and process assessment. Similar to EPE's Energy$mart program, the Energy Saver program also provides weatherization and other efficiency improvement at no cost to low-income customers. Other measures provided include LEDs, thermostats, and water conservation measures for customers with electric water heaters. The projects supported through this program are prescriptive. The gross evaluation focused on a deemed savings review, including a review of the source of the calculation methodology, specifically the New Mexico TRM, as well as a verification that deemed savings are applied appropriately within the tracking data. Furthermore, the process assessment provided insights into the program's processes, identifying areas for improvement in delivery, customer participation, and engagement.

5.1 GROSS IMPACTS

The impact evaluation process calculates the realized gross based on the program-level analysis described above. Most of the gross impact evaluation activities were devoted to a deemed savings review of the measures implemented through the program. For measures with several unique iterations, a sample was pulled to assess a representative portion of the overall measure-level population. For all other measures, the evaluation team reviewed the census of projects.

A summary of the PY2024 population is provided in Table 5-1, which shows the majority of savings are associated with the implementation of evaporative cooling measures, representing 82.9% of the overall population savings. The table also identifies measures where the census was evaluated, or a specified sample size where applied. In total, 401 unique projects were evaluated through the process of deemed reviews. The resulting sample achieved a relative precision of 90/10.7 overall.

Table 5-1 Energy Saver Population Summary

Sub-Measure	Count of Measure	Average kWh	Total kWh savings	% of savings	Sample Count
Advanced Power Strips	103	62	6,386	1.1%	Census
Air Infiltration	25	186	4,661	0.8%	4
Ceiling Insulation	8	190	1,517	0.3%	4
Duct Efficiency	25	828	20,711	3.5%	4
Evaporative Cooling	126	3,878	488,628	82.9%	Census
Faucet Aerator - Bathroom	37	41	1,516	0.3%	Census
Faucet Aerator - Kitchen	36	24	867	0.1%	Census
LED Candelabra - 5W B11	41	171	7,026	1.2%	6
LED Flood - 11W BR30	4	440	1,759	0.3%	Census
LED Globe - 6W G25	12	128	1,537	0.3%	1
LED Lighting	62	246	15,229	2.6%	8
LED Nightlights	23	21	482	0.1%	3
LED PAR38	6	188	1,128	0.2%	Census
Low Flow Showerhead	43	311	13,381	2.3%	Census
Pipe Wrap	30	37	1,124	0.2%	2
Smart Thermostats	12	498	5,980	1.0%	Census
Water Heater Jacket	40	441	17,638	3.0%	2
Total	**633**	**931**	**589,570**	**100.0%**	**401**

5.1.1 Realized Gross Impacts

The Gross Realized Savings are calculated by taking the original ex-ante savings values from the participant tracking databases and adjusting them using an Installation Adjustment factor (based on the count of installed measures verified through the phone surveys) and an Engineering Adjustment factor (based on the engineering analysis, desk reviews, etc.)

$$Gross\ Realized\ Savings = (Ex\ Ante\ Savings) * (Installation\ Adjustment) * (Engineering\ Adjustment\ Factor)$$

The ex-ante PY2024 impacts for the Energy Saver program are summarized in Table 5-2 and Table 5-3.

Table 5-2 Energy Saver Savings Summary kWh

Program	# of Projects	Expected Gross kWh Savings	Engineering Adjustment Factor	Realized Gross kWh Savings
Energy Saver	1.431	589,570	99.5%	586,766
Total	**1.431**	**589,570**	**99.5%**	**586,766**

Table 5-3 Energy Saver Savings Summary kW

Program	# of Projects	Expected Gross kW Savings	Engineering Adjustment Factor	Realized Gross kW Savings
Energy Saver	1.431	325.0	99.2%	322.3
Total	**1.431**	**325.0**	**99.2%**	**322.3**

The evaluators found that the majority of measures implemented through EPE's Energy Saver program utilized appropriate inputs and methodology when compared to the New Mexico TRM. For other measures, variation occurred due to differences in TRM-based inputs such as demand factors, as well as the omission of savings for residences with evaporative cooling that installed ceiling insulation. Please note, heating savings were not captured for these projects as the space heating equipment was gas-fired. If the residences were heated using electric-based space heating equipment, then heating savings could have been claimed even if cooling savings were not.

The measures that resulted in variation between ex-ante and ex-post calculations, as well as the summary of savings are provided in Table 5-4. Note, the sum of savings for all measures with reported variation is equal to 4.8% of the overall population savings.

Table 5-4 Evaluated Energy Saver Measures Without Variation in Results

Sub-Measure	Count of Measure	Expected Gross kWh savings	Expected Gross kW savings	Realized Gross kWh savings	Realized Gross kW savings
Air Infiltration	25	4,661	1.57	3,061	1.82
Ceiling Insulation	8	1,517	1.28	0	0.00
Duct Efficiency	25	20,711	8.97	27,502	9.07
LED PAR38	6	1,128	0.00	1,209	0.53
Total	**633**	**34,508**	**11.82**	**31,772**	**11.42**

The primary difference in savings is associated with HVAC interactive effects for the installation of ceiling insulation. The New Mexico TRM does not account for the reduction in cooling load associated with residences with evaporative cooling equipment, as the impact on the fan is likely minimal after installing ceiling insulation. Additionally, for all sampled ceiling insulation projects, the reported heating equipment was gas fired, not electric-based heating. Therefore, all sampled ceiling insulation projects were found to result in 0 savings. Implementors should follow the New Mexico TRM when calculating deemed savings through the Energy Saver program, including HVAC interactive effects associated with specific on-site space conditioning equipment.

5.2 NET IMPACTS

5.2.1 Realized Net Impacts

The net-to-gross evaluation process calculates the Net-to-Gross (NTG) savings, which reflect the effectiveness of the program in achieving energy savings. The NTG ratio is calculated by comparing the Net Realized Savings (i.e., the savings that result directly from the program's influence on participants) to the Gross Realized Savings (the total savings from all measures installed from the impact evaluation above). This ratio accounts for factors such as free ridership (participants who would have implemented the measures without the program) and spillover (savings from participants who were influenced by the program but did not directly participate). The NTG ratio is crucial for assessing the overall impact of the program.

Net Realized Savings are then determined by multiplying the Gross Realized Savings by the NTG ratio:

$$Net\ Realized\ Savings = (Net - to - Gross\ Ratio) * (Gross\ Realized\ Savings)$$

Table 5-5 and Table 5-6 summarize the PY2024 net impacts using the prospective NTG ratios calculated by the evaluation team during the PY2023 evaluation.

Table 5-5 Easy Savings Net Impact Summary (kWh)

Program	# of Projects	Realized Gross kWh Savings	NTG Ratio	Realized Net kWh Savings
Energy$mart	1.431	586,766	100%	586,766
Total	**1.431**	**586,766**	**100%**	**586,766**

Table 5-6 Easy Savings Net Impact Summary (kW)

Program	# of Projects	Realized Gross kW Savings	NTG Ratio	Realized Net kW Savings
Energy$mart	1.431	322.3	100%	322.3
Total	**1.431**	**322.3**	**100%**	**322.3**

5.2.2 Net-to-Gross Ratio Update for PY2024

The evaluation of the Energy Saver program did not include a net-to-gross component for PY2024.

5.3 PROCESS EVALUATION

5.3.1 Participant Surveys

5.3.1.1 Participant Survey Overview

As part of the EPE EnergySaver program process evaluation, the Evaluation team conducted telephone interviews with 34 low-income customers who received no-cost energy efficiency services

in their homes.[9] The surveys were completed from November 2024 through February 2025 and were approximately 15 minutes in length.

The survey was designed to collect participant information on the following topics:

- Demographic characteristics of program participants
- How participants learned about the program
- Purchase motivations and the influence of program components
- Satisfaction with the program
- Installation and performance of equipment

All percentages and figures below have been weighted according to the energy savings of each respondent's measures installed through the program.

5.3.1.2 Respondent Demographics

We asked survey respondents about various characteristics of their homes, including ownership status, bill payment responsibility, housing type, building size, and the age of their homes.

Survey responses indicated that the EPE EnergySaver program primarily serves homeowners, with 87 percent of respondents reporting they owned their homes and 13 percent reporting they rented (total n=32). Nearly all participants (96%) reported that they pay their own EPE bill, while only 4 percent indicated someone else pays the bill (total n=34).

In terms of housing type, 92 percent of respondents live in single-family homes, while 8 percent live in multifamily buildings. Surveyed respondents reported varied home sizes (Figure 5-1), with the most common size being homes between 1,000 and 1,499 square feet (71%). Fifteen percent of homes were between 2,000 and 2,499 square feet, 12 percent of homes were between 1,500 and

[9] To qualify for the EnergySaver program, participant household income must be at or below 200% of the Federal Poverty Guidelines established by the Department of Health and Human Services. The number of people in the household determines the specific income threshold. For full eligibility information, please visit https://www.epesaver.com/service/residential-low-income/.

1,999 square feet, and 1 percent of homes were 4,000 square feet or more. This distribution indicates that program participation is predominantly among households with smaller living spaces, which may influence their energy efficiency priorities and needs.

Figure 5-1 Square Footage of Respondent Homes (n=17)

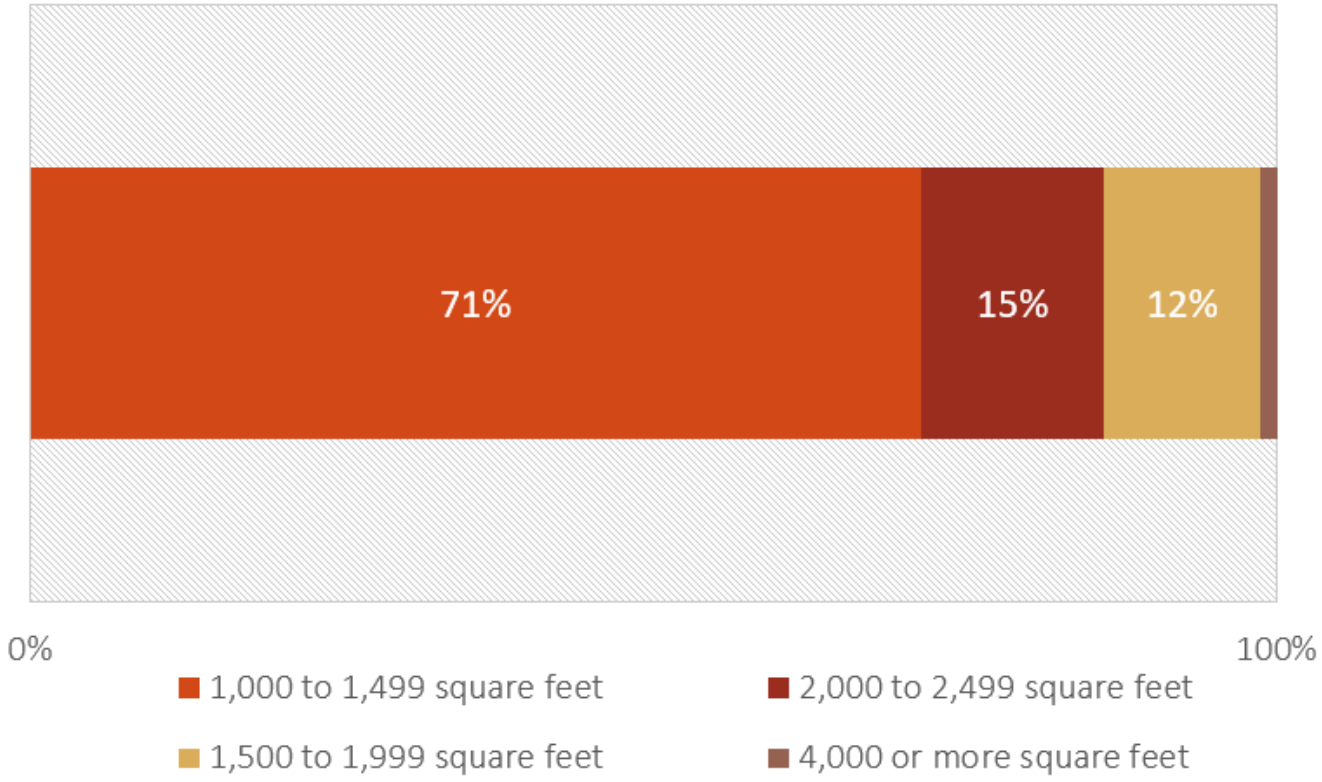
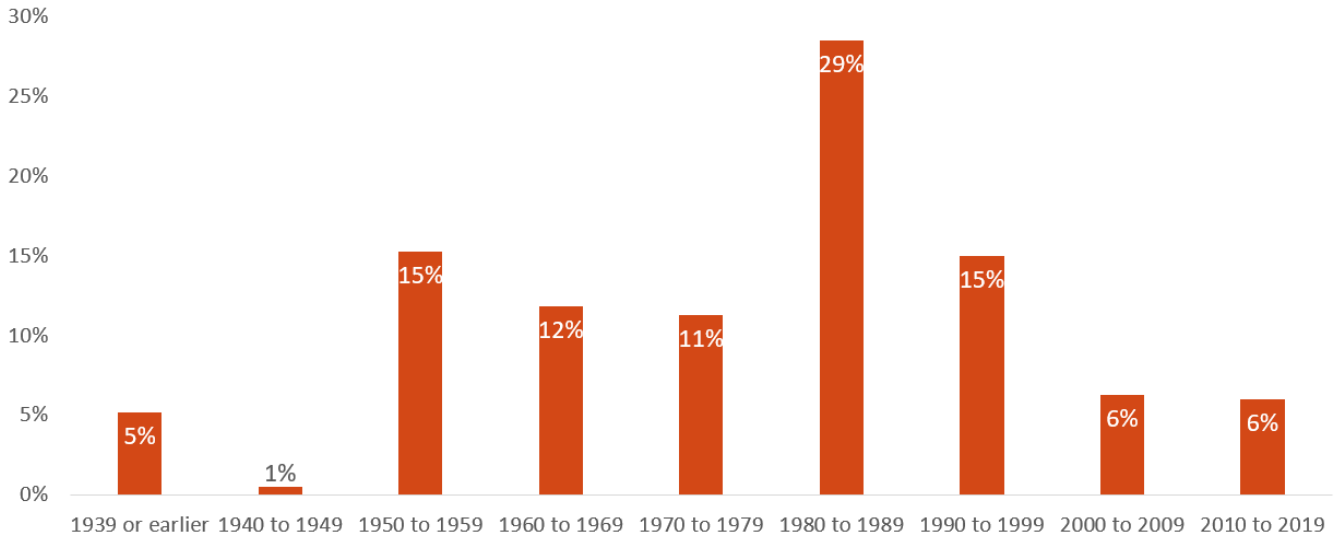


Figure 5-2 shows the age of surveyed participants' homes. The most common home vintage was from 1980 to 1989 (29%), followed by homes built from 1950 to 1959 (15%) and from 1990 to 1999 (15%). The distribution of home ages in the participant sample indicates the program is serving residents in both older and newer buildings, with a significant portion (29%) living in homes built in the 1980s.

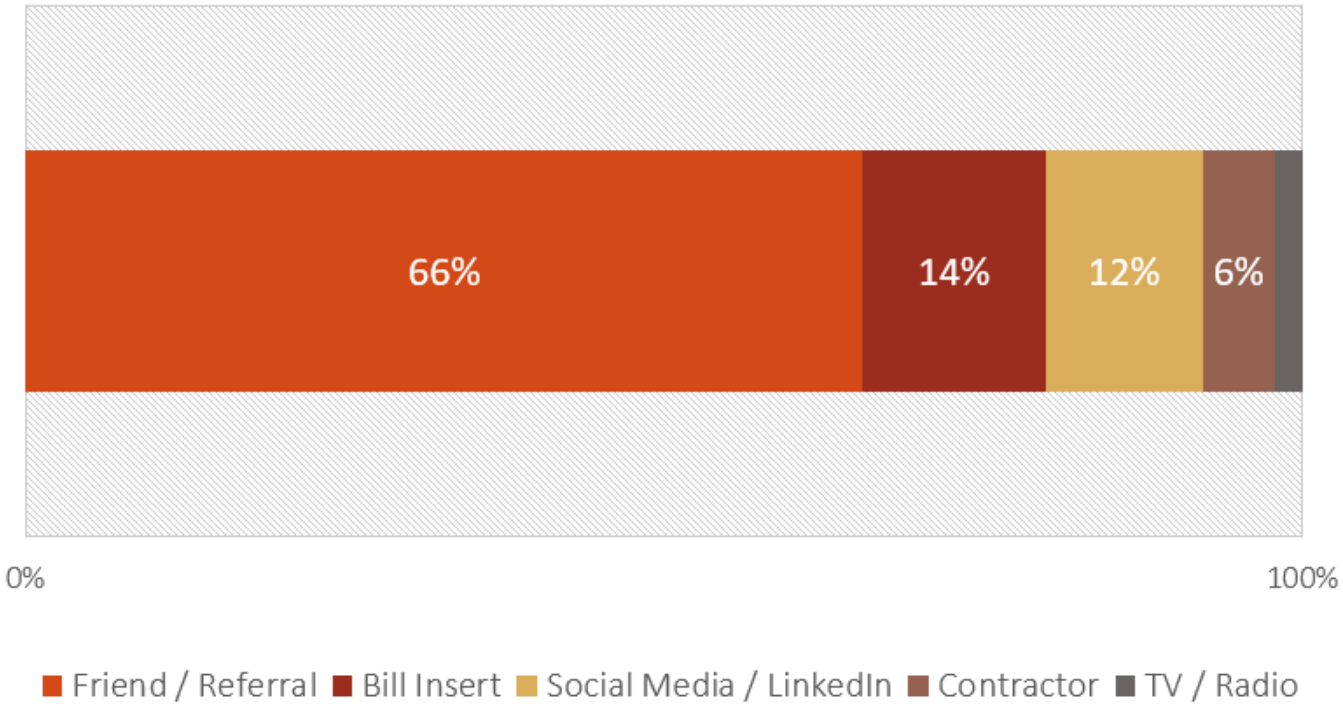
Figure 5-2 Age of Respondents' Homes (n=27)



5.3.1.3 Sources of Awareness

The Evaluation team asked program participants how they initially became aware of the program. Sixty-six percent of respondents reported that they learned of the program through a friend or referral (Figure 5-3). Other sources of awareness included bill inserts (14%), social media/LinkedIn (12%), contractors (6%), and TV/radio (2%). These data indicate that program awareness has spread primarily through word-of-mouth, suggesting this program has achieved a level of customer satisfaction that motivates participants to recommend it to others.

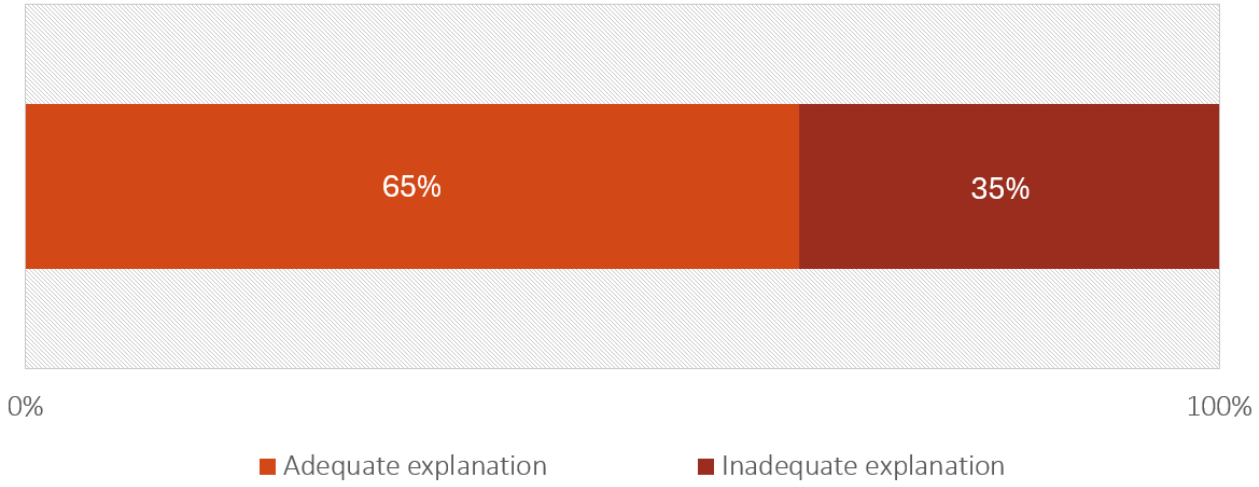
Figure 5-3 How Respondents First Learned of the Program (n=20)



The EnergySaver program relies on contractors to deliver program services directly to participants. When asked if the contractor specifically mentioned that the program was being offered by EPE, 93 percent of respondents recalled that the contractor did mention EPE's sponsorship, while only 7 percent did not recall this being mentioned.

Respondents provided various responses when asked how contractors explained the free energy efficiency upgrades. The Evaluation team categorized their responses as whether the contractor's explanation of energy efficiency upgrades was adequate. Sixty-five percent of respondents expressed that the contractor explained what they were doing and how it would benefit the respondent (Figure 5-4). Among those who felt that the contractor explained the free energy upgrades, the most common element of their responses was that the energy efficiency upgrades would bring down their electricity bills.

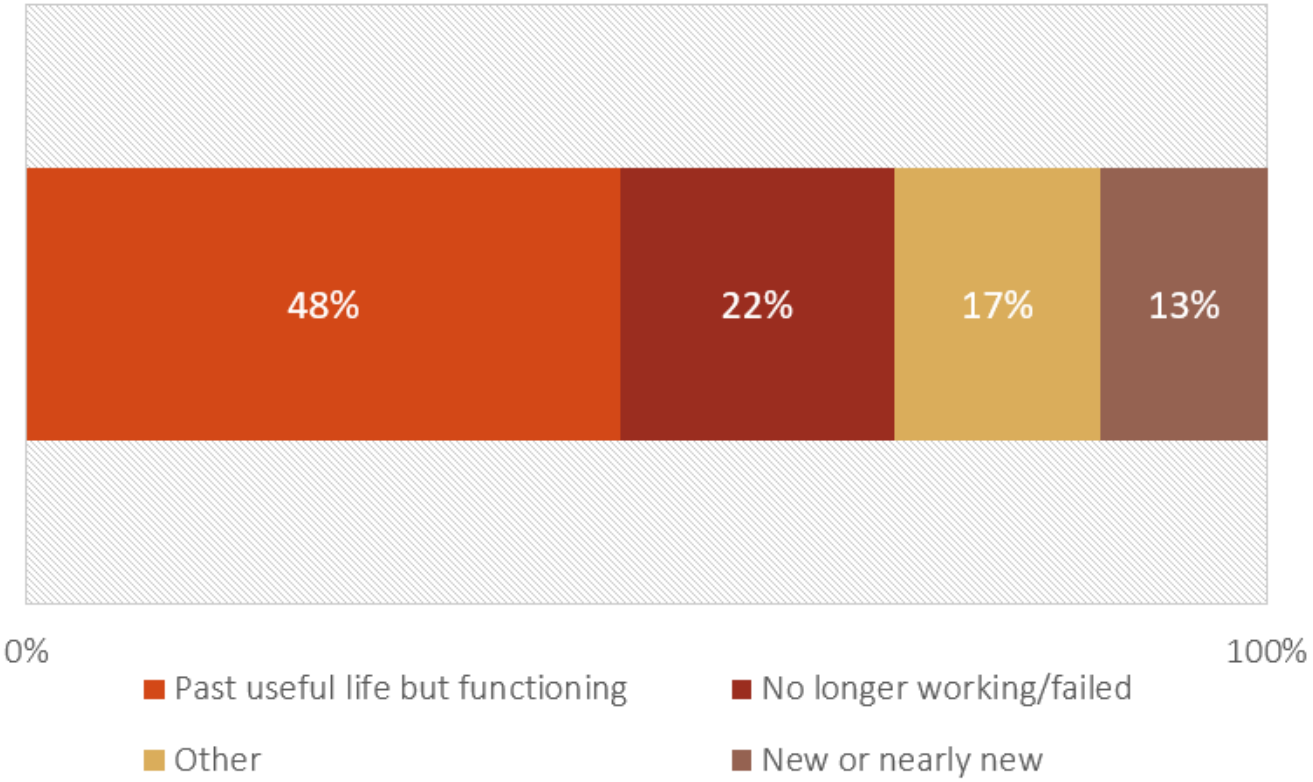
Figure 5-4 Adequacy of Contractor Explanation of Efficiency Upgrades (n=29)



5.3.1.4 Influences and Motivations

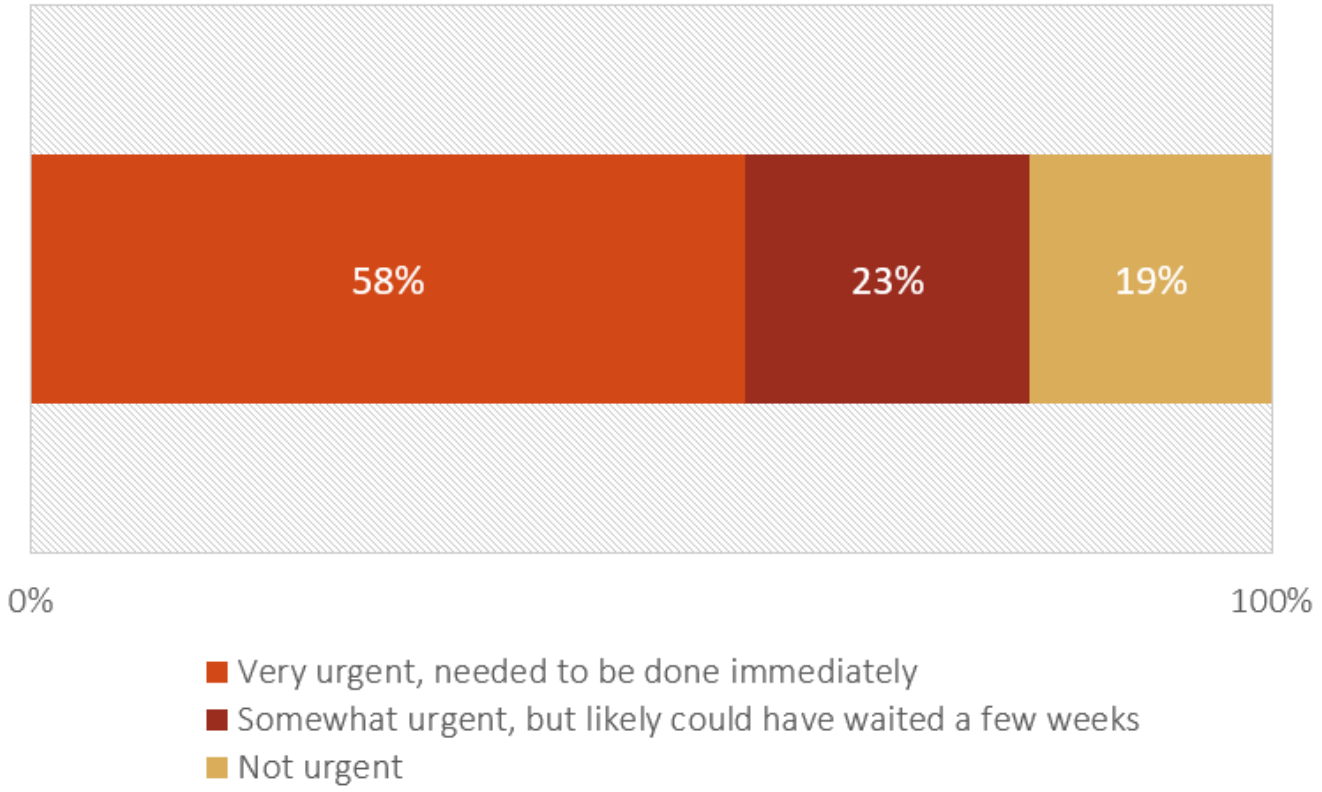
When asked about the equipment installed through the program, 86 percent of respondents reported that the equipment replaced existing equipment, while 16 percent indicated it was a new installation (n=34). Among those who replaced existing equipment, 48 percent reported that the old equipment was past its useful life but still functioning, 22 percent indicated it was no longer working or had failed, and 13 percent stated it was new or nearly new (Figure 5-5). Among those who chose 'Other', only one respondent provided a reason, saying that the equipment was “working fine, no problems.”

Figure 5-5 Condition of Replaced Equipment (n=31)



Regarding the urgency of replacement, 58 percent of respondents considered it very urgent, and 23 percent considered it to be somewhat urgent (Figure 5-6). Collectively, 81 percent of respondents indicated some level of urgency in their equipment replacement needs, suggesting that the program is addressing critical needs for a substantial majority of participants.

Figure 5-6 Urgency of Equipment Replacement (n=28)



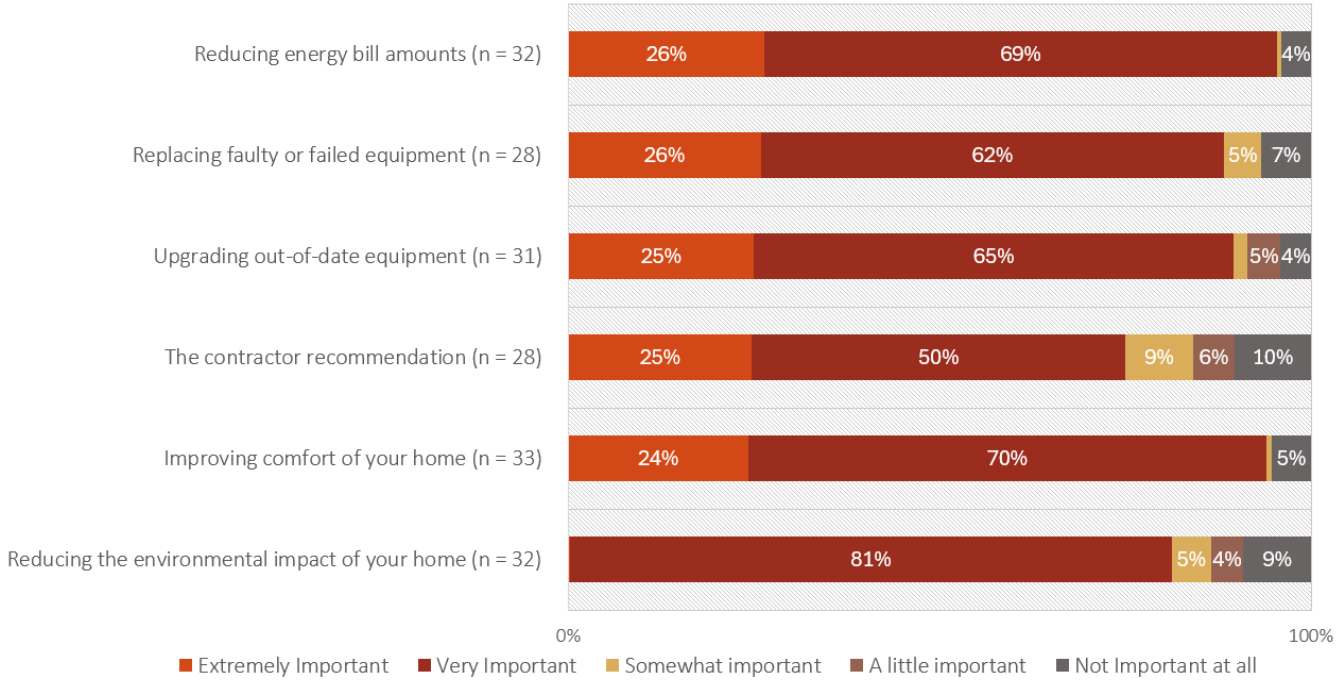
This high level of urgency highlights the high impact of the EnergySaver program on the lives of low-income EPE customers. For these households, equipment failure or inefficiency can create significant financial strain through higher utility bills and potential health and safety concerns, particularly during extreme weather periods. The no-cost efficiency upgrades provided by the program are likely alleviating immediate pressures on household budgets while improving home comfort and safety. By addressing these urgent replacement needs, the EnergySaver program is not only improving energy efficiency but also potentially preventing situations where participants might be forced to make difficult financial trade-offs between energy costs and other necessities.

The Evaluation team asked respondents to rate various motivating factors on a five-point scale ranging from extremely important to not important (Figure 5-7). Reducing energy bills stands out as the most important motivator, with 95 percent of respondents rating it as very or extremely important (26% extremely important, 69% very important). This nearly universal prioritization of bill

savings aligns with the program's focus on low-income customers, for whom utility costs represent a significant portion of household budgets.

Home comfort improvement was rated nearly as highly, with 94 percent considering it very or extremely important (70% very important, 24% extremely important). This suggests participants value the immediate quality-of-life benefits of energy efficiency upgrades beyond just financial savings.

Figure 5-7 Motivations for Program Participation (n varies)



The Evaluation team then asked respondents to provide any additional motivating factors beyond what was already addressed. The following are a few of the responses provided:

- "I'm extremely low income to buy one like that. I'd never afford it. So, it was really nice that they came out there to install the cooler for me but I'm not sure how I'm going to afford the filters."
- "Just the fact that you could feel some air moving around my windows and doors, and saving energy and costs was extremely important to me."
- "I needed them to check my air conditioner, the fan was not working"
- "The most important [motivator] was lack of economic resources in the house."

Participants in the program face major financial barriers that prevent them from accessing not only energy-efficient upgrades but even basic functional heating and cooling equipment. These comments suggest that the program has successfully provided these participants with improvements they could not have afforded on their own. This understanding of participant circumstances reinforces the program's value in addressing both energy efficiency and quality of life issues for low-income households.

5.3.1.5 Respondent Satisfaction

The Evaluation team measured participant satisfaction across multiple program components using a five-point scale ranging from very satisfied (5) to very dissatisfied (1) (Figure 5-8).

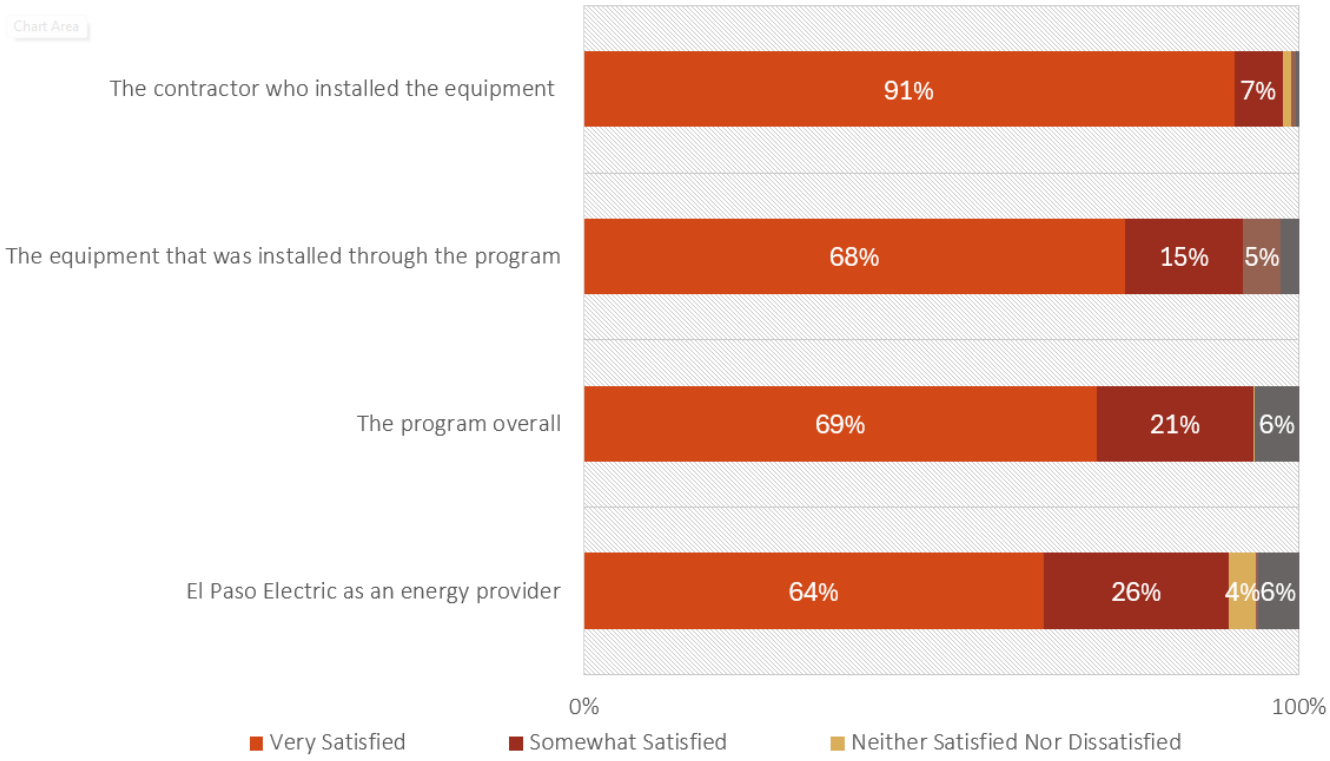
The highest satisfaction ratings were for the contractors who installed the equipment, with 98 percent of respondents reporting they were very or somewhat satisfied (91% very satisfied, 7% somewhat satisfied). This exceptionally high rating suggests that the program's contractors are providing quality service, which is crucial for a program that relies heavily on contractor interactions with participants. Satisfaction with the equipment installed through the program was also strong, with 83 percent of respondents reporting they were very or somewhat satisfied (68% very satisfied, 15% somewhat satisfied).

Satisfaction with EPE as an energy provider was positive, with 90 percent of respondents very or somewhat satisfied (64% very satisfied, 26% somewhat satisfied). However, 6 percent reported being very dissatisfied with EPE as an energy provider. This small but notable dissatisfaction might be

related to factors outside of the EnergySaver program itself, such as electricity rates or other utility services.

The consistently high satisfaction ratings across all program aspects indicate that the EnergySaver program is meeting or exceeding participant expectations in most cases. The particularly strong satisfaction with contractors reinforces the importance of maintaining high-quality service delivery through the program's contractor network.

Figure 5-8 Respondent Satisfaction with the Program (n=34)



5.3.2 Contractor Surveys

As part of the PY2024 evaluation, the Evaluation team conducted an interview with one contractor who participated in the NM Energy Saver program. For this evaluation round, the interview covered the following topics:

- Contractor background
- Program awareness and engagement
- Program process and market response
- Program satisfaction

Due to there being only one contractor that is involved with the program and the depth of the discussion with this contractor, this section presents results in a qualitative fashion.

5.3.2.1 Contractor Background

A single company implements the NM Energy Saver program and has done so since 2010. This contractor focuses on customer acquisition and installation services for measures such as attic insulation, air and duct sealing, LED lighting, evaporative coolers, and other efficiency upgrades. The contractor has extensive experience in the field and has positioned itself as a key provider of energy efficiency solutions in the region.

5.3.2.2 Program Awareness and Engagement

The contractor first became involved with the NM Energy Saver program in 2010, after a program manager at EPE suggested that the contractor partner directly with EPE. In response, the contractor founded a new company that has been actively involved with the NM Energy Saver program ever since.

The contractor highlighted the importance of working with income-qualified customers, which presents unique challenges in terms of gaining their trust and providing extended warranties and services.

The contractor's relationship with EPE includes monthly check-ins and opportunities for community outreach. Over the years, the contractor has participated jointly in community events, has provided information at food banks and community centers, and has given presentations to Medicaid providers. The contractor reported training EPE customer service representatives to refer income eligible customers to the NM EnergySaver program when they call in for bill assistance.

The contractor praised EPE for providing strong support and cited the company's recent focus on expanding community outreach. EPE's use of the Technical Reference Manual (TRM) to guide program decisions was reported to have been helpful, as it defined which projects qualify for rebates based on energy savings potential. For example, window replacements are excluded because they do not provide sufficient energy savings to justify the cost.

5.3.2.3 Program Process and Market Response

The contractor emphasized that the NM Energy Saver program is vital to their business, accounting for 25 percent of their work, and noted that they have a mission-driven approach in alignment with EPE's commitment to helping income-qualified families save energy and money while supporting environmental goals.

The contractor stated that every low-income project within EPE's service territory qualifies for and receives a rebate, and the program has influenced the selection of high-quality products that benefit both customers and technicians, ensuring safety, health, and environmental sustainability.

The contractor handles customer signatures that verify completed work and confirms income qualification. They then scan and upload these in a "straightforward and highly efficient [process], taking only 10 to 15 minutes to complete." No improvements were recommended, as the current system works smoothly.

The contractor had no suggestions for program changes, noting that they work closely with EPE to develop the program, and everything is functioning well.

The contractor believes that the high referral rate of their business (40%) indicates that there is a strong word of mouth component that may indicate the program has perceived value among customers. The contractor credits this partially to the no-cost nature of the program.

In terms of market reach, the contractor mentioned that they are struggling to come up with new customer classes, be they mentioned a few new customer segments that could be targeted. They suggested that EPE could focus outreach to specific customer segments who are currently not served by the program, such as renters, apartment residents, mobile homeowners, and seniors to ensure these groups feel included. Apartment residents and renters in particular are historically harder to reach and have challenges with participation in part due to the split incentives barrier.

