



ComEd CY2021 Summary Impact Evaluation Report

Energy Efficiency/Demand Response Plan:
Program Year 2021 (CY2021)
(1/1/2021-12/31/2021)

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1. Introduction

This report presents the results of the impact evaluation of ComEd's Program Year 2021 (CY2021) slate of energy efficiency programs offered under the Energy Efficiency Portfolio Standard (EEPS) umbrella. It presents a summary of the energy and peak demand impacts for the portfolio and each program and some detail on measure-specific savings. CY2021 covers January 1, 2021 through December 31, 2021.

In CY2021, ComEd's portfolio evaluation included 37 programs, including 9 Business, 6 Residential, 5 Income Eligible, 7 Pilot, 9 Third Party, and one cross-cutting program, Voltage Optimization, as listed in Table 1-1. The tables in the main body of this report show results for the program groupings that align with the way the ComEd portfolio is presented in filings with the Illinois Commerce Commission (ICC). The appendix presents tables that break those results down into more granularity for some programs, when the evaluation produced separate impact evaluation reports for specific program components.

This summary report contains program savings that ComEd can claim for CY2021: electricity savings, including reduction in water usage that produces secondary kWh savings from water supply and wastewater treatment, and gas savings in therms converted to kWh that ComEd can claim toward its goal. The electricity savings account for electric heating penalties, where applicable. Process evaluation findings and results of net-to-gross research are presented in separate reports.

Seven programs had carryover savings from measures sold or incented in CY2019 and CY2020 that were installed in CY2021. The programs are Lighting Discounts, Product Discounts (Lighting Discounts – IE), Business Instant Discounts, UIC-ERC Income Eligible Kits, Food Bank LED Distribution, Elementary Education Kits, and Small Business Kits.

This report includes 12 programs that ComEd implemented jointly or coordinated with Nicor Gas Company, Peoples Gas Light and Coke Company ("PGL") and North Shore Gas Company ("NSG"). Guidehouse issued joint evaluation reports for four of those programs, including Affordable Housing New Construction, Elementary Education Kits, Non-Residential New Construction, and RetroCommissioning.

Table 1-1. ComEd CY2021 Energy Efficiency Programs

Sector	Program	Combined Report with Gas Utility	Separate Impact Reports
All	Voltage Optimization		
Business			
Business	Business Instant Discounts		
Business	Facility Assessments		
Business	Incentives		Custom, Standard
Business	Industrial Systems		Industrial Systems, Industrial Energy Management
Business	LED Streetlighting		
Business	Non-residential New Construction	Nicor Gas & PGL/NSG	
Business	RetroCommissioning	Nicor Gas & PGL/NSG	RetroCommissioning, Virtual Commissioning
Business	Small Business		
Business	Strategic Energy Management		
Residential			
Residential	Appliance Rebates		
Residential	Lighting Discounts		
Residential	Multi-Family Assessments		
Residential	Residential Behavior		
Residential	Residential HVAC		
Residential	Single-Family Assessment		
Income Eligible			
Income Eligible	Affordable Housing New Construction	Nicor Gas	
Income Eligible	Multi-Family Retrofits		One report, separate sections for IEMS, IHWAP
Income Eligible	Product Discounts		One report, separate sections for Appliance Rebates, Lighting Discounts
Income Eligible	Public Housing Retrofits		
Income Eligible	Single-Family Retrofits		PGL/NSG: CBA+IHWAP Nicor Gas: IHWAP
Third Party Programs			
Third Party-Business	Agriculture		
Third Party-Business	Business Grocery		
Third Party-Business	Nonprofit Retrofits		
Third Party-Business	Public Buildings in Distressed Communities		
Third Party-Business	Small Business Kits		
Third Party-Business	Business Telecomm		
Third Party-Income Eligible	Food Bank-LED Distribution		
Third Party-Income Eligible	UIC-ERC Income Eligible Kits		
Third Party-Residential	Elementary Energy Education	Nicor Gas & PGL/NSG	
Pilots			
Pilot	Building Operator Certification		
Pilot	SEM Water Savings		
Pilot	Water Infrastructure Leak Reduction		
Pilot	Efficient Choice		
Pilot	Electric Homes New Construction		
Pilot	ENERGY STAR Retail Products Platform		
Pilot	Upstream Commercial Food Service Equipment		

Note: Table contains only programs where Guidehouse submitted impact reports to ComEd.

Source: ComEd tracking data and Guidehouse evaluation reports

2. Portfolio Savings

The evaluation calculated incremental annual savings and cumulative persisting annual savings (CPAS) from the ComEd CY2021 programs. Each is presented below.

2.1 Annual Savings

Table 2-1 summarizes the incremental energy and peak demand savings the ComEd portfolio achieved in CY2021. This table includes direct electric savings (includes electric heating penalties, where applicable), secondary electric savings from water supply and wastewater treatment plants, and gas savings converted to electricity that ComEd can claim according to Section 8-103B(b-25) of the Illinois Public Utilities Act, which states “In no event shall more than 10% of each year's applicable annual incremental goal as defined in paragraph (7) of subsection (g) of this Section be met through savings of fuels other than electricity.” The terms and calculation approaches are defined in Section 2.2.

Table 2-1. Total Annual Savings

Savings Category	Energy Savings (kWh)	Peak Demand Savings (kW)*
Ex Ante Gross Savings	1,909,615,119	260,884
Portfolio Gross Realization Rate	1.04	1.24
Verified Gross Savings	1,987,273,672	323,281
Portfolio Net-to-Gross Ratio (NTG)	0.88	0.88
Verified Net Savings	1,739,836,125	285,345
Legacy Savings†	3,144,029,600	
Gas Savings Eligible for Claiming (Therms)	11,097,315	
Gas Savings Counted Toward Goal (Therms)	3,754,385	
Gas Savings Counted Toward Goal (kWh)‡	110,041,036	
Total Net Savings (Electric + Gas Savings Counted)	1,849,877,162	285,345
Historic Portfolio Total Savings (Electric + Gas Savings Counted)§	4,663,796,144	
Grand Total Net Savings (Plus Legacy & Historic Savings)	9,657,702,906	285,345
CPAS Statutory Goal	9,274,887,320	
CPAS Achieved as Percent of Goal	104.1%	
Applicable Annual Incremental Goal (AAIG)	1,100,410,360	
Applicable Annual Incremental Savings Achieved‡§	981,632,682	
AAIG Achieved as Percent of Goal	89.2%	

Notes:

The totals in this table may vary slightly from the totals in other tables and the totals summed across the individual program reports due to rounding errors.

Carryover: Verified gross savings include carryover savings. This is different from the program level reports where the summary Table 3-1 excludes carryover gross savings from the verified gross savings.

Portfolio NTG Ratio: Guidehouse calculated the portfolio NTG ratio by dividing the total net savings by the total verified gross savings. However, some programs do not report ex ante gross savings and only report net savings (e.g., the Residential Behavior program). Where the evaluation approach also produces net savings as its primary output, we did not calculate verified gross savings.

* The Peak Demand Savings are savings occurring at coincident Summer Peak period, defined as 1:00-5:00 PM Central Prevailing Time on non-holiday weekdays, June through August. This definition is in accordance with PJM requirement.

† Estimated by multiplying statutory 2021 CPAS Legacy Savings percent (4.0%) by ComEd Baseline - 2014-2016 Average Annual Sales Less Exempt Customers MWh value of 78,600,740.

‡ Gas savings are converted to kWh by multiplying therms by 29.31 (which is based on 100,000 Btu/therm and 3,412 Btu/kWh).

§ Historical savings go back to CY2018.

|| Estimated by multiplying statutory 2021 CPAS Goal percent (11.8%) by ComEd Baseline - 2014-2016 Average Annual Sales Less Exempt Customers MWh value of 78,600,740.

‡§ Estimated as new incremental savings from 2021 after offsetting incremental expiring savings in 2021.

Source: ComEd tracking data and evaluation team analysis

Table 2-2 summarizes savings from the sectors. In CY2021, ComEd's energy efficiency portfolio achieved 1,739,836 verified net MWh savings. The portfolio savings included 1,654,970 net MWh from measures funded in CY2021 and 84,866 net MWh savings from previously funded lighting measures, or carryover, funded in CY2019 or CY2020 through the Lighting Discounts, Lighting Discounts – IE, Business Instant Discounts, UIC-ERC Income Eligible Kits, Food Bank

LED Distribution, Elementary Education Kits, and Small Business Kits Programs and expected to be installed in 2021.¹

Table 2-2. Total Annual Incremental Electric Savings

Savings Type	Portfolio	Ex Ante Gross Savings	Verified Gross Realization Rate	Verified Gross Savings	NTC*	Verified Net Savings
Energy (kWh)	Business	983,638,462	1.02	1,005,607,575	0.82	828,139,608
Energy (kWh)	Residential	372,218,710	1.09	407,343,808	0.61	354,758,879
Energy (kWh)	Income Eligible	101,397,627	1.01	102,191,586	0.88	89,630,395
Energy (kWh)	Third Party	180,444,666	1.10	198,707,224	0.97	193,096,858
Energy (kWh)	Pilots	1,381,823	1.79	2,471,737	0.81	3,258,645
Energy (kWh)	Voltage Optimization	270,533,831	1.00	270,951,740	1.00	270,951,740
Energy (kWh)	Total	1,909,615,119	1.04	1,987,273,672	0.88	1,739,836,125
Peak Demand (kW)	Business	160,762	1.05	168,350	0.82	137,594
Peak Demand (kW)	Residential	18,823	3.24	61,027	0.62	56,327
Peak Demand (kW)	Income Eligible	3,781	3.83	14,479	0.88	12,782
Peak Demand (kW)	Third Party	25,156	1.06	26,695	0.97	25,796
Peak Demand (kW)	Pilots	53	3.67	196	0.75	311
Peak Demand (kW)	Voltage Optimization	52,308	1.00	52,535	1.00	52,535
Peak Demand (kW)	Total	260,884	1.24	323,281	0.88	285,345

Note: The kWh savings in this table does not include any converted gas savings.

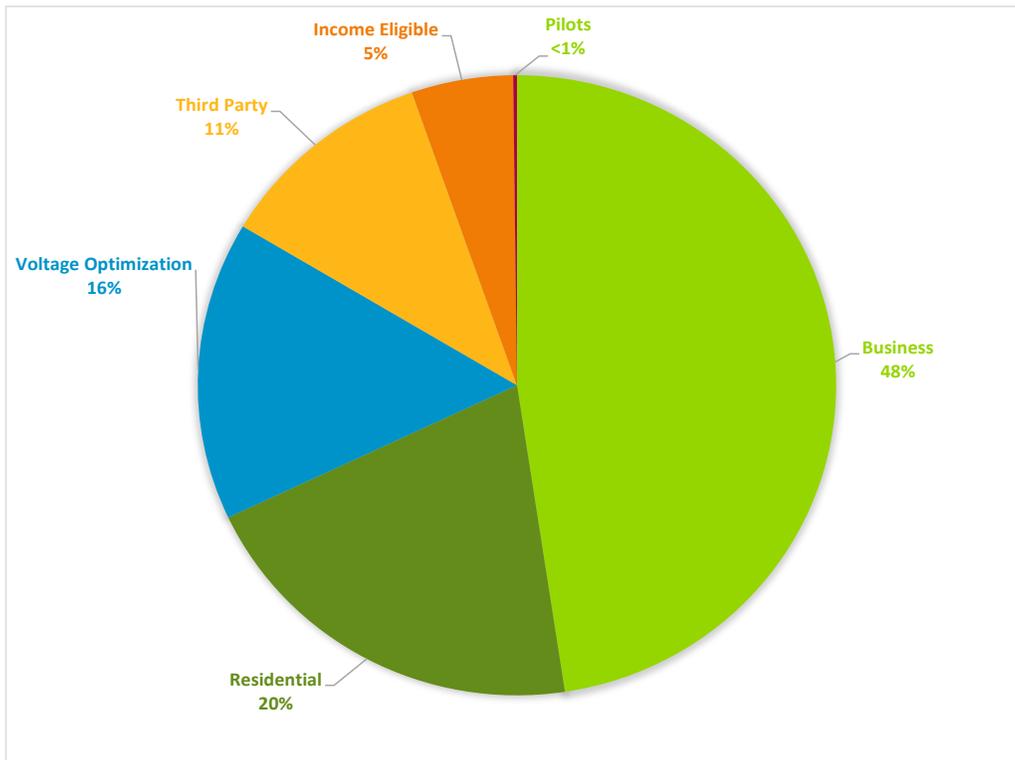
* The NTC is calculated as the sum of net savings divided by the sum of verified gross savings after excluding measures that do not have verified gross estimates (e.g., some behavior programs).

Source: ComEd tracking data and evaluation team analysis.

Overall, the Business programs realized 48% of the portfolio net savings, the Residential programs contributed 20%, Voltage Optimization contributed 16%, Third Party programs contributed 11%, Income Eligible programs contributed 5%, and Pilot programs contributed less than half of one percent (see Figure 2-1). Further detail on the savings by program are shown in subsequent sections.

¹ ComEd did not include carryover savings in their ex ante gross savings for the seven programs with carryover. All program reports with carryover show carryover in the verified gross and verified net savings in the CPAS tables and subsequent tables.

Figure 2-1. Annual Incremental Net Electric Savings by Sector



Source: ComEd tracking data and Navigant team analysis.

2.2 Cumulative Persisting Annual Savings (CPAS)

Per Section 8-103B of the Illinois Public Utilities Act, ComEd’s energy efficiency goals are expressed in CPAS, which is the sum of the electric energy savings achieved in a given year from all measures installed in that year and in previous years, but no earlier than January 1, 2012, that are still operational and providing savings in that year.

2.2.1 Gas Savings

The gas savings attributed to ComEd’s programs are only those not claimed by the Illinois gas utilities so that there is no double-counting.² Some of the gas savings that ComEd can claim are from programs jointly implemented with the gas utilities, and some are from ComEd-only programs that produce gas savings along with electric savings. According to Section 8-103B(b-25) of the Illinois Public Utilities Act, "In no event shall more than 10% of each year's applicable annual incremental goal (AAIG) as defined in paragraph (7) of subsection (g) of this Section be

² For 2021, Guidehouse identified some measures where it was possible to confirm the gas companies were not also claiming gas savings (e.g., they did not claim gas savings on clothes washers, ductless mini-split heat pumps, and EMS). There were other measures where the ComEd joint program data indicated the percentage of gas savings claimed by ComEd or by gas utilities (e.g., Kitchen DCV, programmable thermostats, air sealing and pipe insulation). Those measures and gas savings were confirmed by Guidehouse to have no potential double counting from the gas utilities’ data and were included in the sorting process to determine the gas savings counted in the calculation of the savings ComEd can claim toward goal.

met through savings of fuels other than electricity." For CY2021, ComEd's savings target (AAIG) is 1,100,410 MWh and so ComEd can claim up to 110,041 MWh in gas savings.³

The Future Energy Jobs Act (FEJA) specifies that ComEd shall prioritize other fuels (which in CY2021 are from gas) for the Income Eligible population first to the extent practicable, but can use other fuels from other sectors to achieve its target. To calculate the other fuels' savings eligible for claiming, the evaluation team used a data set containing all measure-level savings, with associated sector and program flags. We sorted the measures from the Income Eligible programs to the top, then sorted by descending measure life. We calculated cumulative savings from the top of the data set until the cumulative total reached the maximum ComEd can claim. Only those savings above that point are included in Table 2-5 below.

2.2.2 Legacy Savings

FEJA specifies legacy savings, which are CPAS from energy efficiency measures implemented by ComEd from January 1, 2012 to December 31, 2017, that are still providing savings in the applicable year. The evaluation applied the deemed legacy savings of 3,144,030 MWh toward ComEd verified CPAS in CY2021.⁴

2.2.3 Historical Savings

FEJA requires that historical savings be included in CPAS. This means that the CPAS tables shown in this report include savings from measures installed in 2018 through 2020 that have not reached the end of their EUL. It also means that the CPAS tables account for expiring savings. The evaluation applied the historical contribution to CPAS of 4,663,796 MWh (electric 4,365,269 MWh plus counted gas converted of 298,527 MWh) toward ComEd verified total CPAS in CY2021.

2.2.4 Expiring Savings

FEJA specifies that each year ComEd's programs must replace energy savings for measures that have reached the end of their measure lives before any progress towards achievement of its applicable annual incremental goal (AAIG) may be counted. The evaluation calculated incremental expiring savings using the following equation.

Equation 2-1. Incremental Expiring Savings

$$\text{Incremental Expiring Savings} = \text{CPAS } Y_{n-1} - \text{CPAS } Y_n$$

The grand total incremental expiring savings in CY2021 is estimated as CY2021 incremental expiring savings plus the legacy incremental expiring savings in CY2021 and historical expiring savings since CY2018, given a value of 868,244 MWh (in CY2021, there were no incremental expiring savings, but from legacy incremental expiring savings of 393,003 MWh, and historical incremental expiring savings⁵ of 475,241 MWh).

³ FEJA Statute: 220 ILCS 5/8-103B(g)(7.5). Section 8-103B. The 2021 applicable annual incremental goal is estimated as the difference in the 2021 CPAS Statutory Goal (9,274,887 MWh) and the 2020 CPAS Statutory Goal (8,174,477 MWh).

⁴ For CY2021, legacy savings are estimated by multiplying statutory 2021 CPAS Legacy Savings percent (4.0%) by ComEd Baseline - 2014-2016 Average Annual Sales Less Exempt Customers MWh value of 78,600,740.

⁵ Historic incremental expiring savings are equal to Historic CPAS Y_{n-1} – Historic CPAS Y_n .

2.2.5 Total Savings

As shown in Table 2-3 and the following tables, ComEd's CY2021 energy efficiency programs achieved total electric CPAS of 1,739,836 MWh. They achieved 11,097,315 therms of gas savings, which converts to 325,262 MWh.⁶ From those gas savings, ComEd can claim 110,041 MWh toward their annual incremental goal. Adding the current year electric savings to the allowable converted gas savings gives 1,849,877 MWh total savings.

Adding the legacy savings of 3,144,030 MWh and historical savings since CY2018, the grand total CY2021 CPAS that ComEd can claim is 9,657,703 MWh (which is 104% of the CPAS goal of 9,274,887 MWh).

2.2.6 Applicable Annual Incremental Goal (AAIG)

Per FEJA,⁷ the AAIG is estimated as the difference between the statutory CPAS goal for current year (CY2021) and the CPAS goal for the immediately preceding year (CY2020). We calculate progress toward AAIG that ComEd achieved in CY2021 as the difference in verified CY2021 CPAS and the incremental expiring savings (both expiring legacy savings and post 2017 expiring programmatic savings).

Equation 2-2. Applicable Annual Incremental Goal (AAIG)

$$\text{AAIG} = \text{CPAS } Y_n \text{ Goal} - \text{CPAS } Y_{n-1} \text{ Goal}$$

Equation 2-3. Applicable Annual Incremental Goal Achieved

$$\text{Progress toward AAIG} = \text{CPAS } Y_n - \text{Incremental Expiring Savings } Y_n$$

In CY2021, the AAIG is estimated as 1,100,410 MWh. The estimated progress toward goal that ComEd achieved is 981,633 MWh, which is the difference between the CPAS that ComEd can claim against their goal (rounded 1,849,877 MWh) and the grand total incremental expiring savings (868,244 MWh). The AAIG achieved as percent of goal (1,100,410 MWh) is 89.2%.

⁶ Gas savings are converted to kWh by multiplying therms by 29.31 (which is based on 100,000 Btu/therm and 3,412 Btu/kWh).

⁷ FEJA Statute: 220 ILCS 5/8-103B(g)(7.5). Section 8-103B.

Table 2-3. CPAS by Program – Electric

Sector	Program	WAML*	CY2021 Verified Gross Savings (kWh)	NTG†	Lifetime Net Savings (kWh)‡	Verified Net kWh Savings											
						2018	2019	2020	2021	2022	2023	2024	2025	2026			
Business	Incentives - Custom + Standard	13.8	293,103,873	0.75	2,881,560,904				219,031,128	218,968,749	218,063,015	215,456,052	213,997,304	212,532,547			
Business	Business Instant Discounts	11.2	269,381,913	0.76	2,046,609,042				205,628,306	205,628,306	205,628,306	205,628,306	153,913,771	148,333,242			
Business	Small Business	12.5	222,829,653	0.97	2,476,947,097				216,199,143	216,071,758	214,495,997	207,264,017	196,098,879	189,681,442			
Business	LED Streetlighting	20.0	54,194,123	0.86	897,929,010				46,856,560	46,856,560	46,856,560	44,617,207	44,617,207	44,617,207			
Business	Industrial Systems + Industrial Energy Management	7.6	53,893,793	0.81	326,008,697				43,806,654	43,806,654	43,806,654	27,207,699	27,207,699	15,595,991			
Business	RetroCommissioning + VCx	7.9	45,838,183	0.97	350,028,407				44,436,322	44,436,322	44,436,322	44,436,322	44,436,322	44,436,322			
Business	Strategic Energy Management	7.0	34,145,568	1.00	239,018,974				34,145,568	34,145,568	34,145,568	34,145,568	34,145,568	34,145,568			
Business	Non-residential New Construction	17.4	29,881,254	0.53	275,564,929				15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065			
Business	Facility Assessments	3.9	2,339,216	0.94	8,602,947				2,198,863	2,198,863	2,100,051	1,488,903	615,039	1,228			
Residential	Lighting Discount	10.9	318,243,559	0.56	1,431,751,246				176,705,487	176,705,487	176,705,487	176,705,487	106,182,644	100,982,131			
Residential	Appliance Rebates	10.1	56,668,076	0.79	451,471,934				44,878,796	44,878,796	44,878,796	44,878,796	44,878,796	44,878,796			
Residential	Single-Family Assessment	9.7	16,921,456	0.84	100,823,486				14,246,262	14,246,262	14,246,262	14,246,262	7,639,577	7,639,577			
Residential	Multi-Family Assessments	8.1	9,369,022	0.87	60,268,959				8,121,286	7,931,530	7,700,769	7,522,432	6,911,585	5,033,452			
Residential	Residential HVAC	15.9	6,141,696	0.79	69,662,297				4,838,627	4,838,627	4,838,627	4,781,880	4,781,880	4,781,880			
Residential	Residential Behavior	5.0	-	-	262,365,944				105,968,421	76,127,714	46,144,814	23,788,506	10,336,490	-			
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	10.2	90,914,407	0.86	655,072,777				78,353,216	78,353,216	78,353,216	61,895,052	60,438,032				
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	12.6	4,717,726	1.00	54,259,017				4,717,726	4,717,726	4,623,105	4,061,940	3,747,963	3,511,164			
Income Eligible	Single Family Retrofits - CBA + IHWAP	16.1	3,780,257	1.00	51,257,133				3,780,257	3,780,257	3,780,257	3,773,626	3,764,193	3,764,193			
Income Eligible	Public Housing Retrofits	9.1	1,404,776	1.00	11,061,400				1,404,776	1,404,776	1,322,540	1,253,221	1,076,147	1,037,102			
Income Eligible	Affordable Housing New Construction	15.4	1,374,420	1.00	21,211,557				1,374,420	1,374,420	1,374,420	1,374,420	1,374,420	1,374,420			
Third Party	Food Bank-LED Distribution	10.1	108,183,380	1.00	1,007,322,240				108,183,380	108,183,380	108,183,380	108,183,380	108,183,380	108,183,380			
Third Party	UIC-ERC Income Eligible Kits	9.5	35,945,840	1.00	319,971,254				35,945,840	35,945,840	35,945,840	35,945,840	35,945,840	35,945,840			
Third Party	Business Telecomm	10.8	12,350,428	0.80	106,450,699				9,883,056	9,883,056	9,883,056	9,883,056	9,883,056	9,883,056			
Third Party	Agriculture	14.3	10,159,378	0.80	107,553,247				8,127,502	8,127,502	8,127,080	8,090,979	7,638,604	7,621,864			
Third Party	Public Buildings in Distressed Communities	14.8	9,091,363	0.97	127,861,084				8,818,622	8,818,622	8,818,622	8,817,878	8,605,395	8,526,013			
Third Party	Business Grocery	13.0	6,937,145	0.97	87,227,790				6,729,031	6,729,031	6,729,031	6,729,031	6,654,745	5,940,115			
Third Party	Small Business Kits	7.2	6,148,377	0.97	35,921,124				5,953,315	5,953,315	5,953,315	5,825,433	3,943,148	2,282,569			
Third Party	Elementary Energy Education	9.4	5,543,705	0.95	44,443,348				5,238,932	5,238,932	5,026,025	5,026,025	4,210,392	4,210,392			
Third Party	Non-Profit Retrofits	13.6	4,347,609	0.97	53,868,283				4,217,181	4,217,181	4,217,013	4,139,084	3,979,099	3,792,370			
Pilots	Building Operator Certification	10.2	756,433	0.80	6,172,493				605,146	605,146	605,146	605,146	605,146	605,146			
Pilots	Water Infrastructure Leak Reduction	29.2	587,663	0.80	13,711,511				470,131	470,131	470,131	470,131	470,131	470,131			
Pilots	Upstream Commercial Food Service Equipment	13.1	349,653	0.80	3,671,853				279,722	279,722	279,722	279,722	279,722	279,722			
Pilots	SEM Water Savings	5.1	307,653	1.00	1,567,597				307,653	307,653	307,653	307,653	307,653	6,342			
Pilots	Efficient Choice	15.9	278,151	0.63	2,775,188				174,134	174,134	174,134	174,134	174,076	174,076			
Pilots	Electric Homes New Construction	15.1	192,185	0.80	2,319,002				153,748	153,748	153,748	153,748	153,748	153,748			
Pilots	ENERGY STAR Retail Products Platform	14.0	-	-	17,753,557				1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111			
Voltage Optimization	Voltage Optimization	15.0	270,951,740	1.00	4,064,276,100				270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740			
CY2021 Portfolio Total Electric Contribution to CPAS		12.1	1,987,273,672	0.82	18,674,342,124				1,739,836,126	1,709,815,898	1,676,431,577	1,623,672,013	1,446,711,586	1,398,915,973			
Historic Portfolio Total Electric Contribution to CPAS\$									1,765,460,187	3,230,285,186	4,840,365,070	4,365,269,463	4,241,476,783	4,094,238,218	3,697,989,609	3,503,861,701	3,292,571,532
Portfolio Total Electric CPAS									1,765,460,187	3,230,285,186	4,840,365,070	6,105,105,588	5,951,092,681	5,770,669,795	5,321,661,622	4,950,573,287	4,691,487,505
CY2021 Portfolio Incremental Expiring Electric Savings 												30,220,228	33,184,321	52,759,564	176,960,428	47,795,613	
Historic Portfolio Incremental Expiring Electric Savings#												475,095,608	123,792,679	147,238,566	396,248,609	194,127,908	211,290,168
Portfolio Grand Total Incremental Expiring Electric Savings*†												475,095,608	154,012,907	180,422,886	449,008,172	371,088,336	259,085,781