5.3.2.4 Program Satisfaction

When asked to rate the customers' overall satisfaction with the NM Energy Saver program on a scale from 1 to 5, the contractor gave a rating of 5, indicating they were very satisfied with the program. He also expressed that his customers would rate the program even higher, with overwhelming satisfaction. The contractor mentioned that the program makes a significant difference for families facing challenges. The contractor shared feedback from customers who reported improvements in their ability to afford basic needs such as food and medication, as well as enhanced comfort and air quality in their homes—particularly through the installation of evaporative coolers.

The contractor said there were no instances where the program failed to meet the customers' expectations, and he did not have any specific suggestions for improvement.

The contractor emphasized the importance of ensuring income-qualified customers continue to have access to no-cost energy efficiency services installed by a reliable contractor. They stressed that eliminating all financial and other barriers is critical to the success of such programs. They expressed concern about any potential shift toward a market rate program, noting that larger rebates would not help families who simply cannot afford the upfront cost of energy-efficient appliances such as air conditioners.

5.4 CONCLUSIONS AND RECOMMENDATIONS

5.4.1 Gross Impact

EPE's Energy Saver program assists low income residential customers in the implementation of weatherization and other efficiency improvements such as LED lighting, thermostats, and water conservation measures. The implementation of all measures are provided to customers at no cost. Key issues found through the evaluation include differences in TRM assumptions such as demand factors, as well as the omission of savings associated with HVAC load reductions for residences with evaporative cooling measures.

Table 5-7 Energy Saver Gross Evaluation Findings and Recommendations

Finding	Recommendation
1. The New Mexico TRM does not account for savings associated with reductions in cooling load for residences with evaporative cooling equipment, as the impact on the fan is minimal. Additionally, electric savings were found to be reported for residences with gas heating equipment.	**Recommendation:** Savings for measures that reduce cooling load should not be considered for residences with evaporative cooling equipment, as the impact on the fan is minimal. Furthermore, savings should reflect the specific space conditioning equipment found for the residence. For example, electric heating savings should not be reported for residences with gas fired heating equipment.
2. Some measures were found to utilize different assumptions in the TRM, such as demand factors, when calculating ex-ante savings.	**Recommendation:** Implementors and evaluators should follow the inputs and assumptions provided in the New Mexico TRM, including demand factors, when calculating savings for measures installed through the Energy Saver program.

5.4.2 Participant Surveys

The Evaluation team's analysis of survey responses indicates that the EnergySaver program has successfully delivered energy efficiency upgrades to participants, with high satisfaction levels across all program aspects. Word-of-mouth referrals play a critical role in program participation, with 66 percent of participants learning about the program through friends or referrals. This suggests that satisfied participants are sharing their positive experiences with others, creating an effective informal marketing channel.

Contractors are effectively communicating EPE's sponsorship of the program, with 93 percent of respondents recalling that contractors mentioned EPE. The exceptionally high satisfaction with contractors (91% very satisfied) demonstrates the program's success in selecting and managing quality service providers.

Respondents are motivated by multiple factors, with reducing energy bills, improving home comfort, and replacing or upgrading equipment being particularly important. The program appears to be addressing urgent needs for many participants, with 58 percent of respondents reporting that their equipment replacement was very urgent and needed to be done immediately.

The program primarily serves homeowners (87%) living in single-family homes (92%), with most homes being smaller (71% between 1,000-1,499 square feet) and built between 1980 and 1989 (29%). This demographic profile suggests the program is reaching its intended low-income target population, many of whom live in older, modest-sized homes where energy efficiency improvements can provide significant benefits.

Based on the evaluation results above, the Evaluation team presents four key findings, each with a recommendation for program improvement.

Table 5-8 Key Findings and Recommendations

Finding	Recommendation
1: Word-of-mouth referrals are the primary source of program awareness (66%), far exceeding formal marketing channels such as bill inserts (14%) and social media (12%).	**Recommendation:** Implement a formal referral program that rewards existing participants for referring new participants, capitalizing on already strong word-of-mouth marketing while expanding the program reach more systematically.
2: Contractors are highly effective at communicating EPE's sponsorship (93% awareness) and receive exceptional satisfaction ratings (98% satisfied), demonstrating their importance as program ambassadors.	**Recommendation:** Enhance contractor training and support to ensure consistent, high-quality explanation of program benefits, particularly focusing on energy-saving strategies for participants to maximize their benefits from the installed equipment.
3: Most participants (84%) replaced existing equipment, with 58 percent reporting the replacement was very urgent, indicating the program is addressing critical needs.	**Recommendation:** Consider developing an expedited process for urgent equipment replacement cases to ensure the program can respond quickly to participants' most pressing needs.
4: While environmental impact was rated as very important by 81 percent of participants, practical concerns such as home comfort, energy bills, and equipment needs were rated as extremely important more frequently, suggesting that immediate tangible benefits are stronger motivators.	**Recommendation:** Emphasize practical benefits such as comfort improvements and bill savings in program marketing, while still acknowledging environmental benefits as a secondary motivation.

5.4.3 Contractor Surveys

The NM Energy Saver program benefits from a strong partnership with the contractor, reflected in high customer satisfaction and significant referrals driven by increased awareness of the program. This collaborative approach has expanded program reach, especially for income-qualified families. The contractor's consistent engagement in community outreach efforts, supported by EPE, further contributes to high program visibility and trust within the community.

While the program's design currently meets the needs of many customers, the contractor believes that there remains an opportunity to expand its reach. The contractor recommended targeted outreach to underserved groups such as renters, apartment residents, mobile home residents, and seniors, to enhance inclusivity from underserved groups. They also emphasized maintaining a no-cost model, as a shift to a purchase-based approach could pose financial barriers for the customers who need these services the most.

Table 5-9 Findings and Recommendations

Finding	Recommendation
1. The contractor is struggling to identify new customer segments to market the program.	**Recommendation:** Assist with conducting targeted outreach to underserved groups such as renters, apartment residents, and seniors, to enhance inclusivity from underserved groups.

6 Residential Comprehensive

The evaluation of the Residential Comprehensive program involved a net-to-gross, and process assessment, focusing on the various prescriptive measures supported in the program to improve energy efficiency in residential settings. These measures include insulation, duct sealing, air infiltration, solar screens, evaporative coolers, refrigerated air conditioning, variable speed pool pumps, cool roofs, Energy Star windows, Energy Star smart thermostats, heat pump water heaters, and high-efficient room air conditioners. The NTG/process analysis provided critical insights into the program's delivery, identifying areas for improvement in customer outreach, process efficiency, and overall program effectiveness to maximize energy savings and participation.

6.1 GROSS IMPACTS

The evaluation of the PY2024 Residential Comprehensive program did not include a gross impact assessment.

The evaluation of the PY2024 Residential Comprehensive program did not include a NTG impact assessment.

6.1.1 Net-to-Gross Ratio Update for PY2024

For the net impact for the Residential Comprehensive program, we were able to complete surveys with 99 of the 339 customers who had valid contact data. We calculated a free-ridership rate of 0.3468 that resulted in an overall net-to-gross (NTG) ratio of 0.6532. This new value will be applied to the Residential Comprehensive program beginning in PY2025.

Table 6-1 Residential Comprehensive NTG Ratio Update for PY2024

Program	PY2024 NTG Ratio	PY2025 NTG Ratio
Residential Comprehensive	55.14%	65.32%

6.2 PROCESS EVALUATION

6.2.1 Participant Surveys

As part of the El Paso Electric (EPE) Residential Comprehensive program process evaluation, the Evaluation team conducted telephone interviews with 99 participating residential customers who received rebates for installing energy efficient equipment in their homes. The surveys were completed from November 2024 through February 2025 and were approximately 15 minutes in length.

The survey was designed to collect participant information for the following topics:

- Demographic characteristics of program participants.
- How participants learned about the program.
- Purchase motivations and the influence of program components.
- Satisfaction with the program.
- Installation and performance of equipment.

All percentages and figures below have been weighted according to the energy savings of each respondent's measures installed through the program.

6.2.1.1 Respondent Demographics

We asked survey respondents about various characteristics of their homes, including home size, building age, and household size. Survey responses indicated a wide range of home sizes among program participants (**Error! Reference source not found.**). The largest segment was homes between 1,500 and 1,999 square feet (26%), followed by homes between 2,000 and 2,499 square feet (24%). Only 6 percent of respondents lived in homes of 4,000 square feet or more, while 4 percent lived in homes smaller than 1,000 square feet. These data suggest that the program primarily serves mid-sized homes.

Figure 6-1 Distribution of Home Size (n=99)

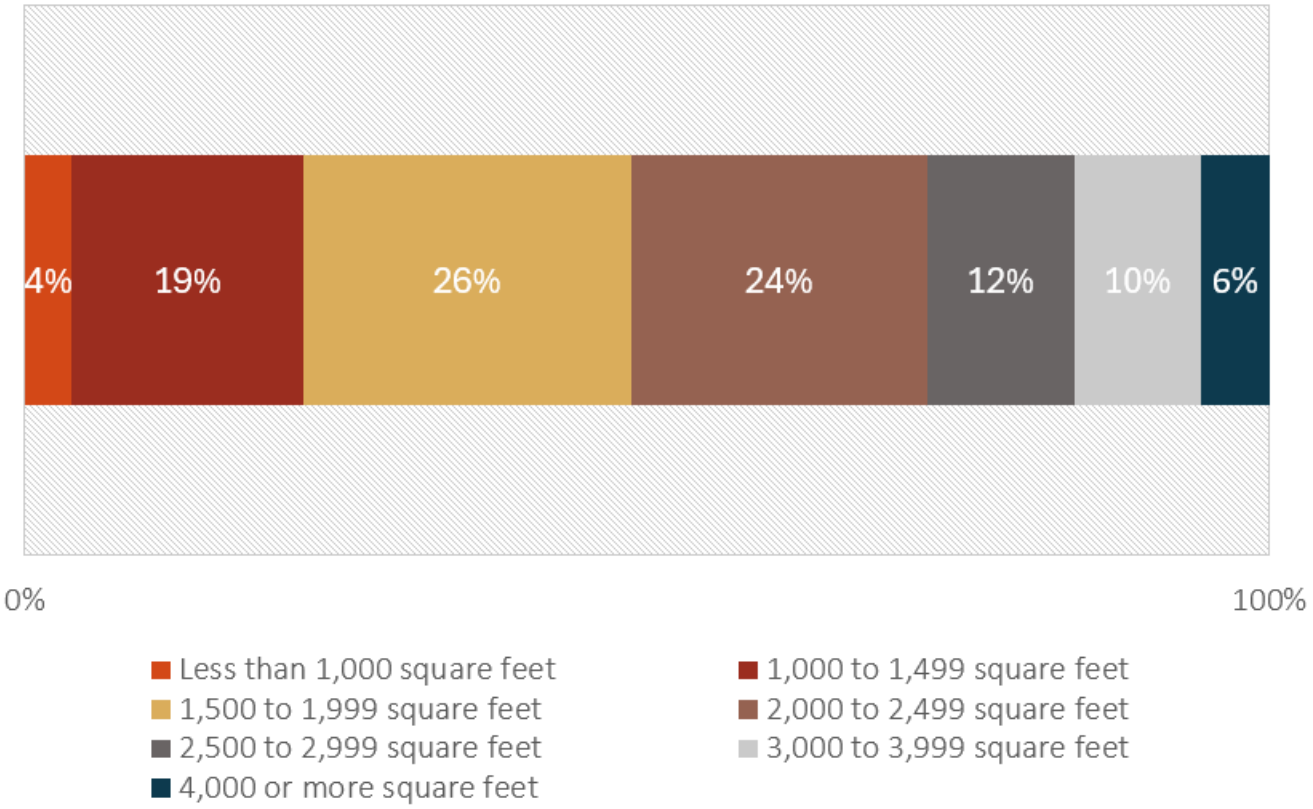


Figure 6-2 shows the household size distribution of program participants. The data reveal that most respondents live in households with one or two people (67% combined), with two-person households being the most common (47%). Three-person households accounted for 9 percent of respondents, followed by four-person households (11%), five-person households (8%), and larger households of six or more people (4% combined). This distribution suggests that the program appeals most strongly to smaller households.

Figure 6-2 Size of Respondents' Families (n=97)

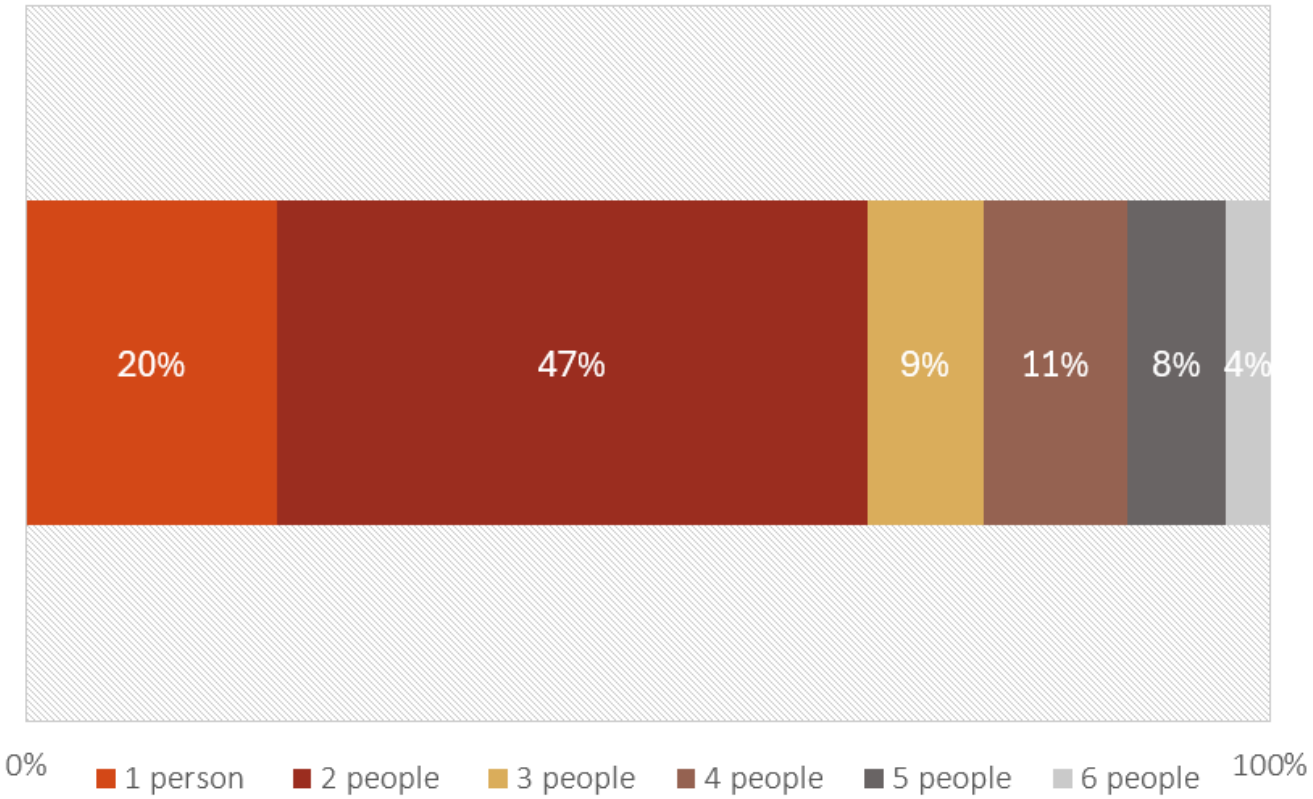
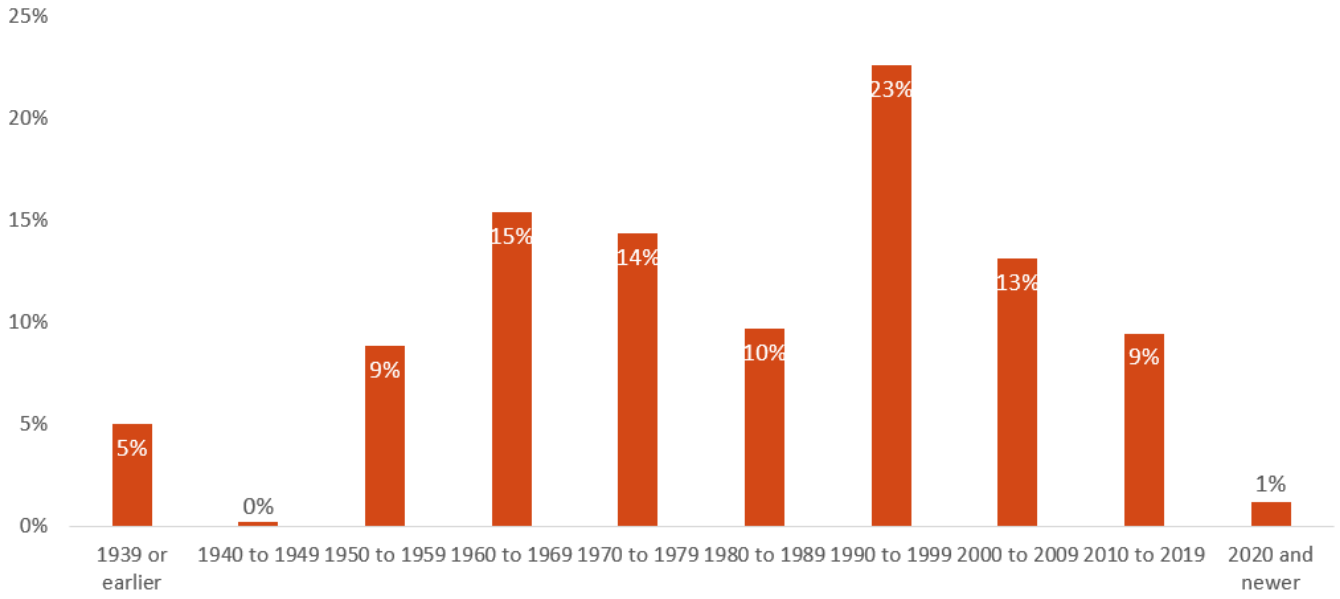


Figure 6-3 shows the age of surveyed participants' homes. Responses varied and generally demonstrate a normal distribution across home vintage categories . Homes built from 1990 to 1999 (23%) were most common, followed by homes built from 1960 to 1969 (15%) and homes built from 1970 to 1979 (14%). Homes built from 2000 to 2009 represented 13 percent of the total, while homes built from 1980 to 1989 accounted for 10 percent.

Figure 6-3 Age of Respondents' Homes (n=88)

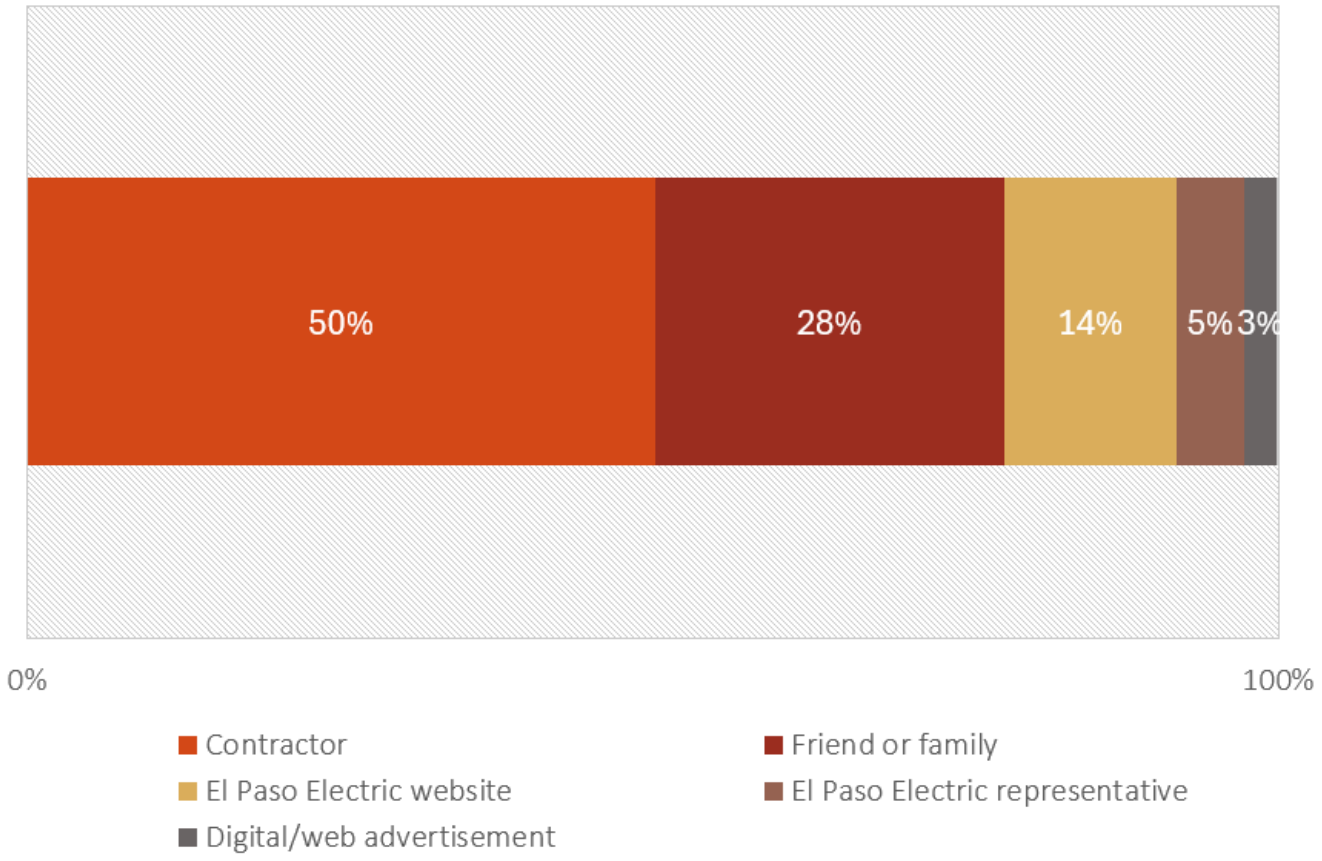


6.2.1.2 Sources of Awareness

The Evaluation team asked program participants how they initially became aware of the EPE Residential Comprehensive program (Figure 6-4). Fifty percent of respondents reported that they learned of the program through a contractor. Other significant sources of awareness included friends or family (28%) and EPE's website (14%). Relatively few participants learned about the program through an EPE representative (5%) or digital/web advertisements (3%).

These findings indicate that awareness of the program is primarily driven by contractor relationships. The strong representation of word-of-mouth referrals (28% from friends or family) also demonstrates the importance of customer satisfaction in generating new program participation. EPE's digital presence (website) also contributed meaningfully to program awareness at 14 percent.

Figure 6-4 How Respondents First Learned of the Program (n=70)



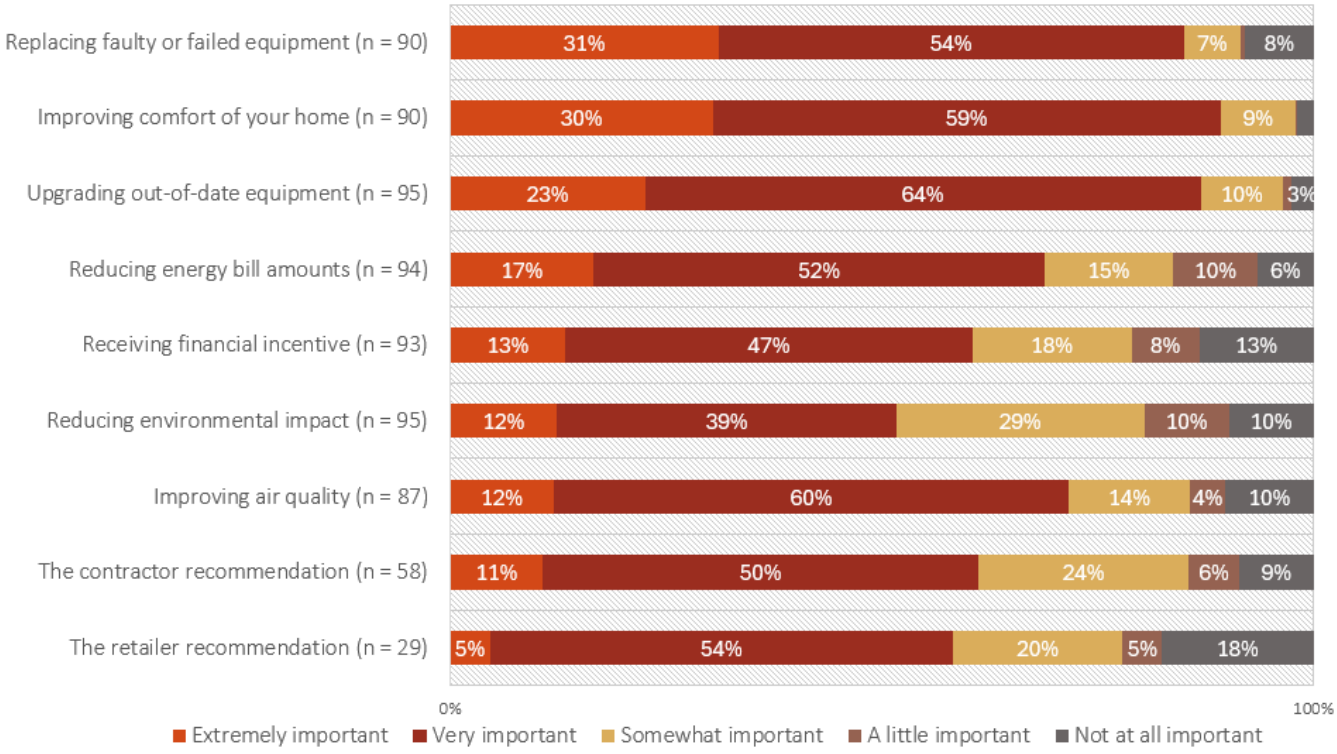
6.2.1.3 Influences and Motivations

The Evaluation team asked respondents to provide background on the various factors that contributed to their decision to install their new energy efficiency equipment. Figure 6-5 shows how respondents rated nine contributing factors in terms of importance.

Equipment-related considerations were significant motivators. Replacing faulty or failed equipment was rated as extremely or very important by 85 percent of respondents, while upgrading out-of-date equipment was considered extremely or very important by 87 percent of respondents. Improving comfort of the home was also a strong motivator for participants who installed cooling measures (smart thermostats, evaporative and refrigerated cooling systems) with 89 percent rating it as extremely or very important.

Financial considerations were also important drivers of participation. Reducing energy bill amounts was rated as extremely or very important by 69 percent of respondents, while receiving a financial incentive was rated similarly by 60 percent of participants. Environmental and air quality considerations were moderately important, with improving air quality rated as extremely or very important by 72 percent of cooling measure respondents, and reducing environmental impact rated similarly by 51 percent of all respondents.

Figure 6-5 Motivations for Participation (n varies)

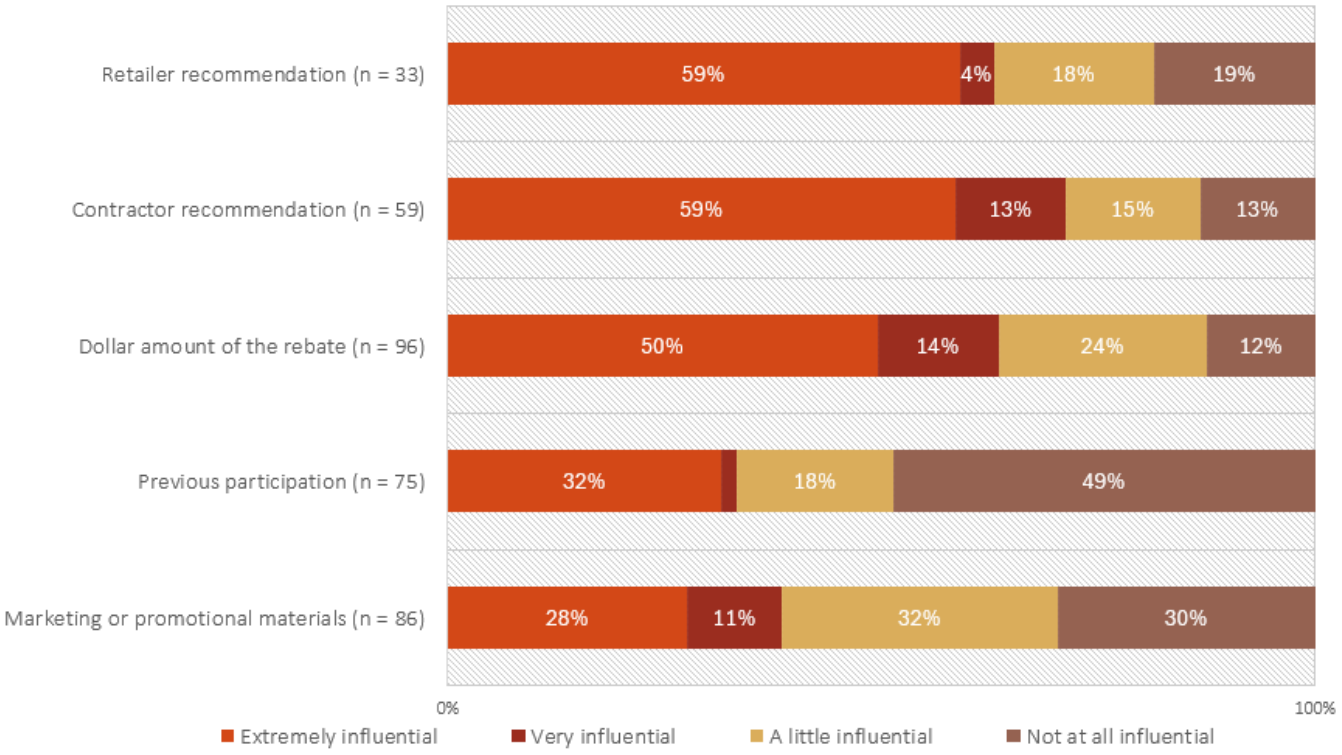


To gain deeper insight into customer decision-making, the Evaluation team asked detailed follow-up questions to participants about specific program aspects that influenced their decisions to upgrade equipment. Respondents rated the influence of various program components on a scale from 0 (not at all influential) to 10 (extremely influential). For analysis purposes, responses were grouped into four categories: extremely influential (8-10), very influential (6-7), a little influential (3-5), and not at all influential (0-2). Results are shown in Figure 6-6.

Contractor and retailer recommendations proved highly influential for those who interacted with a contractor or retailer. Contractor recommendations were considered extremely or very influential by 72 percent of respondents who used contractors, while retailer recommendations were rated similarly by 63 percent of those who purchased through retailers.

The dollar amount of the rebate was a particularly strong program component, with 64 percent of respondents rating it as extremely or very influential in their decision to upgrade equipment. This suggests that while financial incentives may not be the primary driver of participation (as shown in the importance ratings), they significantly impact the final decision to proceed with energy-efficient upgrades. Marketing or promotional materials from EPE were relatively less influential, with 39 percent of respondents rating them as extremely or very influential, while 32 percent considered them a little influential and 30 percent considered them not at all influential. This suggests that marketing materials may serve more as informational resources than primary motivators. Previous participation in EPE programs had the least influence among the factors measured, with 49 percent of respondents indicating it was not at all influential in their decision to participate in the current program. However, a substantial minority (32%) still rated previous participation as extremely influential, suggesting that positive past experiences do drive repeat participation for a meaningful subset of customers.

Figure 6-6 Influence of Program Components (n varies)



When then asked if there were other important reasons for installing the equipment beyond those explicitly mentioned, many respondents mentioned equipment age, maintenance, and reliability concerns, with comments such as "the one we replaced was kind of iffy at 19 years old" and "the old unit wasn't working." Several respondents specifically mentioned preventative maintenance to avoid equipment failure, with one noting they installed new equipment because their existing unit was "15 years old and I was afraid it would fail in summer." One respondent explained, "we are retired and we wanted to reduce our future maintenance costs" and others mentioned issues with older equipment that was "rusting and starting to leak" or "very old to maintain."

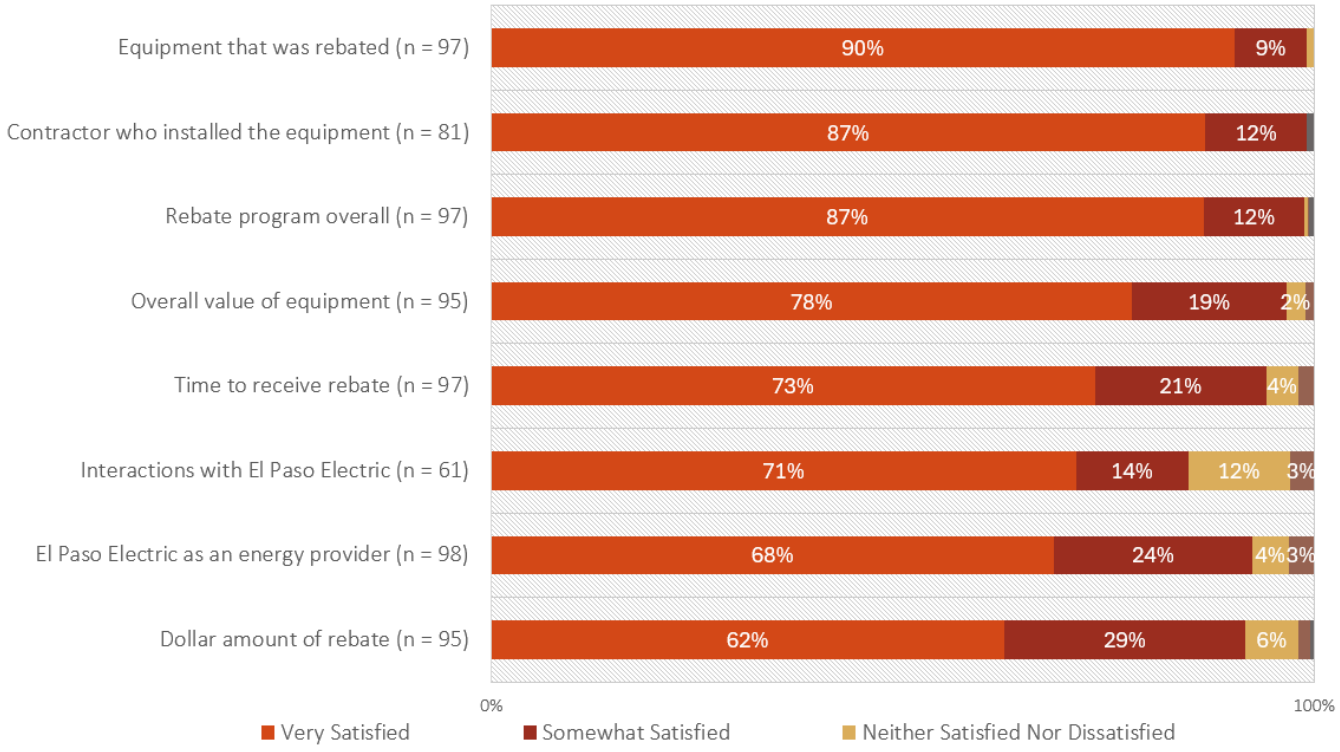
6.2.1.4 Respondent Satisfaction

The Evaluation team measured participant satisfaction across multiple program components using a five-point scale ranging from very satisfied (5) to very dissatisfied (1). Eighty-seven percent of respondents were very satisfied with the rebate program overall, with 12 percent somewhat satisfied. Satisfaction with the energy efficiency equipment was exceptionally high, with 90 percent of

respondents reporting they were very satisfied with their equipment and an additional 9 percent somewhat satisfied, for a combined satisfaction rate of 99 percent (Figure 6-7).

Contractor performance received high marks, with 87 percent of respondents very satisfied with the contractor who installed their equipment and 12 percent somewhat satisfied. The overall value of the equipment also received strong ratings, with 78 percent very satisfied and 19 percent somewhat satisfied (97% combined). The time to receive rebates satisfied 94 percent of respondents (73% very satisfied, 21% somewhat satisfied), while satisfaction with the dollar amount of the rebate was notably lower, with only 62 percent very satisfied and 29 percent somewhat satisfied. Satisfaction with EPE as an energy provider was also strong, with 92 percent of respondents reporting they were very or somewhat satisfied (68% very satisfied, 24% somewhat satisfied).

Figure 6-7 Respondent Satisfaction with the Program (n varies)



Despite high overall satisfaction, when asked for suggestions to improve the program, respondents provided valuable feedback in several key areas:

Rebate Amount and Structure: Nine respondents recommended increasing rebate amounts or changing the rebate structure. Two respondents specifically mentioned support for low-income customers, with one stating, "they should put a little bit more money for the rebate especially low-income people." One respondent suggested proportional rebates based on customer contribution, and another recommended higher rebates for older equipment replacement.

Program Information and Accessibility: Eight respondents identified issues with program information and accessibility. Four respondents specifically mentioned website navigation problems, with comments such as "the online resources are a little hard to find, it took some digging to find it on the website" and "EPE website isn't easy to navigate. I got lost on the website." Four respondents suggested improving information distribution, with one recommending “to spread the word more, in the emails and bills; it would have been easier to see and know about" and another suggesting "letting more people know about it."

Program Process: Seven respondents recommended streamlining the application and rebate process. Three respondents specifically mentioned faster rebate processing with comments such as "Make the rebate process faster" and "rebate faster." Two respondents suggested simplifying forms, with one noting "they need to clean up the forms, more streamlined, wanted the same information in different forms." Two respondents mentioned needing more assistance for specific populations: "More help for disabled and elderly people with forms and printed forms."

Expanded Coverage: Five respondents requested covering additional equipment types. One respondent specifically requested window rebates, another wanted smart thermostat coverage, and one mentioned wanting "the 500-dollar rebate for the charger for my electric car." Adopting these suggestions for improvement, while representing a minority of respondents given the high overall satisfaction, could further strengthen participant experience and broaden program appeal.

6.2.2 Participant Surveys

The Evaluation team's analysis of survey responses indicates that the EPE Residential Comprehensive program has successfully encouraged the adoption of energy efficient equipment, as evidenced by high satisfaction rates across all measured program aspects. Contractors effectively drive program awareness, with 50 percent of respondents learning about the program through contractors and an additional 28 percent learning about it through word-of-mouth from friends or family.

Equipment-related needs have played a significant role in respondents' decisions to install energy efficiency measures, with replacing faulty equipment (85% rated this as extremely or very important) and upgrading out-of-date equipment (87% rated this as extremely or very important) being the primary motivators. Improving home comfort was also a strong motivator for cooling measure participants (89% rated this as extremely or very important). Financial incentives and energy bill reductions were important secondary motivators, suggesting that marketing messages emphasizing these benefits alongside primary equipment benefits would resonate with potential participants.

The EPE Residential Comprehensive program has demonstrated excellent performance in terms of customer satisfaction, with nearly all participants somewhat or very satisfied with their overall program experience (97%). Equipment satisfaction was particularly impressive, with 99 percent of respondents reporting they were somewhat or very satisfied with their energy-efficient equipment. While the program has delivered strong customer satisfaction with equipment, opportunities for improvement include expanding outreach beyond contractor-driven awareness, strengthening understanding and satisfaction with financial incentives, and streamlining information on the program website.

Based on the evaluation results above, the Evaluation team presents three key findings, each with a recommendation for program improvement.

Table 6-2 Key Findings and Recommendations

Finding	Recommendation
1: Program awareness is primarily driven by contractors (50%) and word-of-mouth from friends and family (28%), demonstrating the importance of contractor relationships and customer satisfaction in program outreach.	**Recommendation:** Strengthen the contractor network through enhanced training and resources to maintain their crucial role in program promotion. Consider implementing a formal referral program to leverage the strong word-of-mouth component already contributing to program awareness.
2: Equipment-related needs (replacing failed equipment, upgrading outdated equipment) and comfort improvements are the primary motivators for participation, with financial benefits serving as important secondary motivators.	**Recommendation:** Align marketing messages with participant priorities by emphasizing equipment reliability, performance improvements, and comfort benefits, while highlighting financial incentives and energy savings as complementary benefits.

3: While program satisfaction is very high overall, only 62 percent of respondents were very satisfied with the dollar amount of the rebate, making it one of the lowest-rated program elements in terms of satisfaction.	**Recommendation:** Conduct peer utility benchmarking to assess appropriate incentive amounts and potentially adjust rebate amounts to better meet customer expectations. Consider tiered incentives that provide higher rebates for low-income customers and older equipment replacements, as specifically suggested by multiple respondents. Implement improvements to address the other frequently mentioned suggestions including website navigation enhancements and streamlined application forms.

7 Residential Lighting

The residential lighting market in the United States has experienced significant change over the past 20 years. Passage of the Energy Independence and Security Act of 2007 (EISA) began the phase-out of (energy inefficient) incandescent bulbs. Since then, consumers have become more aware of LEDs, and the purchase price of LEDs has become increasingly affordable. El Paso Electric's (EPE's) Residential Lighting program promotes the adoption of energy efficient lighting by providing incentives to customers to replace less efficient light bulbs with LED bulbs through in-store rebates at participating retailers in EPE's service territory.

In total, 17 retail locations in EPE's service territory that participated in the Residential Lighting program over the period were analyzed (January 1, 2024 – December 31, 2024); these retailers sold 112,706 LED bulbs at a discounted price through a customer point-of-purchase rebate.

The retailers that participated in the program differ with respect to retail channels (e.g., hardware, discount and other retail stores) and serve an array of customer income demographics. As shown in Table 7-1, the slight majority (54%) of bulbs were sold at retailers including mass merchant, discount, or home centers, while approximately 46 percent were sold at hardware stores.