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Custom + Standard	209,108,562	206,261,869	204,119,070	200,281,277	191,223,738	153,552,894	109,565,797	101,902,943	97,685,534	20,974,971	19,802,169	18,594,716
Business	Business Instant Discounts	145,626,216	116,519,955	116,469,815	105,535,835	95,096,159	87,314,960	87,131,317	86,512,236	81,642,314	-	-	-
Business	Small Business	187,439,622	185,503,225	184,577,889	178,745,380	157,656,390	126,542,974	79,714,058	70,640,721	66,128,942	37,332	37,332	37,332
Business	LED Streetlighting	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207
Business	Industrial Systems + Industrial Energy Management	15,595,991	15,595,991	15,574,568	15,574,568	14,605,877	14,605,877	14,605,877	3,054,243	3,054,243	2,513,007	2,513,007	2,408,482
Business	RetroCommissioning + VCx	44,436,322	27,382,831	11,591,324	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	34,145,568	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	6,334,826
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	99,864,580	97,978,163	92,561,325	92,289,419	27,404,531	27,404,531	27,404,531	27,404,531	25,452,910	-	-	-
Residential	Appliance Rebates	44,878,796	31,492,871	31,492,871	29,748,578	29,674,545	4,999,896	2,660,735	2,660,735	1,457,002	1,457,002	1,331,485	130,116
Residential	Single-Family Assessment	7,561,668	6,694,190	6,321,933	6,321,933	520,709	229,422	229,422	229,422	229,422	221,163	-	-
Residential	Multi-Family Assessments	3,037,828	3,035,327	3,034,679	3,034,679	2,412,803	1,258,902	409,468	409,468	406,326	8,425	-	-
Residential	Residential HVAC	4,364,752	4,354,182	4,302,957	4,235,297	4,044,136	3,408,767	3,408,767	3,408,767	3,408,767	2,061,556	1,395,075	1,395,075
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	59,441,248	42,782,986	39,924,012	38,281,004	8,614,678	8,614,678	7,479,292	7,094,465	7,094,465	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	3,173,500	3,069,862	2,806,910	2,723,294	2,175,793	1,984,524	1,710,141	1,710,141	1,707,066	1,662,157	1,536,123	1,516,807
Income Eligible	Single Family Retrofits - CBA + IHWAP	2,901,174	2,862,516	2,836,658	2,572,530	1,859,825	1,782,386	1,779,342	1,779,342	1,779,342	1,774,246	1,742,807	1,738,172
Income Eligible	Public Housing Retrofits	1,003,095	831,753	573,150	371,459	315,999	144,068	43,042	43,042	43,042	43,042	38,769	38,769
Income Eligible	Affordable Housing New Construction	1,374,420	1,374,420	1,286,449	1,286,449	1,282,003	1,257,493	1,257,493	1,228,821	917,361	594,751	365,185	142,940
Third Party	Food Bank-LED Distribution	102,269,698	80,284,087	79,992,249	79,992,249	1,575,403	1,575,403	1,575,403	1,575,403	1,575,403	1,561,332	1,561,332	1,561,332
Third Party	UIC-ERC Income Eligible Kits	35,945,840	23,647,672	22,351,353	22,351,353	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	9,883,056	9,883,056	9,429,729	7,616,420	2,087,558	2,063,137	2,063,137	2,063,137	2,063,137	-	-	-
Third Party	Agriculture	7,621,864	7,547,632	7,547,632	7,379,415	6,939,220	6,758,160	6,649,516	6,581,301	2,794,976	-	-	-
Third Party	Public Buildings in Distressed Communities	8,501,269	8,471,275	8,459,504	8,458,572	8,457,066	8,437,991	8,406,896	8,406,896	7,856,464	-	-	-
Third Party	Business Grocery	5,940,115	5,940,115	5,940,115	5,940,115	4,883,025	4,883,025	4,869,969	4,660,165	4,660,165	-	-	-
Third Party	Small Business Kits	2,179,943	2,106,797	1,219,179	493,665	2,611	2,611	2,611	2,611	-	-	-	-
Third Party	Elementary Energy Education	4,210,392	4,210,392	3,535,933	3,535,933	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	3,750,032	3,726,001	3,723,264	3,720,303	3,571,348	3,227,074	2,681,299	2,417,015	2,381,854	13,520	13,520	13,520
Pilots	Building Operator Certification	605,146	605,146	605,146	605,146	121,029	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	470,131	470,131	470,131	470,131	470,131	470,131	470,131	470,131	470,131	443,970	443,970	443,970
Pilots	Upstream Commercial Food Service Equipment	279,722	279,722	279,722	272,271	268,866	268,866	48,116	48,116	48,116	40,001	40,001	40,001
Pilots	SEM Water Savings	6,342	6,342	6,342	3,962	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	164,519	164,463	164,463	164,018	163,991	163,267	162,038	162,038	146,679	146,679	126,756	318
Pilots	Electric Homes New Construction	153,748	153,748	153,748	153,748	153,748	153,748	153,748	153,748	153,748	12,788	-	-
Pilots	ENERGY STAR Retail Products Platform	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	-	-	-	-
Voltage Optimization	Voltage Optimization	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	-	-	-
CY2021 Portfolio Total Electric Contribution to CPAS		1,378,609,281	1,225,910,841	1,194,026,240	1,154,833,125	898,255,305	793,778,907	697,156,267	667,293,561	644,563,418	94,020,214	91,401,805	79,013,583
Historic Portfolio Total Electric Contribution to CPAS\$		3,041,216,688	2,639,918,911	2,422,565,934	1,889,726,233	1,590,516,217	1,370,911,260	1,088,857,895	621,370,548	115,686,948	90,782,572	68,434,216	39,927,951
Portfolio Total Electric CPAS		4,419,825,969	3,865,829,752	3,616,592,174	3,044,559,358	2,488,771,522	2,164,690,167	1,786,014,162	1,288,664,109	760,250,367	184,802,786	159,836,021	118,941,534
CY2021 Portfolio Incremental Expiring Electric Savings]]		20,306,692	152,698,441	31,884,601	39,193,114	256,577,821	104,476,398	96,622,640	29,862,706	22,730,142	550,543,204	2,618,410	12,388,222
Historic Portfolio Incremental Expiring Electric Savings#		251,354,844	401,297,777	217,352,977	532,839,702	299,210,016	219,604,957	282,053,365	467,487,347	505,683,600	24,904,377	22,348,356	28,506,265
Portfolio Grand Total Incremental Expiring Electric Savings*†		271,661,536	553,996,218	249,237,578	572,032,816	555,787,837	324,081,355	378,676,005	497,350,053	528,413,742	575,447,580	24,966,765	40,894,487

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Custom + Standard	18,590,204	17,937,401	3,696,140	3,696,140	3,696,140	1,411,272	1,411,272	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business	37,332	37,332	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	44,617,207	43,484,019	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	2,303,957	2,303,957	89,233	89,233	89,233	-	-	-	-	-	-	-
Business	RetroCommissioning + VCx	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	130,116	28,135	28,135	28,135	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	156,171	156,171	140,067	140,067	140,067	140,067	140,067	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - (Lighting Discounts +Appliance Rebates - IE)	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	1,514,951	1,438,655	29,894	29,894	29,894	29,894	29,894	-	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	1,655,604	1,549,251	577	577	-	-	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	36,804	36,804	-	-	-	-	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	142,940	94,453	94,453	94,453	94,453	76,502	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	1,561,332	1,561,332	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Energy Education	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	13,520	13,520	13,520	13,520	13,520	-	-	-	-	-	-	-
Pilots	Building Operator Certification	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970
Pilots	Upstream Commercial Food Service Equipment	40,001	40,001	-	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	318	318	318	318	-	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization Voltage Optimization		-	-	-	-	-	-	-	-	-	-	-	-
CY2021 Portfolio Total Electric Contribution to CPAS		71,244,428	69,125,320	4,536,309	4,536,309	4,507,278	2,101,706	2,025,203	443,970	443,970	443,970	443,970	443,970
Historic Portfolio Total Electric Contribution to CPAS§		36,046,852	28,958,993	28,628,475	18,220,864	5,168,834	670,910	-	-	-	-	-	-
Portfolio Total Electric CPAS		107,291,280	98,084,312	33,164,784	22,757,173	9,676,112	2,772,616	2,025,203	443,970	443,970	443,970	443,970	443,970
CY2021 Portfolio Incremental Expiring Electric Savings		7,769,155	2,119,108	64,589,011	-	29,031	2,405,573	76,502	1,581,233	-	-	-	-
Historic Portfolio Incremental Expiring Electric Savings#		3,881,100	7,087,859	330,518	10,407,611	13,052,031	4,497,924	670,910	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Electric Savings*†		11,650,254	9,206,967	64,919,529	10,407,611	13,081,061	6,903,496	747,412	1,581,233	-	-	-	-

Note: The green highlighted cell shows program total first year electric savings. The gray cells are blank, indicating values irrelevant to the CY2021 contribution to CPAS. Verified gross savings include carryover savings. This is different from the program level reports where carryover savings are excluded from Table 3-1.

* WAML is the weighted average measure life across all measures and savings in the program.

† The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

‡ Lifetime savings are the sum of CPAS savings through the EUL.

§ Historical savings go back to CY2018.

|| Incremental expiring savings are equal to CPAS Yn-1 - CPAS Yn.

Historic incremental expiring savings are equal to Historic CPAS Yn-1 – Historic CPAS Yn.

*† Portfolio total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis

Table 2-4. CPAS by Program – Gas

Sector	Program	WAML	CY2021 Verified Gross Savings (Therms)	NTG*	Lifetime Net Savings (Therms)†	Verified Net Therms Savings								
						2018	2019	2020	2021	2022	2023	2024	2025	2026
Business	Incentives - Custom + Standard	15.1	2,999,487	0.70	31,634,690				2,099,641	2,099,641	2,099,641	2,099,641	2,099,641	2,099,636
Business	Small Business	9.8	367,704	0.98	3,528,391				360,050	360,050	341,917	341,917	341,917	325,015
Business	Non-residential New Construction	17.4	78,927	0.53	727,860				41,831	41,831	41,831	41,831	41,831	41,831
Business	RetroCommissioning + VCx	8.5	68,573	0.94	548,692				64,459	64,459	64,459	64,459	64,459	64,459
Business	Facility Assessments	4.7	16,774	0.94	74,880				15,768	15,768	15,768	15,768	11,810	-
Business	Business Instant Discounts	-	-	-	-				-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	-	-	-	-				-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-				-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-				-	-	-	-	-	-
Residential	Appliance Rebates	11.1	6,344,294	0.89	62,669,720				5,675,167	5,675,167	5,675,167	5,675,167	5,675,167	5,675,167
Residential	Residential HVAC	11.4	248,389	0.90	2,549,690				223,328	223,328	223,328	223,328	223,328	223,328
Residential	Lighting Discount	-	-	-	-				-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-				-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-				-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-				-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	18.5	703,896	1.00	12,859,220				703,896	703,896	697,757	697,757	697,757	690,765
Income Eligible	Single Family Retrofits - CBA + IHWAP	19.7	380,863	1.00	7,163,499				380,863	380,863	380,863	377,776	377,523	377,523
Income Eligible	Public Housing Retrofits	5.9	60,865	1.00	359,737				60,865	60,865	60,865	56,626	56,626	49,045
Income Eligible	Affordable Housing New Construction	-	-	-	-				-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	-	-	-	-				-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	20.0	653,124	1.00	13,062,480				653,124	653,124	653,124	653,124	653,124	653,124
Third Party	UIC-ERC Income Eligible Kits	10.0	577,891	1.00	5,778,912				577,891	577,891	577,891	577,891	577,891	577,891
Third Party	Small Business Kits	6.5	197,299	0.97	1,248,950				191,380	191,380	191,380	191,380	191,380	58,410
Third Party	Elementary Energy Education	9.4	30,152	1.00	284,250				30,152	30,152	27,993	27,993	27,993	27,993
Third Party	Business Grocery	15.0	17,403	0.97	253,213				16,881	16,881	16,881	16,881	16,881	16,881
Third Party	Business Telecomm	11.0	1,188	0.80	10,450				950	950	950	950	950	950
Third Party	Agriculture	-	-	-	-				-	-	-	-	-	-
Third Party	Non-Profit Retrofits	-	-	-	-				-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-				-	-	-	-	-	-
Pilots	Efficient Choice	14.0	1,726	0.62	14,931				1,070	1,070	1,070	1,070	1,070	1,070
Pilots	Building Operator Certification	-	-	-	-				-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-				-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-				-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-				-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-				-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	-	-	-	-				-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-				-	-	-	-	-	-
CY2021 Portfolio Total Gas Contribution to CPAS (Therms)			12,748,553	0.87	142,769,566				11,097,315	11,097,315	11,070,883	11,063,557	11,059,347	10,883,087
CY2021 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)‡			373,660,100	0.87	4,184,575,976				325,262,291	325,262,291	324,487,592	324,272,856	324,149,452	318,983,283
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§						216,877,650	387,368,187	664,862,938	663,608,709	660,492,752	654,083,990	647,948,524	636,234,858	633,245,187
Portfolio Total Gas CPAS (kWh Equivalent)						216,877,650	387,368,187	664,862,938	988,871,000	985,755,043	978,571,583	972,221,380	960,384,310	952,228,470
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)												26,431	7,326	4,210
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent) 												774,699	214,736	123,404
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#									1,254,229	3,115,957	6,408,761	6,135,467	11,713,666	2,989,671
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)*†									1,254,229	3,115,957	7,183,460	6,350,203	11,837,070	8,155,840

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Custom + Standard	2,099,636	2,099,636	2,099,636	2,099,636	2,087,970	2,087,970	2,087,970	2,087,970	2,087,970	39,691	39,691	39,691
Business	Small Business	325,015	325,015	325,015	325,015	101,023	6,585	6,585	6,585	6,585	6,021	6,021	6,021
Business	Non-residential New Construction	41,831	41,831	41,831	41,831	41,831	41,831	41,831	41,831	41,831	41,831	41,831	16,732
Business	RetroCommissioning + VCx	64,459	61,890	35,592	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	5,675,167	5,675,167	5,675,167	5,675,167	5,675,167	80,963	80,963	80,963	-	-	-	-
Residential	Residential HVAC	223,408	223,408	223,408	223,408	223,408	10,298	10,298	10,298	10,298	10,298	10,298	10,298
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	686,429	686,429	686,429	686,429	650,904	628,776	628,776	622,425	622,425	408,344	405,366	405,366
Income Eligible	Single Family Retrofits - CBA + IHWAP	374,027	374,027	373,929	353,304	349,885	346,938	342,868	341,952	341,952	340,670	336,843	336,843
Income Eligible	Public Housing Retrofits	1,483	1,483	1,483	1,483	1,116	1,116	1,116	1,105	1,105	1,105	563	563
Income Eligible	Affordable Housing New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124
Third Party	UIC-ERC Income Eligible Kits	577,891	577,891	577,891	577,891	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	58,410	58,410	58,410	58,410	-	-	-	-	-	-	-	-
Third Party	Elementary Energy Education	27,993	27,993	27,993	27,993	-	-	-	-	-	-	-	-
Third Party	Business Grocery	16,881	16,881	16,881	16,881	16,881	16,881	16,881	16,881	16,881	-	-	-
Third Party	Business Telecomm	950	950	950	950	950	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	1,070	1,070	1,070	1,070	1,070	1,054	1,054	1,054	-	-	-	-
Pilots	Building Operator Certification	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2021 Portfolio Total Gas Contribution to CPAS (Therms)		10,827,774	10,825,205	10,798,809	10,742,592	9,803,329	3,875,535	3,871,465	3,864,187	3,782,171	1,501,084	1,493,737	1,468,638
CY2021 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)‡		317,362,052	317,286,752	316,513,096	314,865,381	287,335,562	113,591,926	113,472,629	113,259,336	110,855,423	43,996,762	43,781,421	43,045,780
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§		629,391,419	546,232,395	512,123,206	360,082,687	257,561,584	254,536,072	191,427,684	168,355,317	45,670,514	41,857,243	40,521,623	36,029,850
Portfolio Total Gas CPAS (kWh Equivalent)		946,753,471	863,519,147	828,636,302	674,948,068	544,897,147	368,127,998	304,900,313	281,614,652	156,525,937	85,854,005	84,303,044	79,075,629
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)		55,313	2,569	26,396	56,217	939,264	5,927,794	4,070	7,277	82,017	2,281,087	7,347	25,099
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent) 		1,621,231	75,300	773,656	1,647,715	27,529,818	173,743,637	119,297	213,293	2,403,913	66,858,660	215,342	735,641
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#		3,853,768	83,159,024	34,109,190	152,040,518	102,521,103	3,025,512	63,108,388	23,072,368	122,684,802	3,813,271	1,335,620	4,491,774
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)*†		5,474,999	83,234,324	34,882,846	153,688,234	130,050,921	176,769,149	63,227,685	23,285,661	125,088,715	70,671,932	1,550,961	5,227,415

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Custom + Standard	39,691	39,691	-	-	-	-	-	-	-	-	-	-
Business	Small Business	6,021	6,021	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	RetroCommissioning + VCx	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	10,298	10,298	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	405,366	405,366	154,764	145,950	145,950	145,950	145,950	-	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	336,843	336,843	233	233	233	233	233	-	-	-	-	-
Income Eligible	Public Housing Retrofits	563	563	-	-	-	-	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	653,124	653,124	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Energy Education	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2021 Portfolio Total Gas Contribution to CPAS (Therms)		1,451,906	1,451,906	154,997	146,182	146,182	146,182	146,182	-	-	-	-	-
CY2021 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†		42,555,353	42,555,353	4,542,958	4,284,607	4,284,607	4,284,607	4,284,607	-	-	-	-	-
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§		22,678,927	12,257,537	12,225,951	12,225,951	5,895,804	2,914,303	-	-	-	-	-	-
Portfolio Total Gas CPAS (kWh Equivalent)		65,234,279	54,812,890	16,768,909	16,510,558	10,180,412	7,198,910	4,284,607	-	-	-	-	-
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)		16,732	-	1,296,909	8,814	-	-	146,182	-	-	-	-	-
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent) 		490,427	-	38,012,394	258,351	-	-	4,284,607	-	-	-	-	-
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#		13,350,923	10,421,390	31,587	-	6,330,146	2,981,502	2,914,303	-	-	-	-	-
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)*†		13,841,350	10,421,390	38,043,981	258,351	6,330,146	2,981,502	2,914,303	4,284,607	-	-	-	-

Note: The green highlighted cell shows program total first year gas savings in kWh equivalents. The gray cells are blank, indicating values irrelevant to the CY2021 contribution to CPAS.

* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

† Lifetime savings are the sum of CPAS savings through the EUL.

‡ kWh equivalent savings are calculated by multiplying therm savings by 29.31.

§ Historic savings go back to CY2018.

|| Incremental expiring savings are equal to CPAS Yn-1 - CPAS Yn.

Historic incremental expiring savings are equal to Historic CPAS Yn-1 – Historic CPAS Yn.

*† kWh equivalent portfolio total incremental savings are calculated by multiplying therm savings by 29.31.

Source: Evaluation team analysis

Table 2-5. CPAS from Gas Counting Toward ComEd Goal

Sector	CY2021 Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)*	Verified Net Therms Savings									
			2018	2019	2020	2021	2022	2023	2024	2025	2026	
Income Eligible Gas (Therms)	2,376,640	39,223,848				2,376,640	2,376,640	2,370,500	2,363,174	2,362,921	2,348,348	
All Other Gas (Therms)	1,975,260	21,046,628				1,377,746	1,377,746	1,377,746	1,377,746	1,377,746	1,377,746	
Income Eligible Gas (kWh Equivalent)†	69,659,308	1,149,650,994				69,659,308	69,659,308	69,479,354	69,264,618	69,257,205	68,830,082	
All Other Gas (kWh Equivalent)†	57,894,882	616,876,661				40,381,728	40,381,728	40,381,728	40,381,728	40,381,728	40,381,728	
CY2021 Portfolio Total Gas CPAS (Therms)	4,351,900	60,270,476				3,754,385	3,754,385	3,748,246	3,740,919	3,740,666	3,726,094	
CY2021 Portfolio Total Gas CPAS (kWh Equivalent)§	127,554,190	1,766,527,655				110,041,036	110,041,036	109,861,081	109,646,346	109,638,933	109,211,810	
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)			94,320,888	196,501,850	298,671,854	298,526,682	298,380,591	298,041,437	294,676,564	287,291,550	287,230,260	
Portfolio Total Gas CPAS (kWh Equivalent)#			94,320,888	196,501,850	298,671,854	408,567,718	408,421,627	407,902,518	404,322,910	396,930,483	396,442,069	
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)								6,140	7,326	253	14,573	
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†								179,955	214,736	7,413	427,123	
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)						145,172	146,091	339,154	3,364,872	7,385,014	61,291	
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)††						145,172	146,091	519,109	3,579,608	7,392,427	488,414	

Sector	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Income Eligible Gas (Therms)	2,292,954	2,292,954	2,292,856	2,272,231	1,655,028	1,629,953	1,625,883	1,618,606	1,618,606	1,403,243	1,395,896	1,395,896
All Other Gas (Therms)	1,377,746	1,377,746	1,377,746	1,377,746	1,377,746	1,377,746	1,377,746	1,377,746	1,377,746	97,840	97,840	72,742
Income Eligible Gas (kWh Equivalent)†	67,206,493	67,206,493	67,203,609	66,599,103	48,508,874	47,773,929	47,654,632	47,441,339	47,441,339	41,129,058	40,913,716	40,913,716
All Other Gas (kWh Equivalent)†	40,381,728	40,381,728	40,381,728	40,381,728	40,381,728	40,381,728	40,381,728	40,381,728	40,381,728	2,867,705	2,867,705	2,132,064
CY2021 Portfolio Total Gas CPAS (Therms)	3,670,700	3,670,700	3,670,602	3,649,977	3,032,774	3,007,699	3,003,629	2,996,352	2,996,352	1,501,084	1,493,737	1,468,638
CY2021 Portfolio Total Gas CPAS (kWh Equivalent)§	107,588,220	107,588,220	107,585,337	106,980,831	88,890,601	88,155,657	88,036,360	87,823,066	87,823,066	43,996,762	43,781,421	43,045,780
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)	286,457,055	272,512,233	255,971,890	201,745,447	201,563,168	198,537,656	135,909,071	114,926,894	45,670,514	41,857,243	40,521,623	36,029,850
Portfolio Total Gas CPAS (kWh Equivalent)#	394,045,275	380,100,453	363,557,227	308,726,278	290,453,770	286,693,313	223,945,430	202,749,960	133,493,581	85,854,005	84,303,044	79,075,629
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)	55,394	-	98	20,625	617,203	25,075	4,070	7,277	-	1,495,268	7,347	25,099
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†	1,623,589	-	2,883	604,506	18,090,230	734,944	119,297	213,293	-	43,826,304	215,342	735,641
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)	773,205	13,944,822	16,540,343	54,226,443	182,279	3,025,512	62,628,586	20,982,177	69,256,379	3,813,271	1,335,620	4,491,774
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)††	2,396,794	13,944,822	16,543,226	54,830,949	18,272,508	3,760,456	62,747,883	21,195,470	69,256,379	47,639,575	1,550,961	5,227,415

Sector	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Income Eligible Gas (Therms)	1,395,896	1,395,896	154,997	146,182	146,182	146,182	146,182	-	-	-	-	-
All Other Gas (Therms)	56,009	56,009	-	-	-	-	-	-	-	-	-	-
Income Eligible Gas (kWh Equivalent)	40,913,716	40,913,716	4,542,958	4,284,607	4,284,607	4,284,607	4,284,607	-	-	-	-	-
All Other Gas (kWh Equivalent)	1,641,637	1,641,637	-	-	-	-	-	-	-	-	-	-
CY2021 Portfolio Total Gas CPAS (Therms)	1,451,906	1,451,906	154,997	146,182	146,182	146,182	146,182	-	-	-	-	-
CY2021 Portfolio Total Gas CPAS (kWh Equivalent)§	42,555,353	42,555,353	4,542,958	4,284,607	4,284,607	4,284,607	4,284,607	-	-	-	-	-
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)	22,678,927	12,257,537	12,225,951	12,225,951	5,895,804	2,914,303	-	-	-	-	-	-
Portfolio Total Gas CPAS (kWh Equivalent)#	65,234,279	54,812,890	16,768,909	16,510,558	10,180,412	7,198,910	4,284,607	-	-	-	-	-
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)	16,732	-	1,296,909	8,814	-	-	-	146,182	-	-	-	-
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†	490,427	-	38,012,394	258,351	-	-	-	4,284,607	-	-	-	-
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)	13,350,923	10,421,390	31,587	-	6,330,146	2,981,502	2,914,303	-	-	-	-	-
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)†‡	13,841,350	10,421,390	38,043,981	258,351	6,330,146	2,981,502	2,914,303	4,284,607	-	-	-	-

Note: The green highlighted cell shows program total first year gas savings in kWh equivalents. The gray cells are blank, indicating values irrelevant to the CY2021 contribution to CPAS.

* Lifetime savings are the sum of CPAS savings through the EUL.

† Income Eligible kWh equivalent savings are calculated by multiplying therm savings by 29.31.

‡ All others kWh equivalent savings are calculated by multiplying therm savings by 29.31.

§ Portfolio kWh equivalent savings are calculated by multiplying therm savings by 29.31.

|| Historic savings go back to CY2018.

Portfolio Total Gas CPAS (kWh Equivalent) is the sum of CY2021 equivalent kWh CPAS and historic equivalent kWh CPAS.

*† Incremental expiring savings are equal to CPAS Yn-1 - CPAS Yn.

†‡ Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent) is the sum of CY2021 portfolio incremental equivalent kWh counted and historic portfolio incremental expiring equivalent kWh savings counted.

Source: Evaluation team analysis

Below is the list of programs and measures with gas savings which were counted towards ComEd CPAS goal.

Table 2-6. Measure List and Savings from Gas Counting Toward ComEd Goal

Sector	Program	Verified Gross Savings (Therms)	Verified Gross Savings (kWh Equivalent)	Verified Net Savings (Therms)	Verified Net Savings (kWh Equivalent)	Counted Measures (EUL)
Income Eligible	Income Eligible (All)	2,376,640	69,659,308	2,376,640	69,659,308	All Income Eligible Measure and EUL were counted (16.7)
Business	Incentives - Custom + Standard	1,861,022	54,546,560	1,302,716	38,182,592	Kitchen Demand Ventilation Controls (20), Building Energy Management System (15)
Business	Non-residential New Construction	78,927	2,313,336	41,831	1,226,068	All Projects (17.4)
Business	Small Business	6,207	181,921	6,021	176,463	Kitchen Fan with DCV (20)
Residential	Residential HVAC	11,702	342,985	10,298	301,827	Duct Sealing (20)
Third Party	Business Grocery	17,403	510,080	16,881	494,777	Add Door Retrofit kits (15)
Total		4,351,900	127,554,190	3,754,385	110,041,036	

Note: This table shows only gross and net gas savings counted towards ComEd's goal in CY2021. Results shown for programs in sectors other than Income Eligible may be different from program specific reports.