Table 7-1 Bulb Sales Through the EPE Residential Lighting Program, January – June 2024

Type of Retailer	Bulbs Sold or Given Away	Percentage of Bulbs
Hardware Store	51,372	46%
Other Retailers	61,334	54%
Total	**112,706**	**100%**

Note: Bulb sales by individual retailers have been aggregated to maintain confidentiality. Bulbs with negative quantities in the tracking data are not accounted for in this table.

Table 7-2 shows summary statistics including the price per bulb before the rebate as well as the rebate for standard and specialty LED bulbs. On average, standard bulbs sold through EPE's Residential Lighting program had a pre-rebate price of $13.96 and a median price of $12.94. For specialty LED bulbs, the average pre-rebate price was $10.47, and the median price was $10.48. Actual prices ranged from $4.00 to $199.00 per standard bulb, and from $5.84 to $21.52 per specialty bulb. Rebates for standard bulbs provided to consumers through EPE's Residential Lighting program

ranged from $1.50 to $2200 with a mean and median rebate of $6.45 and $6.00, respectively. Rebates for specialty bulbs ranged from $2.00 to $18.00 with a mean of $4.77 and a median of $4.50. On average, the rebate reduced the price by 46 percent for both standard and specialty LED bulbs.

*Table 7-2 Summary Statistics on Bulb Prices and Rebates Through EPE Residential Lighting Program**

	Standard LED		Specialty LED	
Statistic	Pre-Rebate Price Per Bulb	Rebate Per Bulb	Pre-Rebate Price Per Bulb	Rebate Per Bulb
Mean	13.96	6.45	10.47	4.77
Median	12.94	6.00	10.48	4.50
Minimum	4.00	1.50	5.84	2.00
Maximum	199.00	22.00	21.82	18.00
25th Percentile	9.97	5.00	9.97	4.50
75th Percentile	15.39	6.40	14.99	6.40
Mean Rebate as % of Mean Bulb Price	46%		46%	

* Summary statistics weighted by bulb sales.

7.1 GROSS IMPACTS

For the Residential Lighting program, the gross impact analysis consisted of reviewing the per-unit savings values used for all the individual lighting measures covered by the program and then comparing these values with those in the New Mexico Technical Reference Manual (TRM) for residential lighting. For each record, we replicated savings based on the baseline wattage values and hours of use provided. The Evaluation team's replicated savings matched the ex-ante tracking data savings based on the population data provided. However, calculated ex-post savings were found to differ, as the evaluators used EISA required baseline wattages to determine savings, compared to the incandescent equivalent baseline wattages used in the ex-ante calculations.

7.1.1 Realized Gross Impacts

The Gross Realized Savings are calculated by taking the original ex ante savings values from the participant tracking databases and adjusting them using an Installation Adjustment factor (based on the count of installed measures verified through the phone surveys) and an Engineering Adjustment factor (based on the engineering analysis, desk reviews, etc.)

$$Gross\ Realized\ Savings = (Ex\ Ante\ Savings) * (Installation\ Adjustment) * (Engineering\ Adjustment\ Factor)$$

The PY2024 energy savings impacts for the Residential Comprehensive program are summarized in Table 7-3 and Table 7-4 for gross annual kWh and kW demand reductions respectively.

Table 7-3 Residential Lighting Results Summary kWh

Program	# of Bulbs	Expected Gross kWh Savings	Engineering Adjustment Factor	Realized Gross kWh Savings
Residential Lighting	112,706	1,594,501	87%	1,387,363
Total	**112,706**	**1,594,501**	**87%**	**1,387,363**

Table 7-4 Residential Lighting Results Summary kW

Program	# of Bulbs	Expected Gross kW Savings	Engineering Adjustment Factor	Realized Gross kW Savings
Residential Lighting	112,706	268.9	87%	234.0
Total	**112,706**	**268.9**	**87%**	**234.0**

The primary discrepancy is associated with a change in baseline wattage as defined by EISA federal requirements, leading to a reduction in calculated ex-post savings. Ex-ante calculations were found to utilize the pre-EISA incandescent equivalent wattage, specifically for reflector type bulbs, such as BR and PAR bulbs, as well as retrofit kits. Ex-post calculations utilized the baseline specified by the Department of Energy (DOE) for installations after January 1, 2024, which further reduced the Tier 1 baseline previously set by EISA. A comparison of baseline wattages used in the ex-ante and ex-post calculations that resulted in a discrepancy are shown in Table 7-5 by bulb type and lumen level.

Table 7-5 Residential Lighting Baseline Discrepancies

Bulb Type	Lumen Level	Ex-Ante Baseline W	Ex-Post Baseline W
BR30	650	65	17.8
	700	65	17.8
	1,200	65	17.8
	1,400	65	17.8
BR40	800	65	17.8
	1065	65	17.8
	1070	65	17.8
PAR20	500	30	11.6
PAR30	700	21.7	11.6
		40	11.6
	735	21.7	11.6
		40	11.6
PAR38	1,200	30	17.2
		65	17.2
	1,260	30	17.2
		65	17.2
	1,300	25	17.2
Retrofit Kit	600	50	72.8
	650	65	72.8
	700	65	72.8
	750	65	72.8
	1,150	65	72.8

7.2 NET IMPACTS

The Evaluation team utilized an elasticity model to determine net impacts for the Residential Lighting program. As discussed in Section 2 of this report, the elasticity model estimates the relationship between price paid and the number of bulbs sold. Once this relationship is established, it can be used to estimate the share of total bulbs sold that should be attributed to the price reductions offered by the program including those bulbs distributed to customers through giveaways.

The quantity of bulbs sold is inversely related to price—as the price of bulbs decreases, the number of bulbs sold increases. Approximately 79 percent of bulbs sold through EPE's Residential Lighting program were less than $2.00, and another 14 percent were between $2.00 and $4.00 (Table 7-6). Relatively few bulbs sold through the program had a rebated cost greater than $4.00. This trend was explored in more detail using the elasticity model, described below.

*Table 7-6 Bulb Sales Through EPE Residential Lighting Program by Rebated Price of Bulb**

	Standard LED		Specialty LED		
Rebated Price Per Bulb	Average Pre-Rebate Price Per Bulb	Average Rebate Per Bulb	Average Pre-Rebate Price Per Bulb	Average Rebate Per Bulb	Proportion of Bulbs Sold
$2.00 or less	$2.75	$1.55	$2.77	$1.67	79.0%
$2.01 - $4.00	$4.56	$1.49	$5.48	$2.35	14.0%
$4.01 - $6.00	$7.81	$2.48	$7.99	$2.79	5.5%
$6.01 - $8.00	$9.36	$2.69	$9.56	$2.38	0.6%
$8.01 - $10.00	$11.72	$2.00	$12.90	$3.00	0.5%
More than $10.00	$17.56	$2.49	$18.22	$2.65	0.4%

To develop the elasticity model, the Evaluation team analyzed sales data for EPE's Residential Lighting program for program year (PY) 2024 (January 1 – June 30) to understand the impact that direct (in-store) rebates have had on the sale of residential LED lighting. Since a customer receives the rebate at the time of purchase (as opposed to a mail-in rebate or a rebate on a future purchase), the rebate acts to immediately lower the purchase price of the LED lighting.

To estimate the impact that price has on the sale of LED bulbs, the Evaluation team specified and estimated a Poisson regression model. The Poisson regression model is preferable to standard ordinary least squares (OLS) regression because the response variable (i.e., bulb sales) in the model only takes on non-negative (or positive) values. The OLS regression model is generally not an appropriate choice because it fails to account for the limited possible values of the response variable. While there are other models that account for limitations of count data (e.g., negative binomial), the Poisson model is the most commonly used approach.

The generalized log-linear Poisson model is specified as

$$Ln(\mu_i) = x_i'\beta$$

Where, μ_i is the mean of the individual bulb sales across retailers and sales periods.

The empirical model the Evaluation team estimated for the EPE Residential Lighting program was specified as:

$$Ln(Bulb\ Sales_{kit}) = \beta_0 + \beta_1(Rebated\ Price_{kit}) + \beta_k(Bulb\ Char_k)$$

Where

$Ln(Bulb\ Sales_{kit})$ is the natural logarithm of the average number of bulb type *k* sold per day by retailer *i* during time period *t*.

$Rebated\ Price_{kit}$ is the price after rebate for bulb type *k* sold by retailer *i* in time period *t*.

$Bulb\ Char_k$ is one or more characteristics of the LED bulb, such as lumens or watts.

7.2.1 Realized Net Impact

The Evaluation team estimated separate models for standard and specialty LED bulbs (two models in total). The team's *a priori* assumption is that consumers are more sensitive to price when purchasing standard LED bulbs, which are applicable to a greater range of residential lighting fixtures and for which consumers may have a greater number of alternative lighting options (e.g., efficient incandescent, halogen, and CFL). By comparison, there is a wide range of specialty LED bulbs available in the market, but not every specialty LED bulb is demanded by every consumer and therefore only those consumers who have a use for a particular specialty bulb—regardless of lighting option—will show any sensitivity to the price of the LED option.

Table 7-7 summarizes the final gross and net impacts for the Residential Lighting program using the NTG ratio derived from the PY2021 elasticity model.

Table 7-7 Gross and Net Impact Summary

Residential Lighting Program	# of Bulbs	Realized Gross Savings	NTG Ratio	Realized Net Savings
kWh Savings	153,508	1,387,363	0.6000	832,418
kW Savings	153,508	234.0	0.6000	140.4

7.2.2 Net-to-Gross Ratio Update for PY2024

Table 7-8 shows the estimates of price elasticity of demand for the two regression models and for the Residential Lighting program overall.[10] Price elasticities are assumed to be negative (i.e., as price goes up, demand for the good or service goes down); it is the magnitude of the elasticity (the "responsiveness") that is of primary interest.[11]

As Table 7-8 shows, the Evaluation team found that the demand for LED bulbs is elastic for standard bulbs (a price elasticity of -1.41), but the demand for specialty LED bulbs is relatively inelastic (estimated elasticity of -0.50). Overall, when weighing LED bulb sales from all retailers, the Evaluation team estimated the price elasticity of demand for LED bulbs to be -1.20. Thus, a 10 percent *decrease* in the price of LED bulbs will result in a 12 percent *increase* in demand for LED bulbs, holding all else constant.

Table 7-8 also shows estimates of the net-to-gross (NTG) ratio for EPE's Residential Lighting program using the elasticity model. The estimates of the NTG ratio differ substantially between the two bulb types, with standard LED bulbs having an estimated NTG of 0.57 and specialty LED bulbs substantially lower at 0.31. For the EPE Residential Lighting program overall, the Evaluation team estimated the NTG ratio to be 0.51.

Table 7-8 Estimates of Price Elasticity of Demand and NTG Ratio

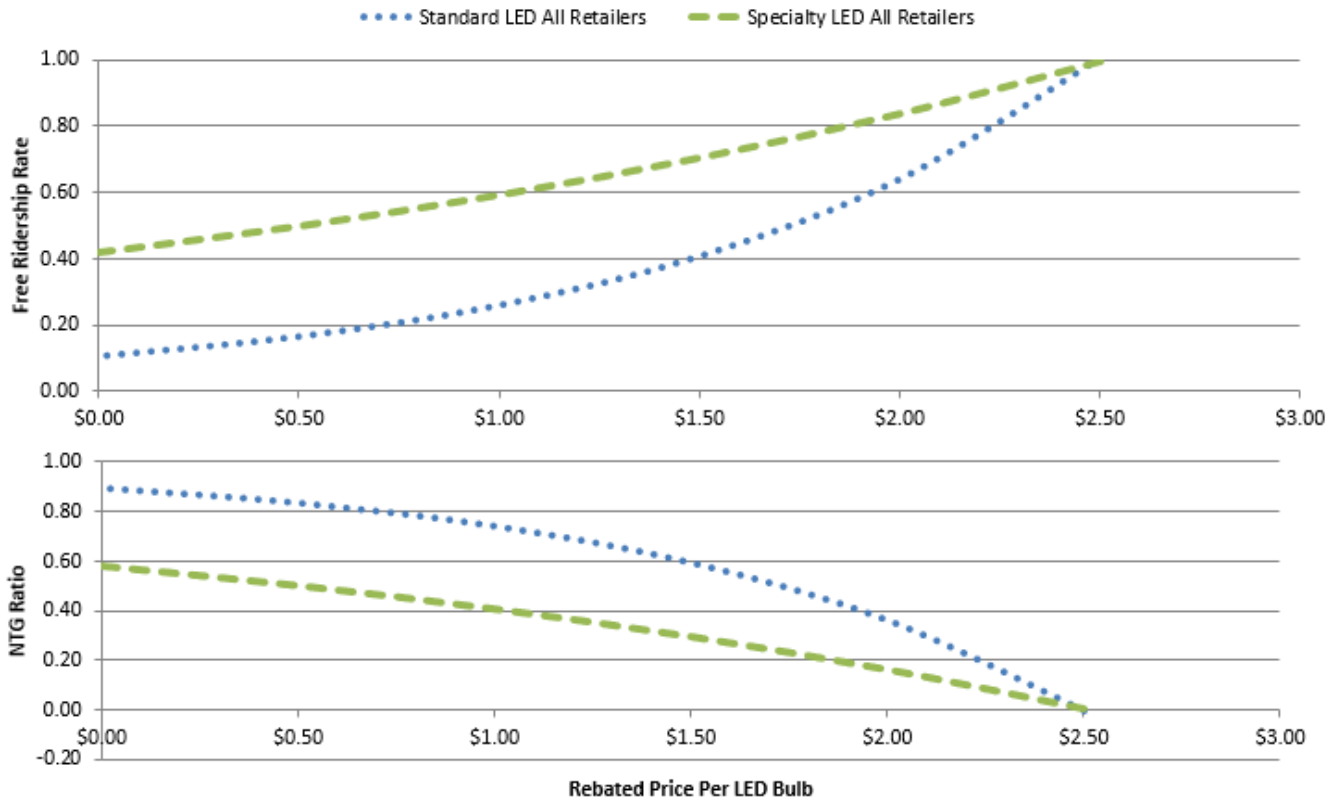
LED Bulb Type	Elasticity at Mean Rebated Price	NTG Ratio at Mean Rebated Price
Standard LED	-1.41	0.57
Specialty LED	-0.50	0.31
Program Overall (weighted by sales)	**-1.20**	**0.51**

[10] The price elasticity of demand is a measure of the change in the demand for a good or service when the price of that good or service increases or decreases by a small amount (generally 1.0 percent).

[11] If the price elasticity for a good is greater than 1.0 in absolute value, demand for that good is referred to as elastic (more responsive). Similarly, when the price elasticity is less than 1.0 in absolute value, demand for that product is referred to as inelastic. When the price elasticity of demand is equal to 1.0, demand for that product is referred to as unit elastic.

Figure 7-1 shows how expected rates of free ridership and NTG ratios vary by rebated bulb price for standard and specialty bulbs.[12] As the rebated price of LEDs drops, the proportion of purchasers that free ride decreases and the NTG ratio increases. The trajectories differ for standard and specialty bulbs due to the substantially different price elasticity of demand for the two bulb types.

Figure 7-1 Estimated Free Ridership and NTG Ratio by LED Bulb Type and Retailer



It is important to note that the free ridership chart (the upper panel of Figure 7-1) does not show the expected number of bulbs sold by rebated price, but rather the proportion of bulbs sold by rebated price that would have sold even without the rebate. As the rebated price decreases (moving from right to left along the horizontal axis), more and more consumers—who otherwise would not

[12] Excludes bulbs distributed through giveaways because there is no price sensitivity to measure.

purchase LED bulbs—are motivated to purchase bulbs, resulting in a decreasing proportion of purchasers that are free riders.

The purpose of the rebates is to encourage those consumers who would not otherwise purchase an LED to make the purchase. However, because the rebate is available to all purchasers of the LED bulbs, consumers who would have purchased the bulbs without the rebate still receive the rebate. The larger the rebate, the lower the cost to the consumer and the greater the number of consumers who will purchase LED bulbs, leading to a lower rate of free ridership and a higher NTG ratio (the lower panel of Figure 7-1).

Table 7-9 summarizes the final NTG ratio derived from the PY2021 elasticity model of 0.6000 and the PY2025 NTG ratio update to 0.5100.

Table 7-9 Residential Lighting NTG Ratio Update for PY2024

Program	PY2024 NTG Ratio	PY2025 NTG Ratio
Residential Lighting	60.00%	51.00%
Average	60.00%	51.00%

7.3 PROCESS EVALUATION

The Evaluation team did not perform a Process evaluation for this program year.

7.4 CONCLUSIONS AND RECOMMENDATIONS

7.4.1 Gross Impact

EPE's Residential Lighting program promotes the adoption of energy efficient lighting by providing incentives to customers to replace less efficient light bulbs with LED bulbs through in-store rebates at participating retailers in EPE's service territory. Key issues include the adoption of EISA required baselines when calculating ex-ante savings.

Table 7-10 Residential Lighting Evaluation Findings and Recommendations

Finding	Recommendation
1. The ex-ante analysis utilized incandescent equivalent baseline wattages when calculating savings, specifically for reflector bulb types (BR and PAR bulbs) as well as retrofit kits.	**Recommendation:** Baseline wattages should be reported based on the DOE specifications for installations after January 1, 2024, which further reduced the Tier 1 baseline previously set by EISA.

8 Residential Marketplace

The Residential Marketplace program was launched in the Spring of 2023 and features an online marketplace where residential energy efficient product are offered including: LEDs, smart thermostats, room air conditioners, advanced power strips, water fixtures, and kits.

8.1 GROSS IMPACTS

The evaluation of the PY2024 Residential Marketplace program did not include a gross impact assessment.

8.2 NET IMPACTS

The evaluation of the PY2024 Residential Marketplace program did not include a NTG impact assessment.

8.2.1 Net-to-Gross Ratio Update for PY2024

For the net impact self-report analysis, the Evaluation team completed 56 interviews from among the 203 customers who had valid contact information and participated in the PY2024 Residential Marketplace program.

This is the first year the net-to-gross (NTG) values have been calculated using the self-report method, instead of by a literature review. The self-report method is considered more accurate than a literature review and more directly captures actual participant perspective, and the evaluation team intends to use the self-report method for net impact analysis for this program in future cycles. We calculated a free-ridership rate of 0.4645 for the lighting subprogram, resulting in an NTG ratio of 0.5355. For non-lighting, we calculated a free-ridership rate of 0.2046 for a resulting NTG ratio of 0.7954. The new values will be applied to the Residential Marketplace program beginning in PY2025.

Table 8-1 Residential Marketplace NTG Ratio Update for PY2024

Program	PY2024 NTG Ratio	PY2025 NTG Ratio
Residential Marketplace Lighting	67.00%	53.55%
Residential Marketplace Non-Lighting	69.00%	79.54%

8.3 PROCESS EVALUATION

8.3.1 Participant Survey Overview

As part of the EPE Residential Marketplace program process evaluation, the Evaluation team conducted telephone interviews with 56 participating residential customers who received rebates for installing energy efficient equipment in their homes. The surveys were completed from November 2024 through February 2025 and were approximately 15 minutes in length.

The survey was designed to collect participant information for the following topics:

- Demographic characteristics of program participants.
- How participants learned about the program.
- Purchase motivations and the influence of program components.
- Satisfaction with the program.
- Installation and performance of equipment.

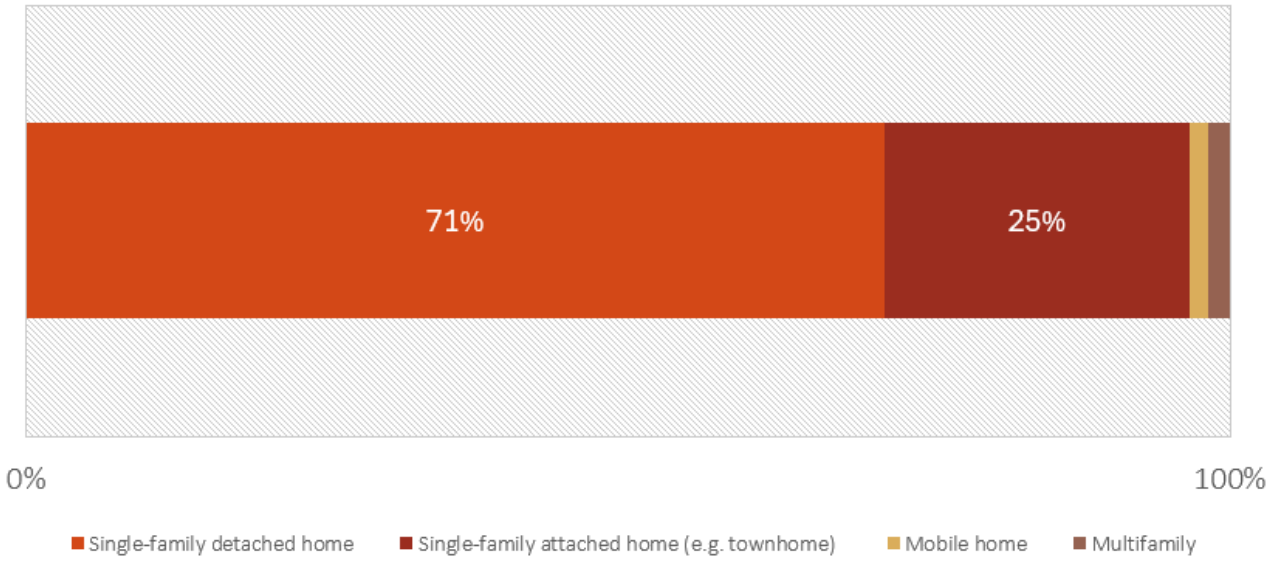
All percentages and figures below have been weighted according to the energy savings of each respondent's measures installed through the program.

8.3.1.1 Respondent Demographics

We asked survey respondents about various characteristics of their homes, including housing type, home size, building age, household size, and the length of time they have lived in their homes.

Survey responses indicated that the EPE Residential Marketplace program primarily serves single-family detached homes, with 71 percent of respondents residing in this housing type. An additional 25 percent live in single-family attached homes (e.g., townhomes), with the remaining small percentage of respondents living in mobile homes or multifamily buildings (Figure 8-1).

Figure 8-1 Building Types of Respondents' Homes (n=56)



Surveyed respondents reported a wide range of home sizes (Figure 8-2). The largest segments were homes between 3,000 and 3,999 square feet (27%) and homes between 2,000 and 2,499 square feet (25%). Other common home sizes included homes between 1,500 and 1,999 square feet (18%) and homes of 4,000 square feet or more (14%). These survey data indicate that the sample of respondents represents a diverse range of living environments, capturing homes of various sizes and configurations.

Figure 8-2 Square Footage of Respondent Homes (n=47)

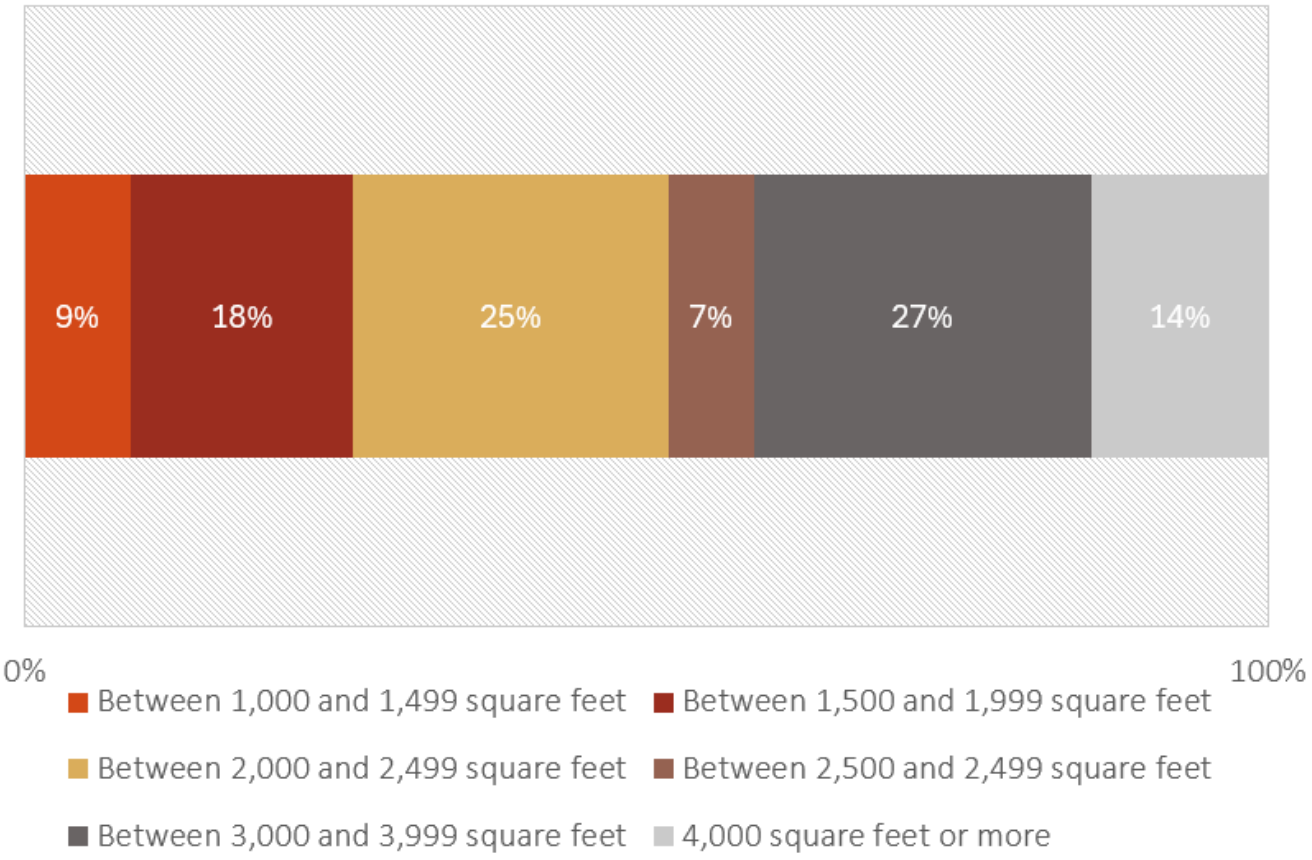
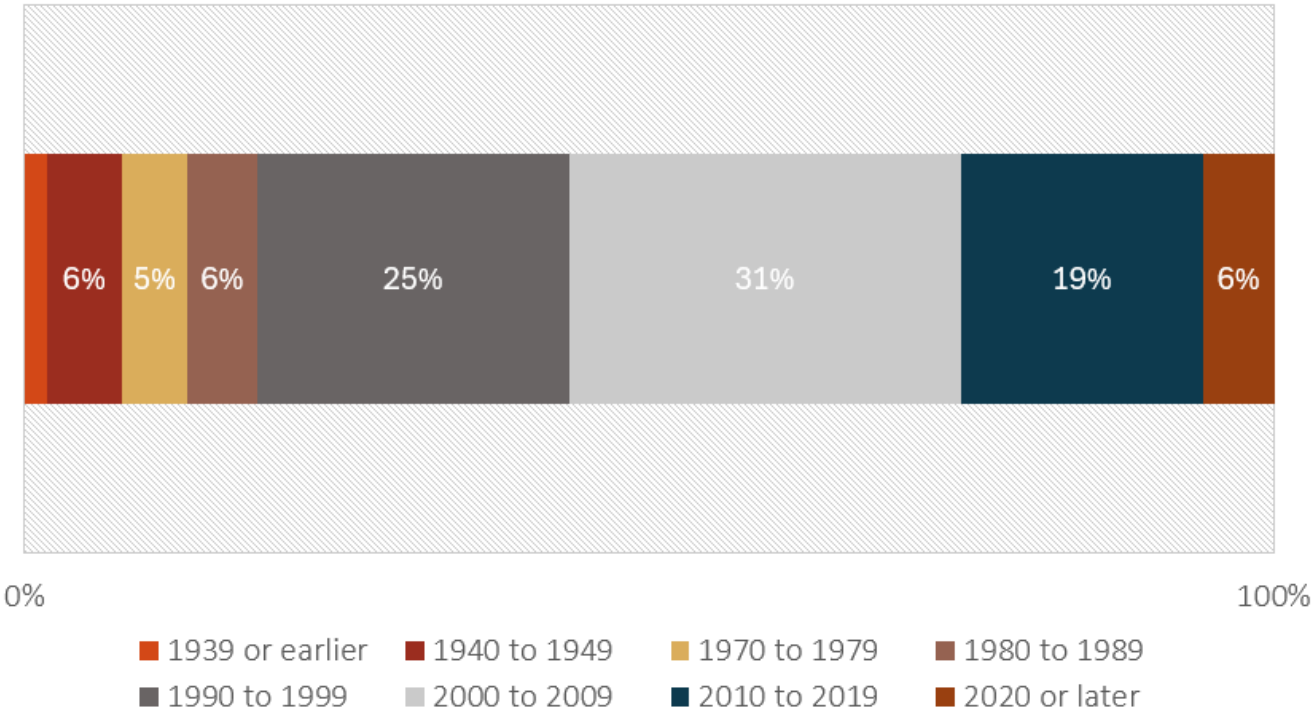


Figure 8-3 shows the age of surveyed participants' homes. Responses varied, but homes built from 2000 to 2009 (31%) were the most common, followed by homes built from 1990 to 1999 (25%). A notable portion of homes (19%) were recently built between 2010 and 2019. The diverse age range of houses represented in the survey data strengthens the results of these findings, as it demonstrates the program's effectiveness across homes of different vintages and construction types.

Figure 8-3 Age of Respondent Homes (n=54)

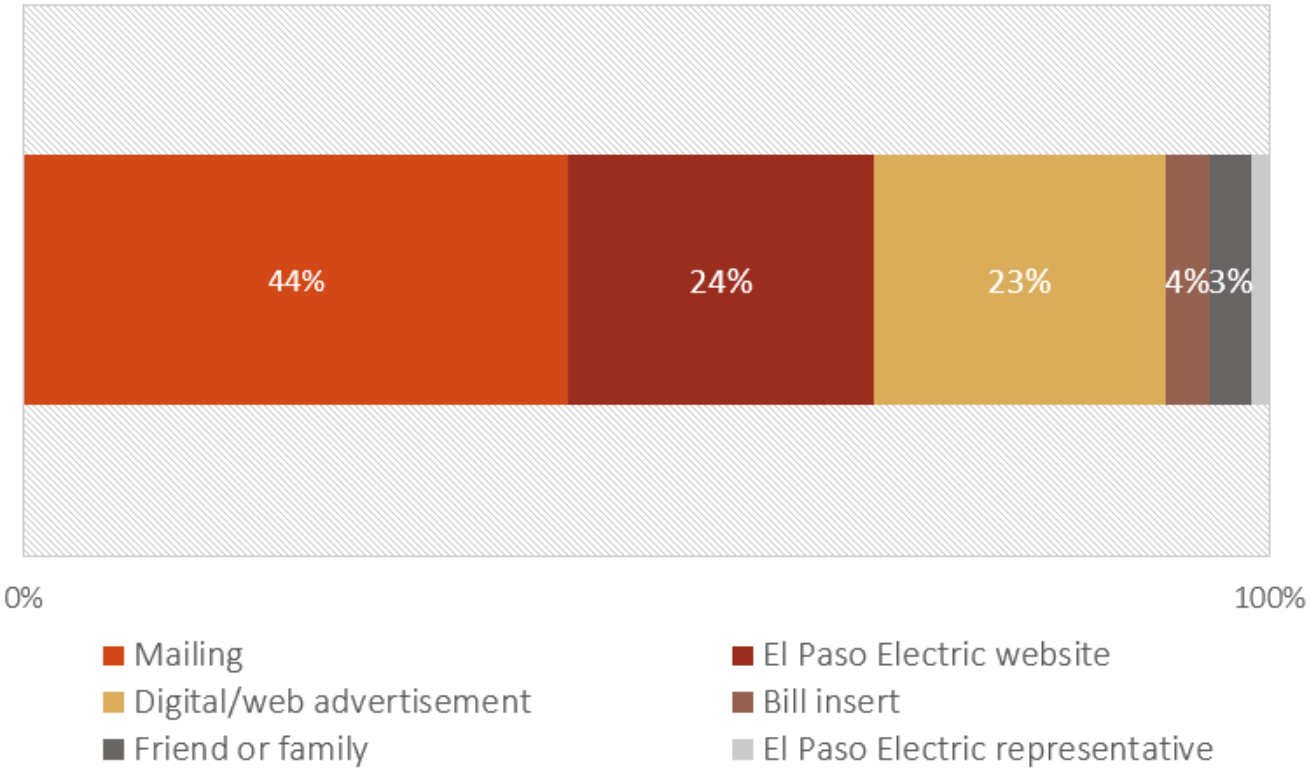


8.3.1.2 Sources of Awareness

The Evaluation team asked program participants how they initially became aware of the EPE Residential Marketplace program. As shown in Figure 8-4, 44 percent of respondents reported that they learned of the program through a mailing from El Paso Electric. Other significant sources of awareness included El Paso Electric's website (24%) and digital/web advertisements (23%). Relatively few participants learned about the program through bill inserts (4%), friends or family (3%), or directly from an El Paso Electric representative (2%).

These findings indicate that awareness of the program is primarily driven by direct utility marketing efforts, particularly through mailings and online channels. The strong performance of EPE's digital presence (website and digital advertising combined represent 47%) demonstrates that customers are successfully finding and engaging with information about energy efficiency programs and rebates through EPE's outreach online.

Figure 8-4 How Respondents First Learned of the Program (n=53)



8.3.1.3 Influences and Motivations

The Evaluation team asked respondents to provide background on the various factors that contributed to their decision to install their new energy efficiency equipment. Figure 8-5 shows how respondents rated four contributing factors in terms of importance.

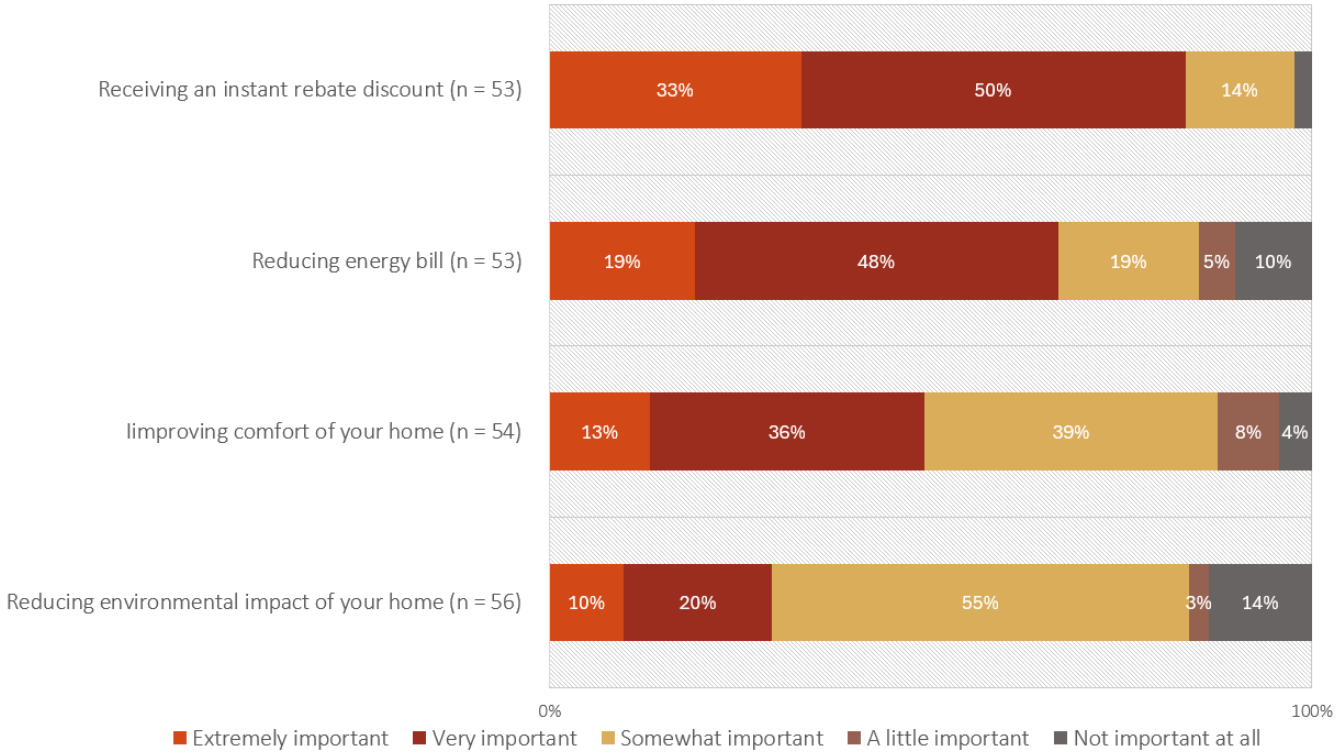
Financial considerations were significant motivators, with 83 percent of respondents rating the instant rebate discount as very important or extremely important. Similarly, reducing energy bills was rated as very important or extremely important by 67 percent of respondents. Improving home comfort was a moderately strong motivator, with 49 percent rating it as very important or extremely important.

Environmental concerns were relatively less influential in participants' decision-making, with only 30 percent rating the environmental impact as very important or extremely important. Notably, 14

percent of respondents indicated that environmental impact was not at all important in their decision, as this factor was marked the highest 'not at all important' rating among the four factors.

These findings indicate that program participants prioritize immediate financial benefits and increased home comfort over environmental considerations. Program administrators might consider evolving their approach to align with this customer profile, potentially emphasizing cost savings and comfort improvements in program marketing.

Figure 8-5 Motivations for Participation (n varies)

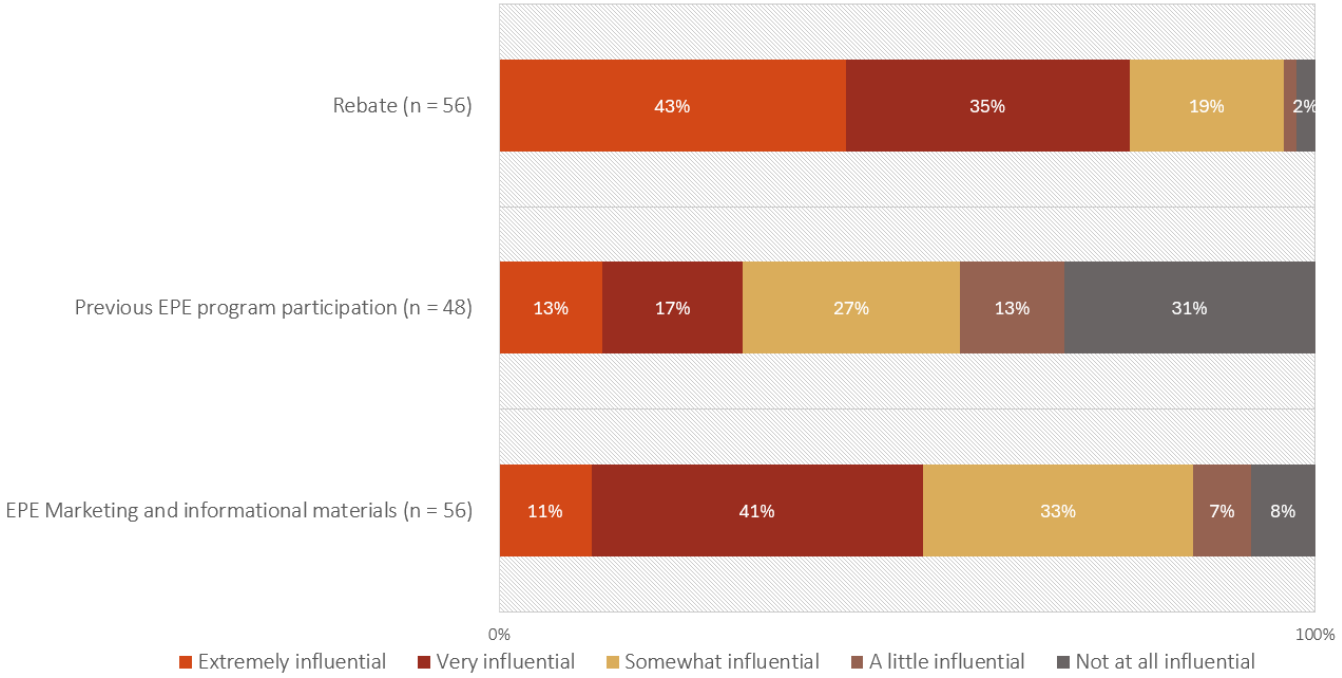


To gain deeper insight into customer decision-making, the Evaluation team conducted detailed follow-up questions with participants about the factors that most strongly influenced their decisions to upgrade equipment. Figure 8-6 provides additional context on participant motivations.

The rebate offered by the program was the most influential program component, with 78 percent of respondents reporting it was very or extremely influential in their decision. EPE marketing and informational materials were also impactful, with 52 percent rating them as very or extremely

influential. Previous participation in EPE programs had the least influence, with 31percent of respondents indicating it was not at all influential in their decision to participate in the current program. This suggests the EPE Residential Marketplace program may be reaching customers who have not previously engaged with energy efficiency programs and who are likely attracted by the program's convenience and instant rebate structure over the other components, or the program may be reaching customers who simply were not influenced by previous participation in other programs.