Source: *Evaluation team analysis*

Table 2-7. Total CPAS Counting Toward ComEd Goal

Sector	Program	EUL	CY2021 Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	Verified Net kWh Savings (Including Those Converted from Gas Savings)												
					2018	2019	2020	2021	2022	2023	2024	2025	2026				
Business	Incentives - Custom + Standard	14.0	347,650,433	0.74	3,460,116,522				257,213,720	257,151,342	256,245,608	253,638,644	252,179,897	250,715,140			
Business	Business Instant Discounts	11.2	269,381,913	0.76	2,046,609,042				205,628,306	205,628,306	205,628,306	205,628,306	153,913,771	148,333,242			
Business	Small Business	12.5	223,011,574	0.97	2,480,476,360				216,375,606	216,248,221	214,672,460	207,440,480	196,275,342	189,857,905			
Business	LED Streetlighting	20.0	54,194,123	0.86	897,929,010				46,856,560	46,856,560	46,856,560	44,617,207	44,617,207	44,617,207			
Business	Industrial Systems + Industrial Energy Management	7.6	53,893,793	0.81	326,008,697				43,806,654	43,806,654	43,806,654	27,207,699	27,207,699	15,595,991			
Business	RetroCommissioning + VCx	7.9	45,838,183	0.97	350,028,407				44,436,322	44,436,322	44,436,322	44,436,322	44,436,322	44,436,322			
Business	Strategic Energy Management	7.0	34,145,568	1.00	239,018,974				34,145,568	34,145,568	34,145,568	34,145,568	34,145,568	34,145,568			
Business	Non-residential New Construction	17.4	32,194,590	0.53	296,898,511				17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133			
Business	Facility Assessments	3.9	2,339,216	0.94	8,602,947				2,198,863	2,198,863	2,100,051	1,488,903	615,039	1,228			
Residential	Lighting Discount	10.9	318,243,559	0.56	1,431,751,246				176,705,487	176,705,487	176,705,487	176,705,487	106,182,644	100,982,137			
Residential	Appliance Rebates	10.1	56,668,076	0.79	451,471,934				44,878,796	44,878,796	44,878,796	44,878,796	44,878,796	44,878,796			
Residential	Single-Family Assessment	9.7	16,921,456	0.84	100,823,486				14,246,262	14,246,262	14,246,262	14,246,262	7,639,577	7,639,577			
Residential	Multi-Family Assessments	8.1	9,369,022	0.87	60,268,959				8,121,286	7,931,530	7,700,769	7,522,432	6,911,585	5,033,452			
Residential	Residential HVAC	16.2	6,484,681	0.79	75,698,834				5,140,454	5,140,454	5,140,454	5,083,707	5,083,707	5,083,707			
Residential	Residential Behavior	5.0	-		262,365,944				105,968,421	76,127,714	46,144,814	23,788,506	10,336,490	-			
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebate]	10.2	90,914,407	0.86	655,072,777				78,353,216	78,353,216	78,353,216	78,353,216	61,895,052	60,438,032			
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	17.4	25,348,924	1.00	431,162,757				25,348,924	25,348,924	25,074,348	24,513,183	24,199,206	23,757,490			
Income Eligible	Single Family Retrofits - CBA + IHWAP	18.8	14,943,355	1.00	261,219,297				14,943,355	14,943,355	14,943,355	14,846,245	14,829,398	14,829,398			
Income Eligible	Public Housing Retrofits	7.3	3,188,733	1.00	21,605,290				3,188,733	3,188,733	3,106,498	2,912,921	2,735,848	2,474,597			
Income Eligible	Affordable Housing New Construction	15.4	1,374,420	1.00	21,211,557				1,374,420	1,374,420	1,374,420	1,374,420	1,374,420	1,374,420			
Third Party	Food Bank-LED Distribution	11.6	127,326,444	1.00	1,390,183,529				127,326,444	127,326,444	127,326,444	127,326,444	127,326,444	127,326,444			
Third Party	UIC-ERC Income Eligible Kits	9.6	52,883,831	1.00	489,351,165				52,883,831	52,883,831	52,883,831	52,883,831	52,883,831	52,883,831			
Third Party	Business Telecomm	10.8	12,350,428	0.80	106,450,699				9,883,056	9,883,056	9,883,056	9,883,056	9,883,056	9,883,056			
Third Party	Agriculture	14.3	10,159,378	0.80	107,553,247				8,127,502	8,127,502	8,127,080	8,090,979	7,638,604	7,621,864			
Third Party	Public Buildings in Distressed Communities	14.8	9,091,363	0.97	127,861,084				8,818,622	8,818,622	8,818,622	8,817,878	8,605,395	8,526,013			
Third Party	Business Grocery	13.1	7,447,225	0.97	94,649,451				7,223,808	7,223,808	7,223,808	7,223,808	7,149,522	6,434,892			
Third Party	Small Business Kits	7.2	6,148,377	0.97	35,921,124				5,953,315	5,953,315	5,953,315	5,825,433	3,943,148	2,282,569			
Third Party	Elementary Energy Education	9.4	5,543,705	0.95	44,443,348				5,238,932	5,238,932	5,026,025	5,026,025	4,210,392	4,210,392			
Third Party	Non-Profit Retrofits	13.6	4,347,609	0.97	53,868,283				4,217,181	4,217,181	4,217,013	4,139,084	3,979,099	3,792,370			
Pilots	Building Operator Certification	10.2	756,433	0.80	6,172,493				605,146	605,146	605,146	605,146	605,146	605,146			
Pilots	Water Infrastructure Leak Reduction	29.2	587,663	0.80	13,711,511				470,131	470,131	470,131	470,131	470,131	470,131			
Pilots	Upstream Commercial Food Service Equipment	13.1	349,653	0.80	3,671,853				279,722	279,722	279,722	279,722	279,722	279,722			
Pilots	SEM Water Savings	5.1	307,653	1.00	1,567,597				307,653	307,653	307,653	307,653	307,653	6,342			
Pilots	Efficient Choice	15.9	278,151	0.63	2,775,188				174,134	174,134	174,134	174,134	174,076	174,076			
Pilots	Electric Homes New Construction	15.1	192,185	0.80	2,319,002				153,748	153,748	153,748	153,748	153,748	153,748			
Pilots	ENERGY STAR Retail Products Platform	14.0	-		17,753,557				1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111			
Voltage Optimization	Voltage Optimization	15.0	270,951,740	1.00	4,064,276,100				270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740			
CY2021 Portfolio Total Contribution to CPAS (kWh)			2,114,827,862		20,440,869,779				1,849,877,162	1,819,656,934	1,786,292,659	1,733,318,359	1,556,350,519	1,508,127,783			
Historic Portfolio Total Contribution to CPAS‡									1,859,781,075	3,426,787,036	5,139,036,924	4,663,796,144	4,539,857,374	4,392,279,654	3,992,666,173	3,791,153,251	3,579,801,792
Legacy Savings (kWh)§										4,087,238,480	3,537,033,300	3,144,029,600	2,751,025,900	2,436,622,940	2,200,820,720	1,965,018,500	1,807,817,020
Portfolio Total CPAS (kWh)									1,859,781,075	7,514,025,516	8,676,070,224	9,657,702,906	9,110,540,208	8,615,195,253	7,926,805,253	7,312,522,270	6,895,746,595
CY2021 Portfolio Incremental Expiring Savings 													30,220,228	33,364,275	52,974,300	176,967,840	48,222,736
Historic Portfolio Incremental Expiring Savings#													475,240,780	123,938,771	147,577,720	399,613,481	201,512,922
Legacy Incremental Expiring Savings													393,003,700	393,003,700	314,402,960	235,802,220	235,802,220
Portfolio Grand Total Incremental Expiring Savings*†													868,244,480	547,162,699	495,344,955	688,390,000	614,282,983
Progress towards Applicable Annual Incremental Goal (AIG)††														981,632,682	-	-	-

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Custom + Standard	247,291,154	244,444,461	242,301,662	238,463,869	229,406,331	191,735,486	147,748,389	140,085,535	135,868,126	22,138,317	20,965,516	19,758,062
Business	Business Instant Discounts	145,626,216	116,519,955	116,469,815	105,535,835	95,096,159	87,314,960	87,131,317	86,512,236	81,642,314	-	-	-
Business	Small Business	187,616,086	185,679,688	184,754,353	178,921,843	157,832,853	126,719,437	79,890,522	70,817,184	66,305,405	213,795	213,795	213,795
Business	LED Streetlighting	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207
Business	Industrial Systems + Industrial Energy Management	15,595,991	15,595,991	15,574,568	15,574,568	14,605,877	14,605,877	14,605,877	3,054,243	3,054,243	2,513,007	2,513,007	2,408,482
Business	RetroCommissioning + VCx	44,436,322	27,382,831	11,591,324	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	34,145,568	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	6,825,253
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	99,864,580	97,978,163	92,561,325	92,289,419	27,404,531	27,404,531	27,404,531	27,404,531	25,452,910	-	-	-
Residential	Appliance Rebates	44,878,796	31,492,871	31,492,871	29,748,578	29,674,545	4,999,896	2,660,735	2,660,735	1,457,002	1,457,002	1,331,485	130,116
Residential	Single-Family Assessment	7,561,668	6,694,190	6,321,933	6,321,933	520,709	229,422	229,422	229,422	229,422	221,163	-	-
Residential	Multi-Family Assessments	3,037,828	3,035,327	3,034,679	3,034,679	2,412,803	1,258,902	409,468	409,468	406,326	8,425	-	-
Residential	Residential HVAC	4,666,579	4,656,009	4,604,784	4,537,123	4,345,962	3,710,594	3,710,594	3,710,594	3,710,594	2,363,382	1,696,902	1,696,902
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebate]	59,441,248	42,782,986	39,924,012	38,281,004	8,614,678	8,614,678	7,479,292	7,094,465	7,094,465	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	23,292,726	23,189,088	22,926,135	22,842,520	21,253,785	20,413,943	20,139,561	19,953,405	19,950,329	13,630,720	13,417,414	13,398,097
Income Eligible	Single Family Retrofits - CBA + IHWAP	13,863,918	13,825,260	13,796,519	12,927,885	12,114,942	11,951,131	11,828,790	11,801,960	11,801,960	11,759,284	11,615,674	11,611,039
Income Eligible	Public Housing Retrofits	1,046,563	875,220	616,617	414,926	348,699	176,768	75,741	75,434	75,434	75,434	55,263	55,263
Income Eligible	Affordable Housing New Construction	1,374,420	1,374,420	1,286,449	1,286,449	1,282,003	1,257,493	1,257,493	1,228,821	917,361	594,751	365,185	142,940
Third Party	Food Bank-LED Distribution	121,412,762	99,427,151	99,135,314	99,135,314	20,718,468	20,718,468	20,718,468	20,718,468	20,718,468	20,704,397	20,704,397	20,704,397
Third Party	UIC-ERC Income Eligible Kits	52,883,831	40,585,663	39,289,344	39,289,344	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	9,883,056	9,883,056	9,429,729	7,616,420	2,087,558	2,063,137	2,063,137	2,063,137	2,063,137	2,063,137	-	-
Third Party	Agriculture	7,621,864	7,547,632	7,547,632	7,379,415	6,939,220	6,758,160	6,649,516	6,581,301	2,794,976	-	-	-
Third Party	Public Buildings in Distressed Communities	8,501,269	8,471,275	8,459,504	8,458,572	8,457,066	8,437,991	8,406,896	8,406,896	7,856,464	-	-	-
Third Party	Business Grocery	6,434,892	6,434,892	6,434,892	6,434,892	5,377,802	5,377,802	5,364,746	5,154,943	5,154,943	-	-	-
Third Party	Small Business Kits	2,179,943	2,106,797	1,219,179	493,665	2,611	2,611	2,611	2,611	-	-	-	-
Third Party	Elementary Energy Education	4,210,392	4,210,392	3,535,933	3,535,933	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	3,750,032	3,726,001	3,723,264	3,720,303	3,571,348	3,227,074	2,681,299	2,417,015	2,381,854	13,520	13,520	13,520
Pilots	Building Operator Certification	605,146	605,146	605,146	605,146	121,029	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	470,131	470,131	470,131	470,131	470,131	470,131	470,131	470,131	470,131	443,970	443,970	443,970
Pilots	Upstream Commercial Food Service Equipment	279,722	279,722	279,722	272,271	268,866	268,866	48,116	48,116	48,116	40,001	40,001	40,001
Pilots	SEM Water Savings	6,342	6,342	6,342	3,962	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	164,519	164,463	164,463	164,018	163,991	163,267	162,038	162,038	146,679	146,679	126,756	318
Pilots	Electric Homes New Construction	153,748	153,748	153,748	153,748	153,748	153,748	153,748	153,748	153,748	12,788	-	-
Pilots	ENERGY STAR Retail Products Platform	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	-	-	-	-
Voltage Optimization	Voltage Optimization	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740
CY2021 Portfolio Total Contribution to CPAS (kWh)		1,486,197,502	1,333,499,061	1,301,611,577	1,261,813,956	987,145,906	881,934,564	785,192,626	755,116,627	732,386,485	138,016,977	135,183,225	122,059,363
Historic Portfolio Total Contribution to CPAS†		3,327,673,743	2,912,431,144	2,678,537,824	2,091,471,680	1,792,079,385	1,569,448,916	1,224,766,966	736,297,442	161,357,463	132,639,815	108,955,839	75,957,801
Legacy Savings (kWh)§		1,650,615,540	1,414,813,320	1,336,212,580	-	-	-	-	-	-	-	-	-
Portfolio Total CPAS (kWh)		6,464,486,785	5,660,743,525	5,316,361,981	3,353,285,636	2,779,225,291	2,451,383,480	2,009,959,592	1,491,414,069	893,743,947	270,656,792	244,139,065	198,017,163
CY2021 Portfolio Incremental Expiring Savings 		21,930,281	152,698,441	31,887,484	39,797,621	274,668,050	105,211,342	96,741,937	30,075,999	22,730,142	594,369,508	2,833,751	13,123,863
Historic Portfolio Incremental Expiring Savings#		252,128,049	415,242,599	233,893,319	587,066,144	299,392,294	222,630,469	344,681,950	488,469,524	574,939,979	28,717,648	23,683,975	32,998,039
Legacy Incremental Expiring Savings		157,201,480	235,802,220	78,600,740	-	-	-	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Savings*†		431,259,810	803,743,260	344,381,544	626,863,765	574,060,345	327,841,811	441,423,888	518,545,523	597,670,121	623,087,156	26,517,727	46,121,901
Progress towards Applicable Annual Incremental Goal (AAIG)††		-	-	-	-	-	-	-	-	-	-	-	-

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Custom + Standard	19,753,550	19,100,748	3,696,140	3,696,140	3,696,140	1,411,272	1,411,272	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business	213,795	213,795	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	44,617,207	43,484,019	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	2,303,957	2,303,957	89,233	89,233	89,233	-	-	-	-	-	-	-
Business	RetroCommissioning + VCx	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	130,116	28,135	28,135	28,135	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	457,998	457,998	140,067	140,067	140,067	140,067	140,067	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebate:	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	13,396,242	13,319,945	4,566,035	4,307,684	4,307,684	4,307,684	4,307,684	-	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	11,528,471	11,422,118	7,394	7,394	6,817	6,817	6,817	-	-	-	-	-
Income Eligible	Public Housing Retrofits	53,298	53,298	-	-	-	-	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	142,940	94,453	94,453	94,453	94,453	76,502	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	20,704,397	20,704,397	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Energy Education	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	13,520	13,520	13,520	13,520	13,520	-	-	-	-	-	-	-
Pilots	Building Operator Certification	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970
Pilots	Upstream Commercial Food Service Equipment	40,001	40,001	-	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	318	318	318	318	-	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization Voltage Optimization													
CY2021 Portfolio Total Contribution to CPAS (kWh)		113,799,781	111,680,672	9,079,267	8,820,916	8,791,885	6,386,313	6,309,810	443,970	443,970	443,970	443,970	443,970
Historic Portfolio Total Contribution to CPAS‡		58,725,779	41,216,530	40,854,426	30,446,815	11,064,638	3,585,213	-	-	-	-	-	-
Legacy Savings (kWh)§		-	-	-	-	-	-	-	-	-	-	-	-
Portfolio Total CPAS (kWh)		172,525,559	152,897,202	49,933,693	39,267,731	19,856,524	9,971,526	6,309,810	443,970	443,970	443,970	443,970	443,970
CY2021 Portfolio Incremental Expiring Savings 		8,259,582	2,119,108	102,601,405	258,351	29,031	2,405,573	76,502	5,865,840	-	-	-	-
Historic Portfolio Incremental Expiring Savings#		17,232,022	17,509,249	362,104	10,407,611	19,382,177	7,479,425	3,585,213	-	-	-	-	-
Legacy Incremental Expiring Savings		-	-	-	-	-	-	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Savings*†		25,491,604	19,628,357	102,963,510	10,665,962	19,411,207	9,884,998	3,661,715	5,865,840	-	-	-	-
Progress towards Applicable Annual Incremental Goal (AAIG)††		-	-	-	-	-	-	-	-	-	-	-	-

Note: The green highlighted cell shows program total first year electric savings (including direct electric savings and those converted from gas). The gray cells are blank, indicating values irrelevant to the CY2021 contribution to CPAS. Verified gross savings include carryover savings. This is different from the program level reports where carryover savings are excluded from Table 3-1.

* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. This table may differ from Table 2-3 as this table includes converted gas savings.

† Lifetime savings are the sum of CPAS savings through the EUL.

‡ Historic savings go back to CY2018.

§ Legacy savings are cumulative persisting annual savings from energy efficiency measures implemented from January 1, 2012 - December 31, 2017, as deemed by FEJA.

|| Incremental expiring savings are equal to $CPAS_{Y_{n-1}} - CPAS_{Y_n}$

Historic incremental expiring savings are equal to $Historic\ CPAS_{Y_{n-1}} - Historic\ CPAS_{Y_n}$.

*† Portfolio total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings and legacy incremental expiring savings.

†‡ AAIG is equal to $CPAS_{Y_n} - CPAS_{Y_{n-1}}$.

Source: Evaluation team analysis

2.3 Weighted Average Measure Life

Guidehouse calculated the weighted average measure life (WAML) for the CY2021 programs as 11.6 years excluding Voltage Optimization and 12.0 years including Voltage Optimization.

The equation to calculate the portfolio level WAML is shown in Equation 2-4 where the summation occurs across all programs with savings during CY2021, except for Voltage Optimization. The WAML calculation includes the electric-equivalent of the gas savings that ComEd can claim toward goal, as discussed in the previous section. It does not include all gas savings.

Equation 2-4. Portfolio Level WAML Calculation

$$WAML = \frac{\sum(\text{Program Level WAML} * \text{Program Level First Year Verified Gross Savings})}{\sum(\text{Program Level First Year Verified Gross Savings})}$$

Where

Program Level WAML

is the program level WAML

Program Level Verified Gross Savings

is the ex post gross verified savings for the program that occurred during CY2021 including electric and claimable gas savings.

The program level WAML is calculated as shown in Equation 2-5 where the summation occurs across all the measures⁸ in the program.

Equation 2-5. Program Level WAML Calculation

$$\text{Program Level WAML} = \frac{\sum(\text{Measure Level EUL} * \text{Measure Level First Year Verified Gross Savings})}{\sum(\text{Measure Level First Year Verified Gross Savings})}$$

Where

Measure Level EUL

is the effective useful life (EUL) for each measure in the program⁹

Measure Level Verified Gross Savings

is the ex post gross verified savings during the period for each measure in the program

Table 2-8 shows savings for each program and the calculated WAML.

⁸ Not all programs have measures (for example New Construction). In these cases, the EUL is aggregated from whatever level program savings are reported at (e.g. building, project, etc.).

⁹ EUL values are either provided in the TRM or through Guidehouse research.

Table 2-8. WAML and Verified Gross Savings by Program

Sector	Program	First Year Verified Gross Savings (kWh)	WAML
Business			
Business	Incentives - Custom + Standard	347,650,433	14.0
Business	Business Instant Discounts	269,381,913	11.2
Business	Small Business	223,011,574	12.5
Business	LED Streetlighting	54,194,123	20.0
Business	Industrial Systems + Industrial Energy Management	53,893,793	7.6
Business	RetroCommissioning + VCx	45,838,183	7.9
Business	Strategic Energy Management	34,145,568	7.0
Business	Non-residential New Construction	32,194,590	17.4
Business	Facility Assessments	2,339,216	3.9
Business	Subtotal	1,062,649,392	12.6
Residential			
Residential	Lighting Discount	318,243,559	10.9
Residential	Residential Behavior*	105,968,421	5.0
Residential	Appliance Rebates	56,668,076	10.1
Residential	Single-Family Assessment	16,921,456	9.7
Residential	Multi-Family Assessments	9,369,022	8.1
Residential	Residential HVAC	6,484,681	16.2
Residential	Subtotal	513,655,214	9.6
Income Eligible			
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	90,914,407	10.2
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	25,348,924	17.4
Income Eligible	Single Family Retrofits - CBA + IHWAP	14,943,355	18.8
Income Eligible	Public Housing Retrofits	3,188,733	7.3
Income Eligible	Affordable Housing New Construction	1,374,420	15.4
Income Eligible	Subtotal	135,769,839	12.5
Third Party			
Third Party	Food Bank-LED Distribution	127,326,444	11.6
Third Party	UIC-ERC Income Eligible Kits	52,883,831	9.6
Third Party	Business Telecomm	12,350,428	10.8
Third Party	Agriculture	10,159,378	14.3
Third Party	Public Buildings in Distressed Communities	9,091,363	14.8
Third Party	Business Grocery	7,447,225	13.1
Third Party	Small Business Kits	6,148,377	7.2
Third Party	Elementary Energy Education	5,543,705	9.4
Third Party	Non-Profit Retrofits	4,347,609	13.6
Third Party	Subtotal	235,298,360	11.3
Pilots			
Pilots	ENERGY STAR Retail Products Platform*	1,268,111	14.0
Pilots	Building Operator Certification	756,433	10.2
Pilots	Water Infrastructure Leak Reduction	587,663	29.2
Pilots	Upstream Commercial Food Service Equipment	349,653	13.1
Pilots	SEM Water Savings	307,653	5.1
Pilots	Efficient Choice	278,151	15.9
Pilots	Electric Homes New Construction	192,185	15.1
Pilots	Subtotal	3,739,849	15.0
Portfolio	Grand Total	1,951,112,654	11.6
Voltage Optimization			
Voltage Optimization	Voltage Optimization	270,951,740	15.0
Voltage Optimization	Subtotal	270,951,740	15.0
Portfolio	Total Including VO	2,222,064,394	12.0

Note: Verified Gross Savings include both electric savings and converted kWh equivalents from gas counted towards goal, and secondary electric energy (kWh) savings from water supply and wastewater treatment plants for measures claimed by ComEd. The WAML values in this table will differ from Table 2-3 for programs

that saved gas because some programs have different electric and gas WAML based on measure types and whether they saved gas. Therefore, the WAML shown in this table is a weighted value for programs that saved both electric and gas.

* No verified gross savings. Verified Net savings are used for WAML calculation.

Source: Evaluation team analysis

3. Savings by Program

The electricity savings by program are shown in the following tables and figures, using the program combinations that correspond to ComEd's filing. Table 3-1 includes secondary electric energy (kWh) savings from water supply and wastewater treatment plants for measures claimed by ComEd. It also includes carryover savings. It does not include gas savings converted to electricity. The kWh savings account for electric heating penalties, where applicable. Details of those measures are discussed in the next section. Table 3-2 includes savings from gas converted to electricity, counting only those savings that ComEd can claim within the 10% limit discussed above in Section 2-1.

Table 3-1. Energy Savings by Program – Electric Only

Sector	Program	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Business	Incentives - Custom + Standard	291,966,693	1.00	293,103,873	0.75	219,031,128
Business	Business Instant Discounts	233,713,154	1.15	269,381,913	0.76	205,628,306
Business	Small Business	231,131,314	0.96	222,829,653	0.97	216,199,143
Business	LED Streetlighting	54,205,711	1.00	54,194,123	0.86	46,856,560
Business	Industrial Systems + Industrial Energy Management	56,104,880	0.96	53,893,793	0.81	43,806,654
Business	RetroCommissioning + VCx	49,662,409	0.92	45,838,183	0.97	44,436,322
Business	Strategic Energy Management	34,128,723	1.00	34,145,568	1.00	34,145,568
Business	Non-residential New Construction	30,070,482	0.99	29,881,254	0.53	15,837,065
Business	Facility Assessments	2,655,095	0.88	2,339,216	0.94	2,198,863
Business	Subtotal	983,638,462	1.02	1,005,607,575	0.82	828,139,608
Residential	Lighting Discount	281,013,394	1.13	318,243,559	0.56	176,705,487
Residential	Appliance Rebates	58,199,834	0.97	56,668,076	0.79	44,878,796
Residential	Single-Family Assessment	17,325,734	0.98	16,921,456	0.84	14,246,262
Residential	Multi-Family Assessments	9,538,796	0.98	9,369,022	0.87	8,121,286
Residential	Residential HVAC	6,140,953	1.00	6,141,696	0.79	4,838,627
Residential	Residential Behavior†	-	-	-	-	105,968,421
Residential	Subtotal	372,218,710	1.09	407,343,808	0.87	354,758,879
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	80,247,992	1.13	90,914,407	0.86	78,353,216
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	4,701,702	1.00	4,717,726	1.00	4,717,726
Income Eligible	Single Family Retrofits - CBA + IHWAP	13,700,036	0.28	3,780,257	1.00	3,780,257
Income Eligible	Public Housing Retrofits	1,384,896	1.01	1,404,776	1.00	1,404,776
Income Eligible	Affordable Housing New Construction	1,363,000	1.01	1,374,420	1.00	1,374,420
Income Eligible	Subtotal	101,397,627	1.01	102,191,586	0.88	89,630,395
Third Party	Food Bank-LED Distribution	91,240,466	1.19	108,183,380	1.00	108,183,380
Third Party	UIC-ERC Income Eligible Kits	32,342,486	1.11	35,945,840	1.00	35,945,840
Third Party	Business Telecomm	12,498,595	0.99	12,350,428	0.80	9,883,056
Third Party	Agriculture	10,446,231	0.97	10,159,378	0.80	8,127,502
Third Party	Public Buildings in Distressed Communities	10,916,482	0.83	9,091,363	0.97	8,818,622
Third Party	Business Grocery	6,563,967	1.06	6,937,145	0.97	6,729,031
Third Party	Small Business Kits	7,515,683	0.82	6,148,377	0.97	5,953,315
Third Party	Elementary Energy Education	4,519,834	1.23	5,543,705	0.95	5,238,932
Third Party	Non-Profit Retrofits	4,400,922	0.99	4,347,609	0.97	4,217,181
Third Party	Subtotal	180,444,666	1.10	198,707,224	0.97	193,096,858
Pilots	Building Operator Certification†	-	-	756,433	0.80	605,146
Pilots	Water Infrastructure Leak Reduction	587,663	1.00	587,663	0.80	470,131
Pilots	Upstream Commercial Food Service Equipment	309,399	1.13	349,653	0.80	279,722
Pilots	SEM Water Savings	313,596	0.98	307,653	1.00	307,653
Pilots	Efficient Choice†	-	-	278,151	0.63	174,134
Pilots	Electric Homes New Construction	171,166	1.12	192,185	0.80	153,748
Pilots	ENERGY STAR Retail Products Platform†	-	-	-	-	1,268,111
Pilots	Subtotal	1,381,823	1.79	2,471,737	1.32	3,258,645
Voltage Optimization	Voltage Optimization	270,533,831	1.00	270,951,740	1.00	270,951,740
Voltage Optimization	Subtotal	270,533,831	1.00	270,951,740	1.00	270,951,740
Portfolio	Grand Total	1,909,615,119	1.04	1,987,273,672	0.88	1,739,836,125

Note: Programs that verified gross and net kWh savings include carryover savings are Lighting Discounts, Product Discounts (Lighting Discounts – IE), Business Instant Discounts, UIC-ERC Income Eligible Kits, Food Bank LED Distribution, Elementary Education Kits, and Small Business Kits.

* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. Guidehouse calculated the portfolio NTG ratio by dividing the total net savings by the total verified gross savings.

† Program did not report ex ante gross savings, and thus the evaluation did not calculate verified gross savings but only verified net savings.

‡ Program did not report ex ante gross savings, but evaluation estimated verified gross and net savings.