Figure 8-6 Motivations of Program Components (n varies)



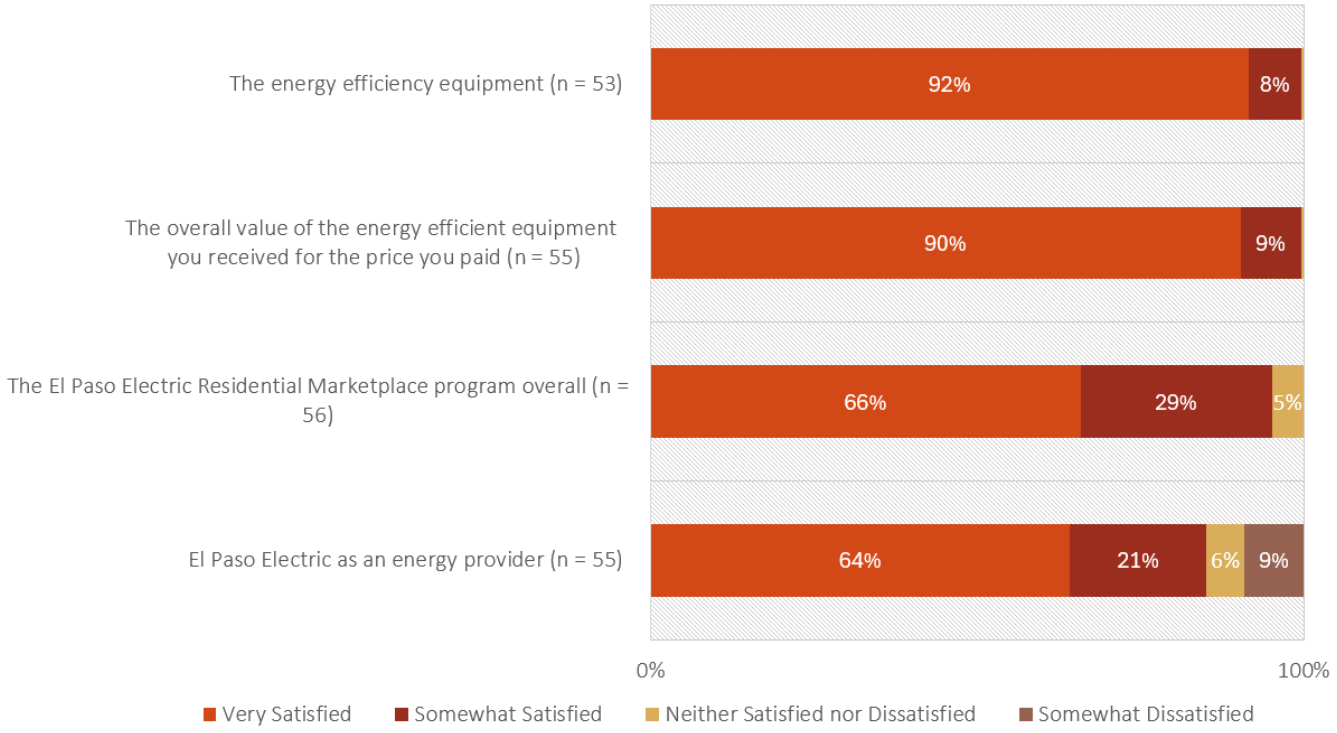
8.3.1.4 Respondent Satisfaction

The Evaluation team measured participant satisfaction across multiple program components using a five-point scale ranging from very satisfied (5) to very dissatisfied (1). Overall, respondents reported high satisfaction (Figure 8-7). Ninety-five percent of respondents reported that they were very or somewhat satisfied with their overall program experience (66% very satisfied, 29% somewhat satisfied).

Satisfaction with the energy efficiency equipment was exceptionally high, with 92 percent of respondents reporting they were very satisfied with their equipment and an additional 8 percent somewhat satisfied. Similarly, 90 percent of respondents were very satisfied with the overall value of the energy efficient equipment for the price paid, or usefulness and quality of equipment, with 9 percent somewhat satisfied.

Satisfaction with EPE as an energy provider was also strong, with 85 percent of respondents reporting they were very or somewhat satisfied (64% very satisfied, 21% somewhat satisfied). However, this component of the survey also measured the highest level of dissatisfaction, with 9 percent of respondents somewhat dissatisfied.

Figure 8-7 Respondent Satisfaction with the Program (n varies)



8.4 CONCLUSIONS AND RECOMMENDATIONS

8.4.1 Participant Survey

The Evaluation team's analysis of survey responses indicates that the EPE Residential Marketplace program has successfully encouraged the adoption of energy efficient equipment, as evidenced by high satisfaction rates across all measured program aspects. Direct utility marketing, particularly through mailings and online channels, effectively drives program awareness, with 44 percent of participants learning about the program through mailings and an additional 47 percent learning about it through the utility's website and digital advertising.

Financial incentives have played a significant role in participants' decisions to install energy efficiency measures. The rebate was rated as very or extremely influential by 78 percent of participants, and 83 percent identified receiving a rebate as very or extremely important in their decision-making process. Participants also strongly prioritized energy bill reductions and improved home comfort, suggesting that marketing messages emphasizing these benefits would resonate with potential participants.

The EPE Residential Marketplace program has demonstrated strong performance in terms of customer satisfaction, with 95 percent of participants somewhat or very satisfied with their overall program experience. Equipment satisfaction was particularly impressive, with 100 percent of respondents reporting they were somewhat or very satisfied with their energy efficiency equipment.

Based on the evaluation results above, the Evaluation team presents three key findings, each with a recommendation for program improvement.

Table 8-2 Key Findings and Recommendations:

Finding	Recommendation
1: Program awareness is primarily driven by direct utility marketing, particularly through mailings (44%) and online channels (47%), demonstrating the effectiveness of these approaches.	**Recommendation:** Continue to invest in direct mailings and digital marketing while exploring opportunities to enhance bill inserts, which currently generate minimal program awareness (4%).
2: Financial considerations are primary motivators for participation, with 83 percent of respondents rating rebates as very or extremely important and 67 percent prioritizing energy bill reduction.	**Recommendation:** Emphasize financial benefits in program marketing by including case studies and anecdotes on the financial benefits. Consider increasing rebate amounts for high-efficiency equipment with significant energy-saving potential.
3: While program satisfaction is very high overall (95% somewhat or very satisfied), there is room for improvement in customer perceptions of El Paso Electric as an energy provider (9% somewhat dissatisfied).	**Recommendation:** Leverage the positive experience of the Residential Marketplace program to enhance overall utility-customer relationships. Follow up with program participants to ensure their equipment is performing as expected and to address any concerns.

9 SCORE Plus

The evaluation of the SCORE Plus program followed a similar approach as the ones used for the Commercial Comprehensive program, and includes a gross assessment. Through this activity, evaluators examined the installation of energy savings measures such as lighting, agriculture lighting, and the installation of high efficiency HVAC units. The gross evaluation assessed the energy savings across a sample of these measures, focusing on the performance and impact of each project through a series of deemed reviews, phone survey verification, and project desk reviews.

9.1 GROSS IMPACTS

The impact evaluation process calculates the realized gross based on the program-level analysis described above. Most of the gross impact evaluation activities were devoted to engineering desk reviews of sampled projects. The sample was stratified to cover a range of different measure types so that no single measure (often lighting) would dominate the desk reviews. The sample was also stratified based on total energy savings within each measure group. Overall, the sampling strategy ensured that a mix of projects in terms of both project size and measure type would be included in the desk reviews.

The final sample design is shown in Table 9-1, where the majority of projects sampled were for lighting and HVAC projects, which represented 42 and 23% of the population savings respectively. The resulting sample achieved a relative precision of 90/2.2 overall.

Table 9-1 SCORE Plus Desk Review Sample

Sub-Measure	Count	Total kWh savings	Total kW savings	% of savings	Current Sample
HVAC	29	441,596	293.9	23%	4
Lighting	29	2,896,177	538.3	42%	7
Other	19	3,486,304	448.3	35%	3
Total	**77**	**6,824,077**	**1,280.5**	**100%**	**14**

9.1.1 Realized Gross Impacts

The Gross Realized Savings are calculated by taking the original ex-ante savings values from the participant tracking databases and adjusting them using an Installation Adjustment factor (based on

the count of installed measures verified through the phone surveys) and an Engineering Adjustment factor (based on the engineering analysis, desk reviews, etc.)

$$Gross\ Realized\ Savings = (Ex\ Ante\ Savings) * (Installation\ Adjustment) * (Engineering\ Adjustment\ Factor)$$

The ex-ante PY2024 impacts for the SCORE Plus program are summarized in Table 9-2 and Table 9-3.

Table 9-2 SCORE Plus Savings Summary kWh

Program	# of Projects	Expected Gross kWh Savings	Engineering Adjustment Factor	Realized Gross kWh Savings
SCORE Plus	2,507	6,824,077	110%	7,503,370
Total	**2,507**	**6,824,077**	**110%**	**7,503,370**

Table 9-3 SCORE Plus Savings Summary kW

Program	# of Projects	Expected Gross kWh Savings	Engineering Adjustment Factor	Realized Gross kWh Savings
SCORE Plus	2,507	1,280.5	102%	1,302.7
Total	**2,507**	**1,280.5**	**102%**	**1,302.7**

The Evaluation team determined gross realized impacts for the SCORE Plus program by performing engineering desk reviews for the sample of projects. EPE has developed Excel-based calculators to estimate savings for lighting and HVAC projects. The factors and assumptions used in these calculators were reviewed by the Evaluation team and compared to the New Mexico TRM. Based on the sample of projects reviewed, the EPE Excel-based calculators appear to be in alignment with the New Mexico TRM.

Through the process of engineering desk reviews, the Evaluation team adjusted several projects based on provided information within the project files, site contact interviews, and the TRM, which impacted the realization rates.

The evaluation identified several recurring issues contributing to discrepancies between ex-ante and verified savings. A key issue is the lack of consistency in applying inputs and assumptions from the New Mexico TRM. This includes the application of stage-specific inputs for agricultural lighting measures, space-specific inputs vs. building weighted averages, and the use of consistent values to

represent equipment efficiency. Furthermore, some projects were found to support the implementation of equipment without required qualification documents.

It is essential to ensure consistency in approaches when calculating savings, such as the consideration of differing stages for agricultural grow measures, and the use of equipment efficiencies for HVAC measures. These steps will ensure energy savings accuracy for the SCORE Plus program.

A summary of the individual desk review findings for each samples project are included in Appendix E.

9.2 NET IMPACTS

The evaluation of the SCORE Plus program did not include a net-to-gross component for PY2024.

9.3 PROCESS EVALUATION

The evaluation of the SCORE Plus program did not include a process component for PY2024.

9.4 CONCLUSIONS AND RECOMMENDATIONS

EPE's SCORE Plus program is offered to large commercial customers, schools, and government facilities. The program is designed to influence retrofit, renovation, and new construction projects to implement higher efficiency solutions for program participants, as well as provide education on energy efficiency best practices. Key issues identified through the evaluation include the inclusion of non-qualified fixtures for energy savings calculations, the inconsistency in savings calculations for differing agricultural lighting stages, and the inconsistency in the use of efficiency values, specifically SEER vs. SEER2.

Table 9-4 SCORE Plus Evaluation Findings and Recommendations

Finding	Recommendation
1. For EA-0001519191, the ex-ante analysis categorized all agricultural fixtures under the Agricultural Flowering building type, and applied corresponding inputs such as hours of use and coincidence factor. For other space types such as Vegetative spaces, the evaluator adjusted hours of use and coincident factors based on the supported inputs associated with vegetative crops, following NM TRM guidelines. For flowering cycle crops, the evaluation referenced a photosynthetic photon flux (PPF_fixture) of 2,007 micromols/s, as specified in the DLC certificate for the installed fixtures.	**Recommendation:** Implementors and evaluators should report inputs such as hours of use and coincident factor based on the specific agricultural lighting space type (such as flowering and vegetative), following NM TRM guidelines. Furthermore, the photosynthetic photon flux (PPF) for the installed fixture should be sourced from the DLC-approved product database.
2. For EA-0003258107 and EA-0003547119, the primary discrepancy resulted from the use of the building weighted average value from the NM TRM to represent hours of use in the ex-post calculations for the building type "Retail – Small". Following NM TRM guidelines, in general, implementors and evaluators should use hours of use for specific area types in the TRM as opposed to the building weighted average. This approach increases the accuracy of energy savings estimates. However, if a project has specific area types, such as "Retail – Small, Restrooms" which are not supported in the TRM, then it is appropriate to use the building weighted average for the full project for consistency.	**Recommendation:** Use hours of use specific to an area type whenever possible, using values from the NM TRM. If the NM TRM lacks a specific area type for the space, then default to using the building weighted average value for the full project.
3. For EA-0003258107, energy savings were claimed for non-qualified fixtures in both interior and exterior spaces. The NM TRM states that "LED lamps and fixtures must be qualified and listed by at least one of the following organizations: DesignLights Consortium (DLC), ENERGY STAR®, or DOE LED Lighting Facts." If LED lamps or fixtures are non-qualified, the NM TRM also states that these products "may receive approval if results of independent lab testing show the products comply with the Minimum Efficacy (lm/W) and L70 requirements listed in the most current version of the DLC Technical Requirements. In addition, when a product is non-qualified, including cases where there is note a product qualification category, then a custom approach may be used. If a utility chooses to approve a non-qualified LED, they must clearly demonstrate how any non-qualified aspects of the product have been accounted for.	**Recommendation:** Implementors should only claim energy savings for qualified fixtures. If a fixture is not qualified, implementors should document independent lab testing to demonstrate product compatibility with the Minimum Efficacy (lm/W) and L70 requirements listed in the most current version of the DLC Technical requirements, or utilize a custom approach for calculating energy savings.

Finding	Recommendation
4. For EA-0003903230, the ex-ante analysis used PNM workpapers and IECC 2018 standards, applying SEER ratings for baseline equipment, and SEER2 ratings from AHRI certificates for installed equipment without converting between the two factors. The inconsistent use of efficiency led to differences in savings calculations. The ex-post analysis followed the same algorithm, but referenced IECC 2021 standards, using SEER2 efficiencies to represent both baseline and installed cases.	**Recommendation:** Implementors and evaluators should define the baseline equipment efficiency based on IECC 2021 standards. Furthermore, equipment efficiency ratings should be consistently reported as SEER/SEER2, EER/EER2, and HSPF/HSPF2, and should be converted when necessary to maintain accuracy in savings calculations.

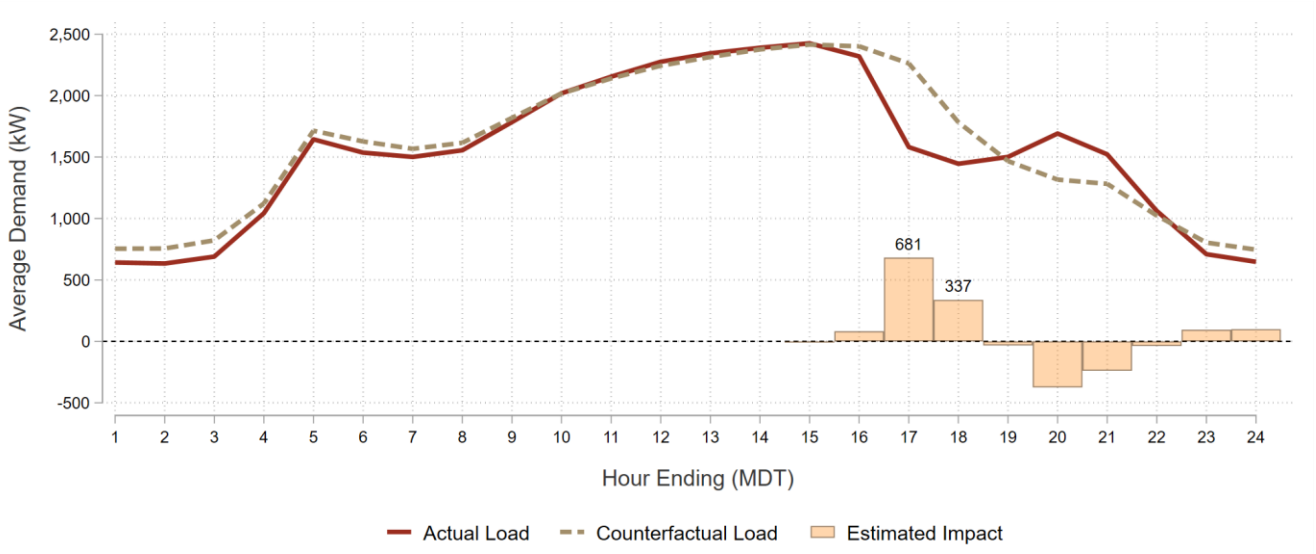
10 Load Management

10.1 COMMERCIAL LOAD MANAGEMENT

10.1.1 Introduction

El Paso Electric's (EPE) Commercial Load Management program is a demand response (DR) program for non-residential premises in its service territory. The program compensates participants for reducing electric load upon dispatch during periods of high system load. Figure 10-1 illustrates the impact of event dispatch on load during a typical two-hour event from 4:00 PM until 6:00 PM. In 2024, there were five program participants – all schools. Each participant commited to providing a certain amount of capacity relief (in kW) for each event. Committed capacities for individual program participants ranged from 20 kW to 110 kW.

Figure 10-1 Commercial Load Management Example – Average Two-Hour Event



During the summer 2024 demand response season, EPE and the program implementer (Trane) called nine demand response events as summarized in Table 10-1. Each event lasted two hours, eight of which were from 4:00 PM to 6:00 PM Mountain Daylight Time (MDT).

Table 10-1 2024 Demand Response Event Summary

Date	Day of Week	Commitment (kW)	Start Time (MDT)	End Time (MDT)	Max Temp in Interval (°F) – Las Cruces
June 13	Thursday	340	4:00 PM	6:00 PM	106.7
June 26	Wednesday	340	4:00 PM	6:00 PM	97.6
July 1	Monday	340	4:00 PM	6:00 PM	96.1
July 30	Tuesday	340	4:00 PM	6:00 PM	100.6
August 1	Thursday	340	4:00 PM	6:00 PM	98.8
August 8	Thursday	340	3:00 PM	5:00 PM	100.8
August 16	Friday	340	4:00 PM	6:00 PM	102.3
August 20	Tuesday	340	4:00 PM	6:00 PM	98.4
August 21	Wednesday	340	4:00 PM	6:00 PM	98.7

The Evaluation team performed an independent evaluation of program performance and verify the savings calculated by Trane for purposes of settlement with participating customers. Table 10-2 shows the verified savings results. Note Trane did not report energy savings, so the Evaluation team set reported energy savings equal to verified energy savings. Subsequent sections describe the methods and findings in greater detail.

Table 10-2 Evaluation Results

Resource	Number of Schools	Savings			Measure Life (Years)
		Reported	Verified	Realization Rate	
Demand (kW)	5	508	539	106%	1
Energy (kWh)	5	5,367	5,367	100%	1

10.1.2 Methodology

10.1.2.1 Input Data

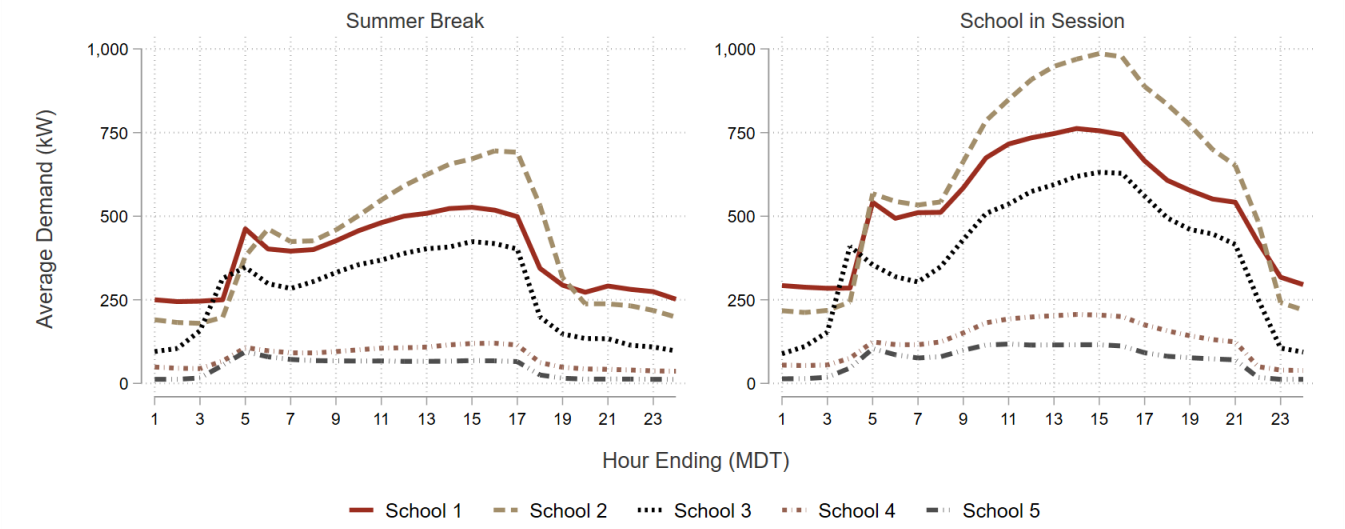
The evaluation relied on three key data streams:

- **Five-minute interval data** for program participants. The interval data was provided by EPE and was used to estimate participant baselines, verified demand reductions, and verified energy savings.

- **Fifteen-minute meter data** for program participants. The metering data was provided by Trane and was used to verify Trane's demand reduction estimates. AMI data has not historically been available for program participants, which is why Trane has meters installed at participating sites. In future years, Trane will use the five-minute interval data for their analysis.
- **Hourly weather data.** The hourly weather data was used to understand the relationship between demand reductions and outdoor temperature.

Per the interval data, Figure 10-2 shows average hourly demand for each school on non-event weekdays during summer of 2024. The left panel shows average demand during the summer break, and the right panel shows average demand during the school season. There is a clear difference in consumption across the two periods, with average consumption being considerably higher during the school season. Across both periods, loads are highest in the late afternoon when the outdoor temperatures are high. There is a sharp decline in loads around 6:00 PM.

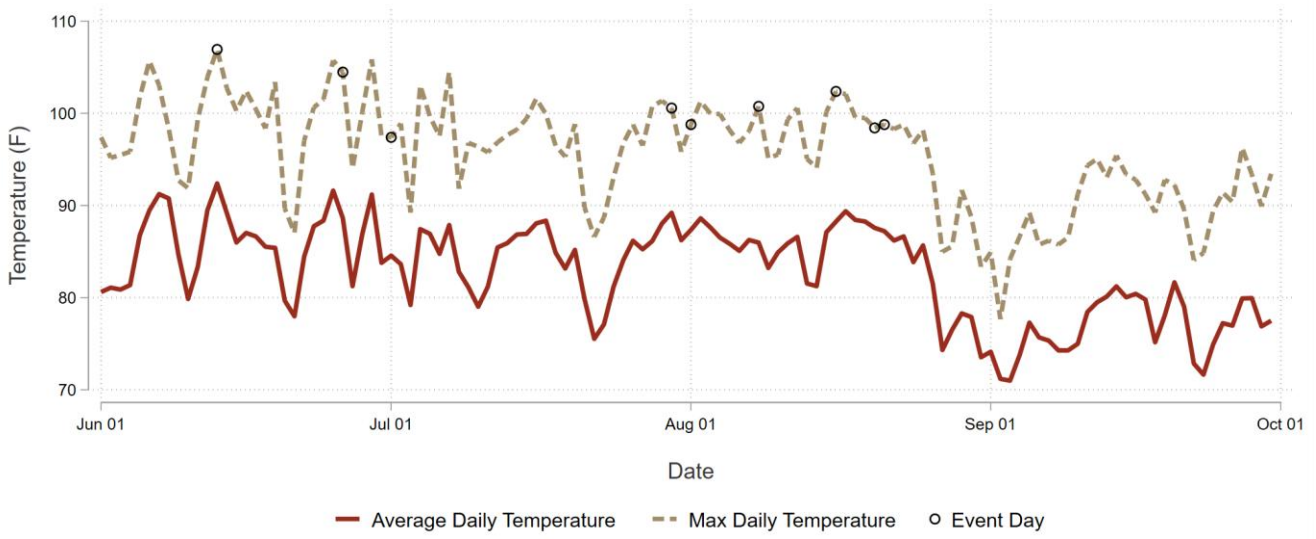
Figure 10-2 Distribution of Electric Demand, June-September 2024



By date, Figure 10-3 shows the average and maximum daily temperature for the 2024 summer. Event days are denoted with black circles. An event was dispatched on the hottest day (June 13th) of the summer. There were several non-event days where the maximum temperature exceeded 100°F

(though some of these days are weekend days). For reference, the first day of school for this pool of participants was July 31st.

Figure 10-3 Las Cruces Weather, Summer 2024



10.1.2.2 Estimating Demand Response Impacts

The DR performance calculation centers on the customer baseline (CBL), which is an estimate of what load would have been in the participating facilities on event days if DR had not been called. The settlement calculations called for a "high 8-of-10" baseline with a capped, symmetric day-of adjustment. Only non-event, non-holiday weekdays were eligible to be baseline days. For each event day, the method was as follows:

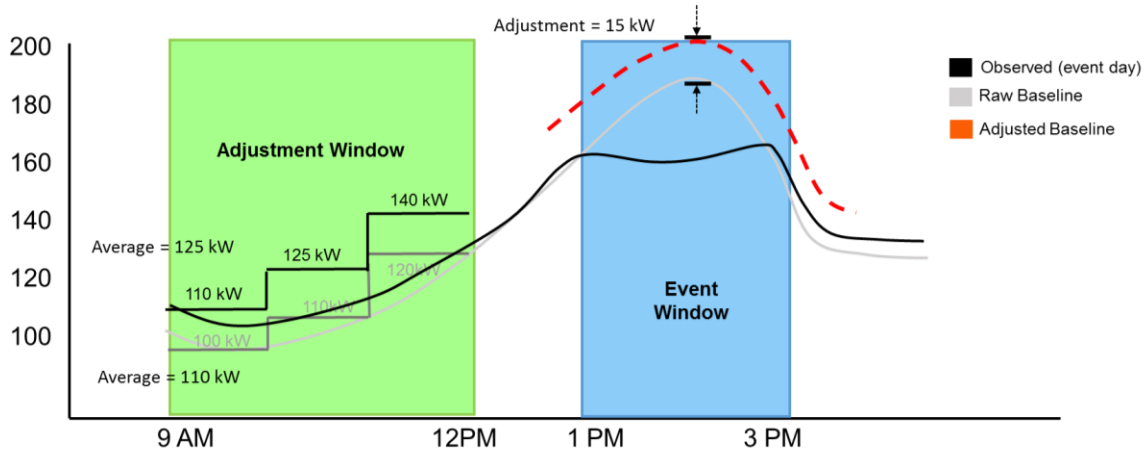
- Select the last ten non-event, non-holiday weekdays.
- Select the eight days (out of ten) with the highest average load during the event window, using the 15-minute interval load data. For summer 2024, the event window was 4:00 PM to 6:00 PM for eight of the nine events and 3:00 PM to 5:00 PM for the other event.
- For each 15-minute interval, calculate the average load of the eight selected baseline days. This is known as the unadjusted baseline.

After the unadjusted baseline is calculated, an adjustment factor is calculated and applied to the unadjusted baseline to create the adjusted baseline as follows:

- Designate the three hours prior to the event, excluding the hour immediately prior to the event, as the adjustment window. For summer 2024, the adjustment window was 12:00 PM to 3:00 PM for eight of the nine events and 11:00 AM to 2:00 PM for the other event.
- Calculate the average observed load on the event day during the adjustment window (single value).
- Calculate the average observed load on the eight selected baseline days during the adjustment window (single value).
- The adjustment factor (single kW value) is defined as the difference between the average observed load during the adjustment window on the event and baseline days. The adjustment factor is capped at +/- 20% of the unadjusted baseline.
- For each interval in the event window, add/subtract the adjustment factor to/from the unadjusted baseline to calculate the adjusted baseline.

A sample calculation is illustrated in Figure 10-4. In this example, the adjusted baseline is 15 kW higher than the unadjusted baseline during the event window. This is because the actual average observed load during the adjustment window was 15 kW higher on the event day (125 kW) compared to the baseline days (110 kW).

Figure 10-4 Illustration of Adjusted Baseline Calculation

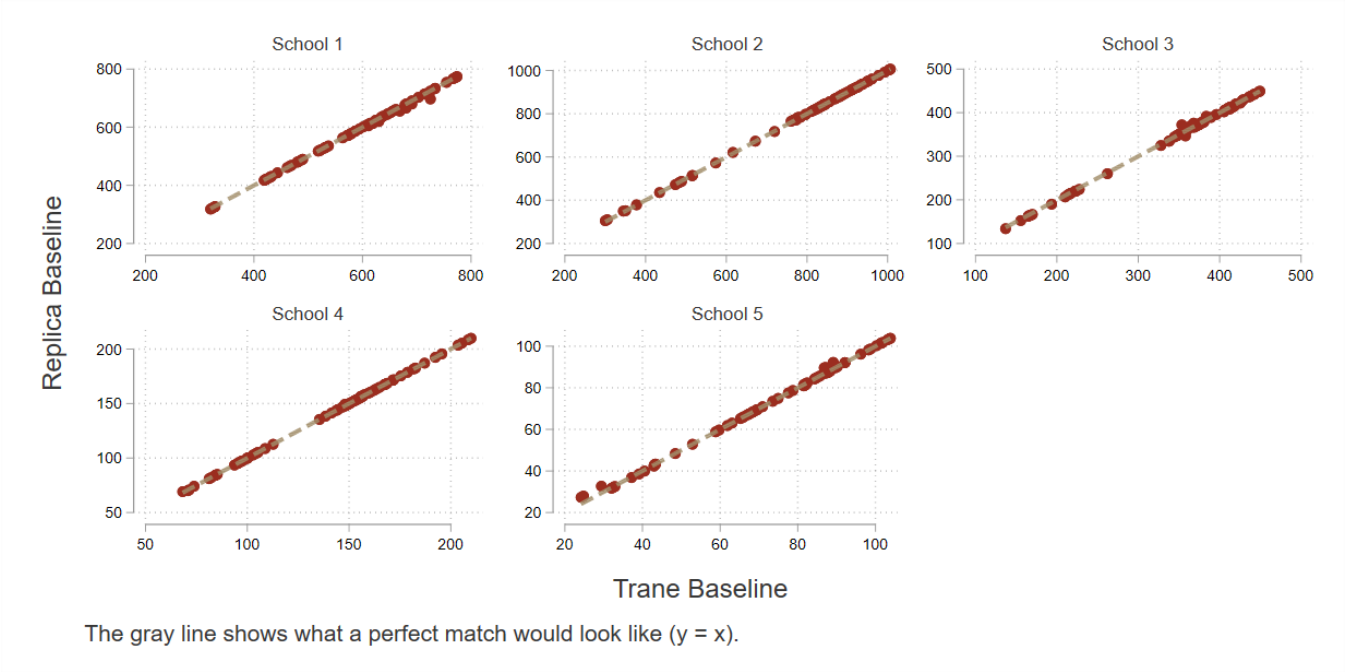


10.1.3 Results

10.1.3.1 Validation of Settlement Claims

EcoMetric was asked to verify the savings calculated by Trane for purposes of settlement with participating customers. We were unable to exactly replicate Trane's reported savings estimates for each event interval, but the differences were small. By school, Figure 10-5 compares our replica baselines with Trane's reported baselines. There is strong alignment, but small differences can be seen.

Figure 10-5 Baseline Comparison



Trane's gross reported savings and our replica savings are displayed in Table 10-3. The small differences can be explained by two key issues in Trane's analysis:

1. **Length of the buffer period.** Per the settlement baseline rules, the buffer period between the event and the adjustment window is supposed to be one hour. For 44% of events, Trane's analysis used a 45-minute buffer period.

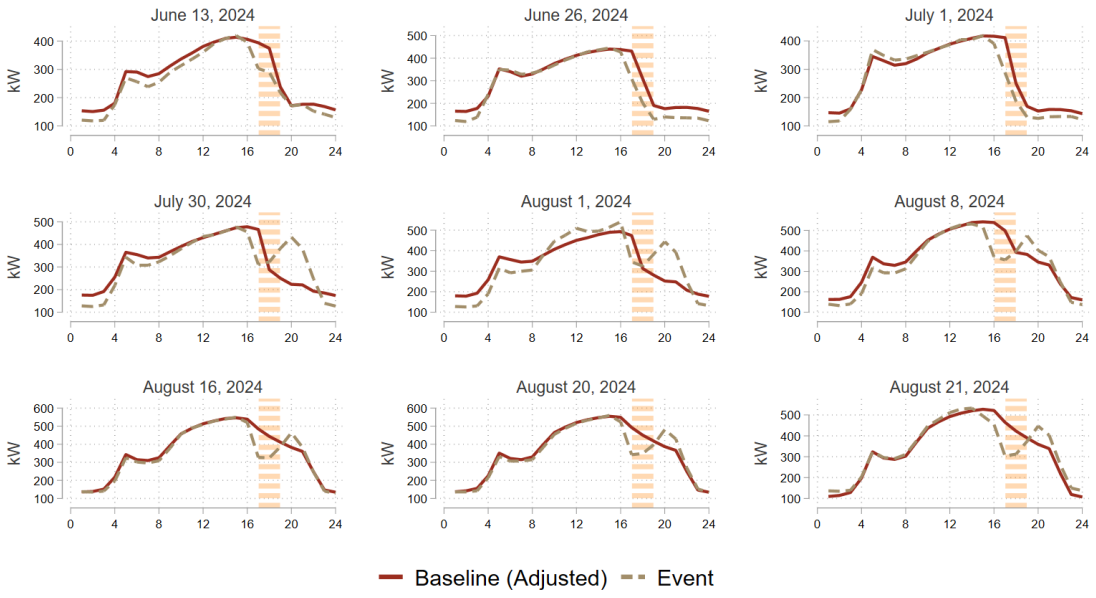
2. **Erroneous lookback window.** In at least one case, we noticed that Trane's analysis effectively used a "high 1-of-1" baseline instead of a "high 8-of-10" baseline.

Table 10-3 Gross Reported Savings

Date	Reported Load Reduction (kW)	Replicated Load Reduction (kW)	Difference (kW)
June 13	473.0	473.0	0.0
June 26	588.9	583.2	5.7
July 1	438.2	439.2	-1.0
July 30	198.0	198.1	-0.1
August 1	275.0	269.6	5.4
August 8	717.5	717.5	0.0
August 16	649.3	649.3	0.0
August 20	591.9	583.3	8.7
August 21	637.8	637.8	0.0
Average	**507.7**	**505.7**	**2.0**

shows the average hourly loads on event days and baseline days for each event. Relative to the baseline days, there is a clear reduction in load during event hours on all nine event days. However, there is a noticeable increase in demand for at least two hours immediately following the last six events (referred to as "snapback"). The snapback is likely the result of increased AC usage after the event, as indoor temperatures return to the desired setpoint.

Figure 10-6 Average Baseline and Event Loads on Event Days



For each event hour,

Table 10-4 shows our verified DR impacts.[13] In every case, demand reductions are higher during the first event hour than in the second event hour. This is not because demand rebounds in the second hour, but because demand remains flat while the baseline drops (as schools turn off their AC on non-event days as students and faculty leave campus at the end of the day). The magnitude of DR impacts is a function of how much load is available for curtailment.

Table 10-4 DR Impacts by Date and Hour

Date	# of Participants	Hour Ending (MDT)	Temp. (°F)	Average Impact (kW)	Total Impact (kW)
June 13	5	17	106.7	91	457
	5	18	106.2	84	422
June 26	5	17	97.6	123	614
	5	18	85.7	108	539
July 1	5	17	96.1	124	618
	5	18	95.7	63	315
July 30	5	17	100.5	155	776
	5	18	100.6	-34	-172
August 1	5	17	98.8	129	643
	5	18	98.5	-12	-59
August 8	5	16	100.2	168	838
	5	17	100.8	143	715
August 16	5	17	102.3	157	787
	5	18	101.7	119	595
August 20	5	17	98.4	150	750
	5	18	98.3	102	509
August 21	5	17	98.7	161	807
	5	18	98.4	110	551
Average	**5**	**---**	**99.2**	**108**	**539**

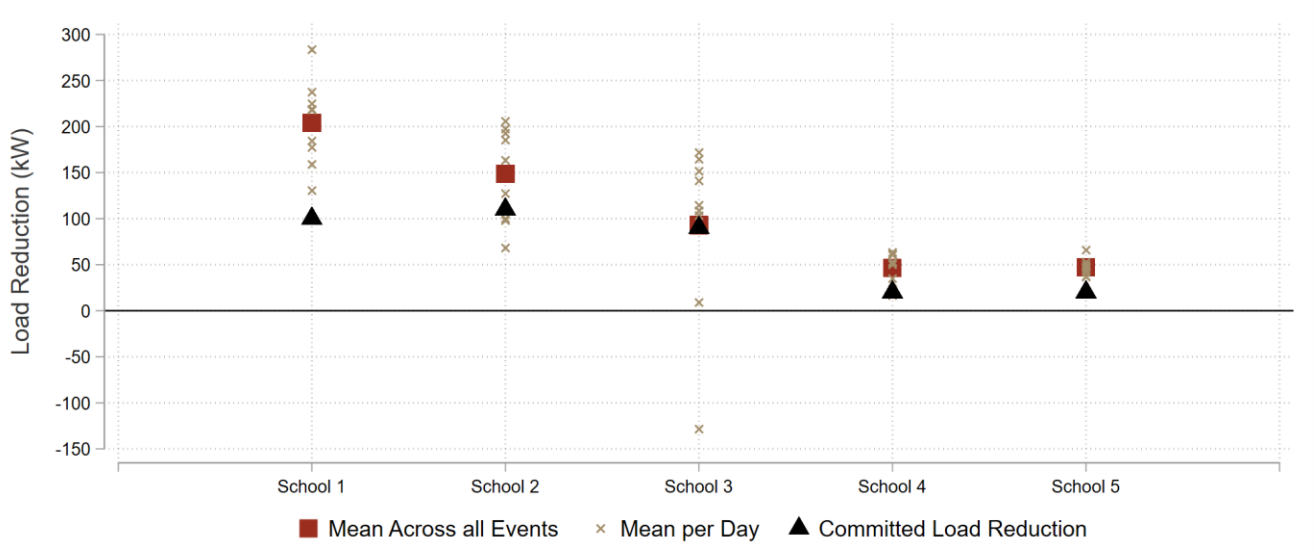
10.1.3.1.1 Impacts by School

Figure 10-7 shows the variance by site of the average event load reductions across the nine summer 2024 DR events. The gold "x" marks represent average load reduction for each of the nine events, and the maroon squares represent the average load reduction across all nine events. The black

[13] Two of the participants experienced power outages during the last 15 minutes of the event on June 26th. The affected 15-minute intervals are not included in our calculations.

triangles represent the committed reduction for each site. For all participants, the average load reduction exceeded their committed reduction. Three of the five participants exceeded their committed reduction on each event day. The other two participants both exceeded their committed reduction on seven of the nine event days.

Figure 10-7 Average Event Reduction by Day



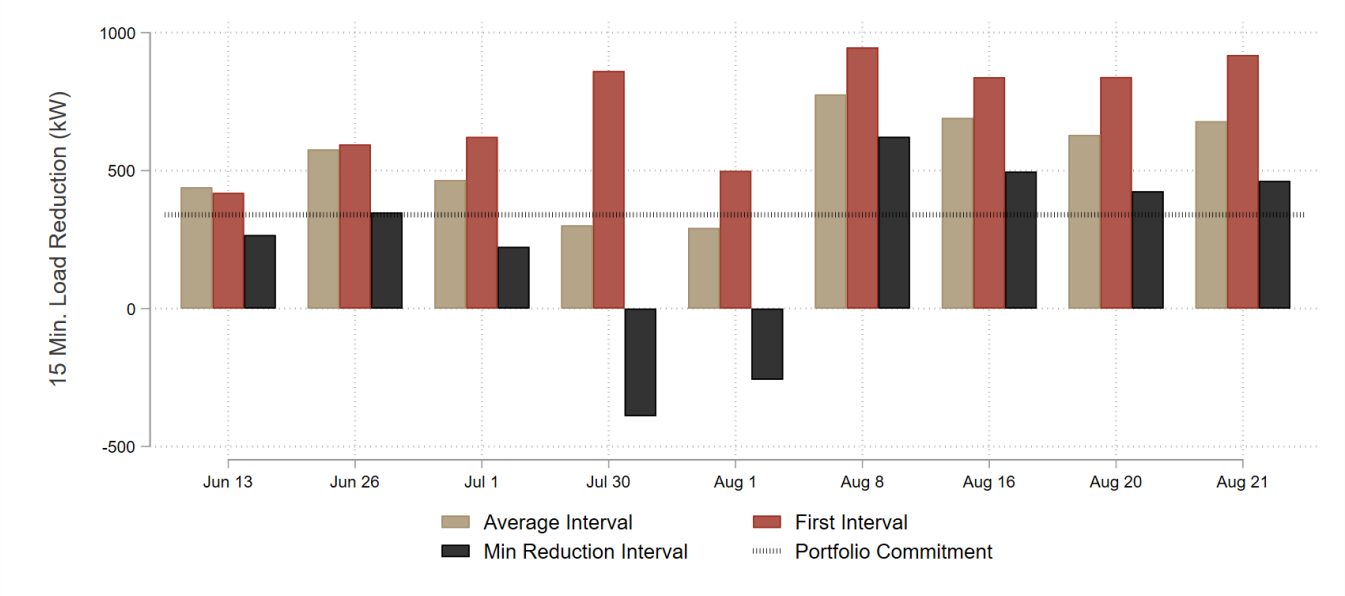
10.1.3.1.2 Duration of Demand Reductions

While our verified impacts are based on the average load reduction across each two-hour event window, the minimum reduction or first interval load reduction may also be of interest depending on the DR use case.