NA – not applicable or not calculated

Source: Evaluation team analysis

Table 3-2. Energy Savings by Program – Total Electric + Gas

Sector	Program	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Business	Incentives - Custom + Standard	291,966,693	1.19	347,650,433	0.74	257,213,720
Business	Business Instant Discounts	233,713,154	1.15	269,381,913	0.76	205,628,306
Business	Small Business	231,313,235	0.96	223,011,574	0.97	216,375,606
Business	LED Streetlighting	54,205,711	1.00	54,194,123	0.86	46,856,560
Business	Industrial Systems + Industrial Energy Management	56,104,880	0.96	53,893,793	0.81	43,806,654
Business	RetroCommissioning + VCx	49,662,409	0.92	45,838,183	0.97	44,436,322
Business	Strategic Energy Management	34,128,723	1.00	34,145,568	1.00	34,145,568
Business	Non-residential New Construction	32,445,296	0.99	32,194,590	0.53	17,063,133
Business	Facility Assessments	2,655,095	0.88	2,339,216	0.94	2,198,863
Business	Subtotal	986,195,196	1.08	1,062,649,392	0.82	867,724,732
Residential	Lighting Discount	281,013,394	1.13	318,243,559	0.56	176,705,487
Residential	Appliance Rebates	58,199,834	0.97	56,668,076	0.79	44,878,796
Residential	Single-Family Assessment	17,325,734	0.98	16,921,456	0.84	14,246,262
Residential	Multi-Family Assessments	9,538,796	0.98	9,369,022	0.87	8,121,286
Residential	Residential HVAC	6,483,938	1.00	6,484,681	0.79	5,140,454
Residential	Residential Behavior†	-	-	-	-	105,968,421
Residential	Subtotal	372,561,695	1.09	407,686,793	0.87	355,060,706
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	80,247,992	1.13	90,914,407	0.86	78,353,216
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	25,280,591	1.00	25,348,924	1.00	25,348,924
Income Eligible	Single Family Retrofits - CBA + IHWAP	24,834,122	0.60	14,943,355	1.00	14,943,355
Income Eligible	Public Housing Retrofits	3,094,099	1.03	3,188,733	1.00	3,188,733
Income Eligible	Affordable Housing New Construction	1,363,000	1.01	1,374,420	1.00	1,374,420
Income Eligible	Subtotal	134,819,805	1.01	135,769,839	0.91	123,208,648
Third Party	Food Bank-LED Distribution	91,240,466	1.40	127,326,444	1.00	127,326,444
Third Party	UIC-ERC Income Eligible Kits	32,342,486	1.64	52,883,831	1.00	52,883,831
Third Party	Business Telecomm	12,498,595	0.99	12,350,428	0.80	9,883,056
Third Party	Agriculture	10,446,231	0.97	10,159,378	0.80	8,127,502
Third Party	Public Buildings in Distressed Communities	10,916,482	0.83	9,091,363	0.97	8,818,622
Third Party	Business Grocery	7,074,047	1.05	7,447,225	0.97	7,223,808
Third Party	Small Business Kits	7,515,683	0.82	6,148,377	0.97	5,953,315
Third Party	Elementary Energy Education	4,519,834	1.23	5,543,705	0.95	5,238,932
Third Party	Non-Profit Retrofits	4,400,922	0.99	4,347,609	0.97	4,217,181
Third Party	Subtotal	180,954,745	1.30	235,298,360	0.98	229,672,691
Pilots	Building Operator Certification†	-	-	756,433	0.80	605,146
Pilots	Water Infrastructure Leak Reduction	587,663	1.00	587,663	0.80	470,131
Pilots	Upstream Commercial Food Service Equipment	309,399	1.13	349,653	0.80	279,722
Pilots	SEM Water Savings	313,596	0.98	307,653	1.00	307,653
Pilots	Efficient Choice†	-	-	278,151	0.63	174,134
Pilots	Electric Homes New Construction	171,166	1.12	192,185	0.80	153,748
Pilots	ENERGY STAR Retail Products Platform‡	-	-	-	-	1,268,111
Pilots	Subtotal	1,381,823	1.79	2,471,737	1.32	3,258,645
Voltage Optimization	Voltage Optimization	270,533,831	1.00	270,951,740	1.00	270,951,740
Voltage Optimization	Subtotal	270,533,831	1.00	270,951,740	1.00	270,951,740
Portfolio	Grand Total	1,946,447,096	1.09	2,114,827,862	0.87	1,849,877,162

Note: The programs where net kWh savings include carryover are Lighting Discounts, Product Discounts (Lighting Discounts – IE), Business Instant Discounts, UIC-ERC Income Eligible Kits, Food Bank LED Distribution, Elementary Education Kits, and Small Business Kits.

* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg->

recommendations-for-2021. Guidehouse calculated the portfolio NTG ratio by dividing the total net savings by the total verified gross savings.

† Program did not report ex ante gross savings, and thus the evaluation did not calculate verified gross savings but only verified net savings.

‡ Program did not report ex ante gross savings, but evaluation estimated verified gross and net savings.

NA – not applicable or not calculated

Source: *Evaluation team analysis*

Table 3-3 breaks down the programs that had carryover electric and peak demand savings from measures sold or incented in CY2019 and CY2020 that were installed in CY2021.

Table 3-3. Carryover Energy Savings by Program

Savings Type	Sector	Program	Verified Gross Carryover	NTG*	Verified Net Carryover
Energy (kWh)	Business	Business Instant Discounts	37,282,079	0.83	30,800,360
Energy (kWh)	Residential	Lighting Discount	36,771,587	0.57	21,005,859
Energy (kWh)	Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	11,329,315	0.94	10,645,662
Energy (kWh)	Third Party	Elementary Energy Education	1,032,384	0.85	879,747
Energy (kWh)	Third Party	Food Bank-LED Distribution	16,993,324	1.00	16,993,324
Energy (kWh)	Third Party	Small Business Kits	1,457,084	0.96	1,402,761
Energy (kWh)	Third Party	UIC-ERC Income Eligible Kits	3,138,611	1.00	3,138,611
Energy (kWh)	Portfolio	Total	108,004,384	0.79	84,866,323
Peak Demand (kW)	Business	Business Instant Discounts	8,500.69	0.83	7,021.26
Peak Demand (kW)	Residential	Lighting Discount	4,996.30	0.57	2,839.48
Peak Demand (kW)	Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	1,480.24	0.94	1,387.40
Peak Demand (kW)	Third Party	Elementary Energy Education	90.05	0.84	75.64
Peak Demand (kW)	Third Party	Food Bank-LED Distribution	2,043.42	1.00	2,043.42
Peak Demand (kW)	Third Party	Small Business Kits	487.01	0.95	463.83
Peak Demand (kW)	Third Party	UIC-ERC Income Eligible Kits	324.00	1.00	324.00
Peak Demand (kW)	Portfolio	Total	17,921.72	0.79	14,155.04

* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

Source: *Evaluation team analysis*

Table 3-4 shows total summer peak demand savings by program.

Table 3-4. Summer Peak Demand Savings by Program

Sector	Program	Ex Ante Gross Savings (kW)	Verified Gross Realization Rate	Verified Gross Savings (kW)	NTG*	Verified Net Savings (kW)
Business	Business Instant Discounts	53,261	1.15	61,393	0.76	46,863
Business	Incentives - Custom + Standard	49,725	0.97	48,149	0.76	36,790
Business	Small Business	44,838	1.00	44,834	0.97	43,495
Business	Industrial Systems + Industrial Energy Management	6,504	0.93	6,063	0.78	4,729
Business	Non-residential New Construction	4,470	0.98	4,400	0.53	2,332
Business	RetroCommissioning + VCx	1,965	1.78	3,496	0.96	3,374
Business	LED Streetlighting	-	-	14	0.81	12
Business	Facility Assessments	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-
Business	Subtotal	160,762	1.05	168,350	0.82	137,594
Residential	Lighting Discount	-	-	42,498	0.55	23,326
Residential	Appliance Rebates	12,934	0.98	12,663	0.78	9,861
Residential	Residential HVAC	2,461	1.00	2,464	0.79	1,956
Residential	Single-Family Assessment	2,401	0.99	2,371	0.84	1,991
Residential	Multi-Family Assessments	1,027	1.00	1,031	0.88	903
Residential	Residential Behavior	-	-	-	-	18,290
Residential	Subtotal	18,823	3.24	61,027	0.92	56,327
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	1,386	8.83	12,240	0.86	10,543
Income Eligible	Single Family Retrofits - CBA + IHWAP	1,384	0.96	1,323	1.00	1,323
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	642	0.85	545	1.00	545
Income Eligible	Affordable Housing New Construction	206	0.97	199	1.00	199
Income Eligible	Public Housing Retrofits	163	1.05	170	1.00	170
Income Eligible	Subtotal	3,781	3.83	14,479	0.88	12,782
Third Party	Food Bank-LED Distribution	10,788	1.19	12,824	1.00	12,824
Third Party	UIC-ERC Income Eligible Kits	3,924	1.08	4,248	1.00	4,248
Third Party	Public Buildings in Distressed Communities	3,230	0.85	2,745	0.97	2,663
Third Party	Agriculture	2,078	0.95	1,966	0.80	1,573
Third Party	Business Telecomm	1,435	1.00	1,438	0.80	1,150
Third Party	Small Business Kits	1,478	0.83	1,222	0.96	1,176
Third Party	Non-Profit Retrofits	1,052	0.92	964	0.97	935
Third Party	Business Grocery	682	1.04	709	0.97	688
Third Party	Elementary Energy Education	489	1.18	579	0.93	540
Third Party	Subtotal	25,156	1.06	26,695	0.97	25,796
Pilots	Building Operator Certification	-	-	83	0.80	67
Pilots	Efficient Choice	-	-	52	0.62	33
Pilots	Upstream Commercial Food Service Equipment	40	1.13	45	0.80	36
Pilots	Electric Homes New Construction	14	1.10	15	0.80	12
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	163
Pilots	SEM Water Savings	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	-	-	-	-	-
Pilots	Subtotal	53	3.67	196	1.58	311
Voltage Optimization	Voltage Optimization	52,308	1.00	52,535	1.00	52,535
Voltage Optimization	Subtotal	52,308	1.00	52,535	1.00	52,535
Portfolio	Grand Total	260,884	1.24	323,281	0.88	285,345

* The program-level NTG values shown in this table is calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. Programs without ex ante gross or verified gross values were excluded from the calculation of the portfolio realization rate and NTG. These programs are typically those where consumption data analysis is used to calculate net savings directly.

NA – not applicable or not calculated

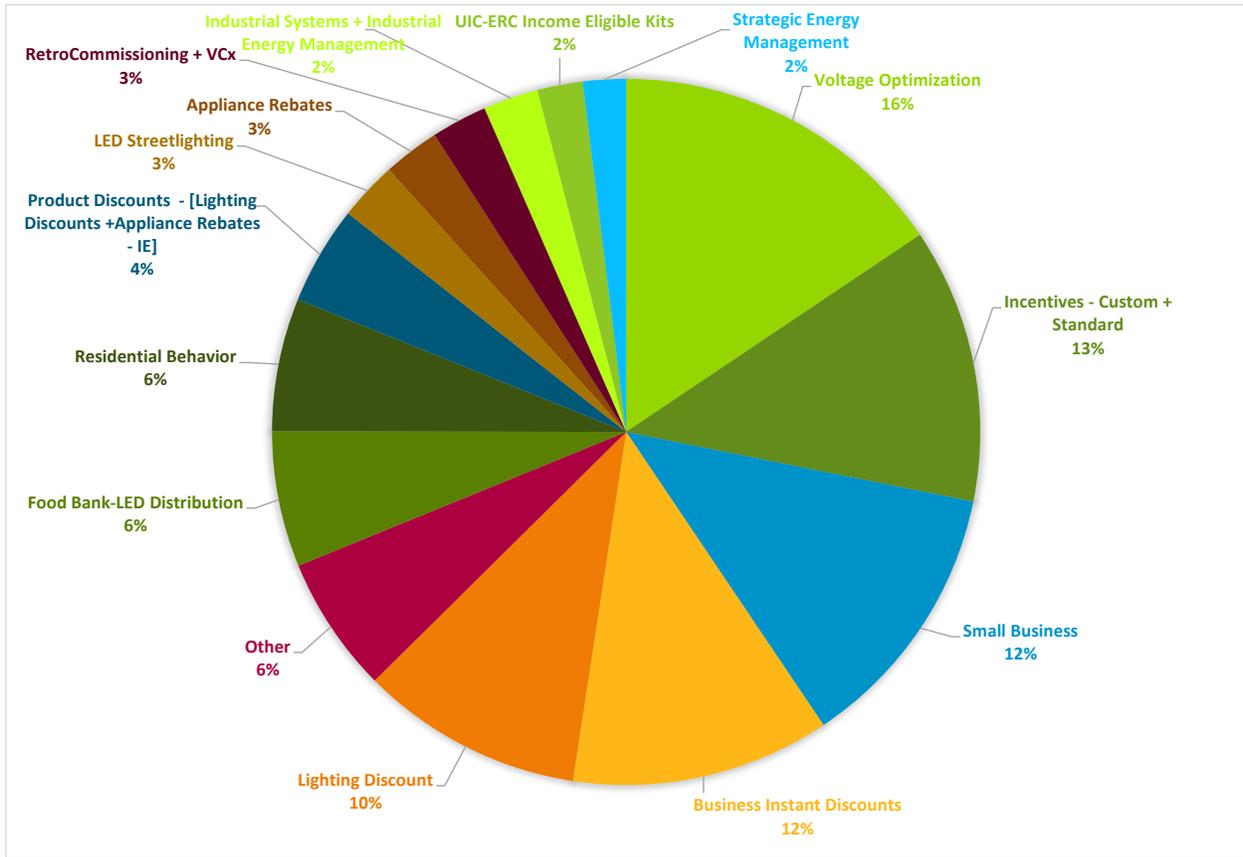
† Program did not report ex ante gross savings, and thus the evaluation did not calculate verified gross savings but only verified net savings.

‡ Program did not report ex ante gross savings, but evaluation estimated verified gross and net savings.

Source: Evaluation team analysis

Figure 3-1 shows energy savings for the CY2021 programs with highest net savings impact.

Figure 3-1. Net Energy Savings by Program – Electric Only



Source: Evaluation team analysis

Table 3-5 shows the net savings compared to goal by CY2021 programs.

Table 3-5. Comparing Electric Net Goals to Actual Achieved by CY2021 Program

Sector	Program	Verified Net Electric Savings (kWh)	2021 Original Plan Savings Goal (kWh)	Implementation Plan Savings Goal (kWh)	Verified Net over Original Plan	Verified Net over Implementation Plan
Business	Incentives - Custom + Standard	219,031,128	307,390,916	206,873,305	0.71	1.06
Business	Small Business	216,199,143	167,663,578	196,000,000	1.29	1.10
Business	Business Instant Discounts	174,827,945	195,530,914	174,162,854	0.89	1.00
Business	LED Streetlighting	46,856,560	67,180,170	50,938,753	0.70	0.92
Business	RetroCommissioning + VCx	44,436,322	61,113,567	44,523,777	0.73	1.00
Business	Industrial Systems + Industrial Energy Management	43,806,654	29,159,582	46,700,000	1.50	0.94
Business	Strategic Energy Management	34,145,568	27,977,500	33,000,000	1.22	1.03
Business	Non-residential New Construction	15,837,065	31,670,883	14,667,000	0.50	1.08
Business	Facility Assessments	2,198,863	1,654,145	3,428,838	1.33	0.64
Business	Subtotal	797,339,248	889,341,256	770,294,526	0.90	1.04
Residential	Lighting Discount	155,699,629	91,176,496	146,768,600	1.71	1.06
Residential	Residential Behavior	105,968,421	106,471,000	82,567,000	1.00	1.28
Residential	Appliance Rebates	44,878,796	33,862,940	23,256,306	1.33	1.93
Residential	Single-Family Assessment	14,246,262	15,066,644	17,359,000	0.95	0.82
Residential	Multi-Family Assessments	8,121,286	6,843,575	9,117,167	1.19	0.89
Residential	Residential HVAC	4,838,627	9,816,000	3,573,601	0.49	1.35
Residential	Subtotal	333,753,021	263,236,655	282,641,674	1.27	1.18
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	67,707,554	15,196,603	66,518,485	4.46	1.02
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	4,717,726	4,111,133	5,513,479	1.15	0.86
Income Eligible	Single Family Retrofits - CBA + IHWAP	3,780,257	6,837,748	3,448,414	0.55	1.10
Income Eligible	Public Housing Retrofits	1,404,776	1,538,944	2,187,000	0.91	0.64
Income Eligible	Affordable Housing New Construction	1,374,420	1,630,878	1,422,830	0.84	0.97
Income Eligible	Subtotal	78,984,734	29,315,307	79,090,209	2.69	1.00
Third Party	Food Bank-LED Distribution	91,190,056	-	89,473,000	-	1.02
Third Party	UIC-ERC Income Eligible Kits	32,807,229	-	30,538,560	-	1.07
Third Party	Business Telecomm	9,883,056	-	8,357,228	-	1.18
Third Party	Public Buildings in Distressed Communities	8,818,622	-	15,261,879	-	0.58
Third Party	Agriculture	8,127,502	-	8,849,912	-	0.92
Third Party	Business Grocery	6,729,031	-	5,013,502	-	1.34
Third Party	Small Business Kits	4,550,554	-	7,289,755	-	0.62
Third Party	Elementary Energy Education	4,359,185	1,377,478	7,446,419	3.16	0.59
Third Party	Non-Profit Retrofits	4,217,181	-	3,935,666	-	1.07
Third Party	Subtotal	170,682,416	1,377,478	176,165,921	123.91	0.97
Pilots	ENERGY STAR Retail Products Platform	1,268,111	-	-	-	-
Pilots	Building Operator Certification	605,146	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	470,131	-	-	-	-
Pilots	SEM Water Savings	307,653	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	279,722	-	-	-	-
Pilots	Efficient Choice	174,134	-	-	-	-
Pilots	Electric Homes New Construction	153,748	-	-	-	-
Pilots	Subtotal	3,258,645	-	-	-	-
Voltage Optimization	Voltage Optimization	270,951,740	260,000,000	263,833,000	1.04	1.03
Voltage Optimization	Subtotal	270,951,740	260,000,000	263,833,000	1.04	1.03
Other	Lighting Carryover	84,866,323	-	20,000,000	-	4.24
Other	Therm Conversion	110,041,036	110,160,000	110,041,000	1.00	1.00
Portfolio	Grand Total	1,849,877,162	1,553,430,695	1,702,066,329	1.19	1.09

Note: Carryover and therm conversion are in separate rows in this table so sector-level totals will not match tables where they are incorporated in the sector total.

Source: Goals values are from the ComEd - CY2021 Q4 Statewide Quarterly Report; ICC approved plan compliance filing (Commission's Final Order approving the EE Plan. For Section 8-104 programs); evaluation team analysis

4. Savings by Measure

Lighting measures contributed the most energy and peak demand savings to the portfolio by a substantial margin as shown in the end-use type categories in Table 4-1, Table 4-2, and Figure 4-1. Lighting measures contributed 60% of the portfolio net electric savings in CY2021. Voltage Optimization followed with 16% of net electric savings, with 6% from Residential Behavior, 3% from HVAC measures, and 8% from all other measures.

Table 4-1. Energy Savings by Measure Category – Electric Only

End Use Type	Ex Ante Gross Savings (kWh)	Verified Gross Savings (kWh)	Verified Net Savings (kWh)
Lighting	1,225,253,174	1,317,576,751	1,039,580,872
Voltage Optimization	270,533,831	270,951,740	270,951,740
Other	170,238,439	167,120,965	136,342,140
HVAC	76,021,351	74,513,052	58,516,360
Compressed Air	42,470,641	41,318,234	31,733,687
Refrigeration	30,991,209	31,934,471	25,941,401
Consumer Electronics	31,410,528	31,085,964	26,954,420
EMS & BAS	13,467,132	13,465,139	9,370,269
Telecomm	12,471,135	12,323,293	9,858,635
Appliances	11,281,298	10,528,439	8,685,995
Hot Water	7,680,130	8,342,508	8,294,175
Shell	16,350,909	6,409,851	6,364,173
Food Service Equipment	857,679	1,115,601	803,707
Water Leak Reduction	587,663	587,663	470,131
Behavior	-	-	105,968,421
Grand Total	1,909,615,119	1,987,273,672	1,739,836,125

Note: The verified savings in this table include secondary electric energy (kWh) savings from water supply and wastewater treatment plants for measures claimed by ComEd. The verified savings account for electric heating penalties, where applicable.

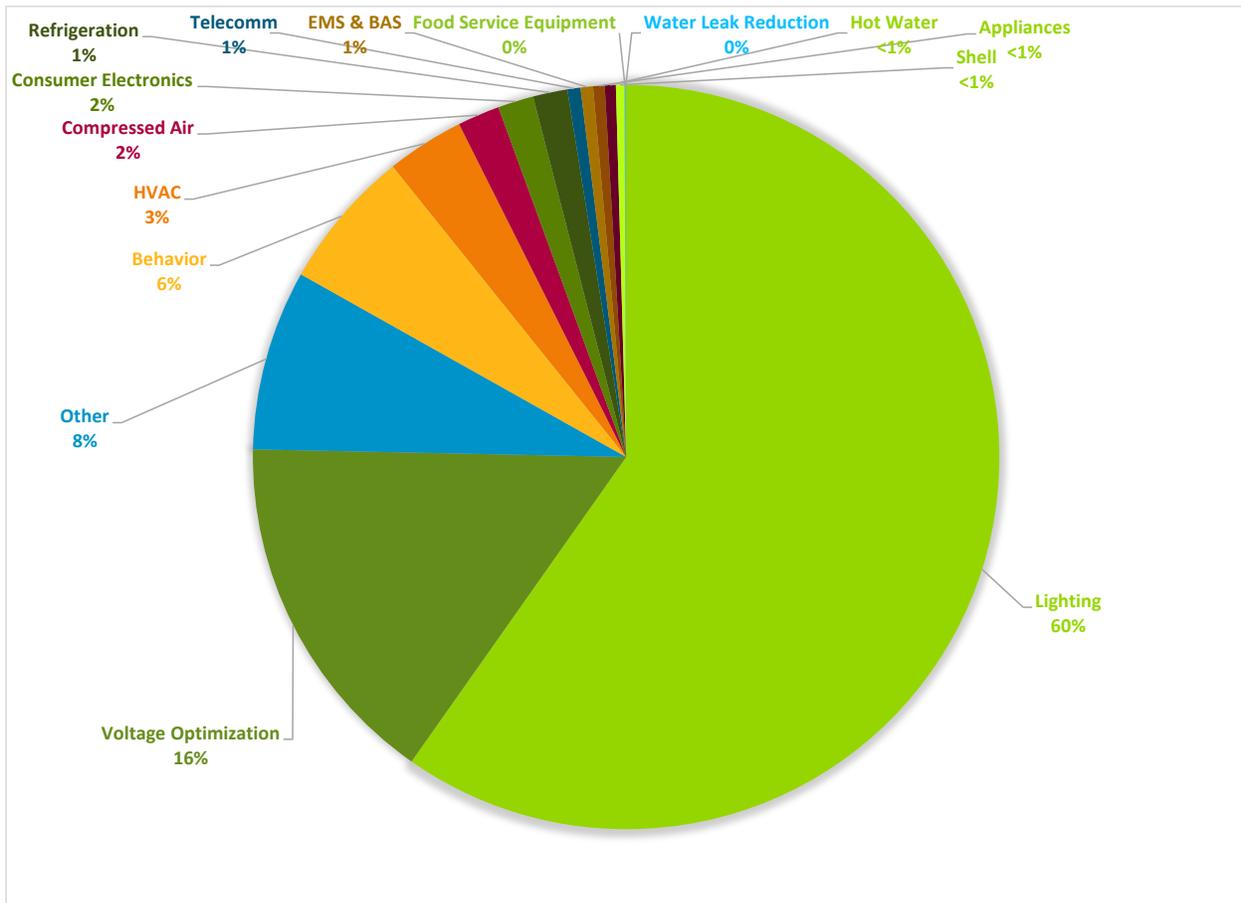
Source: Evaluation team analysis

Table 4-2. Summer Peak Demand Savings by Measure Category

End Use Type	Ex Ante Gross Savings (kW)	Verified Gross Savings (kW)	Verified Net Savings (kW)
Lighting	157,546	221,895	176,579
Voltage Optimization	52,308	52,535	52,535
HVAC	18,387	16,615	13,113
Other	13,147	13,732	9,634
Compressed Air	6,756	6,262	4,902
Refrigeration	3,795	3,600	2,795
Consumer Electronics	3,424	3,435	2,972
Appliances	1,813	1,707	1,358
Telecomm	1,431	1,434	1,147
Hot Water	1,044	998	998
Shell	1,094	908	908
Food Service Equipment	109	144	103
EMS & BAS	31	17	10
Behavior	-	-	18,290
Water Leak Reduction	-	-	-
Grand Total	260,884	323,281	285,345

Source: Evaluation team analysis

Figure 4-1. Net Energy Savings by End-use Type – Electric Only



Source: Evaluation tam analysis

Table 4-3 shows the end use measure savings by magnitude of impact in the respective portfolio sector. Lighting measures contributed the majority (70%) of net energy savings in the Business sector, 57% in the Residential sector, and 48% in the Income Eligible sector. The Third Party programs had 84% of savings from lighting. Next are the Behavioral programs which contributed 30% in net energy savings in the Residential sector. Appliances and the Building Operator Certification Training contributed the majority 40% and 19% respectively in net energy savings among the Pilots.

Table 4-3. Energy Savings by Measure Category and Sector

Sector	End Use Type	Verified Gross Savings (kWh)	Verified Net Savings (kWh)	Verified Net Savings (kWh) from Therms)	Verified Net Savings Total (kWh)	Percent Impact
Business	Lighting	721,462,994	604,059,865		604,059,865	69.6%
Business	Other	164,828,547	134,397,105	1,226,068	135,623,173	15.6%
Business	EMS & BAS	13,465,139	9,370,269	37,019,246	46,389,515	5.3%
Business	Compressed Air	41,229,652	31,662,821		31,662,821	3.6%
Business	HVAC	34,105,681	24,269,982	176,463	24,446,446	2.8%
Business	Refrigeration	27,838,111	21,967,932		21,967,932	2.5%
Business	Food Service Equipment	567,329	397,131	1,163,347	1,560,477	0.2%
Business	Shell	1,522,571	1,476,894		1,476,894	0.2%
Business	Consumer Electronics	508,803	461,222		461,222	0.1%
Business	Hot Water	78,748	76,386		76,386	0.0%
Business	Subtotal	1,005,607,575	828,139,608	39,585,123	867,724,731	100.0%
Residential	Lighting	342,551,997	197,281,382		197,281,382	55.6%
Residential	Behavior	-	105,968,421		105,968,421	29.8%
Residential	HVAC	37,509,389	31,377,388	301,827	31,679,215	8.9%
Residential	Consumer Electronics	17,056,196	12,980,317		12,980,317	3.7%
Residential	Appliances	9,800,693	6,716,241		6,716,241	1.9%
Residential	Hot Water	425,532	435,130		435,130	0.1%
Residential	Subtotal	407,343,808	354,758,879	301,827	355,060,706	100.0%
Income Eligible	Lighting	88,472,647	75,911,456		75,911,456	47.7%
Income Eligible	Shell	3,325,947	3,325,947	36,135,364	39,461,311	24.8%
Income Eligible	Hot Water	95,385	95,385	18,164,989	18,260,374	11.5%
Income Eligible	HVAC	2,539,377	2,539,377	14,635,292	17,174,669	10.8%
Income Eligible	Consumer Electronics	7,059,875	7,059,875		7,059,875	4.4%
Income Eligible	Other	46,356	46,356	723,663	770,019	0.5%
Income Eligible	Appliances	651,999	651,999		651,999	0.4%
Income Eligible	Subtotal	102,191,586	89,630,395	69,659,308	159,289,704	100.0%
Third Party	Lighting	165,089,113	162,328,169		162,328,169	83.9%
Third Party	Telecomm	12,323,293	9,858,635		9,858,635	5.1%
Third Party	Hot Water	7,742,842	7,687,273		7,687,273	4.0%
Third Party	Consumer Electronics	6,445,490	6,443,334		6,443,334	3.3%
Third Party	Refrigeration	4,096,360	3,973,469	494,777	4,468,246	2.3%
Third Party	Shell	1,561,332	1,561,332		1,561,332	0.8%
Third Party	Other	989,749	832,105		832,105	0.4%
Third Party	HVAC	357,002	328,618		328,618	0.2%
Third Party	Compressed Air	88,582	70,866		70,866	0.0%
Third Party	Food Service Equipment	13,460	13,056		13,056	0.0%
Third Party	Subtotal	198,707,224	193,096,858	494,777	193,591,635	100.0%
Pilots	Appliances	75,746	1,317,754		1,317,754	40.4%
Pilots	BOC Training	756,433	605,146		605,146	18.6%
Pilots	Other	499,880	461,427		461,427	14.2%
Pilots	Water Leak Reduction	587,663	470,131		470,131	14.4%
Pilots	Food Service Equipment	534,811	393,521		393,521	12.1%
Pilots	Consumer Electronics	15,599	9,672		9,672	0.3%
Pilots	HVAC	1,604	994		994	0.0%
Pilots	Subtotal	2,471,737	3,258,645		3,258,645	100.0%
Voltage Optimization	Voltage Optimization	270,951,740	270,951,740		270,951,740	100.0%
Voltage Optimization	Subtotal	270,951,740	270,951,740		270,951,740	100.0%
	Total	1,987,273,672	1,739,836,125	110,041,036	1,849,877,161	100.0%

Note: The verified savings in this table include secondary electric energy (kWh) savings from water supply and wastewater treatment plants for measures claimed by ComEd. The verified savings account for electric heating penalties, where applicable.

* Percent impact represent the verified net savings total contribution of each end-use within the sector, expressed in percentage. Where applicable, the verified net savings totals include electric kWh plus converted kWh that ComEd can claim towards goal.

Source: Evaluation team analysis

Eighteen (18) programs include measures that save water. That reduction in water produces secondary kWh savings from water supply and wastewater treatment. Table 4-4 shows the secondary measure level savings by program and end use. The savings in this table are included within the electricity savings in the previous tables in this section.

Table 4-4. Secondary Energy Savings from Water Reduction by Measure – Electric Only

Sector	Program	End Use Type	Research Category	Ex Ante Annual Water Savings (gallons)	Verified Gross			NTG*	Verified Net Savings (kWh)
					Ex Ante Gross Savings (KWh)	Realization Rate (RRwater)	Verified Gross Savings (kWh)		
Business	Small Business	Hot Water	Kitchen & Bathroom Faucet Aerator	529,145	-	-	13,797	0.97	13,383
Business	Non-residential New Construction	Other	Whole Building	5,412,633	21,309	0.83	17,690	0.53	9,375
Business	Small Business	Hot Water	High Efficiency Pre-Rinse Spray Valve	119,434	-	-	344	0.97	334
Business	Incentives - Custom + Standard	Food Service Equipment	Steamers	-	-	-	211	0.70	148
Business	Incentives - Custom + Standard	Food Service Equipment	High Efficiency Pre-Rinse Spray Valve	-	-	-	71	0.70	50
Business	Small Business	Hot Water	Low Flow Showerhead	5,401	-	-	21	0.97	21
Business		Subtotal		6,066,613	21,309	1.51	32,134	0.73	23,311
Residential	Appliance Rebates	Appliances	Clothes Washer	48,003,200	-	-	191,250	0.63	120,488
Residential	Multi-Family Assessments	Hot Water	Low Flow Showerhead	9,463,510	36,983	1.00	37,006	1.03	38,116
Residential	Multi-Family Assessments	Hot Water	Kitchen & Bathroom Faucet Aerator	4,132,300	15,066	1.00	15,071	1.03	15,523
Residential	Single-Family Assessment	Hot Water	Low Flow Showerhead	710,837,714	-	-	2,579	1.04	2,682
Residential	Single-Family Assessment	Hot Water	Kitchen & Bathroom Faucet Aerator	126,962,346	-	-	464	1.04	482
Residential		Subtotal		899,399,070	52,048	4.73	246,369	0.72	177,291
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	Hot Water	Kitchen & Bathroom Faucet Aerator	4,692,799	-	-	13,423	1.00	13,423
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	Hot Water	Low Flow Showerhead	2,905,800	-	-	9,383	1.00	9,383
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	Hot Water	Shower Timer	1,014,307	-	-	3,380	1.00	3,380
Income Eligible	Single Family Retrofits - CBA + IHWAP	Hot Water	Low Flow Showerhead	794,340	2,342	1.00	2,348	1.00	2,348
Income Eligible	Public Housing Retrofits	HVAC	Steam Trap	895,733	2,303	1.00	2,303	1.00	2,303
Income Eligible	Public Housing Retrofits	Hot Water	Kitchen & Bathroom Faucet Aerator	364,420	1,826	1.00	1,826	1.00	1,826
Income Eligible	Affordable Housing New Construction	Hot Water	Hot Water Conservation	2,511,522	1,722	1.00	1,722	1.00	1,722
Income Eligible	Public Housing Retrofits	Hot Water	Low Flow Showerhead	322,237	1,614	1.00	1,614	1.00	1,614
Income Eligible	Single Family Retrofits - CBA + IHWAP	Hot Water	Kitchen & Bathroom Faucet Aerator	158,102	474	1.00	471	1.00	471
Income Eligible	Affordable Housing New Construction	Appliances	Freezer & Refrigerator	174,374	315	1.00	315	1.00	315
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	HVAC	Steam Trap	57,106	-	-	147	1.00	147
Income Eligible	Public Housing Retrofits	Hot Water	Shower Timer	13,961	70	1.00	70	1.00	70
Income Eligible		Subtotal		13,904,701	10,666	3.47	37,004	1.00	37,004
Third Party	UIC-ERC Income Eligible Kits	Hot Water	Low Flow Showerhead	79,757,120	257,909	1.00	257,909	1.00	257,909
Third Party	UIC-ERC Income Eligible Kits	Hot Water	Kitchen & Bathroom Faucet Aerator	63,962,105	206,833	1.00	206,833	1.00	206,833
Third Party	Small Business Kits	Hot Water	High Efficiency Pre-Rinse Spray Valve	18,647,114	-	-	93,991	0.97	91,171
Third Party	Small Business Kits	Hot Water	Kitchen & Bathroom Faucet Aerator	21,359,437	-	-	67,132	0.97	65,118
Third Party	Elementary Energy Education	Hot Water	Low Flow Showerhead	59,940,441	-	-	49,509	1.00	49,509
Third Party	Elementary Energy Education	Hot Water	Kitchen & Bathroom Faucet Aerator	49,753,077	-	-	42,338	1.00	42,338
Third Party	Elementary Energy Education	Hot Water	Shower Timer	4,699,101	-	-	5,655	1.00	5,655
Third Party	Small Business Kits	Hot Water	Low Flow Showerhead	1,751,403	-	-	3,655	0.97	3,546
Third Party		Subtotal		299,869,797	464,742	1.56	727,023	0.99	722,080
Pilots	Water Infrastructure Leak Reduction	Water Leak Reduction	Other Non-lighting	228,573,759	587,663	1.00	587,663	0.80	470,131
Pilots	SEM Water Savings	Other	Whole Building	62,993,935	313,596	0.98	307,653	1.00	307,653
Pilots	Efficient Choice	Appliances	Clothes Washer	-	-	-	2,504	0.62	1,553
Pilots	Upstream Commercial Food Service Equipment	Food Service Equipment	Steamers	-	-	-	1,342	0.80	1,074
Pilots	Upstream Commercial Food Service Equipment	Food Service Equipment	ENERGY STAR Dishwasher	-	-	-	809	0.80	648
Pilots	Electric Homes New Construction	Other	Whole Building	258,855	-	-	760	0.80	608
Pilots	Efficient Choice	Food Service Equipment	ENERGY STAR Dishwasher	-	-	-	40	0.62	25
Pilots		Subtotal		291,426,549	901,259	1.00	900,772	0.87	781,690
Portfolio		Total		1,510,666,730	1,450,025	1.34	1,943,303	0.90	1,741,376

Note: The savings in this table reflect only secondary electric energy (kWh) savings from water supply and wastewater treatment plants for measures claimed by ComEd, not those claimed by gas utilities.

* A deemed value. Source is to be found on the IL SAG web site here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

Source: ComEd tracking data and evaluation team analysis

5. Lifetime Savings and Total Resource Cost Savings Summary

Table 5-1 provides the WAML and estimated lifetime savings from the verified first year gross and net savings (excluding converted gas savings measures). It includes the total cost by program and cost per unit. Table 5-2, below, shows the Total Resource Cost (TRC) table. It includes only the cost-effectiveness analysis savings inputs.

Table 5-1. Verified First Year and Lifetime Savings and Acquisition Costs – Electric Only

Sector	ComEd CY2021 Program	Verified Gross Realization Rate	First Year Annual Energy Savings (kWh) - Gross	First Year Peak Demand Savings (kW) - Gross	NTG*	First Year Annual Energy Savings (kWh) - Net	First Year Peak Demand Savings (kW) - Net	Lifetime Savings (kWh) Net	First Year Cost per First Year Net Annual Savings	First Year Cost per Net Lifetime Savings	Program Costs	Units #	Units Definition	Weighted Average Measure Life
Business	Incentives - Custom + Standard	1.00	293,103,873	48,149	0.75	219,031,128	36,790	2,881,560,904	0.24	0.02	52,572,564	6,762	Projects	14.0
Business	Business Instant Discounts	1.15	269,381,913	61,393	0.76	205,628,306	46,863	2,046,609,042	0.07	0.01	15,209,493	2,204,037	Lamps	11.2
Business	Small Business	0.96	222,829,653	44,834	0.97	216,199,143	43,495	2,476,947,097	0.30	0.03	64,676,952	6,909	Projects	12.5
Business	LED Streetlighting	1.00	54,194,123	14	0.86	46,856,560	12	897,929,010	0.41	0.02	19,211,600	69,224	Lamps	20.0
Business	Industrial Systems + Industrial Energy Management	0.96	53,893,793	6,063	0.81	43,806,654	4,729	326,008,697	0.23	0.03	10,174,699	383	Measures	7.6
Business	RetroCommissioning + VCx	0.92	45,838,183	3,496	0.97	44,436,322	3,374	350,028,407	0.27	0.03	11,858,789	278	Projects	7.9
Business	Strategic Energy Management	1.00	34,145,568	1.00	1.00	34,145,568	1.00	239,018,974	0.13	0.02	4,389,200	169	Projects	7.0
Business	Non-residential New Construction	0.99	29,881,254	4,400	0.53	15,837,065	2,332	275,564,929	0.34	0.02	5,392,398	88	Projects	17.4
Business	Facility Assessments	0.88	2,339,216	0.94	0.94	2,198,863	0.94	8,602,947	0.57	0.15	1,258,061	81	Measures	3.9
Business	Subtotal	1.02	1,005,607,575	168,350	0.82	823,139,808	137,494	9,502,270,006	0.22	0.02	184,743,757	2,287,931		12.5
Residential	Lighting Discount	1.13	318,243,559	42,498	0.56	176,705,487	23,326	1,431,751,246	0.11	0.01	19,463,046	6,206,395	Lamps	10.9
Residential	Appliance Rebates	0.97	56,668,076	12,663	0.79	44,878,796	9,861	451,471,934	0.31	0.03	14,092,824	428,717	Measures	10.1
Residential	Single-Family Assessment	0.98	16,921,456	2,371	0.84	14,246,262	1,991	100,823,486	0.37	0.05	5,334,185	417,559	Measures	9.7
Residential	Multi-Family Assessments	0.98	9,369,022	1,031	0.87	8,121,286	903	60,268,959	0.51	0.07	4,123,105	85,431	Measures	8.1
Residential	Residential HVAC	1.00	6,141,696	2,464	0.79	4,838,627	1,956	69,662,297	0.58	0.04	2,797,451	10,249	Measures	16.2
Residential	Residential Behavior	1.00	105,968,421	18,290	0.88	105,968,421	18,290	262,365,944	0.05	0.02	5,622,890	1,920,154	Households	5.0
Residential	Subtotal	1.09	407,343,808	61,027	0.87	354,758,879	56,327	2,376,343,864	0.14	0.02	51,433,501	9,068,505		10.7
Income Eligible	Product Discounts - (Lighting Discounts +Appliance Rebates - IE)	1.13	90,914,407	12,240	0.86	78,353,216	10,543	655,072,777	0.10	0.01	7,832,693	2,389,875	Measures	10.2
Income Eligible	Multi-Family Retrofits - IEMs + IHWAP	1.00	4,717,726	545	1.00	4,717,726	545	54,259,017	2.26	0.20	10,651,330	892	Projects	17.4
Income Eligible	Single Family Retrofits - CBA + IHWAP	0.28	3,780,257	1,323	1.00	3,780,257	1,323	51,257,133	3.25	0.24	12,279,893	14,884	Projects	18.8
Income Eligible	Public Housing Retrofits	1.01	1,404,776	170	1.00	1,404,776	170	11,061,400	1.19	0.15	1,675,884	135	Projects	7.3
Income Eligible	Affordable Housing New Construction	1.01	1,374,420	199	1.00	1,374,420	199	21,211,557	1.38	0.09	1,892,528	623	Households	15.4
Income Eligible	Subtotal	1.01	102,191,586	14,479	0.88	89,630,395	12,782	792,861,883	0.38	0.04	34,332,328	2,406,409		10.9
Third Party	Food Bank-LED Distribution	1.19	108,183,380	12,824	1.00	108,183,380	12,824	1,007,322,240	0.07	0.01	7,357,187	2,817,014	Lamps	11.6
Third Party	UIC-ERC Income Eligible Kits	1.11	35,945,840	4,248	1.00	35,945,840	4,248	319,971,254	0.14	0.02	5,156,300	840,000	Measures	9.6
Third Party	Business Telecom	0.99	12,350,428	1,438	0.80	9,883,056	1,150	106,450,699	0.29	0.03	2,817,832	70	Projects	10.8
Third Party	Agriculture	0.97	10,159,378	1,966	0.80	8,127,502	1,573	107,553,247	0.37	0.03	2,994,109	234	Projects	14.3
Third Party	Public Buildings in Distressed Communities	0.83	9,091,363	2,745	0.97	8,818,622	2,663	127,861,084	0.15	0.01	1,306,422	84,549	Measures	14.8
Third Party	Business Grocery	1.06	6,937,145	709	0.97	6,729,031	688	87,227,790	0.36	0.03	2,403,735	149	Measures	13.1
Third Party	Small Business Kits	0.82	6,148,377	1,222	0.97	5,953,315	1,176	35,921,124	0.29	0.05	1,743,180	74,916	Measures	7.2
Third Party	Elementary Energy Education	1.23	5,543,705	579	0.95	5,238,932	540	44,443,348	0.14	0.02	741,944	299,530	Measures	9.4
Third Party	Non-Profit Retrofits	0.99	4,347,609	964	0.97	4,217,181	935	53,868,283	0.52	0.04	2,195,809	16,889	Measures	13.6
Third Party	Subtotal	1.10	198,707,224	26,695	0.97	193,096,858	25,796	1,890,619,669	0.14	0.01	26,716,517	4,133,351		11.4
Pilots	Building Operator Certification	1.00	756,433	83	0.80	605,146	67	6,172,493	0.18	0.02	110,216	9	Participants	10.5
Pilots	Water Infrastructure Leak Reduction	1.00	587,663	0.80	0.80	470,131	0.80	13,711,511	0.99	0.03	465,653	90	Measures	29.2
Pilots	Upstream Commercial Food Service Equipment	1.13	349,653	45	0.80	279,722	36	3,671,853	0.60	0.05	168,908	90	Measures	13.1
Pilots	SEM Water Savings	0.98	307,653	1.00	1.00	307,653	1.00	1,567,597	0.62	0.12	191,458	6	Participants	5.9
Pilots	Efficient Choice	1.00	278,151	52	0.63	174,134	33	2,775,188	0.60	0.04	103,750	46,826	Measures	15.1
Pilots	Electric Homes New Construction	1.12	192,185	15	0.80	153,748	12	2,319,002	1.82	0.12	279,088	18	Participants	15.1
Pilots	ENERGY STAR Retail Products Platform	1.00	1,268,111	163	0.80	1,004,848	163	17,753,557	0.92	0.07	1,160,695	112,032	Measures	15.0
Pilots	Subtotal	1.79	2,471,737	196	1.32	3,258,845	311	47,871,203	0.76	0.05	2,479,768	159,071		15.6
Voltage Optimization	Voltage Optimization	1.00	270,951,740	52,535	1.00	270,951,740	52,535	4,064,276,100	-	-	-	530	Feeders	15.0
Voltage Optimization	Subtotal	1.00	270,951,740	52,535	1.00	270,951,740	52,535	4,064,276,100	-	-	-	530		15.0
Portfolio	Grand Total		1,987,273,672	323,281	0.88	1,739,836,126	285,345	18,674,342,124	0.17	0.02	299,705,871	18,055,797		12.1

Note: The following programs have combined savings and cost information: Incentives Programs (Standard + Custom); Small Business (Small Business Private + Public Small Facilities); Multi-Family (Retrofits + IHWAP); Single Family Retrofit (CBA + IHWAP), Product Discounts (Lighting Discounts +Appliance Rebates), Industrial Systems plus Industrial Management Systems.. The lifetime net savings are equal to values from the electric CPAS Table 2-3.

* Combined programs noted above have different EULs, hence the total lifetime savings shown in this table are different from Table 3-1.

Source: Cost values are from the ComEd - CY2021 Q4 Statewide Quarterly Report; Cost values for pilot programs were obtained from ComEd (File: ComEd CY2021 Cost Eff Data Request for TRC Calculations - 4-29 extract.xlsx). Evaluation team analysis.

Table 5-2. Total Resource Cost Savings Summary

Sector	Program	WAML (years)	Verified Gross Electric Energy Savings (kWh)	Verified Gross Peak Demand Reduction (kW)	Verified Gross Gas Savings (Therms)	Gross Secondary Savings due to Water Reduction (kWh)			Gross Heating Penalty (Therms)†			NTG (kWh)	NTG (kW)	NTG (Therms)	Verified Net Electric Energy Savings (kWh)	Verified Net Peak Demand Reduction (kW)	Verified Net Gas Savings (Therms)	Net Secondary Savings due to Water Reduction (kWh)			Net Heating Penalty (kWh)	Net Heating Penalty (Therms)
Business	Incentives - Custom + Standard	14.0	293,103,590	48,149	2,999,487	282	-	(1,191,487)	0.75	0.8	0.7	219,030,931	36,790	2,099,641	198	-	-	-	-	-	-	(949,595)
Business	Business Instant Discounts	11.2	269,381,913	61,393	-	-	-	(3,713,627)	0.76	0.8	-	205,628,306	46,863	-	-	-	-	-	-	-	-	(2,833,444)
Business	Small Business	12.5	222,815,491	44,834	367,704	14,162	(8,311,759)	(2,314,712)	0.97	1.0	1.0	216,185,405	43,495	360,050	13,738	(8,062,406)	(2,245,271)	-	-	-	-	-
Business	LED Streetlighting	20.0	54,194,123	14	-	-	-	-	0.86	0.8	-	46,856,560	12	-	-	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	7.6	53,893,793	6,063	-	-	-	-	0.81	0.8	-	43,806,654	4,729	-	-	-	-	-	-	-	-	-
Business	RetroCommissioning + VCx	7.9	45,838,183	3,496	68,573	-	-	-	0.97	1.0	0.9	44,436,322	3,374	64,459	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	7.0	34,145,568	-	-	-	-	-	1.00	-	-	34,145,568	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	17.4	29,863,565	4,400	78,927	17,690	(617,475)	(77,779)	0.53	0.5	0.5	15,827,689	2,332	41,831	9,375	(327,262)	(41,223)	-	-	-	-	-
Business	Facility Assessments	3.9	2,339,216	-	16,774	-	-	-	0.94	-	0.9	2,198,863	-	15,768	-	-	-	-	-	-	-	-
Residential	Lighting Discount	10.9	318,243,559	42,498	-	-	-	(7,360,519)	0.56	0.5	-	176,705,487	23,326	-	-	-	-	-	-	-	-	(4,047,315)
Residential	Appliance Rebates	10.1	56,476,826	12,663	6,344,294	191,250	-	-	0.79	0.8	0.9	44,758,309	9,861	5,675,167	120,488	-	-	-	-	-	-	-
Residential	Single-Family Assessment	9.7	16,918,413	2,371	-	3,042	(249,049)	(299,660)	0.84	0.8	-	14,243,097	1,991	-	3,164	(209,201)	(251,715)	-	-	-	-	-
Residential	Multi-Family Assessments	8.1	9,316,945	1,031	-	52,077	(136,848)	(46,903)	0.87	0.9	-	8,067,647	903	-	53,639	(109,645)	(39,867)	-	-	-	-	-
Residential	Residential HVAC	16.2	6,141,696	2,464	248,389	-	-	-	0.79	0.8	0.9	4,838,627	1,956	223,328	-	-	-	-	-	-	-	-
Residential	Residential Behavior	5.0	-	-	-	-	-	-	-	-	-	105,968,421	18,290	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - (Lighting Discounts +Appliance Rebates - IE)	10.2	90,914,407	12,240	-	-	-	(1,760,376)	0.86	0.9	-	78,353,216	10,543	-	-	-	-	-	-	-	-	(1,483,638)
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	17.4	4,691,393	545	703,896	26,334	(33,563)	(18,282)	1.00	1.0	1.0	4,691,393	545	703,896	26,334	(33,563)	(18,282)	-	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	18.8	3,777,438	1,323	380,863	2,820	-	(26,040)	1.00	1.0	1.0	3,777,438	1,323	380,863	2,820	-	(26,040)	-	-	-	-	-
Income Eligible	Public Housing Retrofits	7.3	1,398,963	170	60,865	5,813	(15,936)	(8,095)	1.00	1.0	1.0	1,398,963	170	60,865	5,813	(15,936)	(8,095)	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	15.4	1,372,382	199	-	2,038	-	(8,238)	1.00	1.0	-	1,372,382	199	-	2,038	-	(8,238)	-	-	-	-	-
Third Party	Food Bank-LED Distribution	11.6	108,183,380	12,824	653,124	-	-	(1,907,366)	1.00	1.0	1.0	108,183,380	12,824	653,124	-	-	(1,907,366)	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	9.6	35,481,098	4,248	577,891	464,742	-	(522,202)	1.00	1.0	1.0	35,481,098	4,248	577,891	464,742	-	(522,202)	-	-	-	-	-
Third Party	Business Telecomm	10.8	12,350,428	1,438	1,188	-	-	-	0.80	0.8	0.8	9,883,056	1,150	950	-	-	-	-	-	-	-	-
Third Party	Agriculture	14.3	10,159,378	1,966	-	-	-	(112,684)	0.80	0.8	-	8,127,502	1,573	-	-	-	-	-	-	-	-	(90,147)
Third Party	Public Buildings in Distressed Communities	14.8	9,091,363	2,745	-	-	-	(174,383)	0.97	1.0	-	8,818,622	2,663	-	-	-	-	-	-	-	-	(169,152)
Third Party	Business Grocery	13.1	6,937,145	709	17,403	-	-	(22,978)	0.97	1.0	1.0	6,729,031	688	16,881	-	-	-	-	-	-	-	(22,288)
Third Party	Small Business Kits	7.2	5,983,598	1,222	197,299	164,779	(23,654)	(60,184)	0.97	1.0	1.0	5,793,480	1,176	191,380	159,835	(22,944)	(58,219)	-	-	-	-	-
Third Party	Elementary Energy Education	9.4	5,446,202	579	30,152	97,503	(268,195)	(43,751)	0.94	0.9	1.0	5,141,429	540	30,152	97,503	(237,490)	(38,529)	-	-	-	-	-
Third Party	Non-Profit Retrofits	13.6	4,347,609	964	-	-	-	(43,170)	0.97	1.0	-	4,217,181	935	-	-	-	-	-	-	-	-	(125,391)
Pilots	Building Operator Certification	10.2	756,433	83	-	-	-	-	0.80	0.8	-	605,146	67	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	13.1	347,501	45	-	2,151	-	-	0.80	0.8	-	278,001	36	-	1,721	-	-	-	-	-	-	-
Pilots	Efficient Choice	15.9	275,607	52	1,726	2,544	-	-	0.63	0.6	0.6	172,557	33	1,070	1,577	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	15.1	191,424	15	-	760	-	(4,473)	0.80	0.8	-	153,139	12	-	608	(3,578)	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	14.0	-	-	-	-	-	-	-	-	-	1,268,111	163	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	5.1	-	-	-	307,653	-	-	-	-	-	-	-	-	307,653	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	29.2	-	-	-	587,663	-	-	-	-	-	-	-	-	470,131	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	15.0	270,951,740	52,535	-	-	-	-	1.00	1.0	-	270,951,740	52,535	-	-	-	-	-	-	-	-	-
Total		12.1	1,985,330,369	323,281	12,748,553	1,943,303	(9,704,122)	(19,798,534)	0.88	0.88	0.90	1,738,094,750	285,345	11,097,315	1,741,376	(9,063,901)	(14,886,017)					

Note: To avoid double counting, the verified gross kWh and net kWh used in the TRC analysis excludes secondary energy savings from water reduction measures. Table 5-2 represents the kWh savings from Table 3-1 minus those shown in Table 4-4.

* Program kWh savings account for electric heating penalties, where applicable. The electric heating penalties columns show the magnitude of adjustments applied to the program savings.

† Gas heating penalties represent the program therms heating penalties. These penalties are not required to be applied to the programs or portfolio savings.

‡ The heating penalty kWh and therms values for Residential HVAC Rebates Program are the fuel switch savings estimates for cost effectiveness analysis.

Source: Evaluation team analysis

6. High Impact Measures

Table 6-1 through Table 6-6 provide the list of CY2021 high impact measures and the percentage of verified gross and net electric savings for the business, residential, and income eligible sectors. These tables include converted gas savings measures.