Figure 10-8 shows how the magnitude of kW savings varies depending on which metric is used – average, minimum, and first-interval value – using 15-minute intervals. The average reduction, shown in tan, corresponds to the values presented in

Table 10-4. For every event but one, the demand reduction during the first 15-minute interval exceeds the average reduction across the full event.

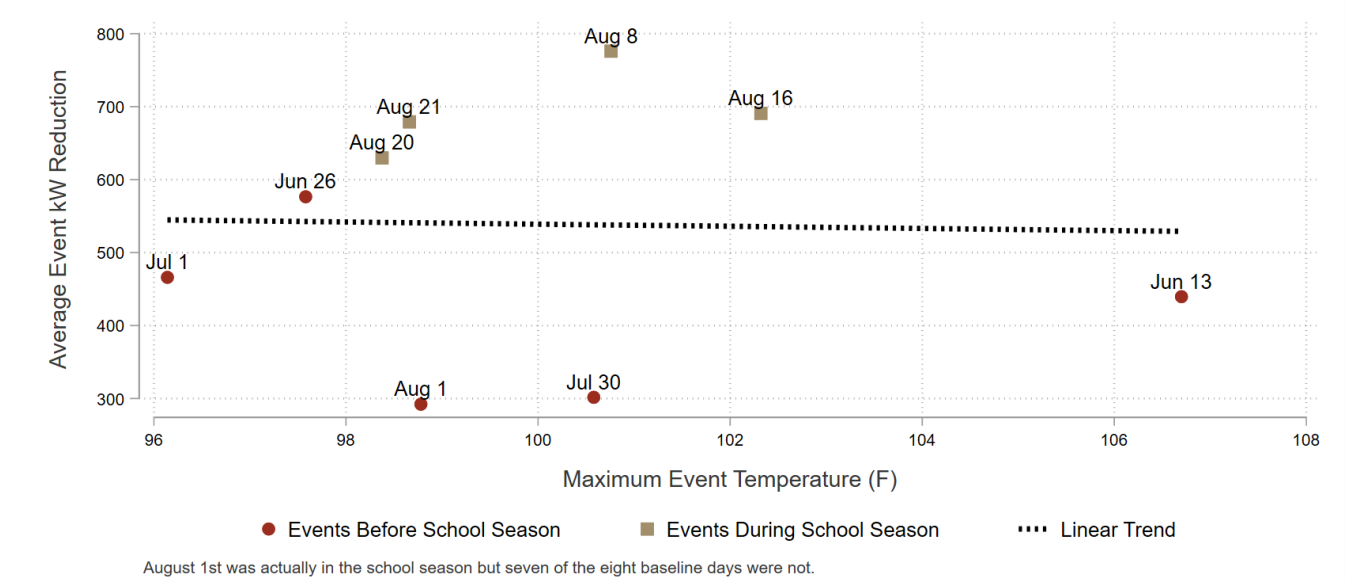
Figure 10-8 Average, Minimum, and First-Interval Load Reduction by Event



10.1.3.1.3 Effect of Weather

Figure 10-9 shows the relationship between the maximum temperature recorded during each event interval and the mean demand reduction in kW. Figure 10-9 suggests there is no clear relationship between temperature and demand reductions, but the relationship is muddied by (1) event timing and (2) the school calendar. The event with the largest average impact (August 8th) started and ended an hour earlier than all the other events, so there was more load available for curtailment. The events in June and July generally have the lowest impacts because these events are sandwiched between the end of the 2023-2024 school year and the beginning of the 2024-2025 school year (started on July 31st), so there was less load available for curtailment. The August 1st event occurred during the school year but seven of the eight baseline days for this event predate the start of the school year.

Figure 10-9 Average Event Reduction by Day



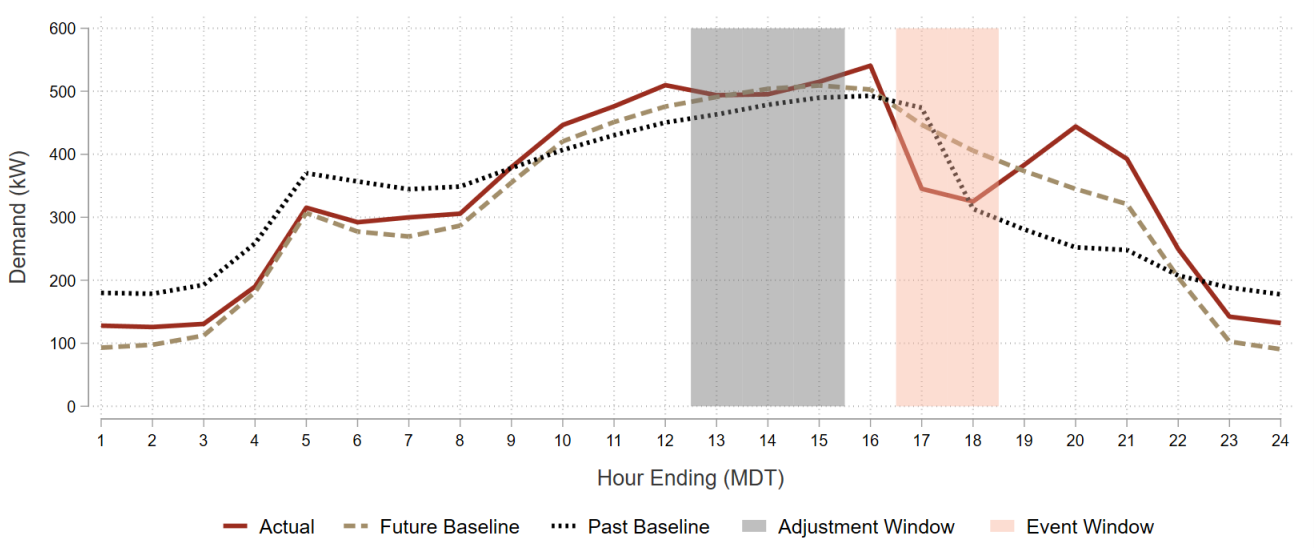
10.1.3.1.4 Alternative Approach for August 1st

As discussed in the prior section, the August 1st event occurred during the school year but seven of the eight baseline days for this event predate the start of the school year. This means the baseline for this event is effectively capturing a summer break day rather than a school schedule day. In future years, the Evaluation team recommends that Trane adjust their 8-of-10 baseline methodology such that all baseline days are "school schedule" days for any events that occur after the beginning of the school year. To do so, both past and future days would need to be considered in the 8-of-10 baseline math.

Figure 10-10 illustrates the approach for the August 1st event. The maroon line represents actual event day load (averaged across the five sites). The golden line represents a baseline consisting of future school schedule days. The black line represents a baseline consisting of past days (mostly summer schedule days). The baseline based on future days mirrors the load shape of the event day better than the baseline based on summer break days. The summer break baseline produces a

marginally larger impact during the first event hour but also a negative impact during the second event hour. (As an aside, the dip in event day load during the adjustment window produces a downwards adjustment to both baselines.)

Figure 10-10 Baseline Comparison for the 8/1/2024 Event



10.1.3.2 Net Energy Impacts

Demand response events may also yield energy savings if the demand reductions during the event window are not offset by actions like precooling or snapback, which shifts demand to intervals outside of the event window. The Evaluation team's approach to estimating the net energy savings on DR event days is similar to the approach for estimating demand savings. Demand savings are estimated by calculating the difference between a site's actual load and its baseline load for the hours in the event window only. To calculate energy savings, the Evaluation team measured the difference between a site's actual load and its baseline load for the daytime hours of event days from 8:00 AM to 12:00 AM.[14] By looking at the hours outside the event window, the Evaluation team accounted for

[14] The cutoff hours of 8:00 AM and 12:00 AM were chosen based on a comparison of daily load shapes across different days and specifically the observation that load profiles tend to track each other closely until 8:00 AM but do not seem to converge again later that night.

increases in energy consumption that may occur before or after the DR event because of pre-cooling or other load-shifting activities.

Table 10-5 shows the portfolio net energy savings for each event day and in total. Total energy savings across the nine event days was 5,367 kWh. During the DR events, the Evaluation team estimated the participants saved 9,704 kWh (539 kW * 2 hours * 9 event days). The difference between these two numbers implies much of the energy avoided during event hours was shifted to the hours before and after the events.

Table 10-5 Energy Savings by Event Day

Date	Energy Savings During Event Hours	Energy Savings Before/After Event	Total Daily Energy Savings (kWh)
June 13	879	992	1,871
June 26	1,153	1,452	2,605
July 1	932	834	1,766
July 30	603	-2,071	-1,467
August 1	585	-3,276	-2,692
August 8	1,552	-520	1,032
August 16	1,382	-144	1,237
August 20	1,259	-510	750
August 21	1,358	-1,093	265
Total	**9,704**	**-4,336**	**5,367**

10.1.4 Historical Comparison

Table 10-6 below offers a year-over-year comparison of the gross verified demand savings estimates for the Commercial Load Management program. Portfolio committed capacity decreased significantly in 2024 (relative to 2020-2023) due to the reduction in the number of program participants.

Table 10-6 Historical Gross Verified Savings Averages

Year	Participants	Events	Portfolio Committed Capacity (kW)	Portfolio Load Reduction (kW)	Actual Enabled Capacity Percentage
2019	6	8	380	489	129%
2020	7	6	1,130	1,122	99%
2021	7	3	1,195	793	66%

Year	Participants	Events	Portfolio Committed Capacity (kW)	Portfolio Load Reduction (kW)	Actual Enabled Capacity Percentage
2022	7	6	1,195	706	59%
2023	7	9	1,195	1,196	100%
2024	5	9	340	539	159%
Average	**6.5**	**6.8**	**906**	**808**	**102%**

10.1.5 Conclusions and Recommendations

Based on the findings of the 2024 evaluation, the Evaluation team offers the following recommendations.

Table 10-7 Findings and Recommendations

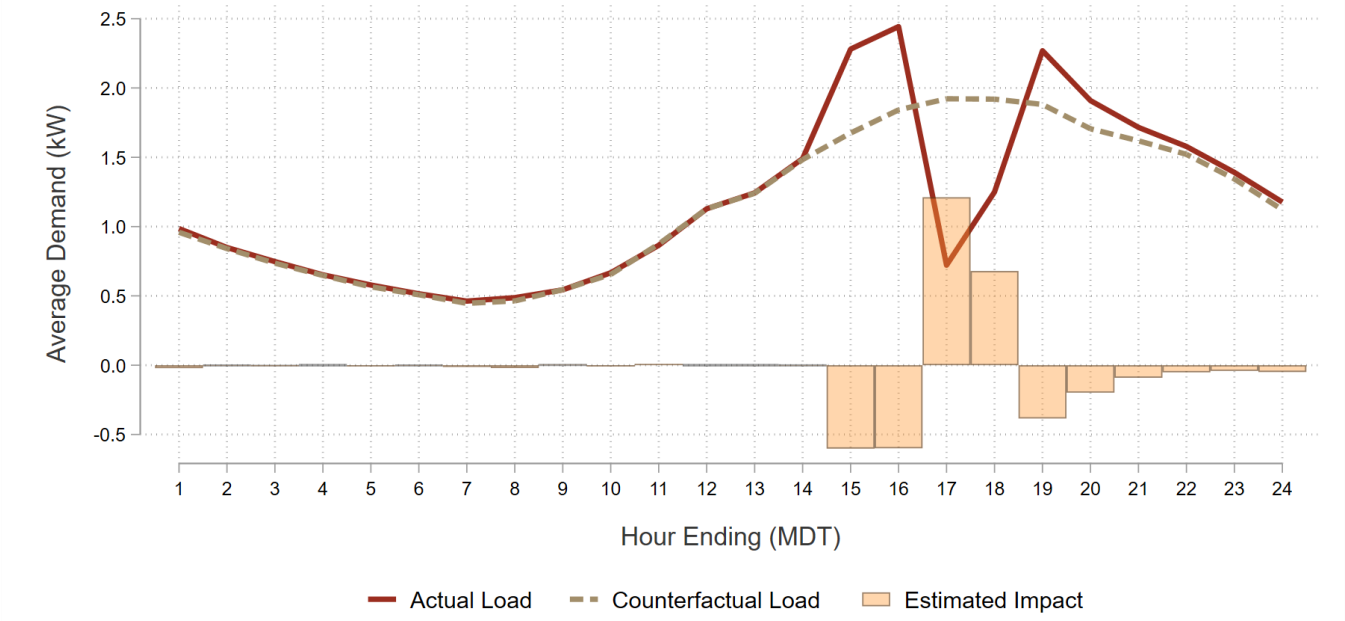
Finding	Recommendation
1. AMI data. Now that AMI data is available, the Evaluation team plans to use AMI data for all future evaluations.	Recommendation: The team recommends Trane use AMI data instead of their metering data when possible so that reported savings and verified savings are drawn from the same data stream.
2. Energy impacts. Verified impacts in 2024 were lower than verified impacts in 2020-2023, on average. This is largely due to participation.	Recommendation: If more schools (or other commercial sites) are enrolled, the program will deliver larger capacity savings.
3. The participants are schools and the program is active during their summer break. For schools, the expected load relief in August and September is greater than June or July due to school operating schedules.	Recommendation: EPE should keep in mind that the dispatchable load reduction is a function of the available load. The Evaluation team recommends using both past and future non-event weekdays as eligible baseline days. If an event is called during the school year, the baseline days should ideally be days when school is in session. See the discussion in Section 10.1.3.1.4.

Finding	Recommendation
4. Participation. For a variety of reasons, it's possible that some sites will not be able to participate (or will choose not to participate) in some events.	Recommendation: Agreements between EPE, Trane, and program participants should more clearly spell out how performance is measured when a site opts-out of an event or technical issue prevents the DR sequence from initiating.

10.2 RESIDENTIAL LOAD MANAGEMENT

EPE's Residential Load Management program is a demand response (DR) program with over 3,500 enrolled smart thermostats. The program provides participants with annual incentives for allowing EPE to curtail their electric cooling load during periods of high system demand. During an event, load curtailment is achieved via communication with the WiFi-enabled smart thermostats. Cooling setpoints are remotely increased, which translates to reduced air conditioning (AC) runtimes and reduced electric loads. Figure 10-11 illustrates the impact of event dispatch on cooling load during a typical two-hour event from 4:00 PM until 6:00 PM. The spike in cooling load prior to the event is due to pre-cooling.

Figure 10-11 Residential Load Management – Average Two-Hour Event



During the summer 2024 DR season, EPE and the program implementer (Uplight) called eleven DR events. All events were two hours in duration; nine events ran from 4:00 PM until 6:00 PM and two events ran from 3:00 PM until 5:00 PM. Table 10-8 provides information on these eleven events. In 2024, all DR events were called on extremely hot days, though during two distinct time windows. Thus, we include all 4:00 PM to 6:00 PM events in our 4:00 PM to 6:00 PM average impact calculation, and both 3:00 PM to 5:00 PM events in our 3:00 PM to 5:00 PM average impact calculation. Note that the "Online Participants" column in Table 10-8 represents the number of distinct devices present in the telemetry data on each event day, minus devices that were offline during at least an hour of the event. Some households have multiple participating devices so the number of unique EPE customers enrolled in the program is slightly lower than the number of participating devices.

Table 10-8 2024 Residential Load Management Event Summary

Date	Day of Week	Online Participants	Start Time (MDT)	End Time (MDT)	Daily High (F)
6/7/2024	Friday	3,159	4:00 PM	6:00 PM	103.0
6/13/2024	Thursday	3,180	4:00 PM	6:00 PM	106.9
6/26/2024	Wednesday	3,204	4:00 PM	6:00 PM	104.5
7/9/2024	Tuesday	3,212	4:00 PM	6:00 PM	96.8
7/25/2024	Thursday	3,233	4:00 PM	6:00 PM	96.7
7/30/2024	Tuesday	3,260	4:00 PM	6:00 PM	100.6
8/1/2024	Thursday	3,265	4:00 PM	6:00 PM	98.8
8/8/2024	Thursday	3,257	3:00 PM	5:00 PM	100.8
8/16/2024	Friday	3,274	3:00 PM	5:00 PM	102.4
8/20/2024	Tuesday	3,271	4:00 PM	6:00 PM	98.4
8/21/2024	Wednesday	3,260	4:00 PM	6:00 PM	98.8

By the end of summer 2024, there were 3,524 devices enrolled in the program. In addition to providing peak demand reductions, new thermostat installations are also treated as an energy efficiency measure with annual kWh savings over the life of the device. EPE rebated 119 new WiFi thermostats in 2024. Energy savings for thermostats purchased through the load management path are attributed to the Residential Load Management Program rather than the Residential Marketplace Program.

As the statewide evaluator for New Mexico, EcoMetric performed an independent evaluation of program performance. Table 10-9 shows the verified savings results. Note there are two rows for energy savings in the table. The first represents avoided energy use on the event days. Reported event day energy savings ignore added cooling load related to pre-cooling and snapback. In our verified savings analysis, we found the events were energy neutral on average, meaning the energy savings during the events were offset by increased cooling load before and after the events. The second energy row represents energy efficiency savings for participants who received a Marketplace rebate for a new smart thermostat through the load management path. Subsequent sections describe our methods and findings in greater detail.

Table 10-9 Evaluation Results

Resource	Reported Savings	Verified Savings	Realization Rate	Measure Life (Years)
Demand (kW) – Event Days	4,039	3,158	78%	1
Energy (kWh) – Event Days	88,862	0	0%	1
Energy (kWh) – Thermostat Rebates	75,905	75,905	100%	10

10.2.1 Methodology

10.2.1.1 Input Data

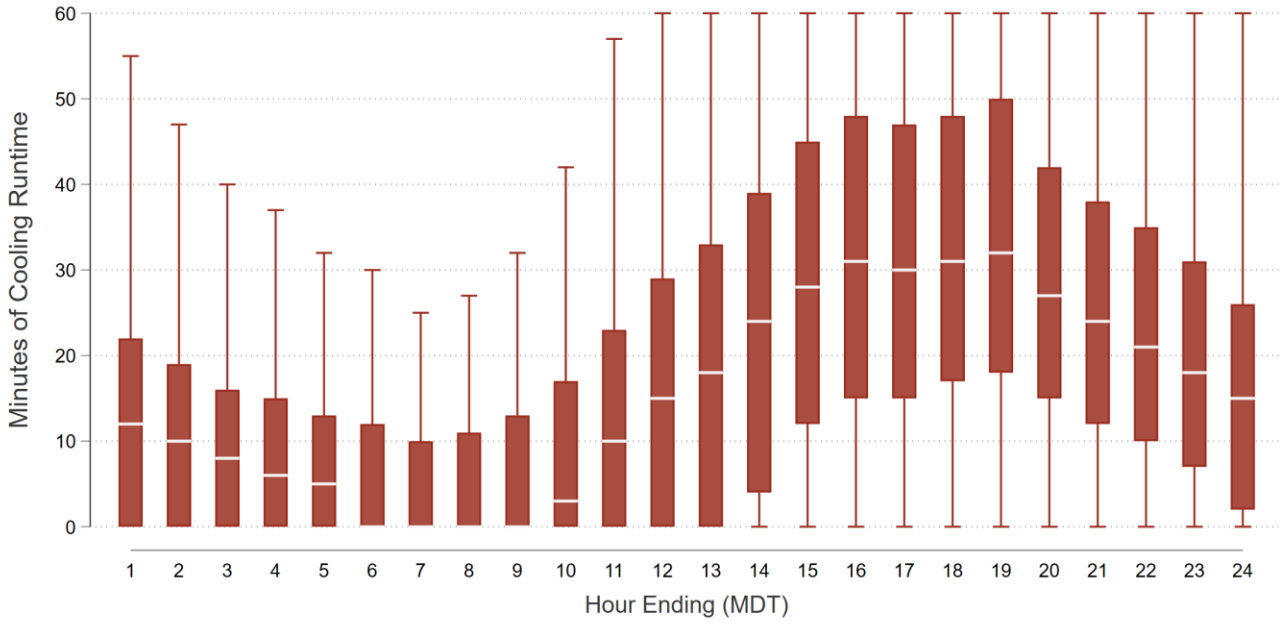
Our evaluation relied on two key data streams: hourly thermostat telemetry data and hourly weather data. The thermostat telemetry data is hourly interval data with cooling runtime (in minutes) for every device in the program. Several other fields, such as thermostat status, are included in the telemetry data. The weather data is used in estimating counterfactual load on DR event days. Both streams are described in greater detail below.

10.2.1.1.1 Thermostat Telemetry Data

Uplight provided the EcoMetric team with hourly device-level telemetry data covering a period between June 2024 and September 2024. This data included device-level information such as the thermostat's serial number, location, minutes of AC runtime, M&V status, device setpoint, and other device-specific data. Figure 10-12 shows the distribution of cooling runtime by hour of day across the

summer of 2024. Cooling runtime is highest in the late afternoon when the outdoor temperatures are high.

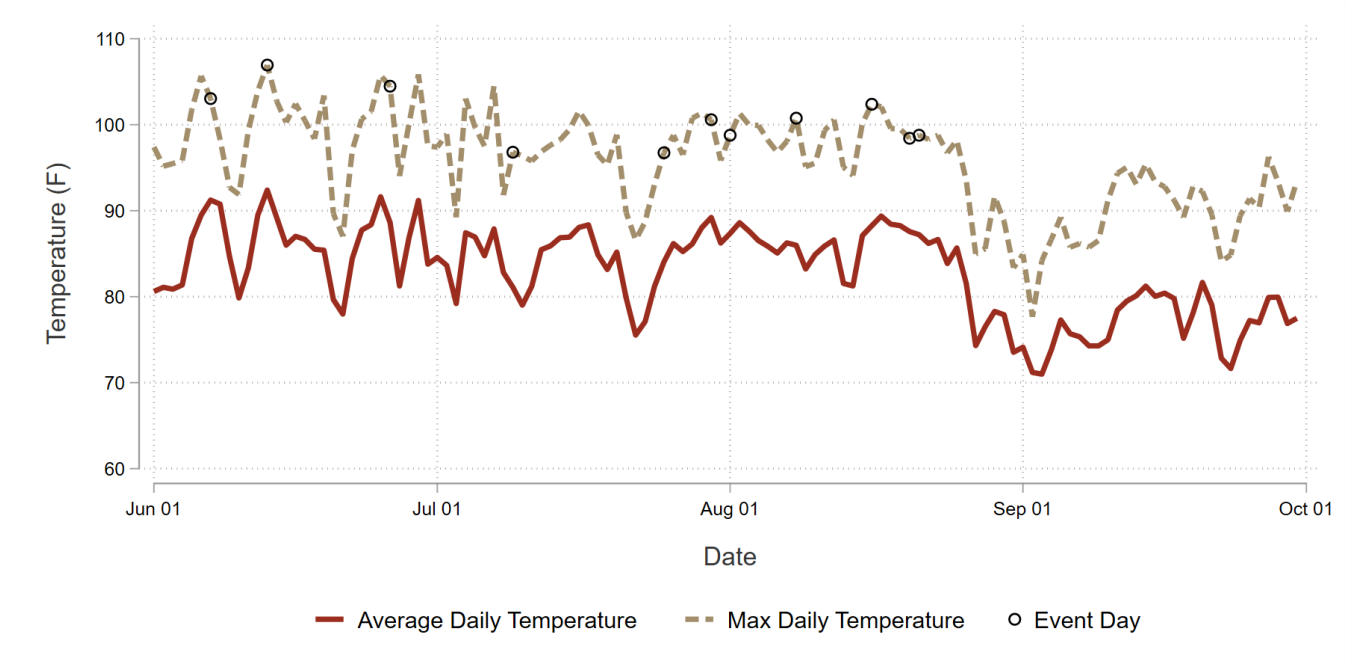
Figure 10-12 Distribution of Cooling Runtime, June-September 2024



10.2.1.1.2 NOAA Weather Data

The EcoMetric team identified some concerns with the outdoor temperature and humidity values contained in the thermostat telemetry data. In place of the telemetry weather data, we downloaded hourly NOAA records from Las Cruces and merged the NOAA weather data with our analysis file. Figure 10-13 shows the average and maximum daily temperature by date for the summer of 2024. Event days are denoted with black circles. The hottest day of the summer (June 13) was an event day. There were several non-event days where the maximum temperature exceeded 100°F.

Figure 10-13 Las Cruces Weather, Summer 2024



10.2.1.2 Converting Cooling Runtime to Cooling Load

The thermostat telemetry data contains cooling runtime in minutes rather than cooling load. To convert cooling minutes to cooling load, we used the connected load assumptions in the New Mexico TRM (as shown in Equation 1).

Equation 1: New Mexico TRM Smart Thermostat Connected Load

$$HVAC\ Capacity\ (kW) = \frac{Capacity_{cool}}{1000\frac{W}{kW}} x \frac{1}{EER} = 3.22\ kW$$

Where:

- $Capacity_{cool}$ = 36,000 BTU/hour (2023 TRM Section 4.18.3)
- EER = -0.02 * $SEER^2$ + 1.12 * SEER = 11.18 (2023 TRM Section 4.6.4)
    - Assuming SEER = 13 (2023 TRM Section 4.18.3)

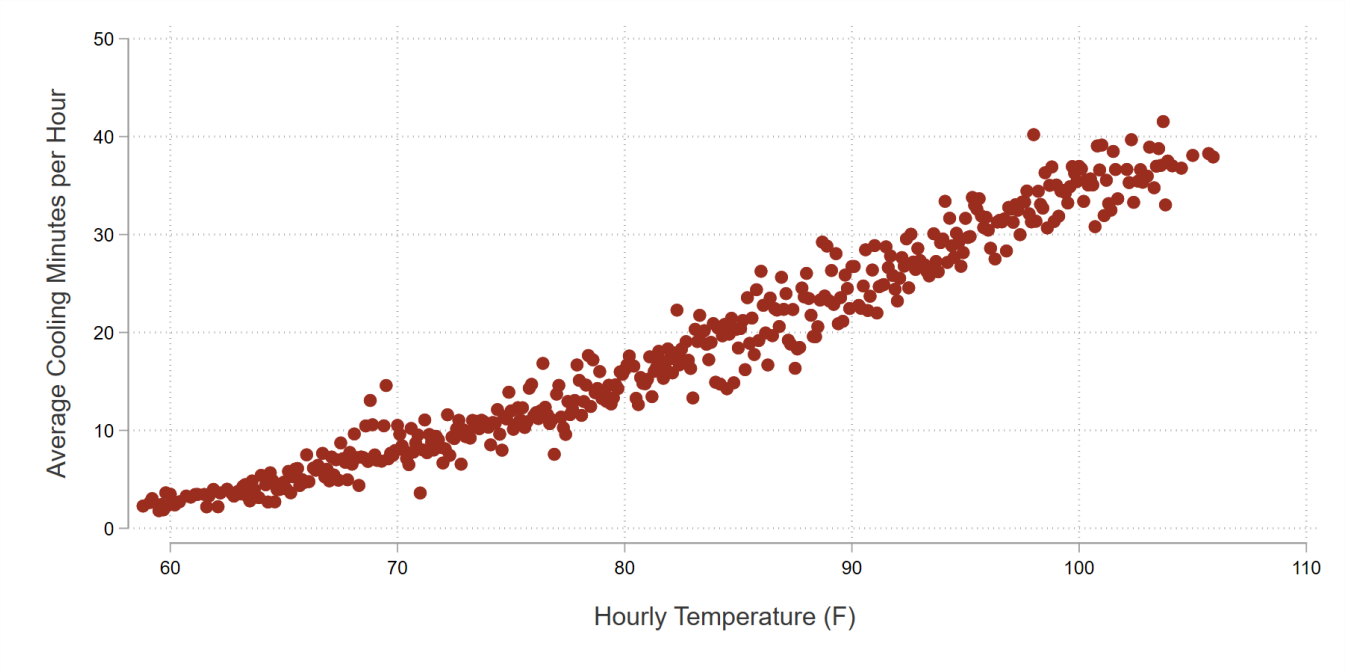
To convert runtime to load, the connected load (3.22 kW) is multiplied by the percentage of the hour in which the thermostat was cooling. Suppose the runtime for a given device during some hour is 30 minutes (out of 60 total minutes). Cooling load for this hour would be 1.61 kW (30 / 60 * 3.22).

10.2.1.3 Estimating Demand Response Impacts

10.2.1.3.1 Estimating the Counterfactual

For a given event hour, the DR impact is the difference between actual load and counterfactual load, where counterfactual load represents what load would have been absent the DR event. Actual load can be measured via the telemetry data (and a connected load assumption), while the counterfactual load must be estimated. Our team used a panel regression model to estimate the counterfactual load. Given the strong relationship between cooling runtime and outdoor air temperature (Figure 10-14), temperature was a key independent variable in our model selection process.

Figure 10-14 Average Cooling Runtime (Minutes/Hour) by Outdoor Temperature



We tested out nine different regression model specifications on non-event day loads and ultimately selected the model that minimized prediction error (or bias). The explanatory variables included in the nine regression models are shown in Table 10-10. To determine which of the nine model specifications produced the least amount of bias, we used an out-of-sample testing technique known as cross validation. First, the non-event day telemetry data is split into testing and training data sets.[15] Regression models are developed using the training data set, and then the models are used to estimate load in the testing data set. Predicted load in the testing data set is compared with actual load. We attribute differences between actual load and predicted load to bias. Model 6 produced the least amount of bias (as measured by root mean squared error) when estimating non-event day load, so this was the model we used to estimate DR counterfactuals.

15 Only non-event, non-holiday weekdays are included in the out-of-sample testing procedure.

Table 10-10 Details on Regression Models

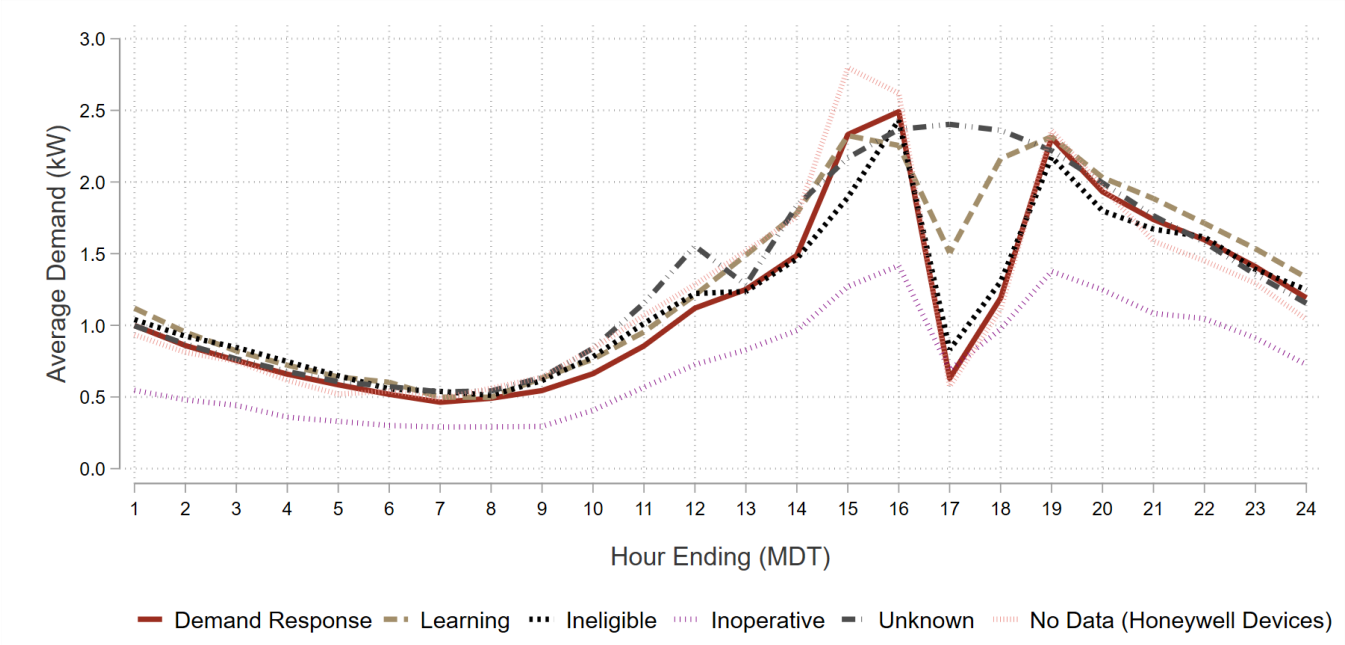
Model Number	Explanatory Variables[1]
1	mean15, temperature*dewpoint, max daily temperature, max daily dewpoint
2	mean15, max daily temperature, max daily dewpoint
3	max daily temperature, temperature*dewpoint
4	mean15, temperature
5	mean15, temperature*dewpoint, pre_event_kw
6	temperature*dewpoint, pre_event_kw
7	mean15, temperature*dewpoint, max daily temperature, max daily dewpoint, pre_event_kw
8	mean15, temperature*dewpoint, max daily temperature, max daily dewpoint, pre_event_kw, day of week
9	mean15, temperature*dewpoint, pre_event_kw, day of week

[1] The variable "mean15" represents the average temperature between midnight and 3:00 PM. The variable "pre_event_kw" represents device-specific kW consumption between 11:00 AM and 12:00 PM. Several models include an interaction term, represented by the "" symbol. For example, Model 1 includes an interaction between temperature and dewpoint as an explanatory variable.*

10.2.1.3.2 Aggregating Impacts

During the 2024 DR season, EPE and Uplight utilized a full dispatch model where all devices were curtailed on event days. For all brands of devices except for Honeywell, we were able to use a "device status" field in the telemetry data to track which devices received the curtailment dispatch. On event days, devices were set to the "Demand Response" status to receive curtailment. On non-event days, devices were uncontrolled and allowed to operate based on customer preferences, indicated by the "Learning" status. Devices could also fall under the categories of "Ineligible," "Inoperative," and "Unknown" on any given day throughout the program. As seen in Figure 10-15, the signature curtailment drop during hours 17 and 18 is not limited to devices with the "Demand Response" status. Rather, it seems many devices received curtailment regardless of M&V status. Note that since there was no "device status" field in the Honeywell telemetry data, Honeywell device loads are represented with their own separate line in the figure.

Figure 10-15 Average Event-Day Load Profile by Status



Since curtailment occurs among M&V statuses other than "Demand Response" on an event day, our modeling approach was to include all devices with AC runtime data in our model, regardless of M&V status. This approach returned an estimate of the average performance per device that was online during an event. This was then multiplied by the number of devices enrolled at the end of the 2024 season and the average proportion of devices that were not missing AC runtime data during the 2024 events. This product was our estimate of the aggregate program impact.

Table 10-11 summarizes the statuses across all devices that had telemetry data on each event day. Also included in the table is a column for devices where AC runtime data was missing for one or more event hour, labeled "Offline." It is unclear what caused a small number of devices to be in "Learning" mode on event days. Additionally, there was a significant number of devices marked as "Unknown." The "Unknown" status only occurred on event days. The total number of devices increased by approximately 3.3% from the first event to the last event. Note that the table below only includes devices that were found in the telemetry data. There were approximately 140 devices that were included in the event participation files but were not found in the telemetry data.

Table 10-11 Device Counts by Status on Event Days

Date	Demand Response	Learning	Ineligible	Inoperative	Unknown	Offline	No Data	Total
6/7/2024	2,734	76	72	135	121	163	21	3,322
6/13/2024	2,787	65	75	116	116	158	21	3,338
6/26/2024	2,800	62	71	121	129	176	21	3,380
7/9/2024	2,819	55	76	113	126	209	23	3,421
7/25/2024	2,851	64	78	105	111	220	24	3,453
7/30/2024	2,860	59	75	119	123	205	24	3,465
8/1/2024	2,889	64	67	97	124	205	24	3,470
8/8/2024	2,885	60	70	113	105	227	24	3,484
8/16/2024	2,885	64	79	99	123	224	24	3,498
8/20/2024	2,868	70	78	95	136	239	24	3,510
8/21/2024	2,869	57	68	104	138	253	24	3,513

10.2.2 Results

This section contains information about our verified demand reductions, net energy impacts, participation rates, and time-of-use (TOU) interference for ecobee devices.

10.2.2.1 Demand Impacts

10.2.2.1.1 Overall Impacts

For each event hour, Table 10-12 shows our verified DR impacts, a count of total and online devices, and the average outdoor air temperature. Impacts during the first event hour are always the largest (1.22 kW/device impact in the first hour, on average, and 0.69 kW/device in the second hour). This occurs primarily for two reasons: (1) the pre-cooling that occurs before the event and (2) the control strategy. The pre-cooling essentially shifts load out of the first event hour and into the pre-event window. Regarding control strategy, thermostat setpoints are increased by a few degrees during the event (rather than cycled). Inevitably, indoor temperatures will surpass the adjusted setpoint and the AC will turn on. This is more likely to occur in the second event hour than the first (partially due to the pre-cooling). EPE resource planners and system operators should be aware of this decay, as it could

ultimately affect the value of the program as a demand resource if/when events last over longer periods of time.

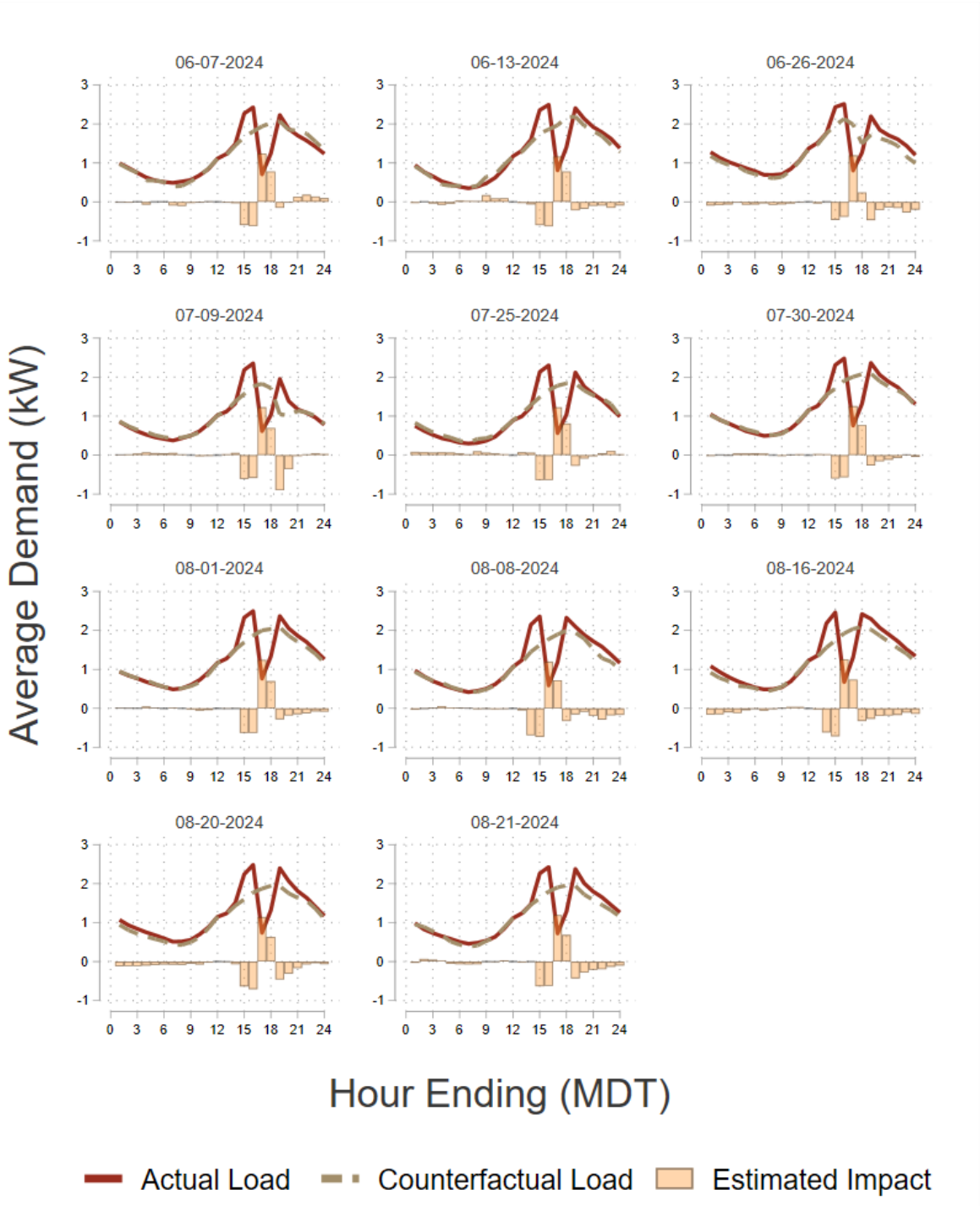
Table 10-12 DR Impacts by Date and Hour

Date	Hour Ending (MDT)	Total Devices	Online Devices[16]	Temp. (F)	Impact per Device (kW)	Total Impact (kW)
6/7/2024	17	3,322	3,167	103.0	1.245	3,944
	18	3,322	3,167	101.6	0.782	2,478
6/13/2024	17	3,338	3,184	106.7	1.164	3,707
	18	3,338	3,189	106.2	0.782	2,495
6/26/2024	17	3,380	3,209	97.6	1.195	3,834
	18	3,380	3,208	85.7	0.243	781
7/9/2024	17	3,421	3,216	96.4	1.231	3,959
	18	3,421	3,218	91.9	0.698	2,246
7/25/2024	17	3,453	3,234	96.7	1.229	3,976
	18	3,453	3,241	96.1	0.813	2,635
7/30/2024	17	3,465	3,263	100.5	1.259	4,108
	18	3,465	3,268	100.6	0.774	2,528
8/1/2024	17	3,470	3,270	98.8	1.246	4,073
	18	3,470	3,272	98.5	0.702	2,296
8/8/2024	16	3,484	3,259	100.2	1.200	3,910
	17	3,484	3,259	100.8	0.723	2,355
8/16/2024	16	3,498	3,277	102.4	1.260	4,130
	17	3,498	3,278	102.3	0.738	2,419
8/20/2024	17	3,510	3,275	98.4	1.144	3,747
	18	3,510	3,275	98.3	0.635	2,081
8/21/2024	17	3,513	3,266	98.7	1.194	3,899
	18	3,513	3,270	98.4	0.686	2,245
Average	---	3,441	3,239	99.1	0.952	3,084

[16] Note that the hourly online counts in Table 10-12 are slightly higher than the daily online counts in Table 10-8 and Table 10-11 as those tables count devices that were offline for just one hour of the event as being offline for the entire event. In contrast, Table 10-12 allows devices that were offline during the first hour to be counted as online in the second hour, and vice versa.

Figure 10-16 visualizes the hourly impacts. The shape of the observed load and the counterfactual is largely consistent except for the June 26th and July 9th events, where the counterfactual takes a sharp dip a few hours after the beginning of the event. We determined these dips were due to rainstorms, which caused a sharp drop in temperature and rise in dewpoint. Temperature and dewpoint are the two primary variables in our regression model that determine the shape of the counterfactual, and the dip in the counterfactual happens at the same time that historical weather records from the area show precipitation.

Figure 10-16 DR Impacts by Date



The gross verified impacts in Table 10-13 are calculated by multiplying the average of each event's device-level impacts during the first two hours of curtailment and the total number of devices that were enrolled in the program at the end of the summer DR season (3,524).[17] This number was then multiplied by the average percentage of devices that were online (not missing AC runtime data) during the 2024 events. Focusing on the first two hours allows for equal contribution from the eleven events and returns an estimate of expected performance during a typical two-hour dispatch.

Table 10-13 Gross Verified Program Impacts

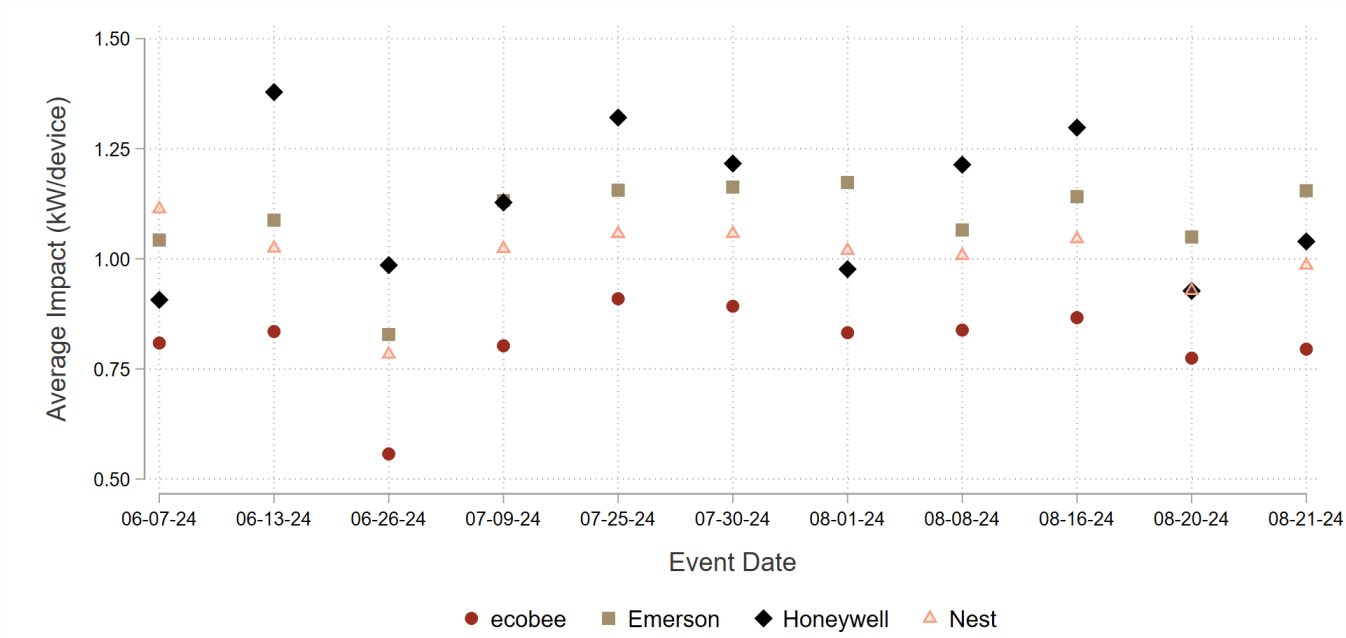
Impact per Online Device (kW)	End of Season Enrollment	Online Rate	Estimated Program Load Reduction (kW)
0.952	3,524	94.13%	3,158

10.2.2.1.2 Impacts by Thermostat Brand

Figure 10-17 shows the average impact (per device) for each thermostat brand. Impacts from ecobee devices are consistently smaller than impacts from Emerson, Honeywell, and Nest devices. Across all events, the average impact (kW/device) was 0.81 for ecobee, 1.09 for Emerson, 1.13 for Honeywell, and 1.00 for Nest.

[17] Since 38 of 41 events over the last four program years have been two hours in duration, we believe that the average impact for a two-hour event is most appropriate when reporting the program's verified impacts. Note all PY2024 events were two hours in duration.

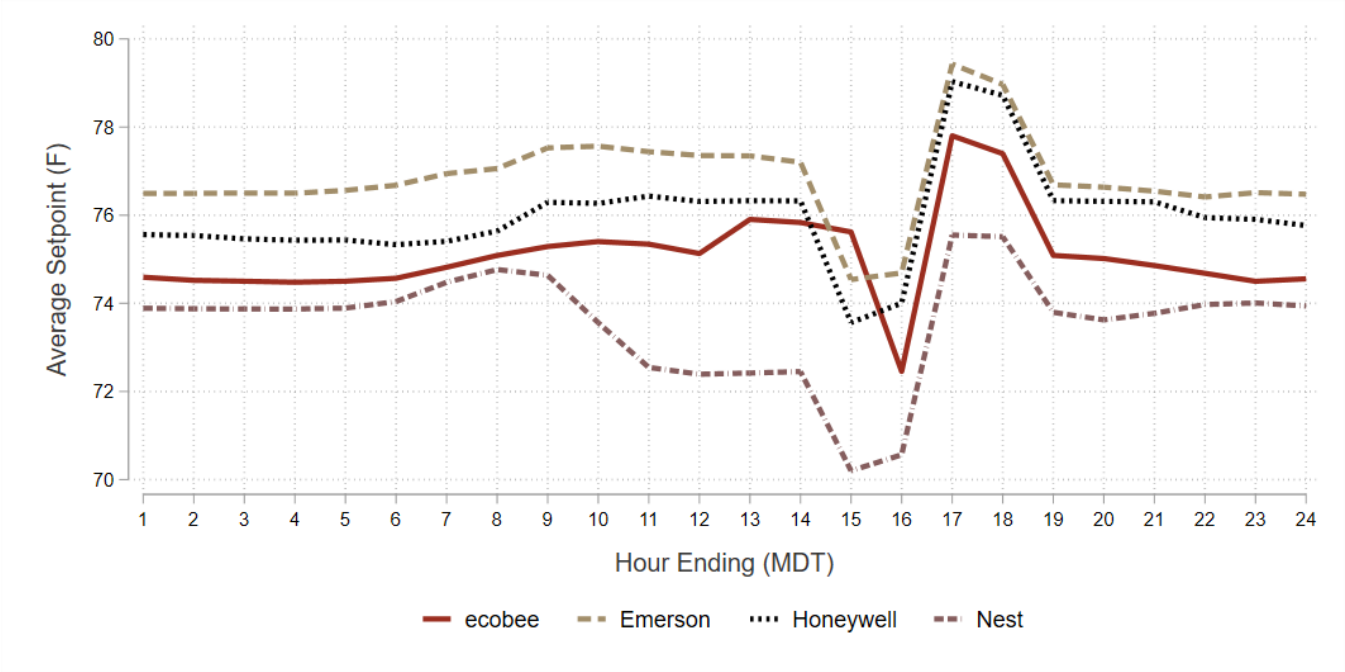
Figure 10-17 Average Impact by Device Brand (kW/Device)



Differences in impacts by device brand can partially be explained by pre-cooling and differences in thermostat setpoints. Figure 10-18 shows the average thermostat setpoint by device brand across the 2024 events. Notably, ecobee devices pre-cool for one hour but Emerson, Honeywell, and Nest devices pre-cool for two hours. Ecobee also seems to have the least aggressive thermostat setpoint increase. This helps explain why participants with ecobee devices generate smaller impacts, on average. Participants with Emerson devices generally have the highest setpoints. During the typical event, the average setpoints for ecobee, Emerson, Honeywell, and Nest devices are 77.6, 79.2, 78.8, and 75.5 respectively.

Another important factor here is the rate at which participants opt out of the events. Lower participation rates lead to lower impacts. Participation rates are discussed in more detail in Section 10.2.2.3.

Figure 10-18 Average Thermostat Setpoints during a Typical Event (4:00 PM – 6:00 PM)



10.2.2.2 Net Energy Impacts

10.2.2.2.1 Net Energy Impacts on Event Days

The Residential Load Management Program provides load reductions by reducing the amount of time a customer's HVAC system is running and cooling the home. If load reduction was the only program goal, Uplight would turn off the HVAC system entirely, rather than just manipulating temperature setpoints. However, customer comfort is also an important consideration. To help keep households cool throughout the event, Uplight "pre-cools" the home in the hours before the event by lowering the setpoint and then also allows the system to run more after the event to return the home to the customer's desired temperature. As a result, the demand response treatment increases runtime and energy usage in the hours before and after the event. This can lead to an overall energy usage increase, even if there are significant peak demand savings.

Table 10-14 shows the net energy impact (per device) across each full event day. Energy impacts varied by event day, with a positive impact for four event days and negative impact for seven event days. The average net energy impact across event days did not meaningfully differ from zero (p-value

= 0.23). Our interpretation of these results is that the Residential Load Management events are energy neutral and the kWh impacts of the program should be limited to the energy efficiency impacts discussed in the next section.

Table 10-14 Device-Level Net Energy Impacts by Date

Date	kWh Impact
6/7/2024	0.82
6/13/2024	0.04
6/26/2024	-1.55
7/9/2024	-0.10
7/25/2024	1.37
7/30/2024	0.44
8/1/2024	-0.26
8/8/2024	-0.96
8/16/2024	-1.38
8/20/2024	-1.72
8/21/2024	-0.91
Average	-0.38

10.2.2.2.2 Marketplace

New smart thermostat devices that are purchased from the EPE marketplace are treated as an energy efficiency (EE) measure. In 2024, EPE provided incentives for a total of 119 eligible smart thermostat devices. Using assumptions from the New Mexico TRM, EcoMetric calculated 75,905 kWh of annual energy savings which matches EPE's reported total.[18] Table 10-15 shows the annual energy savings results for these devices along with the measure life and lifetime savings. No peak demand savings are claimed for the efficiency measure. Note the EE savings for these 119 devices are attributed to the Residential Load Management Program, not the Residential Marketplace Program.

[18] For a home with unknown heating type, annual energy savings are 637.86 kWh/device per the TRM.

Table 10-15 Annual Energy Savings for Rebated Thermostats

Brand	Total Devices	Annual Energy Savings (kWh)	Measure Life	Lifetime Energy Savings (kWh)
ecobee	21	13,395	10	133,950
Google	73	46,564	10	465,637
Sensi	25	15,947	10	159,465
Total	119	75,905	10	759,052

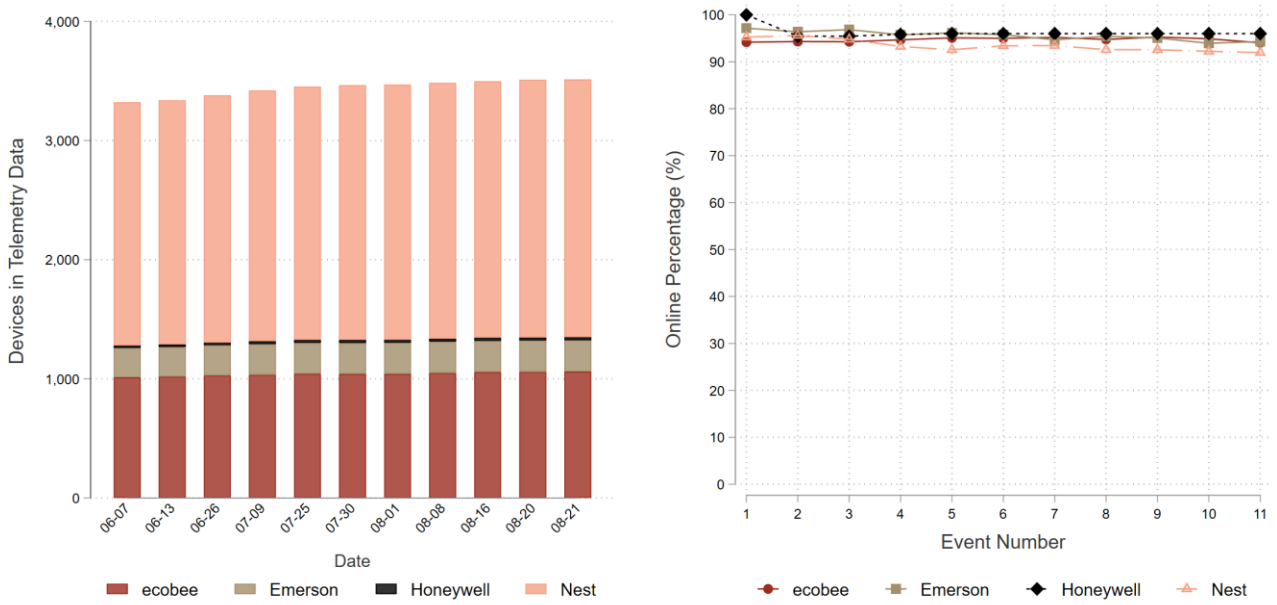
10.2.2.3 Event Participation

Devices enrolled in the load management program have the option to decline participation or opt out of an event mid-event. Devices that are offline do not receive the event dispatch and therefore cannot participate. This section details our findings regarding participation rates and online rates.

10.2.2.3.1 Online Devices

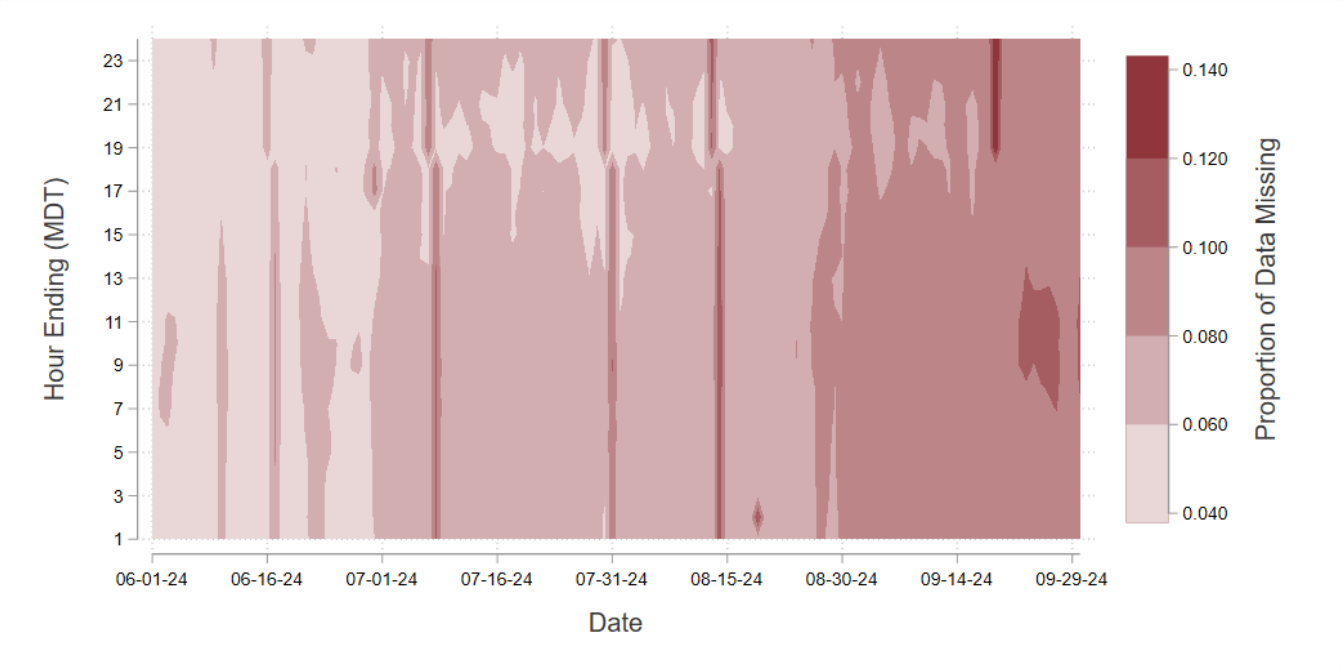
Our impacts were only estimated for online devices, or devices that were not missing AC runtime data during the event period. The left pane of Figure 10-19 displays device counts on each event day, while the right pane shows each brand's proportion of devices that were online. On average, about 4% of devices were offline during events. Online rates were similar across brands, but ecobee tended to have slightly lower online rates than Emerson, Honeywell, and Nest.

Figure 10-19 Device Count and Percent Online by Device Brand on Event Days



On non-event days, approximately 7% of the observations in the telemetry data were missing AC runtime values. This value remained stable throughout most of the summer, but it was slightly higher in September. Figure 10-20 highlights when missing data was most prevalent. Darker pockets represent times with more missing data.

Figure 10-20 Missing Data Heat Map



10.2.2.3.2 Participation Rates

In conjunction with the telemetry data, the EcoMetric team was provided information for each device brand detailing the times in which a particular device opted out of an event and participation summary files for each event and manufacturer. A device was considered "opted out" if the customer declined participation or if the thermostat set point was changed during the event. Table 10-16 shows participation and completion rates by date and device brand. "Completion Percentage" denotes the percentage of devices that did not opt out of the event. "Participation Percentage" denotes the percentage of the event that devices participated in. (E.g., if a device opts out halfway through the event, their participation percentage would be 50% and their completion percentage would be 0%.) Participation percentages were largely consistent across events (typically around 89%) and generally higher for Emerson and Honeywell devices relative to ecobee or Nest devices. The lowest participation and completion percentages occurred during the June 7th event, the first event of the season.

Table 10-16 Participation and Completion Rates

Date	Brand	Participation Percentage	Completion Percentage
6/7/2024	ecobee	89%	56%
	Emerson	94%	69%
	Honeywell	78%	62%
	Nest	83%	69%
6/13/2024	ecobee	88%	57%
	Emerson	93%	69%
	Honeywell	89%	85%
	Nest	82%	68%
6/26/2024	ecobee	89%	58%
	Emerson	92%	67%
	Honeywell	93%	90%
	Nest	81%	68%
7/9/2024	ecobee	89%	59%
	Emerson	93%	72%
	Honeywell	91%	83%
	Nest	84%	71%
7/25/2024	ecobee	91%	59%
	Emerson	92%	70%
	Honeywell	97%	96%
	Nest	82%	70%
7/30/2024	ecobee	88%	56%
	Emerson	93%	73%
	Honeywell	90%	86%
	Nest	82%	68%
8/1/2024	ecobee	88%	57%
	Emerson	94%	74%
	Honeywell	88%	82%
	Nest	82%	68%
8/8/2024	ecobee	90%	60%
	Emerson	91%	71%
	Honeywell	98%	87%
	Nest	84%	71%

Date	Brand	Participation Percentage	Completion Percentage
8/16/2024	ecobee	88%	58%
	Emerson	93%	71%
	Honeywell	95%	78%
	Nest	83%	69%
8/20/2024	ecobee	88%	55%
	Emerson	92%	66%
	Honeywell	94%	87%
	Nest	81%	67%
8/21/2024	ecobee	88%	54%
	Emerson	93%	73%
	Honeywell	92%	77%
	Nest	82%	69%
Average		89%	70%

10.2.2.4 Time-of-Use Rate Interference

Figure 10-21 shows the average device-level demand for thermostats on non-event days for each brand. In hour 12, ecobee thermostats typically see an increase in consumption followed by a decrease during hour 13. The EcoMetric team suspects that this is due to ecobee's Time-of-Use (TOU) feature offered to customers who are on a time-varying rate such as El Paso Electric's Power Hours Time-of-Day program.[19] If a participant is on a TOU rate and enables the optimization feature, ecobee thermostats will automatically pre-cool a home prior to a price increase and then reduce cooling consumption when prices are higher. This is important to consider because this "everyday DR" can potentially lower the baseline for ecobee thermostats during peak hours. Of the devices in the telemetry data, approximately one third of ecobee thermostats showed signs of this behavior.

[19] https://www.epelectric.com/customers/rates-and-regulations/residential-rates-and-information/power-hours-time-of-use-rate

Figure 10-21 Average Non-Event Day Device-Level Loads

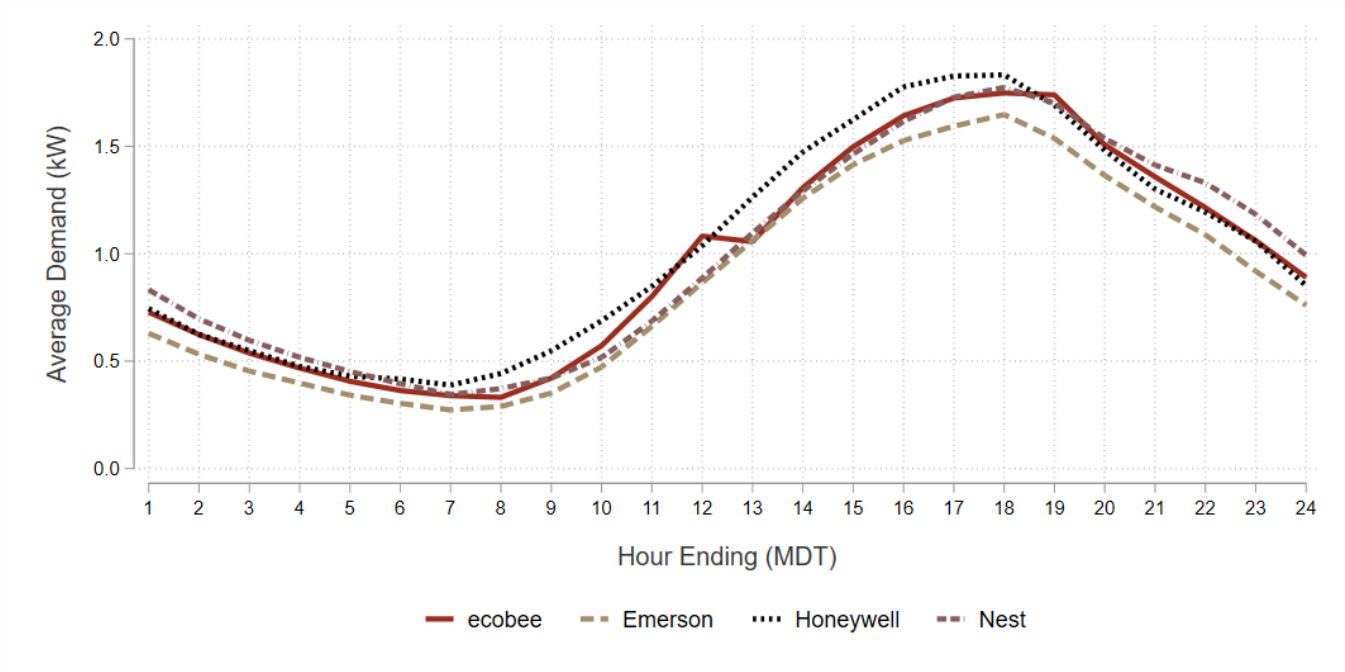
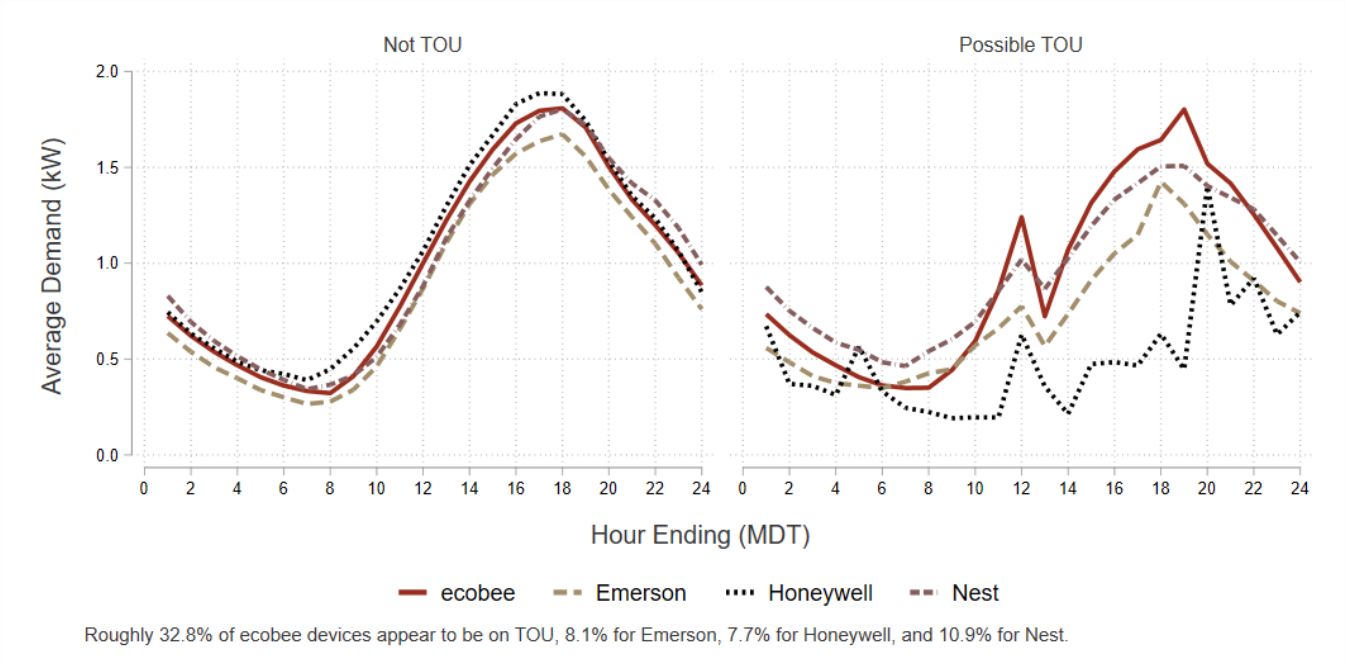


Figure 10-22 Average Non-Event Day Device-Level Loads by Possible TOU Status



While this time-of-use rate optimization is mutually beneficial for the utility and customer, there are several issues to consider:

- If the device is enrolled in the Residential Load Management program, the baseline is reduced due to the "everyday DR" happening in response to the TOU rate.
  - Interestingly, the ecobee devices in EPE's Residential LM program have the highest baseline despite the apparent TOU optimization.
- Based on visual inspection, ecobee appears to be optimizing to the Texas rate and not the New Mexico rate. Texas has an earlier definition for their "On-Peak Period" (12pm – 6pm) than New Mexico (3pm – 7pm), so load reductions from TOU optimization could reduce baseline estimates just prior to demand response event windows. Figure 10-23 displays snap shots of these rates taken from the EPE's website.

Figure 10-23 Time-of-Use Rates for New Mexico and Texas

New Mexico

TIME-OF-DAY (TOD) MONTHLY RATE TARIFF

Customers that can easily reduce their energy use during On-Peak Periods; weekdays (Monday through Friday), between 3 p.m. and 7 p.m., for the months of June through September, to Off-Peak Periods; all other hours not covered in the On-Peak Period, can benefit from the TOD energy charge option thanks to its significantly lower price than the Standard Service Rate.

CUSTOMER CHARGE (PER METER PER MONTH)		$7.00
ENERGY CHARGE PER kWh	SUMMER (JUNE THROUGH SEPTEMBER)	WINTER (OCTOBER THROUGH MAY)
ON-PEAK PERIOD (3 PM - 7 PM)	$0.22016	----------
OFF-PEAK PERIOD	$0.05504	$0.05782

Texas

TIME-OF-DAY (TOD) MONTHLY RATE TARIFF

Customers that can easily reduce their energy use during On-Peak Periods; weekdays (Monday through Friday), between 12 p.m. and 6 p.m., during the summer season (June through September), to Off-Peak Periods; all other hours not covered in the On-Peak Period, can benefit from the TOD energy charge option thanks to its significantly lower price than the Standard Service Rate.

CUSTOMER CHARGE (PER METER PER MONTH)		$9.25
ENERGY CHARGE PER kWh	SUMMER (JUNE THROUGH SEPTEMBER)	WINTER (OCTOBER THROUGH MAY)
ON-PEAK PERIOD	$0.23975	----------
OFF-PEAK PERIOD	$0.07001	$0.09171

10.2.3 Conclusions and Recommendations

Overall, we estimated that the average DR impact was 0.952 kW per online device. When multiplying this by the end-of-season enrollment and the average percentage of devices that were online during events, the gross verified impact came out to approximately 3,158 kW. This implies an average impact of 0.896 kW per enrolled device, which is almost exactly equal to the estimate from 2023 (0.894 kW per enrolled device) and higher than the estimate from 2022 (0.802 kW per enrolled device).

Additional findings and recommendations from our impact evaluation of the 2024 Residential Load Management Program are shown in Table 10-17.

Table 10-17 Findings and Recommendations

Finding	Recommendation
1. Impact per device. We calculated an average impact of 0.952 kW per online device. EPE's reporting summary assumes an impact of 1.45 kW per participating device. These two numbers are not directly comparable because one reflects all online devices (even those that may have opted out) and the other reflects only devices that participated for at least half of the event.	Recommendation: We recommend reducing the kW-per-device assumption. It's true that the average impact is higher for participants than it is for all online devices, but we still believe 1.45 kW is too high. We'd recommend an assumption of approximately 1.0 kW per online device.
2. Energy impacts. EPE's reporting summary multiplies average demand savings by the number of event hours to determine the energy savings for each event. This calculation ignores increased cooling loads during the pre-event hours (pre-cooling) and post-event hours (snapback).	Recommendation: We found that the results were energy neutral, the increased energy consumption prior the event and after the event was roughly equal to the avoided energy consumption during the event. This is consistent with our findings in 2022 and 2023. We'd recommend reporting no energy savings (except for the participants who receive a Marketplace rebate on the new thermostat through the load management path).
3. Load reduction shape: Demand response impacts are generally largest during the first event hour and then diminish in the second hour.	Recommendation: When considering demand response as a resource, it is important to understand that the capability of the program is a function of event duration. The timing of the event is also an important consideration since homes are pre-cooled prior to the event. For an event that begins at 4:00 PM, for example, participant loads between 2:00 PM and 4:00 PM will spike as a result of pre-cooling.

Finding	Recommendation
4. Reference loads: Ecobee devices had the largest average reference load but the lowest average kW reduction per online device of the four device manufacturers. The magnitude of reductions can partially be explained by pre-cooling duration and setpoint increase. Emerson and Nest devices pre-cool for two hours, but ecobee devices only pre-cool for one hour. Ecobee devices show the lowest average setpoint increase during events.	**Recommendation:** If variation in demand reductions by manufacturer matter to EPE, consider discussing the pre-cooling and curtailment strategy with Uplight and/or ecobee.
5. TOU Interference: Our analysis of non-event day load shapes suggests nearly a third of homes with ecobee devices have enabled TOU rate optimization, but the optimization window appears to align with EPE's Texas tariff rather than the New Mexico rate.	**Recommendation:** EPE should reach out to ecobee, Emerson, Honeywell, and Nest to ensure users can select the New Mexico rate when they enable TOU optimization on their thermostat.

11 Cost Effectiveness Results

Cost-effectiveness is a critical metric used to assess the efficiency of investments, programs, or interventions by comparing the benefits achieved to the costs incurred. It helps decision-makers determine the most efficient allocation of resources by identifying options that maximize impact while minimizing expenditures. By quantifying costs relative to outcomes—whether in energy savings, emissions reductions, or customer benefits—cost-effectiveness ensures that programs and policies deliver value while meeting strategic objectives. This evaluation framework is essential for balancing economic feasibility with performance, driving informed decision-making in industries ranging from energy efficiency and healthcare to infrastructure and policy design.

11.1 METHODOLOGY

The evaluation team calculated cost effectiveness using the Utility Cost Test (UCT) for each individual EPE energy efficiency program, as well as the cost effectiveness of the entire portfolio of programs.[20] The evaluation team conducted these tests in a manner consistent with the California Energy Efficiency Policy Manual.[21] Cost effectiveness tests compare relative benefits and costs from different perspectives. The specific cost effectiveness test used in this evaluation compares the benefits and costs to the utility or program administrator implementing the program. The UCT explicitly accounts for the benefits and costs shown in Table 11-1.

20 The Utility Cost Test is sometimes referred to as the Program Administrator Cost Test, or PACT.
21 California Public Utilities Commission. 2020. California Energy Efficiency Policy Manual – Version 6. https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/e/6442465683-eepolicymanualrevised-march-20-2020-b.pdf

Table 11-1: Utility Cost Test Benefits and Costs

Benefits	Costs
• Utility avoided energy-related costs	• Program overhead/ administrative costs
• Utility avoided capacity-related costs, including generation, transmission, and distribution	• Utility incentive costs • Utility installation costs

In addition to the benefits shown in Table 11-1, three programs (Energy Saver, Energy$mart, and Smart Students) also received the 20 percent low-income adder discussed in Section 2.6. We also ran an alternative set of UCT calculations where all programs receive an avoided carbon emissions benefit. Inputs for this benefit were also discussed in Section 2.6.

11.2 RESULTS

Using net realized savings from this evaluation and cost information provided by EPE, the evaluation team calculated the ratio of benefits to costs for each of EPE's programs and for the portfolio overall. The results of the UCT are shown in Table 11-2. The portfolio overall was found to have a UCT ratio of 1.11, indicating the relative benefits of the portfolio exceed the relative costs. When including the avoided carbon emissions benefit in the cost effectiveness calculations, the UCT ratio climbs to 1.77.

Table 11-2: PY2024 Cost Effectiveness Results

Program	Utility Cost Test Ratio			Change
	PY2023	PY2024 Base	PY2024 With Avoided Carbon Emissions Benefit	
Smart Students	0.53	0.36	0.70	↓
ENERGY STAR New Homes	0.96	0.63	1.04	↓
Residential Marketplace	0.06	1.42	2.71	↑
Commercial Comprehensive	1.31	1.84	3.27	↑
SCORE Plus	1.30	1.21	2.19	↓
Commercial Load Management	0.62	0.67	0.67	↑
Residential Load Management	1.10	1.32	1.39	↑
Residential Comprehensive	1.30	1.17	1.62	↓
Residential Lighting	1.77	0.56	1.01	↓
NM Energy Saver (LI)	1.33	1.22	1.62	↓
Energy$mart (LI)	1.07	2.10	2.68	↑
Overall Portfolio	**1.19**	**1.11**	**1.77**	↓

UCT results are based on net realized benefits which are shown in Table 11-3, which compares realized savings and delivery costs between PY2023 and PY2024.

Table 11-3: Portfolio Comparison with PY2023

Metric	PY2023	PY2024	Difference
Delivery Costs	4,866,382	4,438,876	-9%
Net Verified kWh – First Year	17,596,607	9,485,156	-46%
Net Verified kWh – Lifetime	215,483,633	119,884,383	-44%
Net Verified kW	7,501	5,844	-22%

11.3 CONCLUSIONS AND RECOMMENDATIONS

Overall EPE's PY2024 portfolio was found to be cost effective with a UCT of 1.11. The decrease in the portfolio's UCT ratio from 1.19 in PY2023 to 1.11 in PY2024 was driven by a decrease in the avoided cost of energy and avoided cost of capacity assumptions.

While cost-effectiveness remains a key metric for evaluating program performance, these findings highlight the need for continuous assessment and optimization to ensure that future programs maximize benefits while maintaining financial feasibility.

Appendix A

NM Energy Saver (LI) Participation Survey Guide

A. NM Energy Saver (LI) Participation Survey Guide

INSTRUMENT OVERVIEW

Objective: The Evaluation Team will interview NM Energy Saver (LI) participants to assess satisfaction with the program.

Anticipated timing (interview length): 15 to 20 minutes

Method of data collection: Phone interview

Introduction

Hello, my name is ***(NAME)*** from MDC Research. I am calling on behalf of El Paso Electric. May I please speak with _____?

A. (Once correct respondent is reached) Hello, my name is (*YOUR NAME*) from MDC Research. I am calling on behalf of El Paso Electric.

I'm calling because our records show that you recently participated in El Paso Electric's Energy Saver program and had **[MEASURE_TYPE1, or if multiple measures installed, list all measures]** installed at your home located at **[SITE_ADDRESS]**. I'd like to ask a short set of questions about your experience with this program. Your time will help us improve this program for other customers like you. Are you the best person to talk to about these energy efficiency upgrades and energy use in your home?

1. Yes

2. No **(Ask, Who would be the best person to talk to about the energy efficiency upgrades and energy use in your home? (REPEAT INTRO WHEN CORRECT PERSON COMES ON LINE; ARRANGE CALLBACK IF NECESSARY)**

3. Never installed ***(THANK AND TERMINATE)***

(IF NEEDED) El Paso Electric would like to better understand how residential customers like you think about and manage their energy use. The El Paso Electric Energy Saver program is designed to help customers save energy and money. Your input is very important to help El Paso Electric improve its energy efficiency programs.

SECTION A: Role of Contractor

1. (A 1) Did the contractor who provided the energy efficiency upgrades mention specifically that the program was being offered by El Paso Electric?

- Yes
- No
- Prefer not to answer
- Don't know

2. (A 2) How did the contractor explain the free energy efficiency upgrades? Record response.

_____

_____

SECTION B: Awareness and Motivations for Participation

3. (B 1) Did the installed equipment replace existing equipment?

- Yes
- No **(SKIP TO *B4)***
- Prefer not to answer ***(SKIP TO B4)***
- Don't know ***(SKIP TO B4)***

4. (B 2) What was the condition of the equipment you replaced? *(READ CATEGORIES)*

- Past useful life but functioning
- No longer working/failed
- New or nearly new
- Don't know/won't say ***(DO NOT READ)***
- Other **(SPECIFY)**_____

5. (B 3) How urgent was it that you replace the equipment at the time you did?

(READ CATEGORIES)

- Very urgent, needed to be done immediately
- Somewhat urgent, but likely could have waited a few weeks
- Not urgent
- Don't know/refused ***(DO NOT READ)***

6. (B 4) How did you <u>first</u> hear about the El Paso Electric Energy Saver program? *(DO NOT READ CATEGORIES) (TAKE UP TO 3 RESPONSES)*

- TV / Radio
- Social Media / LinkedIn
- Newspaper / Magazine
- Bill Insert
- Friend / Referral
- Contractor
- Distributor / Supplier
- Retailer
- Prefer not to answer [Exclusive]
- Don't know [Exclusive]
- Other ***(SPECIFY)*** _____

7. (B 5) Next, I will read a list of reasons you may have considered when you chose to participate in the program. For each one, please tell me if it was *not at all important, a little important, somewhat important, very important or extremely important*.

How important was…on your decision to participate in the program?

	Extremely Important	*Very Important*	*Somewhat Important*	*A little Important*	*Not imp At All*	*Don't Know*	*Prefer not to answer*	*N/A*
(RANDOMIZE)								
8. (B5a) Reducing the environmental impact of your home	**5**	**4**	**3**	**2**	**1**	**6**	**7**	**8**

9.	**(B5b) Upgrading out-of-date equipment**	**5**	**4**	**3**	**2**	**1**	**6**	**7** **8**
10.	**(B5c) Replacing faulty or failed equipment**	**5**	**4**	**3**	**2**	**1**	**6**	**7** **8**
11.	**(B5d) Improving comfort of your home**	**5**	**4**	**3**	**2**	**1**	**6**	**7** **8**
12.	**(B5e) Reducing energy bill amounts**	**5**	**4**	**3**	**2**	**1**	**6**	**7** **8**
13.	**(B5f) The program representative**	**5**	**4**	**3**	**2**	**1**	**6**	**7** **8**

14. (B 6) Were there any other reasons that you participated that were more important than the ones we have mentioned?