Table 6-1. Summary Table of CY2021 High Impact Measures – Business Gross Impact

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Gross)	Weighted Average Measure Life*	Verified Gross Savings (kWh from Therms)	Lifetime Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year	Cumulative Percent
Business	Voltage Optimization	Voltage Optimization	270,951,740	15.0	-	4,064,276,100	270,951,740	19.6%	19.6%
Business	Interior & Exterior LED Fixtures	Lighting	256,710,278	13.2	-	3,386,502,370	256,710,278	18.6%	38.2%
Business	Other Lighting	Lighting	193,564,716	12.4	-	2,405,613,034	193,564,716	14.0%	52.2%
Business	Standard LED Lamps	Lighting	85,706,379	7.0	-	602,207,184	85,706,379	6.2%	58.4%
Business	TLED Lamps	Lighting	82,843,860	15.0	-	1,241,885,262	82,843,860	6.0%	64.4%
Business	EMS	EMS & BAS	13,465,139	15.0	52,884,637	201,977,084	66,349,776	4.8%	69.2%
Business	Whole Building	Other	64,026,822	11.9	2,313,336	758,952,801	66,340,158	4.8%	74.0%
Business	Streetlights	Lighting	54,194,123	20.0	-	1,082,483,468	54,194,123	3.9%	77.9%
Business	Other Non-lighting	Other	48,275,355	14.9	-	718,973,848	48,275,355	3.5%	81.4%
Business	Retro & Virtual Commissioning	Other	45,838,183	7.9	-	362,655,958	45,838,183	3.3%	84.7%
Business	Carryover Lamps	Lighting	38,739,163	9.6	-	373,562,707	38,739,163	2.8%	87.5%
Business	Leak Repair	Compressed Air	21,557,084	3.0	-	64,671,252	21,557,084	1.6%	89.0%
Business	Compressor system	Compressed Air	19,306,642	12.7	-	246,000,054	19,306,642	1.4%	90.4%
Business	Commercial & Industrial Refrigeration	Refrigeration	18,647,643	12.4	-	231,299,884	18,647,643	1.3%	91.8%
Business	Occupancy Sensor & Other Controls	Lighting	16,920,837	10.6	-	179,007,226	16,920,837	1.2%	93.0%
Business	Variable Speed Drive	HVAC	16,305,779	15.0	-	244,586,683	16,305,779	1.2%	94.2%
Business	LED HID	Lighting	9,056,697	14.5	-	131,191,058	9,056,697	0.7%	94.8%
Business	Network Cabling	Telecomm	6,911,077	10.0	-	69,110,775	6,911,077	0.5%	95.3%
Business	LED Exit Signs, Channel Sign & Nightlight	Lighting	6,735,413	5.0	-	33,677,063	6,735,413	0.5%	95.8%
Business	EC Motor for Cooler or Freezer	Refrigeration	5,882,782	14.3	-	84,289,520	5,882,782	0.4%	96.3%
Business	Equipment Optimization	Telecomm	5,412,216	11.8	-	63,616,808	5,412,216	0.4%	96.6%
Business	HVAC Control System & Maintenance	HVAC	5,113,264	8.0	-	40,765,076	5,113,264	0.4%	97.0%
Business	Data Center	Other	5,031,792	14.6	-	73,700,142	5,031,792	0.4%	97.4%
Business	Water & Air-Cooled Chiller	HVAC	4,900,021	18.0	-	88,151,843	4,900,021	0.4%	97.7%
Business	Decorative & Directional LED Lamps	Lighting	3,243,972	6.6	-	21,451,937	3,243,972	0.2%	98.0%
Business	Anti-Sweat Heater Controls for Glass Door Cooler or Refrigerator	Refrigeration	3,009,029	10.0	-	30,090,293	3,009,029	0.2%	98.2%
Business	CHP	Other	2,240,756	25.0	-	56,018,893	2,240,756	0.2%	98.3%
Business	Programmable/Reprogrammable Thermostat	HVAC	1,917,042	9.6	-	18,441,196	1,917,042	0.1%	98.5%
Business	Motors/Fans/Pumps	HVAC	1,812,070	19.7	-	35,703,368	1,812,070	0.1%	98.6%
Business	Demand Control Ventilation	Food Service Equipment	-	-	1,661,924	1,661,924	0.1%	98.7%	
Business	Night Covers	Refrigeration	1,656,049	5.0	-	8,280,247	1,656,049	0.1%	98.9%
Business	LED Refrigerated Display Case Lighting	Refrigeration	1,619,278	10.3	-	16,736,645	1,619,278	0.1%	99.0%
Business	Demand Control Ventilation	HVAC	1,433,336	10.3	181,921	14,718,224	1,615,257	0.1%	99.1%
Business	HVAC Economizer	HVAC	1,535,011	11.2	-	17,243,792	1,535,011	0.1%	99.2%
Business	Weather Shipping	Shell	1,522,571	10.0	-	15,225,712	1,522,571	0.1%	99.3%
Business	Omni-Directional LED Lamps	Lighting	1,457,136	6.8	-	9,871,098	1,457,136	0.1%	99.4%
Business	High Efficiency Pre-Rinse Spray Valve	Hot Water	1,369,056	5.0	-	6,845,282	1,369,056	0.1%	99.5%
Business	Linear Fluorescents	Lighting	1,091,559	13.0	-	14,209,786	1,091,559	0.1%	99.6%
Business	Room & Central Air Conditioner	HVAC	836,897	14.9	-	12,461,506	836,897	0.1%	99.7%
Business	Specialty LED Lamps	Lighting	642,084	7.4	-	4,782,401	642,084	0.0%	99.7%
Business	Other Non-lighting	Food Service Equipment	567,329	16.9	-	9,572,003	567,329	0.0%	99.7%
Business	Kitchen & Bathroom Faucet Aerator	Hot Water	548,385	10.0	-	5,483,850	548,385	0.0%	99.8%
Business	Strip Curtains for Cooler or Freezer	Refrigeration	431,067	4.0	-	1,724,267	431,067	0.0%	99.8%
Business	Advanced Power Strips Tier 1	Consumer Electronics	304,772	7.0	-	2,133,407	304,772	0.0%	99.8%
Business	No-Loss Condensate Drains	Compressed Air	251,958	10.0	-	2,519,580	251,958	0.0%	99.9%
Business	Air Conditioner Tune-Up	HVAC	246,799	3.0	-	740,396	246,799	0.0%	99.9%
Business	ENERGY STAR Solid or Glass Door Refrigerator or Freezer	Refrigeration	245,975	15.0	-	3,681,601	245,975	0.0%	99.9%
Business	Evaporator Fan Control	Refrigeration	216,292	13.0	-	2,811,799	216,292	0.0%	99.9%
Business	Waste Water Treatment	Other	203,858	13.0	-	2,650,157	203,858	0.0%	99.9%
Business	High-Efficiency Air Nozzles	Compressed Air	200,135	15.0	-	3,002,028	200,135	0.0%	99.9%
Business	Battery Charger	Consumer Electronics	187,117	15.0	-	2,806,755	187,117	0.0%	99.9%
Business	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	134,326	16.1	-	2,167,381	134,326	0.0%	100.0%
Business	Auto Closer for Walk-in Cooler or Freezer	Refrigeration	133,839	8.0	-	1,070,712	133,839	0.0%	100.0%
Business	Packaged RTU Sealing	HVAC	120,783	5.0	-	603,913	120,783	0.0%	100.0%
Business	Bathroom & Kitchen Exhaust Fan	HVAC	92,790	7.0	-	649,531	92,790	0.0%	100.0%
Business	Smart Socket	Consumer Electronics	71,850	7.0	-	502,949	71,850	0.0%	100.0%
Business	Beverage, Snack and Cooler Machine Controls	Refrigeration	57,481	5.0	-	287,406	57,481	0.0%	100.0%
Business	Q-Sync Motors for Reach-in Coolers/Freezers	Refrigeration	35,036	10.0	-	350,360	35,036	0.0%	100.0%
Business	Computer Power Controls	Consumer Electronics	16,914	3.0	-	50,742	16,914	0.0%	100.0%
Business	Tune-up	HVAC	14,566	3.0	-	43,698	14,566	0.0%	100.0%
Business	Low Flow Showerhead	Hot Water	13,617	10.0	-	136,175	13,617	0.0%	100.0%
Business	Ice Machine, Fryer, Combination & Convection Ovens	Food Service Equipment	13,460	12.0	-	161,521	13,460	0.0%	100.0%
Business	Efficient Dryer	Compressed Air	2,414	13.0	-	31,384	2,414	0.0%	100.0%
Pilots - Bus	BOC Training	Other	756,433	10.2	-	7,715,617	756,433	37.8%	37.8%
Pilots - Bus	Other Non-lighting	Water Leak Reduction	587,663	29.2	-	17,139,388	587,663	29.4%	67.2%
Pilots - Bus	Whole Building	Other	307,653	5.1	-	1,569,933	307,653	15.4%	82.5%
Pilots - Bus	Steamers	Food Service Equipment	186,357	12.0	-	2,236,281	186,357	9.3%	91.8%
Pilots - Bus	Ice Machine, Fryer, Combination & Convection Ovens	Food Service Equipment	69,088	11.6	-	801,113	69,088	3.5%	95.3%
Pilots - Bus	Demand Control Ventilation	Food Service Equipment	38,487	20.0	-	769,730	38,487	1.9%	97.2%
Pilots - Bus	ENERGY STAR Dishwasher	Food Service Equipment	25,915	16.4	-	425,019	25,915	1.3%	98.5%
Pilots - Bus	Freezer & Refrigerator	Appliances	16,705	12.0	-	200,458	16,705	0.8%	99.3%
Pilots - Bus	Freezer & Refrigerator	Food Service Equipment	13,101	12.0	-	157,216	13,101	0.7%	100.0%

Note: Cumulative percent is the cumulative sum of percent 1st year kWh achieved by the high impact measure. Percent 1st year kWh is the kWh total for the measure over the sum of kWh total for all measures (electric kWh plus counted kWh converted, where applicable).

Source: Evaluation team analysis

Table 6-2. Summary Table of CY2021 High Impact Measures – Business Net Impact

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Net)	Verified Net Savings (kWh from Therms)	Verified Net Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Business	Voltage Optimization	Voltage Optimization	270,951,740	-	270,951,740	22.9%	22.9%
Business	Interior & Exterior LED Fixtures	Lighting	239,507,009	-	239,507,009	20.3%	43.2%
Business	Other Lighting	Lighting	153,300,317	-	153,300,317	13.0%	56.1%
Business	TLED Lamps	Lighting	62,961,334	-	62,961,334	5.3%	61.5%
Business	Standard LED Lamps	Lighting	62,286,035	-	62,286,035	5.3%	66.7%
Business	Whole Building	Other	49,982,633	1,226,068	51,208,701	4.3%	71.1%
Business	Streetlights	Lighting	46,856,560	-	46,856,560	4.0%	75.0%
Business	EMS	EMS & BAS	9,370,269	37,019,246	46,389,515	3.9%	78.9%
Business	Retro & Virtual Commissioning	Other	44,436,322	-	44,436,322	3.8%	82.7%
Business	Other Non-lighting	Other	37,000,995	-	37,000,995	3.1%	85.8%
Business	Carryover Lamps	Lighting	32,203,121	-	32,203,121	2.7%	88.6%
Business	Leak Repair	Compressed Air	16,598,955	-	16,598,955	1.4%	90.0%
Business	Occupancy Sensor & Other Controls	Lighting	16,142,885	-	16,142,885	1.4%	91.3%
Business	Compressor system	Compressed Air	14,694,423	-	14,694,423	1.2%	92.6%
Business	Commercial & Industrial Refrigeration	Refrigeration	13,053,177	-	13,053,177	1.1%	93.7%
Business	Variable Speed Drive	HVAC	10,836,017	-	10,836,017	0.9%	94.6%
Business	LED HID	Lighting	6,520,822	-	6,520,822	0.6%	95.1%
Business	EC Motor for Cooler or Freezer	Refrigeration	5,706,299	-	5,706,299	0.5%	95.6%
Business	Network Cabling	Telecomm	5,528,862	-	5,528,862	0.5%	96.1%
Business	LED Exit Signs, Channel Sign & Nightlight	Lighting	5,426,085	-	5,426,085	0.5%	96.5%
Business	Equipment Optimization	Telecomm	4,329,773	-	4,329,773	0.4%	96.9%
Business	HVAC Control System & Maintenance	HVAC	4,018,059	-	4,018,059	0.3%	97.3%
Business	Decorative & Directional LED Lamps	Lighting	3,146,653	-	3,146,653	0.3%	97.5%
Business	Anti-Sweat Heater Controls for Glass Door Cooler or Refrigerator	Refrigeration	2,918,758	-	2,918,758	0.2%	97.8%
Business	Water & Air-Cooled Chiller	HVAC	2,535,553	-	2,535,553	0.2%	98.0%
Business	Data Center	Other	2,360,978	-	2,360,978	0.2%	98.2%
Business	Programmable/Reprogrammable Thermostat	HVAC	1,903,514	-	1,903,514	0.2%	98.3%
Business	Night Covers	Refrigeration	1,606,368	-	1,606,368	0.1%	98.5%
Business	LED Refrigerated Display Case Lighting	Refrigeration	1,570,699	-	1,570,699	0.1%	98.6%
Business	Demand Control Ventilation	HVAC	1,390,336	176,463	1,566,799	0.1%	98.7%
Business	Weather Stripping	Shell	1,476,894	-	1,476,894	0.1%	98.9%
Business	Omni-Directional LED Lamps	Lighting	1,413,422	-	1,413,422	0.1%	99.0%
Business	Motors/Fans/Pumps	HVAC	1,354,176	-	1,354,176	0.1%	99.1%
Business	High Efficiency Pre-Rinse Spray Valve	Hot Water	1,327,985	-	1,327,985	0.1%	99.2%
Business	HVAC Economizer	HVAC	1,187,659	-	1,187,659	0.1%	99.3%
Business	Demand Control Ventilation	Food Service Equipment	-	1,163,347	1,163,347	0.1%	99.4%
Business	CHP	Other	1,142,785	-	1,142,785	0.1%	99.5%
Business	Room & Central Air Conditioner	HVAC	811,791	-	811,791	0.1%	99.6%
Business	Linear Fluorescents	Lighting	731,345	-	731,345	0.1%	99.6%
Business	Specialty LED Lamps	Lighting	551,330	-	551,330	0.0%	99.7%
Business	Kitchen & Bathroom Faucet Aerator	Hot Water	531,933	-	531,933	0.0%	99.7%
Business	Strip Curtains for Cooler or Freezer	Refrigeration	418,135	-	418,135	0.0%	99.8%
Business	Other Non-lighting	Food Service Equipment	397,131	-	397,131	0.0%	99.8%
Business	Advanced Power Strips Tier 1	Consumer Electronics	295,629	-	295,629	0.0%	99.8%
Business	No-Loss Condensate Drains	Compressed Air	243,836	-	243,836	0.0%	99.8%
Business	Air Conditioner Tune-Up	HVAC	239,395	-	239,395	0.0%	99.9%
Business	ENERGY STAR Solid or Glass Door Refrigerator or Freezer	Refrigeration	238,596	-	238,596	0.0%	99.9%
Business	Evaporator Fan Control	Refrigeration	209,804	-	209,804	0.0%	99.9%
Business	High-Efficiency Air Nozzles	Compressed Air	194,131	-	194,131	0.0%	99.9%
Business	Battery Charger	Consumer Electronics	149,694	-	149,694	0.0%	99.9%
Business	Auto Closer for Walk-in Cooler or Freezer	Refrigeration	129,824	-	129,824	0.0%	99.9%
Business	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	123,281	-	123,281	0.0%	100.0%
Business	Packaged RTU Sealing	HVAC	117,159	-	117,159	0.0%	100.0%
Business	Waste Water Treatment	Other	103,968	-	103,968	0.0%	100.0%
Business	Bathroom & Kitchen Exhaust Fan	HVAC	74,232	-	74,232	0.0%	100.0%
Business	Smart Socket	Consumer Electronics	69,694	-	69,694	0.0%	100.0%
Business	Beverage, Snack and Cooler Machine Controls	Refrigeration	55,757	-	55,757	0.0%	100.0%
Business	Q-Sync Motors for Reach-in Coolers/Freezers	Refrigeration	33,985	-	33,985	0.0%	100.0%
Business	Computer Power Controls	Consumer Electronics	15,899	-	15,899	0.0%	100.0%
Business	Low Flow Showerhead	Hot Water	13,209	-	13,209	0.0%	100.0%
Business	Ice Machine, Fryer, Combination & Convection Ovens	Food Service Equipment	13,056	-	13,056	0.0%	100.0%
Business	Tune-up	HVAC	7,429	-	7,429	0.0%	100.0%
Business	Efficient Dryer	Compressed Air	2,342	-	2,342	0.0%	100.0%
Pilots - Bus	BOC Training	Other	605,146	-	605,146	36.4%	36.4%
Pilots - Bus	Other Non-lighting	Water Leak Reduction	470,131	-	470,131	28.3%	64.7%
Pilots - Bus	Whole Building	Other	307,653	-	307,653	18.5%	83.2%
Pilots - Bus	Steamers	Food Service Equipment	149,085	-	149,085	9.0%	92.1%
Pilots - Bus	Ice Machine, Fryer, Combination & Convection Ovens	Food Service Equipment	55,270	-	55,270	3.3%	95.5%
Pilots - Bus	Demand Control Ventilation	Food Service Equipment	30,789	-	30,789	1.9%	97.3%
Pilots - Bus	ENERGY STAR Dishwasher	Food Service Equipment	20,732	-	20,732	1.2%	98.6%
Pilots - Bus	Freezer & Refrigerator	Appliances	13,364	-	13,364	0.8%	99.4%
Pilots - Bus	Freezer & Refrigerator	Food Service Equipment	10,481	-	10,481	0.6%	100.0%

Note: Cumulative percent is the cumulative sum of percent 1st year kWh achieved by the high impact measure. Percent 1st year kWh is the kWh total for the measure over the sum of kWh total for all measures (electric kWh plus counted kWh converted, where applicable).

Source: Evaluation team analysis

Table 6-3. Summary Table of CY2021 High Impact Measures – Residential Gross Impact

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Gross)	Weighted Average Measure Life*	Verified Gross Savings (kWh from Therms)	Lifetime Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Residential	Specialty LED Lamps	Lighting	97,630,476	9.3	-	907,553,449	97,630,476	23.6%	23.6%
Residential	Decorative & Directional LED Lamps	Lighting	94,292,361	9.4	-	883,377,565	94,292,361	22.8%	46.4%
Residential	Interior & Exterior LED Fixtures	Lighting	88,044,450	14.9	-	1,314,411,556	88,044,450	21.3%	67.8%
Residential	Carryover Lamps	Lighting	37,803,972	9.5	-	358,898,805	37,803,972	9.1%	76.9%
Residential	Advanced Thermostat	HVAC	30,943,660	11.0	-	340,380,256	30,943,660	7.5%	84.4%
Residential	Advanced Power Strips Tier 1	Consumer Electronics	17,056,196	7.0	-	119,393,375	17,056,196	4.1%	88.5%
Residential	LED Exit Signs, Channel Sign & Nightlight	Lighting	8,099,274	7.6	-	61,220,851	8,099,274	2.0%	90.5%
Residential	Omni-Directional LED Lamps	Lighting	7,917,471	9.4	-	74,599,043	7,917,471	1.9%	92.4%
Residential	Standard LED Lamps	Lighting	4,739,418	7.3	-	34,452,711	4,739,418	1.1%	93.5%
Residential	Networked Lighting & Controls	Lighting	4,696,220	10.0	-	46,962,203	4,696,220	1.1%	94.7%
Residential	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	4,001,106	14.4	-	57,806,441	4,001,106	1.0%	95.6%
Residential	Dehumidifier	Appliances	3,491,284	12.0	-	41,895,410	3,491,284	0.8%	96.5%
Residential	Air Purifier	Appliances	2,207,965	9.0	-	19,871,685	2,207,965	0.5%	97.0%
Residential	Room & Central Air Conditioner	HVAC	2,015,003	18.0	-	36,270,047	2,015,003	0.5%	97.5%
Residential	Low Flow Showerhead	Hot Water	1,963,845	10.0	-	19,638,450	1,963,845	0.5%	98.0%
Residential	Clothes Washer	Appliances	1,910,688	14.0	-	26,749,625	1,910,688	0.5%	98.4%
Residential	Freezer & Refrigerator	Appliances	1,892,920	17.1	-	32,402,935	1,892,920	0.5%	98.9%
Residential	LED HID	Lighting	1,653,450	11.6	-	19,219,685	1,653,450	0.4%	99.3%
Residential	Kitchen & Bathroom Faucet Aerator	Hot Water	1,194,236	10.0	-	11,942,363	1,194,236	0.3%	99.6%
Residential	Duct Insulation & Sealing	HVAC	18,632	20.0	342,985	372,646	361,617	0.1%	99.7%
Residential	Programmable/Reprogrammable Thermostat	HVAC	297,996	15.2	-	4,526,161	297,996	0.1%	99.8%
Residential	LED Night Light	Lighting	236,675	8.5	-	2,014,340	236,675	0.1%	99.8%
Residential	Clothes Dryer	Appliances	187,339	16.0	-	2,997,423	187,339	0.0%	99.9%
Residential	Shower Timer	Hot Water	186,205	2.0	-	372,409	186,205	0.0%	99.9%
Residential	Bathroom & Kitchen Exhaust Fan	HVAC	154,516	19.0	-	2,935,800	154,516	0.0%	99.9%
Residential	Water Cooler	Appliances	110,498	10.0	-	1,104,976	110,498	0.0%	100.0%
Residential	Tune-up	HVAC	70,934	3.0	-	212,802	70,934	0.0%	100.0%
Residential	Water Heater Temperature Setback	Hot Water	26,702	2.0	-	53,405	26,702	0.0%	100.0%
Residential	Pipe Insulation	Hot Water	18,957	15.0	-	284,362	18,957	0.0%	100.0%
Residential	Occupancy Sensor & Other Controls	Lighting	17,521	10.0	-	175,213	17,521	0.0%	100.0%
Residential	ECM Furnace Blower & Motor	HVAC	7,542	6.0	-	45,252	7,542	0.0%	100.0%
Pilots - Res	Freezer & Refrigerator	Food Service Equipment	200,695	17.0	-	3,411,814	200,695	42.7%	42.7%
Pilots - Res	Whole Building	Other	192,185	15.1	-	2,898,753	192,185	40.9%	83.5%
Pilots - Res	Electric Dryers	Appliances	32,660	16.0	-	522,559	32,660	6.9%	90.5%
Pilots - Res	Clothes Washer	Appliances	24,773	14.0	-	346,817	24,773	5.3%	95.7%
Pilots - Res	Other Non-lighting	Consumer Electronics	15,599	6.0	-	93,500	15,599	3.3%	99.1%
Pilots - Res	Room & Central Air Conditioner	HVAC	1,604	12.0	-	19,247	1,604	0.3%	99.4%
Pilots - Res	ENERGY STAR Dishwasher	Food Service Equipment	1,169	11.0	-	12,855	1,169	0.2%	99.6%
Pilots - Res	Air Purifier	Appliances	717	9.0	-	6,455	717	0.2%	99.8%
Pilots - Res	Freezer & Refrigerator	Appliances	513	22.0	-	11,289	513	0.1%	99.9%
Pilots - Res	Dehumidifier	Appliances	379	12.0	-	4,543	379	0.1%	100.0%
Pilots - Res	Other Non-lighting	Other	43	10.0	-	429.7	43	0.0%	100.0%

Note: Cumulative percent is the cumulative sum of percent 1st year kWh achieved by the high impact measure. Percent 1st year kWh is the kWh total for the measure over the sum of kWh total for all measures (electric kWh plus counted kWh converted, where applicable).

Source: Evaluation team analysis

Table 6-4. Summary Table of CY2021 High Impact Measures – Residential Net Impact

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Net)	Verified Net Savings (kWh from Therms)	Verified Net Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Residential	Specialty LED Lamps	Lighting	59,857,685	-	59,857,685	23.5%	23.5%
Residential	Decorative & Directional LED Lamps	Lighting	49,166,311	-	49,166,311	19.3%	42.9%
Residential	Interior & Exterior LED Fixtures	Lighting	45,845,938	-	45,845,938	18.0%	60.9%
Residential	Advanced Thermostat	HVAC	26,234,143	-	26,234,143	10.3%	71.2%
Residential	Carryover Lamps	Lighting	21,885,605	-	21,885,605	8.6%	79.8%
Residential	Advanced Power Strips Tier 1	Consumer Electronics	12,980,317	-	12,980,317	5.1%	84.9%
Residential	LED Exit Signs, Channel Sign & Nightlight	Lighting	6,599,124	-	6,599,124	2.6%	87.5%
Residential	Omni-Directional LED Lamps	Lighting	6,498,249	-	6,498,249	2.6%	90.1%
Residential	Standard LED Lamps	Lighting	4,332,107	-	4,332,107	1.7%	91.8%
Residential	Networked Lighting & Controls	Lighting	3,756,976	-	3,756,976	1.5%	93.2%
Residential	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	3,084,086	-	3,084,086	1.2%	94.5%
Residential	Dehumidifier	Appliances	2,339,160	-	2,339,160	0.9%	95.4%
Residential	Low Flow Showerhead	Hot Water	1,974,685	-	1,974,685	0.8%	96.2%
Residential	Air Purifier	Appliances	1,744,292	-	1,744,292	0.7%	96.8%
Residential	Room & Central Air Conditioner	HVAC	1,612,046	-	1,612,046	0.6%	97.5%
Residential	LED HID	Lighting	1,372,363	-	1,372,363	0.5%	98.0%
Residential	Freezer & Refrigerator	Appliances	1,229,505	-	1,229,505	0.5%	98.5%
Residential	Clothes Washer	Appliances	1,203,733	-	1,203,733	0.5%	99.0%
Residential	Kitchen & Bathroom Faucet Aerator	Hot Water	1,196,527	-	1,196,527	0.5%	99.4%
Residential	Duct Insulation & Sealing	HVAC	16,396	301,827	318,223	0.1%	99.6%
Residential	Programmable/Reprogrammable Thermostat	HVAC	266,106	-	266,106	0.1%	99.7%
Residential	LED Night Light	Lighting	226,999	-	226,999	0.1%	99.8%
Residential	Shower Timer	Hot Water	186,205	-	186,205	0.1%	99.8%
Residential	Clothes Dryer	Appliances	125,517	-	125,517	0.0%	99.9%
Residential	Bathroom & Kitchen Exhaust Fan	HVAC	101,980	-	101,980	0.0%	99.9%
Residential	Water Cooler	Appliances	74,033	-	74,033	0.0%	100.0%
Residential	Tune-up	HVAC	56,747	-	56,747	0.0%	100.0%
Residential	Water Heater Temperature Setback	Hot Water	26,702	-	26,702	0.0%	100.0%
Residential	Pipe Insulation	Hot Water	15,425	-	15,425	0.0%	100.0%
Residential	Occupancy Sensor & Other Controls	Lighting	14,543	-	14,543	0.0%	100.0%
Residential	ECM Furnace Blower & Motr	HVAC	5,883	-	5,883	0.0%	100.0%
Pilots - Res	Whole Building	Other	153,748	-	153,748	46.9%	46.9%
Pilots - Res	Freezer & Refrigerator	Food Service Equipment	126,438	-	126,438	38.6%	85.5%
Pilots - Res	Electric Dryers	Appliances	19,923	-	19,923	6.1%	91.5%
Pilots - Res	Clothes Washer	Appliances	15,359	-	15,359	4.7%	96.2%
Pilots - Res	Other Non-lighting	Consumer Electronics	9,672	-	9,672	2.9%	99.2%
Pilots - Res	Room & Central Air Conditioner	HVAC	994	-	994	0.3%	99.5%
Pilots - Res	ENERGY STAR Dishwasher	Food Service Equipment	725	-	725	0.2%	99.7%
Pilots - Res	Air Purifier	Appliances	445	-	445	0.1%	99.8%
Pilots - Res	Freezer & Refrigerator	Appliances	318	-	318	0.1%	99.9%
Pilots - Res	Dehumidifier	Appliances	235	-	235	0.1%	100.0%
Pilots - Res	Other Non-lighting	Other	27	-	27	0.0%	100.0%

Note: Cumulative percent is the cumulative sum of percent 1st year kWh achieved by the high impact measure. Percent 1st year kWh is the kWh total for the measure over the sum of kWh total for all measures (electric kWh plus counted kWh converted, where applicable).

Source: Evaluation team analysis

Table 6-5. Summary Table of CY2021 High Impact Measures – Income Eligible Gross Impact

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Gross)	Weighted Average Measure Life*	Verified Gross Savings (kWh from Therms)	Lifetime Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Income Eligible	Standard LED Lamps	Lighting	76,983,956	10.0	-	769,839,561	76,983,956	24.3%	24.3%
Income Eligible	Omni-Directional LED Lamps	Lighting	54,640,002	9.6	-	526,293,698	54,640,002	17.3%	41.6%
Income Eligible	Carryover Lamps	Lighting	31,461,250	9.8	-	309,335,540	31,461,250	9.9%	51.5%
Income Eligible	Specialty LED Lamps	Lighting	27,352,356	9.8	-	267,337,035	27,352,356	8.6%	60.2%
Income Eligible	Weather Stripping	Shell	1,562,497	20.0	19,173,691	31,249,944	20,736,188	6.6%	66.7%
Income Eligible	Interior & Exterior LED Fixtures	Lighting	18,484,724	14.1	-	259,881,398	18,484,724	5.8%	72.6%
Income Eligible	Attic/Wall/Basement/Floor/Foundation Insulation	Shell	2,206,986	20.0	12,474,840	44,139,725	14,681,826	4.6%	77.2%
Income Eligible	Advanced Power Strips Tier 1	Consumer Electronics	13,430,178	7.0	-	94,011,246	13,430,178	4.2%	81.4%
Income Eligible	Low Flow Showerhead	Hot Water	1,791,654	10.0	10,824,900	17,916,536	12,616,554	4.0%	85.4%
Income Eligible	Kitchen & Bathroom Faucet Aerator	Hot Water	1,217,853	10.0	7,111,342	12,178,526	8,329,195	2.6%	88.1%
Income Eligible	Decorative & Directional LED Lamps	Lighting	7,613,649	9.4	-	71,889,490	7,613,649	2.4%	90.5%
Income Eligible	Pipe Insulation	HVAC	-	-	5,877,951	-	5,877,951	1.9%	92.3%
Income Eligible	Air Sealing	Shell	926,827	20.0	4,460,632	18,536,530	5,387,459	1.7%	94.0%
Income Eligible	LED Exit Signs, Channel Sign & Nightlight	Lighting	4,124,852	7.9	-	32,502,282	4,124,852	1.3%	95.3%
Income Eligible	High Efficiency Boiler	HVAC	-	-	3,930,684	-	3,930,684	1.2%	96.6%
Income Eligible	Steam Trap	HVAC	2,450	6.0	1,521,128	14,699	1,523,578	0.5%	97.1%
Income Eligible	Room & Central Air Conditioner	HVAC	1,088,134	14.1	227,514	15,341,882	1,315,648	0.4%	97.5%
Income Eligible	Programmable/Reprogrammable Thermostat	HVAC	75,026	12.6	1,081,566	942,700	1,156,591	0.4%	97.8%
Income Eligible	HVAC Control System & Maintenance	HVAC	27,233	10.9	1,020,808	296,843	1,048,041	0.3%	98.2%
Income Eligible	Other Non-lighting	Other	247,887	16.6	723,663	4,109,738	971,549	0.3%	98.5%
Income Eligible	LED Refrigerated Display Case Lighting	Refrigeration	-	-	510,080	-	510,080	0.2%	98.6%
Income Eligible	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	446,636	10.6	-	4,723,840	446,636	0.1%	98.8%
Income Eligible	High Efficiency Furnace	HVAC	146,717	20.0	230,342	2,934,339	377,059	0.1%	98.9%
Income Eligible	Other Non-lighting	HVAC	357,332	16.5	-	5,911,899	357,332	0.1%	99.0%
Income Eligible	Occupancy Sensor & Other Controls	Lighting	349,344	9.5	-	3,317,495	349,344	0.1%	99.1%
Income Eligible	Demand Control Ventilation	HVAC	3,936	15.0	288,245	59,040	292,181	0.1%	99.2%
Income Eligible	LED Night Light	Lighting	283,368	8.0	-	2,266,945	283,368	0.1%	99.3%
Income Eligible	Linear Fluorescent & Other - Delamping	Lighting	245,744	11.0	-	2,703,184	245,744	0.1%	99.4%
Income Eligible	Freezer & Refrigerator	Appliances	242,498	16.5	-	4,002,162	242,498	0.1%	99.5%
Income Eligible	Dehumidifier	Appliances	233,349	12.0	-	2,800,184	233,349	0.1%	99.5%
Income Eligible	Tune-up	HVAC	6,805	3.0	214,736	20,414	221,540	0.1%	99.6%
Income Eligible	Duct Insulation & Sealing	HVAC	53,328	20.0	155,948	1,066,569	209,276	0.1%	99.7%
Income Eligible	Bathroom & Kitchen Exhaust Fan	HVAC	182,650	19.0	-	3,470,357	182,650	0.1%	99.7%
Income Eligible	Air Purifier	Appliances	176,152	9.0	-	1,585,368	176,152	0.1%	99.8%
Income Eligible	Reduced Infiltration & Thermal Bridging	Shell	170,489	19.6	-	3,346,815	170,489	0.1%	99.8%
Income Eligible	Shower Timer	Hot Water	5,084	2.0	161,912	10,168	166,996	0.1%	99.9%
Income Eligible	Advanced Thermostat	HVAC	77,746	11.0	86,372	855,201	164,117	0.1%	99.9%
Income Eligible	Motors/Fans/Pumps	HVAC	59,128	18.3	-	1,080,865	59,128	0.0%	100.0%
Income Eligible	Pipe Insulation	Hot Water	5,192	15.0	37,580	77,875	42,772	0.0%	100.0%
Income Eligible	Door Sweep	Shell	1,094	20.0	26,201	21,874	27,295	0.0%	100.0%
Income Eligible	Gas Water Heater	Hot Water	-	-	26,787	-	26,787	0.0%	100.0%
Income Eligible	High-Performance Windows	Shell	19,387	23.5	-	455,587	19,387	0.0%	100.0%
Income Eligible	Packaged RTU Sealing	HVAC	10,692	15.0	-	160,377	10,692	0.0%	100.0%
Income Eligible	Advanced Power Strips Tier 2	Consumer Electronics	3,337	7.0	-	23,360	3,337	0.0%	100.0%
Income Eligible	Water Heater	Hot Water	-	-	2,467	-	2,467	0.0%	100.0%
Income Eligible	Hot Water Conservation	Hot Water	1,722	10.0	-	17,223	1,722	0.0%	100.0%
Income Eligible	ECM Furnace Blower & Motr	HVAC	1,564	10.3	-	16,146	1,564	0.0%	100.0%

Note: Cumulative percent is the cumulative sum of percent 1st year kWh achieved by the high impact measure. Percent 1st year kWh is the kWh total for the measure over the sum of kWh total for all measures (electric kWh plus counted kWh converted, where applicable).