- Yes. **(Ask what those reasons were and record response)**

_____

_____

_____

- No, none in particular
- Prefer not to answer
- Don't know

SECTION C: Program Satisfaction

Now I have some questions about your satisfaction with various aspects of the program.

(C 1a-d). For each of the following, please tell me if you were *very dissatisfied, somewhat dissatisfied, neither satisfied nor dissatisfied, somewhat satisfied or very satisfied*.

15. (C1a) El Paso Electric as an energy provider

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q.17)***
- Very Satisfied ***(SKIP TO Q. 17)***
- Not applicable ***(SKIP TO Q. 17)***
- Prefer not to answer ***(SKIP TO Q. 17)***
- Don't know ***(SKIP TO Q.17)***

16. Can you tell me why you gave that rating? *(RECORD VERBATIM)*

_____

_____

_____

17. (C1b) The program overall

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 19)***
- Very Satisfied ***(SKIP TO Q. 19)***
- Not applicable ***(SKIP TO Q. 19)***
- Prefer not to answer ***(SKIP TO Q. 19)***
- Don't know ***(SKIP TO Q. 19)***

18. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

19. (C1c) The equipment that was installed through the program

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 21)***
- Very Satisfied ***(SKIP TO Q. 21)***
- Not applicable ***(SKIP TO Q. 21)***
- Prefer not to answer ***(SKIP TO Q. 21)***
- Don't know ***(SKIP TO Q. 21)***

20. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

21. (C1d) The contractor who installed the equipment

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 23)***
- Very Satisfied ***(SKIP TO Q. 23)***
- Not applicable ***(SKIP TO Q. 23)***
- Prefer not to answer ***(SKIP TO Q. 23)***
- Don't know ***(SKIP TO Q. 23)***

22. Can you tell me why you gave that rating? *(RECORD VERBATIM)*

_____

_____

_____

23. (C2) Do you have any recommendations for improving the El Paso Electric Energy Saver program?

- Yes ***(RECORD VERBATIM)***

_____

_____

_____

- No
- Prefer not to answer
- Don't know

SECTION D: Characteristics and Demographics

24. (D 1) Finally, I have a few questions about your household for classification purposes only. Do you own or rent your home where the equipment was installed?

- Own ***(SKIP TO Q.26)***
- Rent
- Prefer not to answer
- Don't know
- Other ***(SPECIFY)*** _____

25. (D 2) Do you pay your El Paso Electric bill, or does someone else (e.g., a landlord)?

- Pay own
- Someone else pays
- Prefer not to answer
- Don't know

26. (D 3) Is your home a single-family home or part of a multifamily building with more than one unit?

- Single-family home ***(SKIP TO Q. 28)***
- More than one residence in building
- Prefer not to answer ***(SKIP TO Q. 28)***
- Don't know ***(SKIP TO Q. 28)***

27. (D4) How many units are in the structure? (Record number)

_____ _____ _____

- Prefer not to answer
- Don't know

28. (D5) Approximately what is the total square footage of your home?

(READ CATEGORIES IF NEEDED)

- Less than 1,000 square feet
- 1,000 to 1,499 square feet
- 1,500 to 1,999 square feet
- 2,000 to 2,499 square feet
- 2,500 to 2,999 square feet
- 3,000 to 3,999 square feet
- 4,000 or more square feet
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

29. (D6) Approximately what year was your home built? *(READ CATEGORIES IF NEEDED)*

- 1939 or earlier
- 1940 to 1949
- 1950 to 1959
- 1960 to 1969
- 1970 to 1979
- 1980 to 1989
- 1990 to 1999
- 2000 to 2009
- 2010 to 2019
- 2020 and newer
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

30. (D7) How many people live in your household? (Record number)

_____ ____

- Prefer not to answer
- Don't know

31. (D8) How long have you lived in this home?

- Less than 6 years
- 6 to 10 years
- 11 to 15 years
- 16 to 20 years
- 21 to 25 years
- 26 to 30 years
- More than 30 years
- Prefer not to answer
- Don't know

THIS CONCLUDES OUR SURVEY. THANK YOU FOR YOUR TIME. HAVE A GOOD DAY.

NOTE TO INTERVIEWER, WAS RESPONDENT:

- Male
- Female

Unique ID #: ____ ____ ____

Respondent's Phone Number: _____

Interviewer's Name: _____

Interviewer's Code: _____

Appendix B

NM Energy Saver (LI) Contractor Interview Guide

B. NM Energy Saver (LI) Contractor Interview Guide

Introduction

Hello, my name is (YOUR NAME) from Evergreen Economics. I am calling on behalf of El Paso Electric (EPE). May I please speak with _____?

A. (Once correct respondent is reached) Hello, my name is (YOUR NAME) from Evergreen Economics. I am calling on behalf of EPE.

I'm calling because our records show that your organization is a service provider in the EPE Energy Saver Low Income program. I'd like to ask a short set of questions about your organization and it's and your experience with this rebate program. Your time will help us improve this program for EPE customers. Are you the best person to talk to about this program?

- Yes
- No (Ask, Who would be the best person to talk to about the energy efficiency upgrades and energy use in your customers' homes? (REPEAT INTRO WHEN CORRECT PERSON COMES ON LINE; ARRANGE CALLBACK IF NECESSARY)
- Have never participated (THANK AND TERMINATE)

Talking points for starting the interview

- Identify self.
- This should take about 20 minutes.
- Your responses will be anonymous, so please feel free to speak candidly.
- Do you have any questions before we begin?
- Would you feel comfortable if I record this call for note taking purposes? We will not share the recording with anyone outside our company and will not attribute anything you say back to you.

Interviewee Background

Let's begin with a couple of background questions….

A1. To start, please tell me a bit about your company.
Probe to understand:

- Services offered
- Types of customers (esp. sector – residential, commercial, or both)
- Regions served
- Interviewee role

Program Awareness and Engagement

B1. Do you recall how your organization first learned about and got involved with the EPE Energy Saver (LI) rebate program through EPE?
Listen (and probe as needed) for:

- Any reservations about participating
- Any barriers to participating
- Whether or not they work with any other EPE rebate programs

B2. Could you describe what involvement is required from a contractor to particpate in the EPE Energy Saver program?
Probe as needed:

- In what ways do you interact with EPE about this program?
- What information or services do you receive from EPE?

B3. In what ways is the EPE program helpful to you in your business?
Probe, as needed:

- Rebate
- Increases customer satisfaction with us
- Increases business
- Helps us up-scale to higher efficiency levels
- Ability to mention the connection with the EPE program
- EPE messaging to customers on benefits of measures you install

B4. What share of your projects within EPE territory would you estimate currently end up qualifying for and receiving an EPE rebate? What could EPE do to involve you more in the program?

B5. Does EPE make it clear which products or services are eligible for EPE rebates?

Probe as needed:

- Is there anything EPE should do to more clearly communicate that?

B6. Have the programs influenced what equipment you install in your customers' homes?

B7. Do you have any suggestions for EPE services and support – either overall or for the Energy Saver program specifically?

Program Process

C1. In what ways are you involved with the rebate portion of the program and the paperwork and process required to participate?

Probe to understand:

- Whether service provider completes the rebate application
- Time required for paperwork and whether that is a burden
- If the rebate goes to the contractor (with a markdown on the charge to customer)
- Recommended improvements

C2. Do you have any comments about the program offerings? Is there anything missing? Anything not needed? Or anything that could be better?

Market Response

D1. Overall, to what degree do you see the program increasing the interest and demand for energy efficient equipment?

- Probe to understand:
  - Why is that?
  - Is the program having a large or small effect on the market?

D2. Are there markets that you feel EPE energy efficiency programs are reaching well? Not well?

Probe to understand:

- Suggested approaches that might expand the reach of the program into additional markets that may be underserved by the program.

D3. Overall, what issue(s), if any, would affect future program participation by customers?

Program Satisfaction

E1. Finally, I'd like to ask about your and your homes' occupants/customers' satisfaction with the EPE Energy Saver program. Please rate your overall satisfaction with the program on a 1 to 5 scale where 1 is not at all satisfied, 2 is somewhat dissatisfied, 3 is neither satisfied nor dissatisfied, 4 is somewhat satisfied and 5 is very satisfied.

- What is your satisfaction?
- How do you think your customers would rate the program?

[IF RATING < 5] What could EPE do to increase your satisfaction with the program?
Probe if needed:

- What is working best?
- What is most challenging or needs improvement?

E2. Have you had any feedback from your homes' occupants/customers' about their experiences with the program that you think EPE should know?

E3. Aside from anything we've already discussed, was there ever an occasion when the program didn't meet your expectations? Please explain.

Closing

F1. Is there anything else we didn't cover that you'd like to mention or discuss about your experiences with the EPE Energy Saver program?

[THANK AND END]

Appendix C

Residential Comprehensive Participants Survey Guide

C. Residential Comprehensive Participants Survey Guide

Instrument Overview

Objective: The Evaluation Team will interview **Residential Comprehensive** program participants to assess the program freeridership.

Anticipated timing (interview length): 15 to 20 minutes

Method of data collection: Phone interview

Introduction

Hello, my name is ***(NAME)*** from MDC Research. I am calling on behalf of El Paso Electric. May I please speak with _____?

Intro. (Once correct respondent is reached) Hello, my name is ***(NAME)*** from MDC Research. I am calling on behalf of El Paso Electric.

I'm calling because our records show that you recently installed an energy efficient **[MEASURE_TYPE1]** at your home located at **[SITE_ADDRESS]** and received a rebate from El Paso Electric. I'd like to ask a short set of questions about your experience with this rebate program. Your time will help us improve this program for other customers like you. Are you the best person to talk to about these energy efficiency upgrades and energy use in your home?

- Yes
- No (Ask, who would be the best person to talk to about the energy efficiency upgrades and energy use in your home? **(REPEAT INTRO WHEN CORRECT PERSON COMES ON LINE; ARRANGE CALLBACK IF NECESSARY)**
- Never installed ***(SKIP TO Q.4)***

(IF NEEDED) El Paso Electric would like to better understand how residential customers like you think about and manage their energy use. The El Paso Electric rebate program is designed to help customers save energy and money. Your input is very important to help El Paso Electric improve its energy rebate programs.

SECTION A: Measure Verification [MEASURE_1]

1. **(A 1) Just to confirm, our records show that you received a rebate from El Paso Electric when you installed a [MEASURE_TYPE1] at your home at [SITE_ADDRESS]. And this was done in 2024. Is this correct?**
   - Yes
   - No ***(THANK AND TERMINATE, UNLESS THERE IS A [MEASURE_2])***
   - Don't know ***(THANK AND TERMINATE, UNLESS THERE IS A [MEASURE_2])***

2. **(A 2) Is the [MEASURE_TYPE1] still installed?**
   - Yes ***(SKIP TO Q. 5)***
   - No ***(CONTINUE TO Q. 3)***
   - Prefer not to answer ***(SKIP TO Q. 5)***
   - Don't know ***(SKIP TO Q. 5)***

3. **(A 3) Was the [MEASURE_TYPE1] removed or never installed?**
   - Removed
   - Never Installed
   - Prefer not to answer ***(SKIP TO MEASURE_2)***
   - Don't know ***(SKIP TO MEASURE_2)***
   - Other ***(SPECIFY)*** _____ ***(SKIP TO MEASURE_2)***

4. **(A3a) Why was the [MEASURE_TYPE1] removed/never installed? *(OPEN VERBATIM)***

_____
_____
_____

POLLER NOTE: Was measure ever installed (Q.1)?
- **Yes (SKIP TO MEASURE_2)**
- **No (THANK AND TERMINATE, UNLESS THERE IS A MEASURE_2)**

5. (A 4) Is the [MEASURE_TYPE1] still functioning properly?

- Yes
- No
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

SECTION A: Measure Verification [MEASURE_2]

1. (A 1) Just to confirm, our records also show that you received a rebate from El Paso Electric when you installed a [MEASURE_TYPE2] at your home at [SITE_ADDRESS]. And this was done in 2024. Is this correct?

- Yes
- No ***(SKIP TO MEASURE 3)***
- Don't know ***(SKIP TO MEASURE 3)***

2. (A 2) Is the [MEASURE_TYPE2] still installed?

- Yes ***(SKIP TO Q. 5)***
- No ***(CONTINUE TO Q. 3)***
- Prefer not to answer ***(SKIP TO Q. 5)***
- Don't know **(*SKIP TO Q. 5)***

3. (A 3) Was the [MEASURE_TYPE2] removed or never installed?

- Removed
- Never Installed
- Prefer not to answer ***(SKIP TO MEASURE_3)***
- Don't know ***(SKIP TO MEASURE_3)***
- Other ***(SPECIFY)*** _____ ***(SKIP TO MEASURE_3)***

4. (A3a) Why was the [MEASURE_TYPE2] removed/never installed? *(OPEN VERBATIM)*

_____
_____
_____

POLLER NOTE: Was measure ever installed (Q.1)?

1. Yes (SKIP TO Q.6)

2. No (THANK AND TERMINATE UNLESS THERE IS A MEASURE 3)

5. (A 4) Is the [MEASURE_TYPE2] still functioning properly?

- Yes
- No
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

SECTION A: Measure Verification [MEASURE_3]

1. (A 1) Just to confirm, our records also show that you received a rebate from El Paso Electric when you installed a [MEASURE_TYPE3] at your home at [SITE_ADDRESS]. And this was done in 2024. Is this correct?

- Yes
- No ***(THANK AND TERMINATE if no measures installed)***
- Don't know ***(THANK AND TERMINATE if no measures installed)***

2. (A 2) Is the [MEASURE_TYPE3] still installed?

- Yes ***(SKIP TO Q. 5)***
- No ***(CONTINUE TO Q. 3)***
- Prefer not to answer ***(SKIP TO Q. 5)***
- Don't know ***(SKIP TO Q. 5)***

3. (A 3) Was the [MEASURE_TYPE3] removed or never installed?

- Removed
- Never Installed
- Prefer not to answer ***(SKIP TO Q.6)***
- Don't know ***(SKIP TO Q.6)***
- Other ***(SPECIFY)*** _____ ***(SKIP TO Q.6)***

4. (A3a) Why was the [MEASURE_TYPE3] removed/never installed? *(OPEN VERBATIM)*

_____
_____
_____

POLLER NOTE: Was measure ever installed (Q.1)?
1. Yes (SKIP TO Q.6)
2. No (THANK AND TERMINATE only if no measures were installed)

5. (A 4) Is the [MEASURE_TYPE3] still functioning properly?
- Yes
- No
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

Section B: Role of Contractor/Retailer

6. (B 1) Did you go through a contractor to purchase the efficient equipment or did you purchase it directly from a retailer?
- Used a contractor ***(SKIP TO Q. 8)***
- Purchased at retailer
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

7. (B 2) Did you use a contractor to install the equipment, or did you do it yourself?
- Contractor installed
- Did it myself
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

Section C: Awareness and Motivations for Participation

8. (C 1) How did you first hear about El Paso Electric's rebates for energy efficient equipment? *(DO NOT READ CATEGORIES)*

- Bill insert
- El Paso Electric website
- Digital/web advertisement (not on the EPE website)
- Television advertisement
- Radio advertisement
- Contractor
- Friend or family
- Social media
- Prefer not to answer
- Don't know
- Other ***(SPECIFY)*** _____

(C 2) Next I will read a list of reasons you may have considered when you decided to make the energy efficiency upgrade. For each one, please tell me if it was *not at all important, a little important, somewhat important, very important or extremely important*.

How important was…on your decision to make the upgrade?

(RANDOMIZE)	*Extremely Important*	*Very Important*	*Somewhat Important*	*A little Important*	*Not imp At All*	*Don't Know*	*Prefer not to answer*	*N/A*
9. (C2a) Reducing environmental impact of your home	**5**	**4**	**3**	**2**	**1**	**6**	**7**	**8**
10. (C2b) Upgrading out-of-date equipment	**5**	**4**	**3**	**2**	**1**	**6**	**7**	**8**
11. (C2c) Replacing faulty or failed equipment	**5**	**4**	**3**	**2**	**1**	**6**	**7**	**8**

POLLER NOTE: Was Cooling Measure installed?
1. Yes (CONTINUE TO Q. 12)
2. No (SKIP TO POLLER NOTE BEFORE Q.14)

12. [If MEASURE_CATEGORY=Cooling, ASK] (C2d) Improving comfort of your home 5 4 3 2 1 6 7 8

13. [If MEASURE_CATEGORY=Cooling, ASK] (C2e) Improving air quality 5 4 3 2 1 6 7 8

POLLER NOTE: Was a Pool Pump installed?
1. Yes (CONTINUE TO Q. 14)
2. No (SKIP TO Q.15)

14. [If MEASURE_CATEGORY=Pool Pump, ASK] (C2f) Improving water circulation in your pool 5 4 3 2 1 6 7 8

15. (C2g) Receiving financial incentive 5 4 3 2 1 6 7 8

16. (C2h) Reducing energy bill amounts 5 4 3 2 1 6 7 8

POLLER NOTE: Did respondent answer Contractor in Q.6?
1. Yes (CONTINUE TO Q. 17)
2. No (SKIP TO POLLER NOTE BEFORE Q. 18)

17. [If Contractor=yes, Q.6, ASK] (C2i) The contractor recommendation 5 4 3 2 1 6 7 8

POLLER NOTE: Did respondent answer Retailer in Q.6?
1. Yes (CONTINUE TO Q. 18)
2. No (SKIP Q. 19)

18. [If Retailer=yes, Q.6 ASK] (C2j) The retailer recommendation 5 4 3 2 1 6 7 8

19. (C 3) Were there any other reasons that you installed the equipment that were more important than the ones we have mentioned?

- Yes. **(Ask what those reasons were and record response)**

_____
_____
_____

- No, none in particular
- Prefer not to answer
- Don't know

SECTION D: CUSTOMER DECISION MAKING PROCESS, FREE-RIDERSHIP

Next, I'm going to ask a few questions about your decision to participate in the El Paso Electric rebate program, and to make an efficiency upgrade at your home.

20. (D 1) Before participating in the El Paso Electric rebate program, do you recall receiving any other rebates from El Paso Electric for making energy efficiency upgrades at your home?

- Yes
- No
- Prefer not to answer
- Don't know

(D 2) Next I will read a list of program aspects that may have been influential in your decision to make the efficiency upgrade. For each one, please tell me how influential it was on a scale of 0 to 10 where 0 means *not at all influential* and 10 means *extremely influential*.

How influential was…on your decision to make the upgrade?

(RANDOMIZE)	*Extremely Influential*	*Not at all Influential*	*Don't Know*	*Prefer not to answer*	*N/A*
21. (D2a) The dollar amount of the rebate	**10…9 …8…7…6…5 …4…3…2…1…0**		**97**	**98**	**99**

POLLER NOTE: Did respondent answer Contractor in Q.6?
1. Yes (CONTINUE TO Q. 22)
2. No (SKIP TO POLLER NOTE BEFORE Q. 23)

22. [IF Contractor=yes, Q.6 ASK] (D2b) The contractor recommendation 10…9 …8…7…6…5 …4…3…2…1…0 97 98 99

POLLER NOT E: Did respondent answer Retailer in Q.6?
1. Yes (CONTINUE TO Q. 23)
2. No (SKIP Q. 24)

23. [IF Retailer=yes, Q.6 ASK] (D2c) The retailer recommendation 10…9 …8…7…6…5 …4…3…2…1…0 97 98 99

24. (D2d) Information from El Paso Electric marketing or promotional materials
10…9 …8…7…6…5 …4…3…2…1…0 97 98 99

25. (D2e) Previous participation in an El Paso Electric program 10…9 …8…7…6…5 …4…3…2…1…0 97 98 99

26. (D 3) Did you first learn about the El Paso Electric rebate program BEFORE or AFTER you decided how energy efficient your equipment would be?

- Before
- After
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

27. (D 4) Now I would like you to think about the efficiency level of the equipment upgrade. Using a scale from 0 to 10, where 0 means *not at all likely* and 10 means *extremely likely*, please rate the likelihood that you would have purchased the exact same efficiency level of equipment if the El Paso Electric rebate program was NOT available.

Extremely										*Not at all*	*DK/*
Likely										*Likely*	*WS*
10	09	08	07	06	05	04	03	02	01	00	11

28. (D 5) Now I would like you to think about the timing of the equipment purchase. Using a scale from 0 to 10, where 0 means *not at all likely* and 10 means *extremely likely*, please rate the likelihood that you would have installed equipment of any efficiency level within 12 months of when you actually did if the El Paso Electric rebate program was NOT available.

Extremely										*Not at all*	*DK/*
Likely										*Likely*	*WS*

10 09 08 07 06 05 04 03 02 01 00 11

29. (D 6) In your own words, how would you describe the influence the El Paso Electric rebate program had on your decision to install the new equipment? ***(RECORD VERBATIM)***

SECTION E: Program Implementation and Delivery

Now I have a question about the program processes.

30. (E 1) About how long did it take to receive your rebate after the equipment was installed?

(DO NOT READ CATEGORIES)

- 1 week or less
- More than a week, but less than 1 month
- About 1 month
- Between 1 and 2 months
- About 2 months
- More than 2 months
- Have not received rebate yet
- Prefer not to answer
- Don't know

SECTION F: Program Satisfaction

Now I have some questions about your satisfaction with various aspects of the program.

(F 2a-h). For each of the following, please tell me if you were *very dissatisfied, somewhat dissatisfied, neither satisfied nor dissatisfied, somewhat satisfied or very satisfied*.

31. (F1a) El Paso Electric as an energy provider

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q.33)***
- Very Satisfied ***(SKIP TO Q. 33)***
- Not applicable ***(SKIP TO Q. 33)***
- Prefer not to answer ***(SKIP TO Q. 33)***
- Don't know ***(SKIP TO Q.33)***

32. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

33. (F1b) The rebate program overall

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 35)***
- Very Satisfied ***(SKIP TO Q. 35)***
- Not applicable ***(SKIP TO Q. 35)***
- Prefer not to answer ***(SKIP TO Q. 35)***
- Don't know ***(SKIP TO Q. 35)***

34. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

35. (F1c) The equipment that was rebated through the program

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO POLLER NOTE BEFORE Q. 37)***
- Very Satisfied ***(SKIP TO POLLER NOTE BEFORE Q. 37)***
- Not applicable ***(SKIP TO POLLER NOTE BEFORE Q. 37)***
- Prefer not to answer ***(SKIP TO POLLER NOTE BEFORE Q. 37)***
- Don't know ***(SKIP TO POLLER NOTE BEFORE Q. 37)***

36. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

POLLER NOTE: Did respondent answer Contractor in Q.6 or 7?
1. Yes (CONTINUE TO Q. 37)
2. No (SKIP TO Q. 39)

37. [IF Contractor=YES, Q. 6 or 7] (F1d) The contractor who installed the equipment

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 39)***
- Very Satisfied ***(SKIP TO Q. 39)***
- Not applicable ***(SKIP TO Q. 39)***
- Prefer not to answer ***(SKIP TO Q. 39)***
- Don't know ***(SKIP TO Q. 39)***

38. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

39. (F1e) The amount of time it took to receive your rebate

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 41)***
- Very Satisfied ***(SKIP TO Q. 41)***
- Not applicable ***(SKIP TO Q. 41)***
- Prefer not to answer ***(SKIP TO Q. 41)***
- Don't know ***(SKIP TO Q. 41)***

40. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

41. (F1f). The dollar amount of the rebate

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 43)***
- Very Satisfied ***(SKIP TO Q. 43)***
- Not applicable ***(SKIP TO Q. 43)***
- Prefer not to answer ***(SKIP TO Q. 43)***
- Don't know ***(SKIP TO Q. 43)***

42. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

43. (F1g) Interactions with El Paso Electric regarding this project

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 45)***
- Very Satisfied ***(SKIP TO Q. 45)***
- Not applicable ***(SKIP TO Q. 45)***
- Prefer not to answer ***(SKIP TO Q. 45)***
- Don't know ***(SKIP TO Q. 45)***

44. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

45. (F1h) The overall value of the equipment you received for the price you paid

- Very Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied Nor Dissatisfied
- Somewhat Satisfied ***(SKIP TO Q. 47)***
- Very Satisfied ***(SKIP TO Q. 47)***
- Not applicable ***(SKIP TO Q. 47)***
- Prefer not to answer ***(SKIP TO Q. 47)***
- Don't know ***(SKIP TO Q. 47)***

46. Can you tell me why you gave that rating? ***(RECORD VERBATIM)***

_____

_____

_____

47. (F2) Do you have any recommendations for improving the El Paso Electric rebate program?

- Yes ***(RECORD VERBATIM)***

_____

_____

_____

- No
- Prefer not to answer
- Don’t know

SECTION GEN: CHARACTERISTICS AND DEMOGRAPIHCS

48. (Gen 1) Finally, I have a few questions about your household for classification purposes only. Do you own or rent your home where the equipment was installed?

- Own ***(SKIP TO Q.50)***
- Rent
- Prefer not to answer
- Don't know
- Other ***(SPECIFY)*** _____

49. (Gen1a) Do you pay your El Paso Electric bill, or does someone else (e.g., a landlord)?

- Pay own
- Someone else pays
- Prefer not to answer
- Don’t know

50. (Gen2) Is your home a single-family home or part of a multifamily building with more than one unit?

- Single-family home ***(SKIP TO Q. 52)***
- More than one residence in building
- Prefer not to answer ***(SKIP TO Q. 52)***
- Don’t know ***(SKIP TO Q. 52)***

51. (Gen2a) How many units are in the structure? (Record number)

_____ _____ _____

- Prefer not to answer
- Don't know

52. (Gen3) Approximately what is the total square footage of your home? *(READ CATEGORIES IF NEEDED)*

- Less than 1,000 square feet
- 1,000 to 1,499 square feet
- 1,500 to 1,999 square feet
- 2,000 to 2,499 square feet
- 2,500 to 2,999 square feet
- 3,000 to 3,999 square feet
- 4,000 or more square feet
- Prefer not to answer ***(DO NOT READ)***

53. (Gen4) Approximately what year was your home built? *(READ CATEGORIES IF NEEDED)*

- 1939 or earlier
- 1940 to 1949
- 1950 to 1959
- 1960 to 1969
- 1970 to 1979
- 1980 to 1989
- 1990 to 1999
- 2000 to 2009
- 2010 to 2019
- 2020 and newer
- Prefer not to answer ***(DO NOT READ)***
- Don't know ***(DO NOT READ)***

54. (Gen5) How many people live in your household? (Record number)

_____ ____

- Prefer not to answer
- Don't know

55. (Gen6) How long have you lived in this home?

- Less than 6 years
- 6 to 10 years
- 11 to 15 years
- 16 to 20 years
- 21 to 25 years
- 26 to 30 years
- More than 30 years
- Prefer not to answer
- Don't know

THIS CONCLUDES OUR SURVEY. THANK YOU FOR YOUR TIME. HAVE A GOOD DAY.

NOTE TO INTERVIEWER, WAS RESPONDENT:

- Male
- Female

Unique ID #: ____ ____ ____

Respondent's Phone Number: _____
Interviewer's Name: _____
Interviewer's Code: _____

Appendix D

Residential Marketplace Participants Survey Guide

D. Residential Marketplace Participants Survey Guide

INSTRUMENT OVERVIEW

Objective: The Evaluation Team will interview Residential Marketplace program participants to assess the program freeridership.

Anticipated timing (interview length): 15 to 20 minutes

Method of data collection: Phone interview

INTRODUCTION

Intro. *(Once correct respondent is reached.)* Hello, my name is *(NAME)* from MDC Research. I am calling on behalf of El Paso Electric. I'm calling because our records show that you recently purchased an energy efficient [MEASURE_TYPE1] through the El Paso Electric Residential Marketplace program and received a rebate. I'd like to ask a short set of questions about your experience with this rebate program. Your time will help us improve this program for other customers like you. Are you the best person to talk to about your purchase and energy use in your home?

Yes 1

No 2

Never purchased 3

(If 2, ask, who would be the best person to talk to about the experience with the rebate program (REPEAT INTRO WHEN CORRECT PERSON COMES ON LINE; ARRANGE CALLBACK IF NECESSARY)

(If 3, thank and terminate)

Section A: Awareness and Motivations for Participation

Q2. (A1) Did you install the equipment that you purchased yourself or hire a contractor?

Self-installed 1

Contractor 2

Other **(ask to specify and record response)** 3

Don't know/don't recall 4

Q3. (A 2) How did you first hear about El Paso Electric's Residential Marketplace program?

El Paso Electric website 1

Digital/web advertisement 2

Newspaper advertisement 3

Contractor outreach or marketing 4

Friend or family 5

Social media 6

El Paso Electric representative 7

Mailing..... 8

Bill insert 9

Landlord/property manager 10

Bulletin Board 11

Prefer not to answer 98

Don't know 99

Q4. (A 3a) How important was <u>reducing environmental impact of your home</u> in your decision to make the purchase?

Not important at all 1

A little important 2

Somewhat important 3

Very important . 4

Extremely important 5

Don't know 6

Prefer not to answer 7

N/A 8

Q5. (A 3b) How important was <u>improving the comfort of your home</u> in your decision to make the purchase?

Not important at all 1

A little important 2

Somewhat important 3

Very important . 4

Extremely important 5

Don't know 6

Prefer not to answer 7

N/A 8

Q6. (A 3c) How important was receiving an instant rebate discount in your decision to make the purchase?

Not important at all	1
A little important	2
Somewhat important	3
Very important	4
Extremely important	5
Don't know	6
Prefer not to answer	7
N/A	8

Q7. (A 3d) How important was reducing energy bill amounts in your decision to make the purchase?

Not important at all	1
A little important	2
Somewhat important	3

Very important . 4

Extremely important 5

Don't know 6

Prefer not to answer 7

N/A 8

Q8. (A 4) Were there any other reasons that you made the purchase that were more important than the ones we have mentioned?

Yes. **(Ask what those reasons were and record response)** 1

No, none in particular 97

Prefer not to answer 98

Don't know 99

Q9. (A 5) Before participating in the El Paso Electric Residential Marketplace program, do you recall receiving any other rebates from El Paso Electric for making energy efficiency upgrades at your home?

Yes 1

No 2

Prefer not to answer 3

Don't know 4

Q10. (A 6a) How influential was <u>the rebate</u> on your decision to make the purchase?

0 - Not influential at all 00

1 01

2 02

3 03

4 04

5 05

6 06

7 07

8 08

9 09

10 - Extremely influential 10

Don't know 97

Prefer not to answer 98

N/A 99

Q11. (A 6b) ***How influential was information from El Paso Electric marketing or informational materials on your decision to make the purchase?***

0 - Not influential at all	00
1 01	
2 02	
3 03	
4 04	
5 05	
6 06	
7 07	
8 08	
9 09	
10 - Extremely influential	10
Don't know 97	
Prefer not to answer 98	
N/A 99	

Q12. (A 6c) ***How influential was previous participation in an El Paso Electric program on your decision to make the purchase?***

0 - Not influential at all	00
1 01	
2 02	
3 03	
4 04	
5 05	
6 06	
7 07	
8 08	
9 09	
10 - Extremely influential	10
Don't know 97	
Prefer not to answer 98	
N/A 99	

Section B: Free-Ridership

Q13. (B 1) Did you first learn about the El Paso Electric Residential Marketplace program BEFORE or AFTER you decided to make the energy efficient equipment purchase?

Before 1

After 2

Prefer not to answer 3

Don't know 4

Q14. (B 2) If you had not received the instant rebate on the [MEASURE_TYPE1] from the El Paso Electric Residential Marketplace, what is the likelihood you would have sought out similar [MEASURE_TYPE1] within the next 12 months?

0 - Not at all likely ... 00

1 01

2 02

3 03

4 04

5 05

6 06

7 07

8 08

9 09

10 - Extremely likely 10

Don't know 97

Prefer not to answer 98

N/A 99

Q15. (B 3) If you had not received the instant rebate from the El Paso Electric Residential Marketplace, what is the likelihood you would have purchased the <u>exact same</u> equipment?

0 - Not at all likely ... 00

1 01

2 02

3 03

4 04

5 05

6 06

7 07

8 08

9 09

10 - Extremely likely 10

Don't know 97

Prefer not to answer 98

N/A 99

Q16. (B 4) In your own words, how would you describe the influence the El Paso Electric Residential Marketplace program had – including the available discounts, support, and any other program information you may have received – on your decision to make the efficient equipment purchase and the timing of that purchase?

Section C: Program Satisfaction

Q17. (C 1a) For each of the following, please tell me if you were *very dissatisfied*, *somewhat dissatisfied*, *neither satisfied nor dissatisfied*, *somewhat satisfied* or *very satisfied*. El Paso Electric as an energy provider.

Very Dissatisfied 1

Somewhat Dissatisfied 2

Neither Satisfied nor Dissatisfied

3

Somewhat Satisfied 4

Very Satisfied 5

Not applicable 6

Prefer not to answer 7

Don't know 8

Q18. Can you tell me why you gave that rating? *(Among those who were* Very Dissatisfied *or* Somewhat Dissatisfied *with El Paso Electric as an energy provider.)*

Q19. (C 1b) For the following, please tell me if you were *very dissatisfied*, *somewhat dissatisfied*, *neither satisfied nor dissatisfied*, *somewhat satisfied* or *very satisfied*. The El Paso Electric Residential Marketplace program overall.

Very Dissatisfied 1

Somewhat Dissatisfied 2

Neither Satisfied nor Dissatisfied

3

Somewhat Satisfied 4

Very Satisfied 5

Not applicable 6

Prefer not to answer 7

Don't know 8

Q20. Can you tell me why you gave that rating? *(Among those who were* Very Dissatisfied *or* Somewhat Dissatisfied *with the El Paso Electric Residential Marketplace program overall.)*

Q21. (C 1c) For the following, please tell me if you were *very dissatisfied*, *somewhat dissatisfied*, *neither satisfied nor dissatisfied*, *somewhat satisfied* or *very satisfied*. The equipment that was discounted through the program.

Very Dissatisfied 1

Somewhat Dissatisfied 2

Neither Satisfied nor Dissatisfied

3

Somewhat Satisfied 4

Very Satisfied 5

Not applicable 6

Prefer not to answer 7

Don't know 8

Q22. Can you tell me why you gave that rating? *(Among those who were* Very Dissatisfied *or* Somewhat Dissatisfied *with the equipment that was discounted through the program.)*

Q23. (C 1d) For the following, please tell me if you were *very dissatisfied*, *somewhat dissatisfied*, *neither satisfied nor dissatisfied*, *somewhat satisfied* or *very satisfied*. The overall value of the energy efficient equipment you received for the price you paid.

Very Dissatisfied 1

Somewhat Dissatisfied 2

Neither Satisfied nor Dissatisfied

3

Somewhat Satisfied 4

Very Satisfied 5

Not applicable 6

Prefer not to answer 7

Don't know 8

Q24. Can you tell me why you gave that rating? *(Among those who were* Very Dissatisfied *or* Somewhat Dissatisfied *with the overall value of the energy efficient equipment you received for the price you paid.)*

Q25. (C 2) Do you have any recommendations for improving the El Paso Electric Residential Marketplace program?

Section D: Characteristics and Demographics

Q26. (D 1) Finally, we have a few questions about your household for classification purposes only. Do you own or rent your home where the equipment was installed?

Own 1

Rent 2

Prefer not to answer 3

Don't know 99

Q27. (D 2) Do you pay your El Paso Electric Energy bill, or does someone else (e.g., a landlord)? *(Among those who answered that they lease or rent the building where the project was completed.)*

Pay own 1

Someone else pays 2

Prefer not to answer 3

Don't know 4

Q28. (D 3) Which of the following best describes the building you reside in?

Single-family detached home 1

Single-family attached home (e.g. townhome) 2

Mobile home 3

Multifamily (i.e. more than one residence in building) 4

Prefer not to answer 98

Don't know 99

Q29. (D 3a) How many units are in the structure? (Among those who answered Q28 and do not live in a single-family detached home)

2 to 4 1

5 to 10 2

11 to 25 3

26 to 50 4

More than 50 5

Prefer not to answer 98

Don't know 99

Q30. (D 4) Approximately what is the total square footage of your home?

Less than 1,000 square feet .. 1

Between 1,000 and 1,499 square feet 2

Between 1,500 and 1,999 square feet

3

Between 2,000 and 2,499 square feet

4

Between 2,500 and 2,499 square feet

5

Between 3,000 and 3,999 square feet

6

4,000 square feet or more 7

Prefer not to answer 8

Don't know 9

Q31. (D 5) Approximately what year was your home built?

1939 or earlier ... 1

1940 to 1949 2

1950 to 1959 3

1960 to 1969 4

1970 to 1979 5

1980 to 1989 6

1990 to 1999 7

2000 to 2009 8

2010 to 2019 9

2020 or later 10

Prefer not to answer 11

Don't know 12

Q32. (D 6) How many people live in your household?

Q33. (D 7) How long have you lived in this home?

Less than 6 years 1

6 to 10 years 2

11 to 15 years ... 3

16 to 20 years ... 4

21 to 25 years ... 5

26 to 30 years ... 6

More than 30 years 7

Prefer not to answer 8

Don't know 9

THIS CONCLUDES OUR SURVEY. THANK YOU FOR YOUR TIME. HAVE A GOOD DAY.

Appendix E

Project-Level Desk Review Results

E. Project-Level Desk Review Results

F. Project ID	101173	102088
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of Replacement ECM for Furnace and LED	Installation of DHW Pipe Insulation, DHW Tank Insulation, General air sealing, Heating System Replacement with Heat Pump, LED,Low Flow Shower Heads
Measure Type	Custom	Custom
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	4,680.50	8,592.10
Gross Reported First Year Peak Demand Savings (kW)	1.66	1.19
Gross Verified First Year Energy Savings (kWh)	4,895.65	16,780.58
Gross Verified First Year Peak Demand Savings (kW)	0.11	0.17
Realization Rate: Energy Savings (%)	105%	195%
Realization Rate: Peak Demand Savings (%)	7%	14%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	Based on the project details, cooling was not mentioned, and the primary heating fuel is electricity. LED: NEAT software was used to determine ex-ante values, providing baseline wattage (60W), efficient wattage (9W), hours of use (4 hours per day, 365 days per year) for lighting, and information on electric heating for the residence, which informed the selection of HVAC interactive and coincident factors. For LED lighting, the 2023 NM TRM offered updated savings values tailored to the local climate and usage patterns. These differences in data sources and location-specific adjustments account for the observed variation between ex-ante and ex-post results. For the Replacement ECM for Furnace, NEAT	DHW Tank Insulation: Ex-post calculations applied TRM-based factors, including average tank and ambient temperatures and an assumed R-value. These standardized assumptions contributed to differences from the ex-ante savings. General Air Sealing: Ex-post calculations used Cooling Degree Hours (45,600), Heating Degree Days (2,816), system efficiencies, Effective Full Load Hours (EFLH), and correction factors, as outlined in the NM TRM. Since this is an unconditioned space, cooling kWh is zero. The ex-post only considered heating kWh, which contributed to the variation from ex-ante values. LED:

	documentation did not specify initial savings estimates. Since this measure is not included in the NM TRM, we attempted to recreate the values using the IL TRM; however, the values showed significant differences, likely due to variations in weather zones. Therefore, we used the same value as in ex-ante values.	Ex-post calculations applied the interactive factor and coincidence factor (CF) as outlined in the TRM. Differences in the assumed hours of use and HVAC interaction contributed to variation from the ex-ante values. Low-Flow Showerheads: Ex-post calculations referenced TRM assumptions for inlet and outlet water temperatures. Differences in temperature assumptions and usage patterns contributed to variation.

Project ID	102237	102345
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of LED, Low flow showerhead, DHW tank insulation and DHW pipe insulation	DHW Pipe Insulation, DHW Tank Insulation, General Air Sealing, LED, Low E Window, Low Flow Shower Heads, Replacement ECM for Furnace.
Measure Type	Custom	Custom
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	3,138.50	3,047.00
Gross Reported First Year Peak Demand Savings (kW)	3.29	1.33
Gross Verified First Year Energy Savings (kWh)	1,831.79	3,507.05
Gross Verified First Year Peak Demand Savings (kW)	0.20	0.55
Realization Rate: Energy Savings (%)	58%	115%
Realization Rate: Peak Demand Savings (%)	6%	41%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	LED: Ex-post calculations applied I.F. and C.F. according to the TRM, which resulted in RR variation. DHW Tank Insulation: As the project document did not provide a kW value, verification was not possible. Ex-post also used average tank temperature and annual temperature from the TRM, contributing to variation. DHW Pipe Insulation: Average pipe temperature and annual temperature from the TRM were used in ex-post, causing some variation. Low E Window: Ex-post calculations used evaporative cooling savings and gas heat savings per square foot for Las Cruces. The area used in calculations was derived from dimensions provided in the NEAT document. Low Flow Shower Heads: Ex-post calculations used outlet and inlet temperatures from the TRM, resulting in variations. Floor Insulation: Ex-post calculations applied evaporative cooling savings and gas heat savings per square foot for Las Cruces. The area was based	LED: Ex-post calculations applied I.F. and C.F.as outlined in the TRM. Differences in the assumed hours of use and HVAC interaction contributed to variation from the ex-ante values. DHW Tank Insulation: The standardized assumptions contributed to differences from the ex-ante savings. DHW Pipe Insulation: kW savings were calculated using the NM TRM formula, resulting in variation. General Air Sealing: Ex-post calculations used Cooling Degree Hours (45,600), Heating Degree Days (2,816), system efficiencies, Effective Full Load Hours (EFLH), and correction factors, as outlined in the NM TRM. Since this is an unconditioned space, cooling kWh is zero. The ex-post only considered heating kWh, which contributed to the variation from ex-ante values. Low-E Windows: Ex-post calculations utilized deemed evaporative cooling and gas heat savings per square foot specific to Las Cruces, resulting in variation. The window area was estimated using standard dimension.

	on dimensions from the NEAT document. As the calculated value was negative, it was set to 0.	Low-Flow Showerheads: Ex-post calculations referenced TRM assumptions for inlet and outlet water temperatures. Differences in temperature assumptions and usage patterns contributed to variation. Replacement ECM for Furnace: Ex-post values utilized adjusted kWh savings per ton as defined in the IL TRM. The ex-post savings also incorporated the ratio between NM and IL climate zone heating degree days (HDD) at 65°F (4001.375 / 5281.62 = 0.7576), applied to the average savings value derived from the IL TRM.

Project ID	102640	102729
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of efficient light fixtures	Installation of efficient light fixtures and Replacement Heater ECM
Measure Type	Lighting	Custom
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	540.00	416.00
Gross Reported First Year Peak Demand Savings (kW)	0.15	0.06
Gross Verified First Year Energy Savings (kWh)	934.03	709.99
Gross Verified First Year Peak Demand Savings (kW)	0.15	0.06
Realization Rate: Energy Savings (%)	173%	171%
Realization Rate: Peak Demand Savings (%)	99%	99%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for residential lighting upgrades for income-eligible programs. Project documentation was referenced for quantity (20). Baseline wattages were selected from the NEAT Report, and hours of use referenced the weighted value in the NM TRM. Documentation also showed the presence of gas heating with AC, which was utilized to select HVAC interactive factors. Lastly, a CF of 0.1017 was referenced by the NM TRM.	"The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings. Variations between ex-ante and ex-post results arose due to differences in assumptions, input values, and methodology.

Project ID	102739	102820
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of efficient light fixtures, Attic Insulation	Low E Window and LED
Measure Type	Lighting	Custom
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	432.00	988.70
Gross Reported First Year Peak Demand Savings (kW)	0.12	2.03
Gross Verified First Year Energy Savings (kWh)	747.22	777.11
Gross Verified First Year Peak Demand Savings (kW)	0.12	0.14
Realization Rate: Energy Savings (%)	173%	79%
Realization Rate: Peak Demand Savings (%)	99%	7%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for residential lighting upgrades for income-eligible programs. Project documentation was referenced for quantity (16). Baseline wattages were selected from the NEAT report and hours of use referenced the weighted value in the NM TRM. Documentation also showed the presence of gas heating with AC, which was utilized to select HVAC interactive factors. Lastly, a CF of 0.1017 was referenced by the NM TRM.	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for both LED lighting and Low-E window measures. LED: NEAT software algorithm was used to determine Ex Ante NEAT values, providing baseline wattage (60W), efficient wattage (9W), hours of use (4 hours per day, 365 days per year) for lighting, and information on Natural Gas heating with an evaporative cooler for the residence, which informed the selection of HVAC interactive and coincident factors. The evaluation team replicated project tracking data savings by adjusting the number of days and HVAC demand factors and using a fixture quantity of 16. All other parameters remained unchanged. Low-E windows: NEAT documentation did not specify initial savings estimates for window replacements. In contrast, Ex Post values were based on the 2023 NM TRM, which provided kWh and kW savings by incorporating Las Cruces-specific factors,

		such as kWh/sq.ft and kW/sq.ft for cooling and shading impacts. The project data mentions a window quantity of 2, but ex post calculations used a quantity of 3 based on NEAT. The NEAT savings data could not be replicated, as there was no appropriate measure in the NEAT algorithm. The evaluation team was unable to replicate tracking data savings.

Project ID	102863	103354
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of efficient light fixtures	Lighting
Measure Type	Lighting	Lighting
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	486.00	216.00
Gross Reported First Year Peak Demand Savings (kW)	0.14	0.06
Gross Verified First Year Energy Savings (kWh)	840.62	373.61
Gross Verified First Year Peak Demand Savings (kW)	0.13	0.06
Realization Rate: Energy Savings (%)	173%	173%
Realization Rate: Peak Demand Savings (%)	99%	-99%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for residential lighting upgrades for income-eligible programs. Project documentation was referenced for quantity (18). Baseline wattages were selected from the NEAT Report, and hours of use referenced the weighted value in the NM TRM. Documentation also showed the presence of gas heating with AC, which was utilized to select HVAC interactive factors. Lastly, a CF of 0.1017 was referenced by the NM TRM.	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings. NEAT software was used to determine ex-ante values, providing baseline wattage (60W), efficient wattage (9W), hours of use (4 hours per day, 365 days per year) for lighting, and information on electric heating for the residence, which informed the selection of HVAC interactive and coincident factors. For LED lighting, the 2023 NM TRM offered updated savings values tailored to the local climate and usage patterns. These differences in data sources and location-specific adjustments account for the observed variation between ex-ante and ex-post results.

Project ID	103793	103143
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	
Project Description	0	Installation of LED, Low flow showerhead, DHW tank insulation and DHW pipe insulation
Measure Type	Custom	Custom
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	4,105.40	1,555.00
Gross Reported First Year Peak Demand Savings (kW)	0.74	0.17
Gross Verified First Year Energy Savings (kWh)	6,442.52	1,489.05
Gross Verified First Year Peak Demand Savings (kW)	1.35	0.14
Realization Rate: Energy Savings (%)	157%	96%
Realization Rate: Peak Demand Savings (%)	183%	85%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	Low Flow Shower Heads: Ex-post calculations used outlet and inlet temperatures from the TRM, Minutes used from actual data i.e., 75 min per day for 2 showerheads resulting in variations. General air sealing: Ex-post calculations applied cooling savings and gas heat savings for Las Cruces climatic zone, Pre and Post Treatment Air filtration from actual data. DHW Tank Insulation: Ex-post calculations also used average tank temperature and annual temperature from the TRM, actual efficiency 98%, Ambient 68.2 Deg F for Las Cruses contributing to variation. DHW Pipe Insulation: Average pipe temperature and annual temperature, Hours and efficiency from the TRM were used in ex-post, causing some variation. Attic Insulation: Verifier used NM TRM Parameters, default Rold, CDD and HDD for Las Cruses zone, Cooling Efficiency SEER 11 from NEAT Documentation, Leads to variation in RR.	Showerhead: Ex-post calculations used Outlet temperature and inlet temperature from TRM which resulted in variation. DHW Tank Insulation: Ex-post calculation is using R insulation value according to project document and other parameter according to TRM parameter. Also, we do not have kW value in project document so we could not verify it. LED: EX-post calculation used interactive factor and C.F according to TRM which resulted in RR variation. DHW Pipe Insulation: Ex-post calculation is using all the factors according to TRM and R insulation according to project document. kW is using NM TRM algorithm for ex-post calculation.

	Duct Sealing: Ex-ante savings recreated using DL baseline 2960, whereas ex-post used value from NEAT Documentation i.e., 3172 cfm which leads to variation in RR.	

Project ID	103306	103309
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Lighting	Installation of efficient light fixtures
Measure Type	Lighting	Lighting
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	432.00	810.00
Gross Reported First Year Peak Demand Savings (kW)	0.12	0.23
Gross Verified First Year Energy Savings (kWh)	747.22	1,120.83
Gross Verified First Year Peak Demand Savings (kW)	0.12	0.18
Realization Rate: Energy Savings (%)	173%	138%
Realization Rate: Peak Demand Savings (%)	99%	79%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings. NEAT software was used to determine ex-ante values, providing baseline wattage (60W), efficient wattage (9W), hours of use (4 hours per day, 365 days per year) for lighting, and information on electric heating for the residence, which informed the selection of HVAC interactive and coincident factors. For LED lighting, the 2023 NM TRM offered updated savings values tailored to the local climate and usage patterns. These differences in data sources and location-specific adjustments account for the observed variation between ex-ante and ex-post results.	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for residential lighting upgrades for income-eligible programs. NEAT documentation was referenced for quantity (24), baseline wattage (60 W), efficient wattage (9W), and hours of use (4 hours per day, 365 days per year). Documentation also showed the presence of Natural Gas heating with AC. This information was utilized to select HVAC interactive factors. Lastly, a CF of 0.1017 was referenced by the NM TRM.

Project ID	103330	103331
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of Low Flow Shower Heads, General Air Sealing, LED, DHW Tank Insulation, Replacement ECM for Furnace, and DHW Pipe Insulation.	Installation of efficient light fixtures, ECM Furnace
Measure Type	Custom	Lighting
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	4,528.90	632.00
Gross Reported First Year Peak Demand Savings (kW)	2.20	0.12
Gross Verified First Year Energy Savings (kWh)	3,485.68	1,783.22
Gross Verified First Year Peak Demand Savings (kW)	0.11	0.12
Realization Rate: Energy Savings (%)	77%	282%
Realization Rate: Peak Demand Savings (%)	5%	99%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	Low Flow Shower Heads: Ex-post calculations used outlet and inlet temperatures from the TRM, resulting in variations. General air sealing: Ex-post calculations applied cooling savings and gas heat savings for Las Cruces climatic zone. LED: Ex-post calculations applied the interactive factor and C.F. according to the TRM, which resulted in RR variation. DHW Tank Insulation: Ex-post calculations used all factors according to the TRM, with the R-value for insulation based on an average value. As the project document did not provide a kW value, verification was not possible. Ex-post also used average tank temperature and annual temperature from the TRM, contributing to variation. Replacement ECM for Furnace: Since this measure is not included in the NM TRM, we attempted to recreate the values using the IL TRM; however, the values showed significant differences, likely due to	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for residential lighting upgrades for income-eligible programs. Project documentation was referenced for quantity (16). Baseline wattages were selected from the project documentation, and hours of use referenced the weighted value in the NM TRM. Documentation also showed the presence of gas heating with AC, which was utilized to select HVAC interactive factors. Lastly, a CF of 0.1017 was referenced by the NM TRM. ECM Replacement for Furnace: Verifier used deemed savings from IL TRM as NM TRM doesn't contain this ECM.

	variations in weather zones. Therefore, we used the same value as in ex-ante calculations. DHW Pipe Insulation: Ex-post calculations applied all factors in line with the TRM, using an average R-value for insulation. kW savings were calculated using the NM TRM algorithm. Average pipe temperature and annual temperature from the TRM were used in ex-post calculations, causing some variation.	

Project ID	103354	103363
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of Attic Insulation, DHW Tank Insulation, LED, Low Flow Shower Heads, Replacement Heater ECM	Installation of efficient light fixtures and Replacement Heater ECM
Measure Type	Custom	Custom
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	2,389.90	1,049.00
Gross Reported First Year Peak Demand Savings (kW)	0.63	10.14
Gross Verified First Year Energy Savings (kWh)	2,475.22	1,668.31
Gross Verified First Year Peak Demand Savings (kW)	0.19	0.62
Realization Rate: Energy Savings (%)	104%	159%
Realization Rate: Peak Demand Savings (%)	31%	6%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	Attic Insulation: Savings associated with the evaporative cooler fan are minimal, and the New Mexico TRM does not attribute energy savings to evaporative cooling systems, which typically use minimal electricity for air circulation. The space heating is provided by a natural gas furnace, and therefore no electric heating savings apply. As a result, the ex-post analysis reports 0 kWh savings, with only natural gas (therms) savings considered for the measure.	LED: NEAT software algorithm was used to determine ex-ante NEAT values, providing baseline wattage (60W), efficient wattage (9W), hours of use (4 hours per day, 365 days per year) for lighting, and information on Natural Gas heating with central air conditioner for the residence, which informed the selection of HVAC interactive and coincident factors. The evaluation team replicated project tracking data savings by adjusting the number of days and HVAC demand

	LED: Ex-post calculations applied I.F. and C.F. as outlined in the TRM. Differences in the assumed hours of use and HVAC interaction contributed to variation from the ex-ante values. DHW Tank Insulation: Ex-post calculations applied TRM-based factors, including average tank and ambient temperatures and an assumed R-value. These standardized assumptions contributed to differences from the ex-ante savings. Low-Flow Showerheads: Ex-post calculations referenced TRM assumptions for inlet and outlet water temperatures. Differences in temperature assumptions and usage patterns contributed to variation. Replacement ECM for Furnace: Ex-post values utilized adjusted kWh savings per ton as defined in the IL TRM. The ex-post savings also incorporated the ratio between NM and IL climate zone heating degree days (HDD) at 65°F (4001.375 / 5281.62 = 0.7576), applied to the average savings value derived from the IL TRM to account for the climate zone difference.	factors and using a fixture quantity of 26. All other parameters remained unchanged. Low-E windows: NEAT documentation did not specify initial savings estimates for window replacements. In contrast, ex-post values were based on the 2023 NM TRM, which provided kWh and kW savings by incorporating Las Cruces-specific factors, such as kWh/sq.ft and kW/sq.ft for cooling and shading impacts. The project data mentions a window quantity of 7, ex-post calculations used this.

Project ID	103460	103530
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Evaporative Cooler Replacement	Installation of efficient light fixtures
Measure Type	Custom	Lighting
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	3,878.00	791.10
Gross Reported First Year Peak Demand Savings (kW)	2.46	0.53
Gross Verified First Year Energy Savings (kWh)	3,878.00	738.94
Gross Verified First Year Peak Demand Savings (kW)	2.46	1.13
Realization Rate: Energy Savings (%)	100%	93%
Realization Rate: Peak Demand Savings (%)	100%	213%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	The savings for the Evaporative Cooler Replacement were not listed in the NEAT software output. The tracking data calculated the savings using the NM TRM 2023 for Las Cruces.	The evaluation team referenced the 2023 NM TRM to calculate kWh savings for Infiltration Reduction upgrades for income-eligible programs. NEAT documentation was referenced for Blower door measurements. Documentation also showed the 50% of the heating was provided by Space heater (Wood as fuel) and other 50% by Portable Electric Resistance. This information was utilized to select Heating equipment efficiency rating of 0.5.

Project ID	103585	103692
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of efficient light fixtures	Installation of efficient light fixtures
Measure Type	Lighting	Lighting
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	810.00	432.00
Gross Reported First Year Peak Demand Savings (kW)	0.23	0.12
Gross Verified First Year Energy Savings (kWh)	1,062.23	747.22
Gross Verified First Year Peak Demand Savings (kW)	0.17	0.12
Realization Rate: Energy Savings (%)	131%	173%
Realization Rate: Peak Demand Savings (%)	75%	99%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for residential lighting upgrades for income-eligible programs. Project documentation was referenced for quantity (30). Baseline wattages were selected from the TRM based on fixture type, Energy Star certificates were referenced for efficient fixture wattages, and hours of use referenced the weighted value in the NM TRM. Documentation also showed the presence of gas heating with AC, which was utilized to select HVAC interactive factors. Lastly, a CF of 0.1017 was referenced by the NM TRM.	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for residential lighting upgrades for income-eligible programs. Project documentation was referenced for quantity (16). Baseline wattages were selected from the project documentation, and hours of use referenced the weighted value in the NM TRM. Documentation also showed the presence of gas heating with AC, which was utilized to select HVAC interactive factors. Lastly, a CF of 0.1017 was referenced by the NM TRM.

Project ID	103759	103793
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of LED, Duct sealing, DHW tank insulation and General air sealing	0
Measure Type	Custom	Custom
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	1,036.00	1,713.10
Gross Reported First Year Peak Demand Savings (kW)	0.21	9.86
Gross Verified First Year Energy Savings (kWh)	1,577.12	5,438.46
Gross Verified First Year Peak Demand Savings (kW)	0.26	3.40
Realization Rate: Energy Savings (%)	152%	317%
Realization Rate: Peak Demand Savings (%)	124%	35%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.8.9.0.5 (2/10/2012)	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	LED: EX-post calculations used interactive factor and C.F according to TRM which resulted in RR variation. HOURS of usage per day was selected from project document. DHW Tank Insulation: Ex-post calculations are using R insulation type according to project document and other parameter according to TRM parameter. Also, we do not have kW value in project document so we could not verify it. Duct sealing: Ex-post calculations are using values according to project document and other parameters according to NM TRM. Air sealing: Ex-post values are using calculation according to NM TRM algorithm.	Energy savings were calculated using NM TRM: LED: Ex-post calculations applied the interactive factor and C.F., according to the TRM, which resulted in RR variation. DHW Tank Insulation: Ex-post calculations used all factors according to the TRM, with the R-value for insulation based on an average value. As the project document did not provide a kW value, verification was not possible. Ex-post calculations also used average tank temperature and annual temperature, hours from the TRM, contributing to variation. DHW Pipe Insulation: Ex-post calculations are applied all factors in line with the TRM, using an average R-value for insulation. kW savings were calculated using the NM TRM algorithm. Average pipe temperature and annual temperature, and the Hours from the TRM were used in ex-post

		calculations, causing some variation. Low E Window : Ex-post calculations applied all factors in line with the TRM, area 1120 Sq ft and quantity 2 as per NEAT Report and tracking data.

Project ID	103853	103902
Utility	EPE	EPE
Program	Energy$mart	Energy$mart
Subprogram	0	0
Project Description	Installation of efficient light fixtures, Attic Insulation	Installation of efficient light fixtures and attic insulation
Measure Type	Lighting	Custom
Building Type	Residential	Residential
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	970.30	411.90
Gross Reported First Year Peak Demand Savings (kW)	0.40	0.15
Gross Verified First Year Energy Savings (kWh)	2,138.06	560.42
Gross Verified First Year Peak Demand Savings (kW)	0.87	0.09
Realization Rate: Energy Savings (%)	220%	136%
Realization Rate: Peak Demand Savings (%)	217%	60%
Ex Ante Savings Source	Other:	Other:
Other Savings Source	NEAT Software v.10.05.017	NEAT Software v.8.9.0.5 (2/10/2012)
Reasons for RR(s) <> 1	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings for residential lighting upgrades for income-eligible programs. Project documentation was referenced for quantity (24). Baseline wattages were selected from the NEAT Report, and hours of use referenced the weighted value in the NM TRM. Documentation also showed the presence of gas heating with AC, which was utilized to select HVAC interactive factors. Lastly, a CF of 0.1017 was referenced by the NM TRM. Attic Insulation: Verifier used NM TRM 2023 for calculation of Attic Insulation ex-post savings, MHEA Report used for reference for parameters used. Area 1531 Sq Ft, Rold 3.33 and Rnew 13, CDD 1899, EFLHcool 1290 for Las Cruses, nCool 14.25 as per MHEA Report.	The evaluation team referenced the 2023 NM TRM to calculate kWh and kW savings. Variations between ex-ante and ex-post results arose due to differences in assumptions, input values, and methodology. LED: Ex-post calculations applied the interactive factor and coincidence factor (CF) as outlined in the TRM. Differences in the assumed hours of use and HVAC interaction contributed to variation from the ex-ante values. Attic Insulation: Savings associated with the evaporative cooler fan are minimal, and the New Mexico TRM does not attribute energy savings to evaporative cooling systems, which typically use minimal electricity for air circulation. The space heating is provided by a natural gas furnace, and therefore no electric heating savings apply. As a

		result, the ex-post analysis reports 0 kWh savings, with only natural gas (therms) savings considered for the measure.

Project ID	24CLG03	24EC01
Utility	EPE	EPE
Program	Commercial Comprehensive	Commercial Comprehensive
Subprogram	New Construction	0
Project Description	Installation of Packaged DX Air Conditioner	Installation of an evaporative cooling unit
Measure Type	Retrofit HVAC	Other:
Building Type	Retail	Assembly
Other Building Type	Small	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	2,908.23	7,770.00
Gross Reported First Year Peak Demand Savings (kW)	2.06	6.27
Gross Verified First Year Energy Savings (kWh)	2,607.82	7,770.21
Gross Verified First Year Peak Demand Savings (kW)	1.70	6.27
Realization Rate: Energy Savings (%)	90%	100%
Realization Rate: Peak Demand Savings (%)	82%	100%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	In the ex-post analysis, the verifier used the following parameters that resulted in a variation in the Realization Rate (RR). EER baseline: 11.2 for 89000 btuh unit. SEER baseline : 12.8 and 14 for 89000 btuh and 60000 btuh unit respectively.	0

Project ID	24EM04	24LGT08
Utility	EPE	EPE
Program	Commercial Comprehensive	Commercial Comprehensive
Subprogram	HVAC	lighting
Project Description	Installation of evaporator fan motor controls	Installation of interior lighting
Measure Type	Other:	Retrofit Lighting
Building Type	Restaurant - Fast-Food	Warehouse/ Industrial
Other Building Type	-	-
Site Visit Being Conducted	Yes	No
Gross Reported First Year Energy Savings (kWh)	6,423.00	985.00
Gross Reported First Year Peak Demand Savings (kW)	0.75	0.20
Gross Verified First Year Energy Savings (kWh)	6,423.00	923.93
Gross Verified First Year Peak Demand Savings (kW)	0.75	0.20
Realization Rate: Energy Savings (%)	100%	94%
Realization Rate: Peak Demand Savings (%)	100%	98%
Ex Ante Savings Source	Utility Workpaper	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	0	The discrepancy in RR is attributed to variations in CF and HOUs between the ex-ante and ex-post calculations. Upon recreating the ex-ante analysis, it appears that custom CF (0.79) and HOU (4035) values, along with rated lighting fixture wattage (42), were used in the calculations. In contrast, the ex-post analysis referenced HOU (3420) and CF (0.7) values as specified in the NM TRM and incorporated tested lighting wattages (35.8) for the calculation.

Project ID	24LGT11	24LGT12
Utility	EPE	EPE
Program	Commercial Comprehensive	Commercial Comprehensive
Subprogram	0	Retrofit Rebate
Project Description	New construction installation of efficient lighting	Lighting retrofit
Measure Type	Lighting	Retrofit Lighting
Building Type	Retail- Small	Warehouse/ Industrial
Other Building Type	-	Storage (conditioned)
Site Visit Being Conducted	No	0
Gross Reported First Year Energy Savings (kWh)	22,703.00	7,971.00
Gross Reported First Year Peak Demand Savings (kW)	5.69	1.63
Gross Verified First Year Energy Savings (kWh)	22,702.53	8,377.93
Gross Verified First Year Peak Demand Savings (kW)	5.69	1.78
Realization Rate: Energy Savings (%)	100%	105%
Realization Rate: Peak Demand Savings (%)	100%	109%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	0	Ex-ante calculations used HVAC Interactive Factors as 1.0, applicable for unconditioned spaces. The evaluation team used HVAC IF consistent with the building type of Storage - Conditioned. Ex-ante calculations used efficient wattages as 15.5W and 36W. The source of these values could not be determined. The evaluation team utilized efficient wattages as 15.8W and 35.8W, consistent with the DLC tested input wattage. For each light fixture, ex-ante calculations reported rounded kWh savings value up to zero decimals.

Project ID	24LGT16	24LGT22
Utility	EPE	EPE
Program	Commercial Comprehensive	Commercial Comprehensive
Subprogram	0	0
Project Description	Installation of efficient light fixtures	Installing Efficient lighting
Measure Type	Lighting	Lighting
Building Type	Retail- Small	Retail- Small
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	22,651.00	38,508.00
Gross Reported First Year Peak Demand Savings (kW)	5.70	9.07
Gross Verified First Year Energy Savings (kWh)	21,887.36	41,472.05
Gross Verified First Year Peak Demand Savings (kW)	5.70	9.07
Realization Rate: Energy Savings (%)	97%	108%
Realization Rate: Peak Demand Savings (%)	100%	100%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	0	0

Project ID	24LGT24	24LGT25
Utility	EPE	EPE
Program	Commercial Comprehensive	Commercial Comprehensive
Subprogram	ag_lighting	Retrofit Rebate
Project Description	Indoor of efficient LED Grow Lights	Lighting Retrofit
Measure Type	Lighting	Retrofit Lighting
Building Type	Other	Exterior
Other Building Type	Agriculture Growhouse	-
Site Visit Being Conducted	0	No
Gross Reported First Year Energy Savings (kWh)	119,471.00	67,139.00
Gross Reported First Year Peak Demand Savings (kW)	19.25	-
Gross Verified First Year Energy Savings (kWh)	119,428.79	67,017.34
Gross Verified First Year Peak Demand Savings (kW)	19.24	-
Realization Rate: Energy Savings (%)	100%	100%
Realization Rate: Peak Demand Savings (%)	100%	#DIV/0!
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	Ex-ante calculations used PPF value of 1569.24 µmol/s consistent with the DLC Tested value. The evaluation team used a PPF value of 1569 µmol/s consistent with the DLC Reported value.	RR variation is noticed as ex-post calculation is using efficient wattage from DLC certificate.

Project ID	24LGT30	24LGT33
Utility	EPE	EPE
Program	Commercial Comprehensive	Commercial Comprehensive
Subprogram	Lighitng	ag_lighting
Project Description	Installation of interior lighting	Indoor of efficient LED Grow Lights
Measure Type	Retrofit Lighting	Lighting
Building Type	Retail	Other
Other Building Type	-	Agriculture Growhouse
Site Visit Being Conducted	No	0
Gross Reported First Year Energy Savings (kWh)	8,079.00	134,344.00
Gross Reported First Year Peak Demand Savings (kW)	2.04	21.65
Gross Verified First Year Energy Savings (kWh)	7,137.52	134,322.82
Gross Verified First Year Peak Demand Savings (kW)	1.86	24.07
Realization Rate: Energy Savings (%)	88%	100%
Realization Rate: Peak Demand Savings (%)	91%	111%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	The discrepancy in RR is attributed to variations in the CF and HOUs used in the ex-ante and ex-post calculations. Upon recreating the ex-ante calculation, it appears that custom CF (0.86) and HOU (3655) values, along with the rated installed fixture wattages (15W & 7W), were considered for the analysis. In the ex-post analysis, CF (0.83) and HOU (3380) were referenced from the NM TRM, while the installed tested fixture wattage (15.7W & 7.3W) was obtained from the DLC based on the provided model number.	Ex-ante calculations considered efficient fixture as 672 W. The evaluation team considered the Tested Input Wattage of 672.1 W consistent with the DLC certificate. For the crops in vegetative stage, ex-ante calculations used a Coincidence Factor of 0.68, applicable to crops in flowering stage. The evaluation team considered a CF of 0.89, applicable to crops in vegetative stage, consistent with the New Mexico TRM.

Project ID	24LGT34	24LGT44
Utility	EPE	EPE
Program	Commercial Comprehensive	Commercial Comprehensive
Subprogram	lighting	comm lgt
Project Description	Installation of interior lighting	Installation of efficient Exterior LED light fixtures
Measure Type	New Construction Lighting	Lighting
Building Type	Retail	Exterior
Other Building Type	-	-
Site Visit Being Conducted	No	0
Gross Reported First Year Energy Savings (kWh)	24,544.00	32,580.00
Gross Reported First Year Peak Demand Savings (kW)	6.19	-
Gross Verified First Year Energy Savings (kWh)	23,787.75	-
Gross Verified First Year Peak Demand Savings (kW)	6.19	-
Realization Rate: Energy Savings (%)	97%	0%
Realization Rate: Peak Demand Savings (%)	100%	#DIV/0!
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	The discrepancy in RR stems from differences in the CF and HOU values used in the ex-ante and ex-post calculations. Recreating the ex-ante analysis shows that custom CF (0.776) and HOU (3265) values, along with total lighting installed wattages (4500) from the provided COMCHECK sheet, were used. In contrast, the ex-post analysis referenced wattages (4896) from the inspection report and followed the NM TRM for CF (0.83) and HOU (3380) values.	0

Project ID	24LGT45	24LGT48
Utility	EPE	EPE
Program	Commercial Comprehensive	Commercial Comprehensive
Subprogram	Retrofit Rebate	ag_lighting
Project Description	Lighting retrofit	Indoor of efficient LED Grow Lights
Measure Type	Retrofit Lighting	Lighting
Building Type	Other	Other
Other Building Type	Assembly	Agriculture Growhouse
Site Visit Being Conducted	0	0
Gross Reported First Year Energy Savings (kWh)	3,319.00	244,472.00
Gross Reported First Year Peak Demand Savings (kW)	0.91	39.39
Gross Verified First Year Energy Savings (kWh)	3,246.94	244,440.01
Gross Verified First Year Peak Demand Savings (kW)	0.93	47.30
Realization Rate: Energy Savings (%)	98%	100%
Realization Rate: Peak Demand Savings (%)	102%	120%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	Ex-post analysis utilizes HOU, C.F. , and I.F. from the NM TRM 2023 to assess energy savings. Additionally, it incorporates the tested wattage from the DLC certificate to determine the actual wattage of the efficient fixture.	Ex-ante calculations considered efficient fixture as 672 W. The evaluation team considered the Tested Input Wattage of 672.1W consistent with the DLC certificate. For the crops in vegetative stage, ex-ante calculations used a Coincidence Factor of 0.68, applicable to crops in flowering stage. The evaluation team considered a CF of 0.89, applicable to crops in vegetative stage, consistent with the New Mexico TRM. For crops in cloning, seeding and propagation stages, ex-ante calculations used Coincidence Factor of 0.68, applicable to crops in flowering stage. The evaluation team considered a CF of 0.89 as this stage falls under vegetative stage.

Project ID	24LGT50	EA-0001519191
Utility	EPE	EPE
Program	Commercial Comprehensive	SCORE Plus
Subprogram	Retrofit Rebate	0
Project Description	Lighting Retrofit	New construction lighting + Agricultural lighting
Measure Type	Retrofit Lighting	Lighting
Building Type	Retail	Storage - Conditioned + Agriculture
Other Building Type	-	-
Site Visit Being Conducted	No	Yes
Gross Reported First Year Energy Savings (kWh)	2,859.00	969,540.77
Gross Reported First Year Peak Demand Savings (kW)	0.72	157.14
Gross Verified First Year Energy Savings (kWh)	2,852.64	1,051,776.12
Gross Verified First Year Peak Demand Savings (kW)	0.74	162.87
Realization Rate: Energy Savings (%)	100%	108%
Realization Rate: Peak Demand Savings (%)	103%	104%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	Ex-ante calculations are using custom C.F but source is not mentioned for the assumption. Hence, ex-post calculation is using C.F and other interactive factor according to NM TRM	0

Project ID	EA-0003043296	EA-0003199878
Utility	EPE	EPE
Program	SCORE Plus	SCORE Plus
Subprogram	0	0
Project Description	Lighting retrofit	Installation of LED Tubes
Measure Type	Lighting	Retrofit Lighting
Building Type	Manufacturing - Light Industrial	Office - Small
Other Building Type	-	-
Site Visit Being Conducted	Yes	No
Gross Reported First Year Energy Savings (kWh)	450,129.00	6,591.00
Gross Reported First Year Peak Demand Savings (kW)	119.24	1.97
Gross Verified First Year Energy Savings (kWh)	450,128.58	6,595.55
Gross Verified First Year Peak Demand Savings (kW)	119.24	1.99
Realization Rate: Energy Savings (%)	100%	100%
Realization Rate: Peak Demand Savings (%)	100%	101%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	0	Ex-ante calculations rounded and reported as peak kW savings up to two decimal digits, and kWh savings up to zero decimal digits. The evaluation team did not round any savings which resulted in the variation.

Project ID	EA-0003202763	EA-0003210016
Utility	EPE	EPE
Program	SCORE Plus	SCORE PLUS
Subprogram	0	0
Project Description	HVLS Fans	Installation of Split DX Heat Pump
Measure Type	Custom	New Contruction HVAC
Building Type	Warehouse	Education
Other Building Type	-	Secondary School
Site Visit Being Conducted	No	0
Gross Reported First Year Energy Savings (kWh)	142,087.00	1,484.02
Gross Reported First Year Peak Demand Savings (kW)	16.22	0.19
Gross Verified First Year Energy Savings (kWh)	142,087.20	1,484.02
Gross Verified First Year Peak Demand Savings (kW)	16.22	0.19
Realization Rate: Energy Savings (%)	100%	100%
Realization Rate: Peak Demand Savings (%)	100%	100%
Ex Ante Savings Source	Other:	New Mexico TRM - 2023
Other Savings Source	Custom inputs based on facility operations	0
Reasons for RR(s) <> 1	0	RR is 100%.

Project ID	EA-0003210227	EA-0003257887
Utility	EPE	EPE
Program	SCORE Plus	SCORE PLUS
Subprogram	0	0
Project Description	Installation of LED Tubes	Installation of a Hand Dryer
Measure Type	Retrofit Lighting	Retrofit HVAC
Building Type	Manufacturing - Light Industrial	Education
Other Building Type	0	School
Site Visit Being Conducted	No	0
Gross Reported First Year Energy Savings (kWh)	3,218.00	992.00
Gross Reported First Year Peak Demand Savings (kW)	0.94	0.46
Gross Verified First Year Energy Savings (kWh)	3,217.82	991.67
Gross Verified First Year Peak Demand Savings (kW)	0.94	0.46
Realization Rate: Energy Savings (%)	100%	100%
Realization Rate: Peak Demand Savings (%)	100%	101%
Ex Ante Savings Source	New Mexico TRM - 2023	Custom Analysis
Other Savings Source	0	0
Reasons for RR(s) <> 1	0	0

Project ID	EA-0003258107	EA-0003547119
Utility	EPE	EPE
Program	SCORE Plus	SCORE Plus
Subprogram	0	0
Project Description	Interior and Exterior Lighting retrofit with OS Controls	Installation of Efficient Lighting
Measure Type	Lighting	Retrofit Lighting
Building Type	Education - Primary School	Office - Small
Other Building Type	-	-
Site Visit Being Conducted	No	No
Gross Reported First Year Energy Savings (kWh)	125,531.00	82,618.00
Gross Reported First Year Peak Demand Savings (kW)	32.41	11.32
Gross Verified First Year Energy Savings (kWh)	109,990.39	85,725.85
Gross Verified First Year Peak Demand Savings (kW)	31.65	12.25
Realization Rate: Energy Savings (%)	88%	104%
Realization Rate: Peak Demand Savings (%)	98%	108%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	Interior fixtures: -In the ex-post analysis, the fixtures that were not listed (HP-4-RRG-D-19'-S-840-RG-D-96LGVOLTAGE-SC-FC-10%-SF-FE-SW and B4RDF-12C3-40KS-25-S-WH-WH-FTUNV-D6E-CB27) were removed. -Additionally, since most of the fixtures are installed in spaces for which the NM TRM does not provide Hours of Use (HOU) based on areas, a building-weighted average HOU of 4130 hours was used for all interior fixtures in the ex-post analysis. The NM TRM states "when sufficient information exists, using hours on an area-type basis is preferred to using building weighted average hours." If the Space Use is not present in the NM TRM, the evaluation team recommends utilizing the building weighted average hours across the entire project Exterior fixtures: -In the ex-post calculation, the evaluation team also	Interior Fixtures: Since most fixtures are installed in spaces where the NM TRM does not provide Hours of Use (HOU) based on area types, a building-weighted average HOU of 2,590 hours was used for all interior fixtures in the ex-post analysis. According to the NM TRM, "when sufficient information exists, using hours on an area-type basis is preferred overusing building-weighted average hours." If the Space Use is not listed in the NM TRM, the evaluation team recommends utilizing the building-weighted average hours across the entire project. The ex-ante analysis used an efficient wattage of 15.5W for 48T8HO-15-850-DSE-BYP-LED and 47.5W for DYU-TRO261250-DN-T50-B, whereas the verifier used 15.7W and 47.4W, respectively, as per the DLC Certificate Tested input wattage.

	removed the fixture that were not listed (B4RDF-12C3-40KS-25-S-WH-WHNCSM-UNV-D6E-EMW-CB27) from the analysis.	Exterior Fixtures: The ex-ante analysis used an efficient wattage of 148W for BLT-S-GB-150WJ30T3A6-BH10SP50, whereas the verifier used 147.57W, as per the DLC Certificate reported input wattage.

Project ID	EA-0003801674	EA-0003829756
Utility	EPE	EPE
Program	SCORE PLUS	SCORE PLUS
Subprogram	0	0
Project Description	Installation of Cool Roofs	Installation of Split DX Heat Pump
Measure Type	Retrofit Other	Retrofit HVAC
Building Type	Education	Education
Other Building Type	Elementary School	Secondary School
Site Visit Being Conducted	0	No
Gross Reported First Year Energy Savings (kWh)	2,435.00	20,054.00
Gross Reported First Year Peak Demand Savings (kW)	0.72	35.92
Gross Verified First Year Energy Savings (kWh)	2,435.02	50,932.36
Gross Verified First Year Peak Demand Savings (kW)	0.72	35.93
Realization Rate: Energy Savings (%)	100%	254%
Realization Rate: Peak Demand Savings (%)	100%	100%
Ex Ante Savings Source	New Mexico TRM - 2023	Utility Workpaper
Other Savings Source	0	0
Reasons for RR(s) <> 1	0	The AC Tune-Up measure was evaluated using Test-in and Test-out data for ex-post calculations, with key parameters such as Nominal Tonnage, EER Pre, and EER Post are derived from these test results. The verifier applied the 4.32 Residential AC Tune-Up (New) Measure from the NM TRM. A key difference in methodology arose between ex-ante and verifier calculations. The ex-ante analysis used EFLHcool 508 from Section 3.6: High-Efficiency Packaged/Split Air Conditioning/Heat Pump System, whereas the verifier used EFLHcool 1290 from Section 4.32: AC Tune-Up. This difference in equivalent full-load hours (EFLH) explains the variation in the realization rate.

Project ID	EA-0003903230	EA-0003910338
Utility	EPE	EPE
Program	SCORE PLUS	SCORE PLUS
Subprogram	0	0
Project Description	Installation of Packaged Air Conditioners	Installation of Packaged Air Conditioners
Measure Type	Retrofit HVAC	Retrofit HVAC
Building Type	Office	Office
Other Building Type	-	-
Site Visit Being Conducted	Yes	Yes
Gross Reported First Year Energy Savings (kWh)	256.37	2,448.04
Gross Reported First Year Peak Demand Savings (kW)	0.01	0.89
Gross Verified First Year Energy Savings (kWh)	477.90	2,593.68
Gross Verified First Year Peak Demand Savings (kW)	0.14	1.09
Realization Rate: Energy Savings (%)	186%	106%
Realization Rate: Peak Demand Savings (%)	987%	123%
Ex Ante Savings Source	New Mexico TRM - 2023	New Mexico TRM - 2023
Other Savings Source	0	0
Reasons for RR(s) <> 1	The ex-post analysis followed the ex-ante algorithms but referenced IECC 2021 for baseline equipment efficiencies, using 13.4 SEER2 for units 5.4 tons or smaller. EER2 and SEER2 ratings were used from the AHRI certificates for the efficient equipment efficiency ratings. This approach led to a discrepancy in the energy savings calculations.	The ex-post analysis followed the ex-ante algorithms. For the 2.92-ton installed equipment, the analysis referenced AHRI certificates for EER rating of 12.5 and SEER ratings of 16, along with the capacity of 36,000 btuh. This approach led to a discrepancy in the energy savings calculations.

Project ID	EA-0003962450
Utility	EPE
Program	SCORE Plus
Subprogram	0
Project Description	Lighting retrofit
Measure Type	Lighting
Building Type	Education - Secondary School
Other Building Type	-
Site Visit Being Conducted	Yes
Gross Reported First Year Energy Savings (kWh)	2,413.00
Gross Reported First Year Peak Demand Savings (kW)	0.66
Gross Verified First Year Energy Savings (kWh)	2,374.95
Gross Verified First Year Peak Demand Savings (kW)	0.66
Realization Rate: Energy Savings (%)	98%
Realization Rate: Peak Demand Savings (%)	100%
Ex Ante Savings Source	New Mexico TRM - 2023
Other Savings Source	0
Reasons for RR(s) <> 1	Ex-post calculations referenced a Lighting Power Density (LPD) of 0.81 W/ft² based on the 'School/University' building type, using information from the tracking data, post-inspection documents and the site address. The analysis applied custom Hours of Use (HOU) of 2,350 hours. The HVAC interactive factors and a Coincidence Factor (CF) of 0.64, which was associated with 'School/University' building type, were sourced from the 2024 PNM workpapers.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF EL PASO ELECTRIC COMPANY'S APPLICATION FOR APPROVAL OF ITS 2022-2024 ENERGY EFFICIENCY AND LOAD MANAGEMENT PLAN, UTILITY INCENTIVE AND REVISED RATE NO. 17- EFFICIENT USE OF ENERGY RECOVERY FACTOR	)	**Case No. 21-00114-UT**
EL PASO ELECTRIC COMPANY, Applicant.	)	

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on May 30, 2025 a copy of **El Paso Electric Company's 2025 Annual Report for Energy Efficiency Programs, Program Year 2024** was emailed to each of the following:

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DATED May 30, 2025.

/s/ Kari E. Olson
Kari E. Olson