Source: Evaluation team analysis

Table 6-6. Summary Table of CY2021 High Impact Measures – Income Eligible Net Impact

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Net)	Verified Net Savings (kWh from Therms)	Verified Net Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Income Eligible	Standard LED Lamps	Lighting	76,983,956	-	76,983,956	25.3%	25.3%
Income Eligible	Omni-Directional LED Lamps	Lighting	49,385,019	-	49,385,019	16.2%	41.6%
Income Eligible	Carryover Lamps	Lighting	30,777,596	-	30,777,596	10.1%	51.7%
Income Eligible	Specialty LED Lamps	Lighting	26,056,280	-	26,056,280	8.6%	60.3%
Income Eligible	Weather Stripping	Shell	1,562,497	19,173,691	20,736,188	6.8%	67.1%
Income Eligible	Attic/Wall/Basement/Floor/Foundation Insulation	Shell	2,206,986	12,474,840	14,681,826	4.8%	71.9%
Income Eligible	Interior & Exterior LED Fixtures	Lighting	14,658,104	-	14,658,104	4.8%	76.8%
Income Eligible	Advanced Power Strips Tier 1	Consumer Electronics	13,430,178	-	13,430,178	4.4%	81.2%
Income Eligible	Low Flow Showerhead	Hot Water	1,791,654	10,824,900	12,616,554	4.2%	85.3%
Income Eligible	Kitchen & Bathroom Faucet Aerator	Hot Water	1,217,853	7,111,342	8,329,195	2.7%	88.1%
Income Eligible	Decorative & Directional LED Lamps	Lighting	6,133,893	-	6,133,893	2.0%	90.1%
Income Eligible	Pipe Insulation	HVAC	-	5,877,951	5,877,951	1.9%	92.0%
Income Eligible	Air Sealing	Shell	926,827	4,460,632	5,387,459	1.8%	93.8%
Income Eligible	LED Exit Signs, Channel Sign & Nightlight	Lighting	4,104,750	-	4,104,750	1.4%	95.1%
Income Eligible	High Efficiency Boiler	HVAC	-	3,930,684	3,930,684	1.3%	96.4%
Income Eligible	Steam Trap	HVAC	2,450	1,521,128	1,523,578	0.5%	96.9%
Income Eligible	Room & Central Air Conditioner	HVAC	1,088,134	227,514	1,315,648	0.4%	97.4%
Income Eligible	Programmable/Reprogrammable Thermostat	HVAC	75,026	1,081,566	1,156,591	0.4%	97.8%
Income Eligible	HVAC Control System & Maintenance	HVAC	27,233	1,020,808	1,048,041	0.3%	98.1%
Income Eligible	Other Non-lighting	Other	247,887	723,663	971,549	0.3%	98.4%
Income Eligible	LED Refrigerated Display Case Lighting	Refrigeration	-	494,777	494,777	0.2%	98.6%
Income Eligible	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	446,636	-	446,636	0.1%	98.7%
Income Eligible	High Efficiency Furnace	HVAC	146,717	230,342	377,059	0.1%	98.9%
Income Eligible	Other Non-lighting	HVAC	357,332	-	357,332	0.1%	99.0%
Income Eligible	Occupancy Sensor & Other Controls	Lighting	349,344	-	349,344	0.1%	99.1%
Income Eligible	Demand Control Ventilation	HVAC	3,936	288,245	292,181	0.1%	99.2%
Income Eligible	LED Night Light	Lighting	283,368	-	283,368	0.1%	99.3%
Income Eligible	Linear Fluorescent & Other - Delamping	Lighting	245,744	-	245,744	0.1%	99.4%
Income Eligible	Freezer & Refrigerator	Appliances	242,498	-	242,498	0.1%	99.4%
Income Eligible	Dehumidifier	Appliances	233,349	-	233,349	0.1%	99.5%
Income Eligible	Tune-up	HVAC	6,805	214,736	221,540	0.1%	99.6%
Income Eligible	Duct Insulation & Sealing	HVAC	53,328	155,948	209,276	0.1%	99.7%
Income Eligible	Bathroom & Kitchen Exhaust Fan	HVAC	182,650	-	182,650	0.1%	99.7%
Income Eligible	Air Purifier	Appliances	176,152	-	176,152	0.1%	99.8%
Income Eligible	Reduced Infiltration & Thermal Bridging	Shell	170,489	-	170,489	0.1%	99.8%
Income Eligible	Shower Timer	Hot Water	5,084	161,912	166,996	0.1%	99.9%
Income Eligible	Advanced Thermostat	HVAC	77,746	86,372	164,117	0.1%	99.9%
Income Eligible	Motors/Fans/Pumps	HVAC	59,128	-	59,128	0.0%	100.0%
Income Eligible	Pipe Insulation	Hot Water	5,192	37,580	42,772	0.0%	100.0%
Income Eligible	Door Sweep	Shell	1,094	26,201	27,295	0.0%	100.0%
Income Eligible	Gas Water Heater	Hot Water	-	26,787	26,787	0.0%	100.0%
Income Eligible	High-Performance Windows	Shell	19,387	-	19,387	0.0%	100.0%
Income Eligible	Packaged RTU Sealing	HVAC	10,692	-	10,692	0.0%	100.0%
Income Eligible	Advanced Power Strips Tier 2	Consumer Electronics	3,337	-	3,337	0.0%	100.0%
Income Eligible	Water Heater	Hot Water	-	2,467	2,467	0.0%	100.0%
Income Eligible	Hot Water Conservation	Hot Water	1,722	-	1,722	0.0%	100.0%
Income Eligible	ECM Furnace Blower & Motor	HVAC	1,564	-	1,564	0.0	100.0%

Note: Cumulative percent is the cumulative sum of percent 1st year kWh achieved by the high impact measure. Percent 1st year kWh is the kWh total for the measure over the sum of kWh total for all measures (electric kWh plus counted kWh converted, where applicable).

Source: Evaluation team analysis

Appendix A. Program-Level Detail

This appendix presents program-level evaluation results that correspond to the impact reports produced by Guidehouse. Some ComEd programs have separate components that, either due to the nature of their program delivery or due to the nature of the evaluation approach, were evaluated as separate components with their own estimates of savings. The tables in this appendix are identical in structure to those provided in the body of the report but with the addition of new rows to break out savings by those separate components. The correlation between impact reports and programs is covered in the last column of Table 1-1 in the body of the report.

A.1 Portfolio Savings

A.1.1 Cumulative Persisting Annual Savings (CPAS)

Table A-1. CPAS by Program – Electric

[Table 2-3 in the main body]

Sector	Program	WAML*	CY2021 Verified Gross Savings (kWh)	LifETIME Net Savings (kWh)†	Verified Net kWh Savings											
					2018	2019	2020	2021	2022	2023	2024	2025	2026			
Business	Business Instant Discounts	11.2	269,381,913	0.76	2,046,609,042				205,628,306	205,628,306	205,628,306	205,628,306	153,913,771	148,333,242		
Business	Incentives - Standard	13.5	266,168,127	0.77	2,668,928,313				205,086,296	205,023,917	204,118,183	201,518,649	200,059,901	198,789,619		
Business	Small Business	12.5	222,829,653	0.97	2,476,947,097				216,199,143	216,071,758	214,495,997	207,264,017	196,098,879	189,681,442		
Business	LED Streetlighting	20.0	54,194,123	0.86	897,929,010				46,856,560	46,856,560	46,856,560	44,617,207	44,617,207	44,617,207		
Business	Industrial Systems	8.0	43,225,396	0.77	267,711,516				33,283,555	33,283,555	33,283,555	16,684,600	16,684,600	15,109,561		
Business	Strategic Energy Management	7.0	34,145,568	1.00	239,018,974				34,145,568	34,145,568	34,145,568	34,145,568	34,145,568	34,145,568		
Business	Non-residential New Construction	17.4	29,881,254	0.53	275,564,929				15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065		
Business	Incentives - Custom	15.9	26,935,745	0.52	212,632,591				13,944,832	13,944,832	13,944,832	13,937,403	13,937,403	13,742,928		
Business	RetroCommissioning	8.5	23,364,353	0.94	185,969,448				21,962,492	21,962,492	21,962,492	21,962,492	21,962,492	21,962,492		
Business	Virtual Commissioning	7.3	22,473,830	1.00	164,058,958				22,473,830	22,473,830	22,473,830	22,473,830	22,473,830	22,473,830		
Business	Industrial Energy Management	5.7	10,668,396	0.99	58,297,181				10,523,099	10,523,099	10,523,099	10,523,099	10,523,099	486,431		
Business	Facility Assessments	3.9	2,339,216	0.94	8,602,947				2,198,863	2,198,863	2,100,051	1,488,903	615,039	1,228		
Residential	Lighting Discount	10.9	318,243,559	0.56	1,431,751,246				176,705,487	176,705,487	176,705,487	176,705,487	106,182,644	100,982,131		
Residential	Appliance Rebates	10.1	56,668,076	0.79	451,471,934				44,878,796	44,878,796	44,878,796	44,878,796	44,878,796	44,878,796		
Residential	Single-Family Assessment	9.7	16,921,456	0.84	100,823,486				14,246,262	14,246,262	14,246,262	14,246,262	7,639,577	7,639,577		
Residential	Multi-Family Assessments	8.1	9,369,022	0.87	60,268,959				8,121,286	7,931,530	7,700,769	7,522,432	6,911,585	5,033,452		
Residential	Industrial HVAC	15.9	6,141,696	0.79	69,662,297				4,838,627	4,838,627	4,838,627	4,781,880	4,781,880	4,781,880		
Residential	Residential Behavior	5.0	-		262,365,944				105,968,421	76,127,714	46,144,814	23,788,506	10,336,490	-		
Income Eligible	Product Discounts - Lighting Discounts-IE	10.4	82,914,481	0.85	594,456,933				70,353,290	70,353,290	70,353,290	70,353,290	53,895,126	52,438,106		
Income Eligible	Product Discounts - Appliance Rebates-IE	7.6	7,999,926	1.00	60,615,844				7,999,926	7,999,926	7,999,926	7,999,926	7,999,926	7,999,926		
Income Eligible	Multi-Family Retrofits - IEMS	12.3	4,369,191	1.00	49,782,195				4,369,191	4,369,191	4,274,570	3,713,578	3,399,601	3,166,951		
Income Eligible	Single-Family Retrofits - IHWAP	15.1	1,979,150	1.00	23,816,247				1,979,150	1,979,150	1,979,150	1,972,519	1,963,085	1,963,085		
Income Eligible	Single-Family Retrofits - CBA	17.3	1,801,107	1.00	27,440,886				1,801,107	1,801,107	1,801,107	1,801,107	1,801,107	1,801,107		
Income Eligible	Public Housing Retrofits	9.1	1,404,776	1.00	11,061,400				1,404,776	1,404,776	1,322,540	1,253,221	1,076,147	1,037,102		
Income Eligible	Affordable Housing New Construction	15.4	1,374,420	1.00	21,211,557				1,374,420	1,374,420	1,374,420	1,374,420	1,374,420	1,374,420		
Income Eligible	Multi-Family Retrofits - IHWAP	16.5	348,535	1.00	4,476,822				348,535	348,535	348,535	348,362	348,362	344,214		
Third Party	Food Bank-LED Distribution	10.1	108,183,380	1.00	1,007,322,240				108,183,380	108,183,380	108,183,380	108,183,380	108,183,380	108,183,380		
Third Party	UIC-ERC Income Eligible Kits	9.5	35,945,840	1.00	319,971,254				35,945,840	35,945,840	35,945,840	35,945,840	35,945,840	35,945,840		
Third Party	Business Telecomm	10.8	12,350,428	0.80	106,450,699				9,883,056	9,883,056	9,883,056	9,883,056	9,883,056	9,883,056		
Third Party	Agriculture	14.3	10,159,378	0.80	107,553,247				8,127,502	8,127,502	8,127,080	8,090,979	7,638,604	7,621,864		
Third Party	Public Buildings in Distressed Communities	14.8	9,091,363	0.97	127,861,084				8,818,622	8,818,622	8,818,622	8,817,878	8,605,395	8,526,013		
Third Party	Business Grocery	13.0	6,937,145	0.97	87,227,790				6,729,031	6,729,031	6,729,031	6,729,031	6,654,745	5,940,115		
Third Party	Small Business Kits	7.2	6,148,377	0.97	35,921,124				5,953,315	5,953,315	5,953,315	5,825,433	3,943,148	2,282,569		
Third Party	Elementary Energy Education	9.4	5,543,705	0.95	44,443,348				5,238,932	5,238,932	5,026,025	5,026,025	4,210,392	4,210,392		
Third Party	Non-Profit Retrofits	13.6	4,347,609	0.97	53,868,283				4,217,181	4,217,181	4,217,013	4,139,084	3,979,099	3,792,370		
Pilots	Building Operator Certification	10.2	756,433	0.80	6,172,493				605,146	605,146	605,146	605,146	605,146	605,146		
Pilots	Water Infrastructure Leak Reduction	29.2	587,663	0.80	13,711,511				470,131	470,131	470,131	470,131	470,131	470,131		
Pilots	Upstream Commercial Food Service Equipment	13.1	349,653	0.80	3,671,853				279,722	279,722	279,722	279,722	279,722	279,722		
Pilots	SEM Water Savings	5.1	307,653	1.00	1,567,597				307,653	307,653	307,653	307,653	307,653	6,342		
Pilots	Efficient Choice	15.9	278,151	0.63	2,775,188				174,134	174,134	174,134	174,134	174,076	174,076		
Pilots	Electric Homes New Construction	15.1	192,185	0.80	2,319,002				153,748	153,748	153,748	153,748	153,748	153,748		
Pilots	ENERGY STAR Retail Products Platform	14.0	-		17,753,557				1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111		
Voltage Optimization	Voltage Optimization	15.0	270,951,740	1.00	4,064,276,100				270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740		
CY2021 Portfolio Total Electric Contribution to CPAS								1,739,836,126	1,709,615,898	1,676,431,577	1,623,672,013	1,446,711,586	1,398,915,973			
Historic Portfolio Total Electric Contribution to CPAS§								1,765,460,187	3,230,285,186	4,840,365,070	4,365,269,463	4,241,476,783	4,094,238,218	3,697,989,609	3,503,861,701	3,292,571,532
Portfolio Total Electric CPAS								1,765,460,187	3,230,285,186	4,840,365,070	6,105,105,588	5,951,092,681	5,770,669,795	5,321,661,622	4,950,573,287	4,691,487,505
CY2021 Portfolio Incremental Expiring Electric Savings 									30,220,228	33,184,321	52,759,564	176,960,428	47,795,613			
Historic Portfolio Incremental Expiring Electric Savings#								475,095,608	123,792,679	147,238,566	396,248,609	194,127,908	211,290,168			
Portfolio Grand Total Incremental Expiring Electric Savings*†								475,095,608	154,012,907	180,422,886	449,008,172	371,088,336	259,085,781			

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Business Instant Discounts	145,626,216	116,519,955	116,469,815	105,535,835	95,096,159	87,314,960	87,131,317	86,512,236	81,642,314	-	-	-
Business	Incentives - Standard	195,365,633	192,518,940	190,376,142	186,538,348	178,595,471	140,924,627	96,990,805	90,265,582	86,921,525	17,124,684	17,085,535	17,085,535
Business	Small Business	187,439,622	185,503,225	184,577,889	178,745,380	157,656,390	126,542,974	79,714,058	70,640,721	66,128,942	37,332	37,332	37,332
Business	LED Streetlighting	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207
Business	Industrial Systems	15,109,561	15,109,561	15,088,137	15,088,137	14,163,177	14,163,177	14,163,177	2,690,917	2,690,917	2,274,050	2,274,050	2,169,525
Business	Strategic Energy Management	34,145,568	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	15,837,065	6,334,826
Business	Incentives - Custom	13,742,928	13,742,928	13,742,928	13,742,928	12,628,267	12,628,267	12,574,992	11,637,361	10,764,009	3,850,286	2,716,634	1,509,180
Business	RetroCommissioning	21,962,492	20,640,682	11,591,324	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	22,473,830	6,742,149	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	486,431	486,431	486,431	486,431	442,699	442,699	442,699	363,326	363,326	238,957	238,957	238,957
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	99,864,580	97,978,163	92,561,325	92,289,419	27,404,531	27,404,531	27,404,531	27,404,531	25,452,910	-	-	-
Residential	Appliance Rebates	44,878,796	31,492,871	31,492,871	29,748,578	29,674,545	4,999,896	2,660,735	2,660,735	1,457,002	1,457,002	1,331,485	130,116
Residential	Single-Family Assessment	7,561,668	6,694,190	6,321,933	6,321,933	520,709	229,422	229,422	229,422	229,422	221,163	-	-
Residential	Multi-Family Assessments	3,037,828	3,035,327	3,034,679	3,034,679	2,412,803	1,258,902	409,468	409,468	406,326	8,425	-	-
Residential	Residential HVAC	4,364,752	4,354,182	4,302,957	4,235,297	4,044,136	3,408,767	3,408,767	3,408,767	3,408,767	2,061,556	1,395,075	1,395,075
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	51,441,322	41,754,022	38,895,048	37,428,192	7,761,867	7,761,867	7,479,292	7,094,465	7,094,465	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	7,999,926	1,028,964	1,028,964	852,812	852,812	852,812	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	2,927,333	2,841,757	2,578,804	2,495,189	1,988,523	1,797,561	1,558,194	1,558,194	1,555,119	1,543,857	1,417,823	1,410,157
Income Eligible	Single-Family Retrofits - IHWAP	1,299,230	1,269,844	1,246,967	1,246,967	800,715	724,723	721,678	721,678	721,678	716,813	690,362	685,726
Income Eligible	Single-Family Retrofits - CBA	1,601,944	1,592,671	1,589,692	1,325,564	1,059,110	1,057,663	1,057,663	1,057,663	1,057,663	1,052,433	1,052,445	1,052,445
Income Eligible	Public Housing Retrofits	1,003,095	831,753	573,150	371,459	315,999	144,068	43,042	43,042	43,042	43,042	38,769	38,769
Income Eligible	Affordable Housing New Construction	1,374,420	1,374,420	1,286,449	1,286,449	1,282,003	1,257,493	1,257,493	1,228,821	917,361	594,751	365,185	142,940
Income Eligible	Multi-Family Retrofits - IHWAP	246,167	228,105	228,105	228,105	187,270	186,963	151,947	151,947	151,947	118,301	118,301	106,650
Third Party	Food Bank-LED Distribution	102,269,698	80,284,087	79,992,249	79,992,249	1,575,403	1,575,403	1,575,403	1,575,403	1,575,403	1,561,332	1,561,332	1,561,332
Third Party	UIC-ERC Income Eligible Kits	35,945,840	23,647,672	22,351,353	22,351,353	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	9,883,056	9,883,056	9,429,729	7,616,420	2,087,558	2,063,137	2,063,137	2,063,137	2,063,137	-	-	-
Third Party	Agriculture	7,621,864	7,547,632	7,547,632	7,379,415	6,939,220	6,758,160	6,649,516	6,581,301	2,794,976	-	-	-
Third Party	Public Buildings in Distressed Communities	8,501,269	8,471,275	8,459,504	8,458,572	8,457,066	8,437,991	8,406,896	8,406,896	7,856,464	-	-	-
Third Party	Business Grocery	5,940,115	5,940,115	5,940,115	5,940,115	4,883,025	4,883,025	4,869,969	4,660,165	4,660,165	-	-	-
Third Party	Small Business Kits	2,179,943	2,106,797	1,219,179	493,665	2,611	2,611	2,611	2,611	-	-	-	-
Third Party	Elementary Energy Education	4,210,392	4,210,392	3,535,933	3,535,933	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	3,750,032	3,726,001	3,723,264	3,720,303	3,571,348	3,227,074	2,681,299	2,417,015	2,381,854	13,520	13,520	13,520
Pilots	Building Operator Certification	605,146	605,146	605,146	605,146	121,029	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	470,131	470,131	470,131	470,131	470,131	470,131	470,131	470,131	470,131	443,970	443,970	443,970
Pilots	Upstream Commercial Food Service Equipment	279,722	279,722	279,722	272,271	268,866	268,866	48,116	48,116	48,116	40,001	40,001	40,001
Pilots	SEM Water Savings	6,342	6,342	6,342	3,962	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	164,519	164,463	164,463	164,018	163,991	163,267	162,038	162,038	146,679	146,679	126,756	318
Pilots	Electric Homes New Construction	153,748	153,748	153,748	153,748	153,748	153,748	153,748	153,748	153,748	12,788	-	-
Pilots	ENERGY STAR Retail Products Platform	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	-	-	-	-
Voltage Optimization	Voltage Optimization	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	-	-	-
CY2021 Portfolio Total Electric Contribution to CPAS		1,378,609,281	1,225,910,841	1,194,026,240	1,154,833,125	898,255,305	793,778,907	697,156,267	644,563,418	94,020,214	91,401,805	79,013,583	
Historic Portfolio Total Electric Contribution to CPAS\$		3,041,216,688	2,639,918,911	2,422,565,934	1,889,726,233	1,590,516,217	1,370,911,260	1,088,857,895	621,370,548	115,886,948	90,782,572	68,434,216	39,927,951
Portfolio Total Electric CPAS		4,419,825,969	3,865,829,752	3,616,592,174	3,044,559,358	2,488,771,522	2,164,690,167	1,786,014,162	1,288,664,109	760,250,367	184,802,786	159,836,021	118,941,534
CY2021 Portfolio Incremental Expiring Electric Savings\$		20,306,692	152,698,441	31,884,601	39,193,114	256,577,821	104,476,398	96,622,640	29,862,706	22,730,142	550,543,204	2,618,410	12,388,222
Historic Portfolio Incremental Expiring Electric Savings#		251,354,844	401,297,777	217,352,977	532,839,702	299,210,016	219,604,957	282,053,365	467,487,347	505,683,600	24,904,377	22,348,356	28,506,265
Portfolio Grand Total Incremental Expiring Electric Savings*†		271,661,536	553,996,218	249,237,578	572,032,816	555,787,837	324,081,355	378,676,005	497,350,053	528,413,742	575,447,580	24,966,765	40,894,487

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Incentives - Standard	17,085,535	17,085,535	2,924,929	2,924,929	2,924,929	796,531	796,531	-	-	-	-	-
Business	Small Business	37,332	37,332	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	44,617,207	43,484,019	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems	2,065,000	2,065,000	89,233	89,233	89,233	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	Incentives - Custom	1,504,669	851,866	771,212	771,212	771,212	614,741	614,741	-	-	-	-	-
Business	RetroCommissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	238,957	238,957	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	130,116	28,135	28,135	28,135	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	156,171	156,171	140,067	140,067	140,067	140,067	140,067	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	1,408,302	1,408,302	-	-	-	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - IHWAP	603,159	529,412	577	577	-	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - CBA	1,052,445	1,019,839	-	-	-	-	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	36,804	36,804	-	-	-	-	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	142,940	94,453	94,453	94,453	94,453	76,502	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IHWAP	106,650	30,353	29,894	29,894	29,894	29,894	29,894	-	-	-	-	-
Third Party	Food Bank-LED Distribution	1,561,332	1,561,332	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Energy Education	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	13,520	13,520	13,520	13,520	13,520	-	-	-	-	-	-	-
Pilots	Building Operator Certification	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970
Pilots	Upstream Commercial Food Service Equipment	40,001	40,001	-	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	318	318	318	318	-	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2021 Portfolio Total Electric Contribution to CPAS		71,244,428	69,125,320	4,536,309	4,536,309	4,507,278	2,101,706	2,025,203	443,970	443,970	443,970	443,970	443,970
Historic Portfolio Total Electric Contribution to CPAS\$		36,046,852	28,958,993	28,628,475	18,220,864	5,168,834	670,910	-	-	-	-	-	-
Portfolio Total Electric CPAS		107,291,280	98,084,312	33,164,784	22,757,173	9,676,112	2,772,616	2,025,203	443,970	443,970	443,970	443,970	443,970
CY2021 Portfolio Incremental Expiring Electric Savings 		7,769,155	2,119,108	64,589,011	-	29,031	2,405,573	76,502	1,581,233	-	-	-	-
Historic Portfolio Incremental Expiring Electric Savings#		3,881,100	7,087,859	330,518	10,407,611	13,052,031	4,497,924	670,910	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Electric Savings*†		11,650,254	9,206,967	64,919,529	10,407,611	13,081,061	6,903,496	747,412	1,581,233	-	-	-	-

Source: Evaluation team analysis

Table A-2. CPAS by Program – Gas

[Table 2-4 in the main body]

Sector	Program	WAML	CY2021 Verified Gross Savings (Therms)	NTG*	Lifetime Net Savings (Therms)†	Verified Net Therms Savings								
						2018	2019	2020	2021	2022	2023	2024	2025	2026
Business	Incentives - Standard	15.1	2,999,487	0.70	31,634,690				2,099,641	2,099,641	2,099,641	2,099,641	2,099,641	2,099,636
Business	Small Business	9.8	367,704	0.98	3,528,391				360,050	360,050	341,917	341,917	341,917	325,015
Business	Non-residential New Construction	17.4	78,927	0.53	727,860				41,831	41,831	41,831	41,831	41,831	41,831
Business	RetroCommissioning	8.5	68,573	0.94	548,692				64,459	64,459	64,459	64,459	64,459	64,459
Business	Facility Assessments	4.7	16,774	0.94	74,880				15,768	15,768	15,768	15,768	11,810	-
Business	Business Instant Discounts		-	-	-				-	-	-	-	-	-
Business	Incentives - Custom		-	-	-				-	-	-	-	-	-
Business	Industrial Energy Management		-	-	-				-	-	-	-	-	-
Business	Industrial Systems		-	-	-				-	-	-	-	-	-
Business	LED Streetlighting		-	-	-				-	-	-	-	-	-
Business	Strategic Energy Management		-	-	-				-	-	-	-	-	-
Business	Virtual Commissioning		-	-	-				-	-	-	-	-	-
Residential	Appliance Rebates	11.1	6,344,294	0.89	62,669,720				5,675,167	5,675,167	5,675,167	5,675,167	5,675,167	5,675,167
Residential	Residential HVAC	11.4	248,389	0.90	2,549,690				223,328	223,328	223,328	223,328	223,328	223,328
Residential	Lighting Discount		-	-	-				-	-	-	-	-	-
Residential	Multi-Family Assessments		-	-	-				-	-	-	-	-	-
Residential	Residential Behavior		-	-	-				-	-	-	-	-	-
Residential	Single-Family Assessment		-	-	-				-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	18.3	661,332	1.00	11,939,718				661,332	661,332	655,192	655,192	655,192	648,201
Income Eligible	Single-Family Retrofits - CBA	19.9	341,065	1.00	6,519,764				341,065	341,065	341,065	341,065	341,065	341,065
Income Eligible	Public Housing Retrofits	5.9	60,865	1.00	359,737				60,865	60,865	60,865	56,626	56,626	49,045
Income Eligible	Multi-Family Retrofits - IHWAP	21.5	42,564	1.00	919,502				42,564	42,564	42,564	42,564	42,564	42,564
Income Eligible	Single-Family Retrofits - IHWAP	17.8	39,799	1.00	643,735				39,799	39,799	39,799	36,712	36,459	36,459
Income Eligible	Affordable Housing New Construction		-	-	-				-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE		-	-	-				-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE		-	-	-				-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	20.0	653,124	1.00	13,062,480				653,124	653,124	653,124	653,124	653,124	653,124
Third Party	UIC-ERC Income Eligible Kits	10.0	577,891	1.00	5,778,912				577,891	577,891	577,891	577,891	577,891	577,891
Third Party	Small Business Kits	6.5	197,299	0.97	1,248,950				191,380	191,380	191,380	191,380	191,380	58,410
Third Party	Elementary Energy Education	9.4	30,152	1.00	284,250				30,152	30,152	27,993	27,993	27,993	27,993
Third Party	Business Grocery	15.0	17,403	0.97	253,213				16,881	16,881	16,881	16,881	16,881	16,881
Third Party	Business Telecomm	11.0	1,188	0.80	10,450				950	950	950	950	950	950
Third Party	Agriculture		-	-	-				-	-	-	-	-	-
Third Party	Non-Profit Retrofits		-	-	-				-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities		-	-	-				-	-	-	-	-	-
Pilots	Efficient Choice	14.0	1,726	0.62	14,931				1,070	1,070	1,070	1,070	1,070	1,070
Pilots	Building Operator Certification		-	-	-				-	-	-	-	-	-
Pilots	Electric Homes New Construction		-	-	-				-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform		-	-	-				-	-	-	-	-	-
Pilots	SEM Water Savings		-	-	-				-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment		-	-	-				-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction		-	-	-				-	-	-	-	-	-
Volage Optimization	Volage Optimization		-	-	-				-	-	-	-	-	-
CY2021 Portfolio Total Gas Contribution to CPAS (Therms)			12,748,553	0.87	142,769,566				11,097,315	11,097,315	11,070,883	11,063,557	11,059,347	10,883,087
CY2021 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)‡			373,660,100	0.87	4,184,575,976				325,262,291	325,262,291	324,487,592	324,272,856	324,149,452	318,983,283
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§									663,608,709	660,492,752	654,083,990	647,948,524	636,234,858	633,245,187
Portfolio Total Gas CPAS (kWh Equivalent) 									216,877,650	387,368,187	664,862,938	988,871,000	985,755,043	978,571,583
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)#														
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)**†														
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)††														
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)‡‡									1,254,229	3,115,957	6,408,761	6,135,467	11,713,666	2,989,671
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)‡‡									1,254,229	3,115,957	7,183,460	6,350,203	11,837,070	8,155,840

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Standard	2,099,636	2,099,636	2,099,636	2,099,636	2,087,970	2,087,970	2,087,970	2,087,970	2,087,970	39,691	39,691	39,691
Business	Small Business	325,015	325,015	325,015	325,015	101,023	6,585	6,585	6,585	6,585	6,021	6,021	6,021
Business	Non-residential New Construction	41,831	41,831	41,831	41,831	41,831	41,831	41,831	41,831	41,831	41,831	41,831	16,732
Business	RetroCommissioning	64,459	61,890	35,592	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Incentives - Custom	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems	-	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	5,675,167	5,675,167	5,675,167	5,675,167	5,675,167	80,963	80,963	80,963	-	-	-	-
Residential	Residential HVAC	223,408	223,408	223,408	223,408	223,408	10,298	10,298	10,298	10,298	10,298	10,298	10,298
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	643,865	643,865	643,865	643,865	608,486	586,358	586,358	580,007	580,007	369,628	366,650	366,650
Income Eligible	Single-Family Retrofits - CBA	341,065	341,065	341,065	320,440	318,384	317,903	313,832	313,832	313,832	312,979	309,745	309,745
Income Eligible	Public Housing Retrofits	1,483	1,483	1,483	1,483	1,116	1,116	1,116	1,105	1,105	1,105	563	563
Income Eligible	Multi-Family Retrofits - IHWAP	42,564	42,564	42,564	42,564	42,418	42,418	42,418	42,418	42,418	38,716	38,716	38,716
Income Eligible	Single-Family Retrofits - IHWAP	32,963	32,963	32,864	32,864	31,501	29,035	29,035	28,120	28,120	27,691	27,098	27,098
Income Eligible	Affordable Housing New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124	653,124
Third Party	UIC-ERC Income Eligible Kits	577,891	577,891	577,891	577,891	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	58,410	58,410	58,410	58,410	-	-	-	-	-	-	-	-
Third Party	Elementary Energy Education	27,993	27,993	27,993	27,993	-	-	-	-	-	-	-	-
Third Party	Business Grocery	16,881	16,881	16,881	16,881	16,881	16,881	16,881	16,881	16,881	-	-	-
Third Party	Business Telecomm	950	950	950	950	950	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	1,070	1,070	1,070	1,070	1,070	1,054	1,054	1,054	-	-	-	-
Pilots	Building Operator Certification	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2021 Portfolio Total Gas Contribution to CPAS (Therms)		10,827,774	10,825,205	10,798,809	10,742,592	9,803,329	3,875,535	3,871,465	3,864,187	3,782,171	1,501,084	1,493,737	1,468,638
CY2021 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†		317,362,052	317,286,752	316,513,096	314,865,381	287,335,562	113,591,926	113,472,629	113,259,336	110,855,423	43,996,762	43,781,421	43,045,780
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§		629,391,419	546,232,395	512,123,206	360,082,687	257,561,584	254,536,072	191,427,684	168,355,317	45,670,514	41,857,243	40,521,623	36,029,850
Portfolio Total Gas CPAS (kWh Equivalent) 		946,753,471	863,519,147	828,636,302	674,948,068	544,897,147	368,127,998	304,900,313	281,614,652	156,525,937	85,854,005	84,303,044	79,075,629
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)#		55,313	2,569	26,396	56,217	939,264	5,927,794	4,070	7,277	82,017	2,281,087	7,347	25,099
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†		1,621,231	75,300	773,656	1,647,715	27,529,818	173,743,637	119,297	213,293	2,403,913	66,858,660	215,342	735,641
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)††		3,853,768	83,159,024	34,109,190	152,040,518	102,521,103	3,025,512	63,108,388	23,072,368	122,684,802	3,813,271	1,335,620	4,491,774
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)‡§		5,474,999	83,234,324	34,882,846	153,688,234	130,050,921	176,769,149	63,227,685	23,285,661	125,088,715	70,671,932	1,550,961	5,227,415

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Standard	39,691	39,691	-	-	-	-	-	-	-	-	-	-
Business	Small Business	6,021	6,021	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	RetroCommissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Incentives - Custom	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems	-	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	10,298	10,298	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	366,650	366,650	130,074	130,074	130,074	130,074	130,074	-	-	-	-	-
Income Eligible	Single-Family Retrofits - CBA	309,745	309,745	-	-	-	-	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	563	563	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IHWAP	38,716	38,716	24,690	15,876	15,876	15,876	15,876	-	-	-	-	-
Income Eligible	Single-Family Retrofits - IHWAP	27,098	27,098	233	233	233	233	233	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	653,124	653,124	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Energy Education	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2021 Portfolio Total Gas Contribution to CPAS (Therms)		1,451,906	1,451,906	154,997	146,182	146,182	146,182	146,182	-	-	-	-	-
CY2021 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†		42,555,353	42,555,353	4,542,958	4,284,607	4,284,607	4,284,607	4,284,607	-	-	-	-	-
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§		22,678,927	12,257,537	12,225,951	12,225,951	5,895,804	2,914,303	-	-	-	-	-	-
Portfolio Total Gas CPAS (kWh Equivalent) 		65,234,279	54,812,890	16,768,909	16,510,558	10,180,412	7,198,910	4,284,607	-	-	-	-	-
CY2021 Portfolio Incremental Expiring Gas Savings (Therms)#		16,732	-	1,296,909	8,814	-	-	146,182	-	-	-	-	-
CY2021 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†		490,427	-	38,012,394	258,351	-	-	4,284,607	-	-	-	-	-
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)††		13,350,923	10,421,390	31,587	-	6,330,146	2,981,502	2,914,303	-	-	-	-	-
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)†§		13,841,350	10,421,390	38,043,981	258,351	6,330,146	2,981,502	2,914,303	4,284,607	-	-	-	-

Source: Evaluation team analysis

Table A-3. Savings from Gas Counting Toward ComEd Goal
[Table 2-6 in the main body]

Sector	Program	Verified Gross Savings (Therms)	Verified Gross Savings (kWh Equivalent)	Verified Net Savings (Therms)	Verified Net Savings (kWh Equivalent)	Counted Measures (EUL)
Income Eligible	Food Bank-LED Distribution	653,124	19,143,064	653,124	19,143,064	Weather Stripping (20)
Income Eligible	Multi-Family Retrofits - IEMS	661,332	19,383,645	661,332	19,383,645	CA Steam Boiler (25), CA Hydronic Boiler (25), CA Attic Insulation and Air Sealing (20), CA Sidewall Insulation (20), CA Floor Insulation (20), CA Door Weatherstrip (20), CA Door Sweep (20), CA Wall Insulation (20), CA Averaging Controls (20), IU Furnace (20), IU Programmable Thermostat (16), CA On-Demand DHW Control (15), CA Pipe Insulation (15), IU DHW Heater (13), IU Advanced Thermostat (11), IU Kitchen Aerator (10), IU Showerhead (10), IU Bathroom Aerator (10), CA Steam Trap (6), IU AC Cover and Gap Sealer (5), IU Shower Timer (2), IU Reprogram Thermostat (2)
Income Eligible	Multi-Family Retrofits - IHWAP	42,564	1,247,553	42,564	1,247,553	Custom - Heating Plant Improvements (23.4441561504542), Attic Insulation (20), Air Sealing (20), Custom - DHW Boiler (15), Low Flow Faucet Aerator (10), Low Flow Showerhead (10)
Income Eligible	Public Housing Retrofits	60,865	1,783,957	60,865	1,783,957	Insulation/Air Sealing (20), Furnace (20), Programmable Thermostat (16), Water Heater (13), Showerhead (10), Faucet Aerator (10), Steam Trap Repair/ Replace (6), Room AC Cover/Gap Sealer (5), Boiler Tune-Up (3)
Income Eligible	Single-Family Retrofits - CBA	341,065	9,996,603	341,065	9,996,603	Air Sealing (20), Attic Insulation (20), Wall Insulation (20), Floor Insulation (20), Rim Insulation (20), Programmable Thermostat (16), HW Pipe Insulation (15), Advanced Thermostat (11), Low Flow Showerhead (10), Low Flow Faucet Aerator - Kitchen (10), Low Flow Faucet Aerator - Bathroom (10)
Income Eligible	Single-Family Retrofits - IHWAP	39,799	1,166,495	39,799	1,166,495	Gas High Efficiency Boiler - ER (25), Gas High Efficiency Boiler - TOS (25), Air Sealing (20), Gas High Efficiency Furnace - ER (20), Attic Insulation (20), Duct Insulation and Sealing - Distribution Efficiency (20), Wall Insulation (20), Basement Sidewall Insulation (20), Rim Insulation (20), Floor Insulation (20), Gas High Efficiency Furnace - TOS (20), Programmable Thermostat (16), HW Pipe Insulation (15), Gas Water Heater - ER (13), Advanced Thermostat (11), Low Flow Showerhead (10), Low Flow Faucet Aerator - Kitchen (10), Low Flow Faucet Aerator - Bathroom (10), Furnace Tune-Up (3)
Income Eligible	UIC-ERC Income Eligible Kits	577,891	16,937,991	577,891	16,937,991	Low flow showerheads (10), Low flow kitchen faucet aerators (10), Low flow bathroom faucet aerators (10)
Business	Incentives - Standard	1,861,022	54,546,560	1,302,716	38,182,592	Kitchen Demand Ventilation Controls (20), Building Energy Management System (15)
Business	Non-residential New Construction	78,927	2,313,336	41,831	1,226,068	All Projects (17.4)
Business	Small Business	6,207	181,921	6,021	176,463	Kitchen Fan with DCV (20)
Residential	Residential HVAC	11,702	342,985	10,298	301,827	Duct Sealing (20)
Third Party	Business Grocery	17,403	510,080	16,881	494,777	Add Door Retrofit kits (15)
Total		4,351,900	127,554,190	3,754,385	110,041,036	

Source: Evaluation team analysis

Table A-4. PAS by Program Counting Toward ComEd Goal – Total Electric + Gas

[Table 2-7 in the main body]

Sector	Program	WAML	CY2021 Verified Gross Savings (kWh)		Lifetime Net Savings (kWh)	Verified Net kWh Savings (Including Those Converted from Gas Savings)												
			NTG*			2018	2019	2020	2021	2022	2023	2024	2025	2026				
Business	Incentives - Standard	13.8	320,714,688	0.76	3,247,483,931				243,268,889	243,206,510	242,300,776	239,701,241	238,242,494	236,972,211				
Business	Business Instant Discounts	11.2	269,381,913	0.76	2,046,609,042				205,628,306	205,628,306	205,628,306	205,628,306	153,913,771	148,333,242				
Business	Small Business	12.5	223,011,574	0.97	2,480,476,360				216,375,606	216,248,221	214,672,460	207,440,480	196,275,342	189,857,905				
Business	LED Streetlighting	20.0	54,194,123	0.86	897,929,010				46,856,560	46,856,560	46,856,560	44,617,207	44,617,207	44,617,207				
Business	Industrial Systems	8.0	43,225,396	0.77	267,711,516				33,283,555	33,283,555	33,283,555	16,684,600	16,684,600	15,109,561				
Business	Strategic Energy Management	7.0	34,145,568	1.00	239,018,974				34,145,568	34,145,568	34,145,568	34,145,568	34,145,568	34,145,568				
Business	Non-residential New Construction	17.4	32,194,590	0.53	296,898,511				17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133				
Business	Incentives - Custom	15.9	26,935,745	0.52	212,632,591				13,944,832	13,944,832	13,944,832	13,937,403	13,937,403	13,742,928				
Business	RetroCommissioning	8.5	23,364,353	0.94	185,969,448				21,962,492	21,962,492	21,962,492	21,962,492	21,962,492	21,962,492				
Business	Virtual Commissioning	7.3	22,473,830	1.00	164,058,958				22,473,830	22,473,830	22,473,830	22,473,830	22,473,830	22,473,830				
Business	Industrial Energy Management	5.7	10,668,396	0.99	58,297,181				10,523,099	10,523,099	10,523,099	10,523,099	10,523,099	486,431				
Business	Facility Assessments	3.9	2,339,216	0.94	8,602,947				2,198,863	2,198,863	2,100,051	1,488,903	615,039	1,228				
Residential	Lighting Discount	10.9	318,243,559	0.56	1,431,751,246				176,705,487	176,705,487	176,705,487	176,705,487	106,182,644	100,982,131				
Residential	Appliance Rebates	10.1	56,668,076	0.79	451,471,934				44,878,796	44,878,796	44,878,796	44,878,796	44,878,796	44,878,796				
Residential	Single-Family Assessment	9.7	16,921,456	0.84	100,823,486				14,246,262	14,246,262	14,246,262	14,246,262	7,639,577	7,639,577				
Residential	Multi-Family Assessments	8.1	9,369,022	0.87	60,268,959				8,121,286	7,931,530	7,700,769	7,522,432	6,911,585	5,033,452				
Residential	Residential HVAC	16.2	6,484,681	0.79	75,698,834				5,140,454	5,140,454	5,140,454	5,083,707	5,083,707	5,083,707				
Residential	Residential Behavior	5.0	-	-	262,365,944				105,968,421	76,127,714	46,144,814	23,788,506	10,336,490	-				
Income Eligible	Product Discounts - Lighting Discounts-IE	10.4	82,914,481	0.85	594,456,933				70,353,290	70,353,290	70,353,290	70,353,290	53,895,126	52,438,106				
Income Eligible	Multi-Family Retrofits - IEMS	17.2	23,752,835	1.00	399,735,319				23,752,835	23,752,835	23,478,260	22,917,268	22,603,291	22,165,724				
Income Eligible	Single-Family Retrofits - CBA	19.5	11,797,710	1.00	218,535,181				11,797,710	11,797,710	11,797,710	11,797,710	11,797,710	11,797,710				
Income Eligible	Product Discounts - Appliance Rebates-IE	7.6	7,999,926	1.00	60,615,844				7,999,926	7,999,926	7,999,926	7,999,926	7,999,926	7,999,926				
Income Eligible	Public Housing Retrofits	7.3	3,188,733	1.00	21,605,290				3,188,733	3,188,733	3,106,498	2,912,921	2,735,848	2,474,597				
Income Eligible	Single-Family Retrofits - IHWAP	16.1	3,145,645	1.00	42,684,115				3,145,645	3,145,645	3,145,645	3,048,534	3,031,688	3,031,688				
Income Eligible	Multi-Family Retrofits - IHWAP	20.4	1,596,089	1.00	31,427,438				1,596,089	1,596,089	1,596,089	1,595,915	1,595,915	1,591,767				
Income Eligible	Affordable Housing New Construction	15.4	1,374,420	1.00	21,211,557				1,374,420	1,374,420	1,374,420	1,374,420	1,374,420	1,374,420				
Third Party	Food Bank-LED Distribution	11.6	127,326,444	1.00	1,390,183,529				127,326,444	127,326,444	127,326,444	127,326,444	127,326,444	127,326,444				
Third Party	UIC-ERC Income Eligible Kits	9.6	52,883,831	1.00	489,351,165				52,883,831	52,883,831	52,883,831	52,883,831	52,883,831	52,883,831				
Third Party	Business Telecomm	10.8	12,350,428	0.80	106,450,699				9,883,056	9,883,056	9,883,056	9,883,056	9,883,056	9,883,056				
Third Party	Agriculture	14.3	10,159,378	0.80	107,553,247				8,127,502	8,127,502	8,127,080	8,090,979	7,638,604	7,621,864				
Third Party	Public Buildings in Distressed Communities	14.8	9,091,363	0.97	127,861,084				8,818,622	8,818,622	8,818,622	8,817,878	8,605,395	8,526,013				
Third Party	Business Grocery	13.1	7,447,225	0.97	94,649,451				7,223,808	7,223,808	7,223,808	7,223,808	7,149,522	6,434,892				
Third Party	Small Business Kits	7.2	6,148,377	0.97	35,921,124				5,953,315	5,953,315	5,953,315	5,825,433	3,943,148	2,282,569				
Third Party	Elementary Energy Education	9.4	5,543,705	0.95	44,443,348				5,238,932	5,238,932	5,026,025	5,026,025	4,210,392	4,210,392				
Third Party	Non-Profit Retrofits	13.6	4,347,609	0.97	53,868,283				4,217,181	4,217,181	4,217,013	4,139,084	3,979,099	3,792,370				
Pilots	Building Operator Certification	10.2	756,433	0.80	6,172,493				605,146	605,146	605,146	605,146	605,146	605,146				
Pilots	Water Infrastructure Leak Reduction	29.2	587,663	0.80	13,711,511				470,131	470,131	470,131	470,131	470,131	470,131				
Pilots	Upstream Commercial Food Service Equipment	13.1	349,653	0.80	3,671,853				279,722	279,722	279,722	279,722	279,722	279,722				
Pilots	SEM Water Savings	5.1	307,653	1.00	1,567,597				307,653	307,653	307,653	307,653	307,653	6,342				
Pilots	Efficient Choice	15.9	278,151	0.63	2,775,188				174,134	174,134	174,134	174,134	174,076	174,076				
Pilots	Electric Homes New Construction	15.1	192,185	0.80	2,319,002				153,748	153,748	153,748	153,748	153,748	153,748				
Pilots	ENERGY STAR Retail Products Platform	14.0	-	-	17,753,557				1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111				
Voltage Optimization	Voltage Optimization	15.0	270,951,740	1.00	4,064,276,100				270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740				
CY2021 Portfolio Total Contribution to CPAS (kWh)						2,114,827,862	20,440,869,779		1,848,877,162	1,819,656,934	1,786,292,659	1,733,318,359	1,556,350,519	1,508,127,783				
Historic Portfolio Total Contribution to CPAS†									1,859,781,075	3,426,787,036	5,139,036,924	4,663,796,144	4,539,857,374	4,392,279,654	3,992,666,173	3,791,153,251	3,579,801,792	
Legacy Savings (kWh)§										4,087,238,480	3,537,033,300	3,144,029,600	2,751,025,900	2,436,622,940	2,200,820,720	1,965,018,500	1,807,817,020	
Portfolio Total CPAS (kWh)									1,859,781,075	7,514,025,516	8,676,070,224	9,657,702,906	9,110,540,208	8,615,195,253	7,926,805,253	7,312,522,270	6,895,746,595	
CY2021 Portfolio Incremental Expiring Savings 												30,220,228	33,364,275	52,974,300	176,967,840	48,222,736		
Historic Portfolio Incremental Expiring Savings#												475,240,780	123,938,771	147,577,720	399,613,481	201,512,922	211,351,459	
Legacy Incremental Expiring Savings												393,003,700	393,003,700	314,402,960	235,802,220	157,201,480		
Portfolio Grand Total Incremental Expiring Savings††												393,003,700.00	868,244,480	547,162,699	495,344,955	688,390,000	614,282,983	416,775,675
Progress towards Applicable Annual Incremental Goal (AIG)†††													981,632,682					

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Standard	233,548,225	230,701,533	228,558,734	224,720,941	216,778,063	179,107,219	135,173,397	128,448,174	125,104,118	18,288,031	18,248,882	18,248,882
Business	Business Instant Discounts	145,626,216	116,519,955	116,469,815	105,535,835	95,096,159	87,314,960	87,131,317	86,512,236	81,642,314	-	-	-
Business	Small Business	187,616,086	185,679,688	184,754,353	178,921,843	157,832,853	126,719,437	79,890,522	70,817,184	66,305,405	213,795	213,795	213,795
Business	LED Streetlighting	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207	44,617,207
Business	Industrial Systems	15,109,561	15,109,561	15,088,137	15,088,137	14,163,177	14,163,177	14,163,177	2,690,917	2,690,917	2,274,050	2,274,050	2,169,525
Business	Strategic Energy Management	34,145,568	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	17,063,133	6,825,253
Business	Incentives - Custom	13,742,928	13,742,928	13,742,928	13,742,928	12,628,267	12,628,267	12,574,992	11,637,361	10,764,009	3,850,286	2,716,634	1,509,180
Business	RetroCommissioning	21,962,492	20,640,682	11,591,324	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	22,473,830	6,742,149	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	486,431	486,431	486,431	486,431	442,699	442,699	442,699	363,326	363,326	238,957	238,957	238,957
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	99,864,580	97,978,163	92,561,325	92,289,419	27,404,531	27,404,531	27,404,531	27,404,531	25,452,910	-	-	-
Residential	Appliance Rebates	44,878,796	31,492,871	31,492,871	29,748,578	29,674,545	4,999,896	2,660,735	2,660,735	1,457,002	1,457,002	1,331,485	130,116
Residential	Single-Family Assessment	7,561,668	6,694,190	6,321,933	6,321,933	520,709	229,422	229,422	229,422	229,422	221,163	-	-
Residential	Multi-Family Assessments	3,037,828	3,035,327	3,034,679	3,034,679	2,412,803	1,258,902	409,468	409,468	406,326	8,425	-	-
Residential	Residential HVAC	4,666,579	4,656,009	4,604,784	4,537,123	4,345,962	3,710,594	3,710,594	3,710,594	3,710,594	2,363,382	1,696,902	1,696,902
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	51,441,322	41,754,022	38,895,048	37,428,192	7,761,867	7,761,867	7,479,292	7,094,465	7,094,465	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	21,799,005	21,713,430	21,450,477	21,366,861	19,823,245	18,983,710	18,744,344	18,558,188	18,555,112	12,377,654	12,164,348	12,156,682
Income Eligible	Single-Family Retrofits - CBA	11,598,547	11,589,274	11,586,294	10,717,660	10,390,945	10,375,388	10,256,091	10,256,091	10,256,091	10,230,841	10,131,076	10,131,076
Income Eligible	Product Discounts - Appliance Rebates-IE	7,999,926	1,028,964	1,028,964	852,812	852,812	852,812	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	1,046,563	875,220	616,617	414,926	348,699	176,768	75,741	75,434	75,434	75,434	55,263	55,263
Income Eligible	Single-Family Retrofits - IHWAP	2,265,372	2,235,986	2,210,225	2,210,225	1,723,997	1,575,743	1,572,699	1,545,869	1,545,869	1,528,444	1,484,598	1,479,962
Income Eligible	Multi-Family Retrofits - IHWAP	1,493,721	1,475,659	1,475,659	1,475,659	1,430,539	1,430,233	1,395,217	1,395,217	1,395,217	1,253,065	1,253,065	1,241,415
Income Eligible	Affordable Housing New Construction	1,374,420	1,374,420	1,286,449	1,286,449	1,282,003	1,257,493	1,257,493	1,228,821	917,361	594,751	365,185	142,940
Third Party	Food Bank-LED Distribution	121,412,762	99,427,151	99,135,314	99,135,314	20,718,468	20,718,468	20,718,468	20,718,468	20,718,468	20,704,397	20,704,397	20,704,397
Third Party	UIC-ERC Income Eligible Kits	52,883,831	40,585,663	39,289,344	39,289,344	-	-	-	-	-	-	-	-
Third Party	Business Telecom	9,883,056	9,883,056	9,429,729	7,616,420	2,087,558	2,063,137	2,063,137	2,063,137	2,063,137	-	-	-
Third Party	Agriculture	7,621,864	7,547,632	7,547,632	7,379,415	6,939,220	6,758,160	6,649,516	6,581,301	2,794,976	-	-	-
Third Party	Public Buildings in Distressed Communities	8,501,269	8,471,275	8,459,504	8,458,572	8,457,066	8,437,991	8,406,896	8,406,896	7,856,464	-	-	-
Third Party	Business Grocery	6,434,892	6,434,892	6,434,892	6,434,892	5,377,802	5,377,802	5,364,746	5,154,943	5,154,943	-	-	-
Third Party	Small Business Kits	2,179,943	2,106,797	1,219,179	493,665	2,611	2,611	2,611	2,611	-	-	-	-
Third Party	Elementary Energy Education	4,210,392	4,210,392	3,535,933	3,535,933	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	3,750,032	3,726,001	3,723,264	3,720,303	3,571,348	3,227,074	2,681,299	2,417,015	2,381,854	13,520	13,520	13,520
Pilots	Building Operator Certification	605,146	605,146	605,146	605,146	121,029	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	470,131	470,131	470,131	470,131	470,131	470,131	470,131	470,131	470,131	443,970	443,970	443,970
Pilots	Upstream Commercial Food Service Equipment	279,722	279,722	279,722	272,271	268,866	268,866	48,116	48,116	48,116	40,001	40,001	40,001
Pilots	SEM Water Savings	6,342	6,342	6,342	3,962	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	164,519	164,463	164,463	164,018	163,991	163,267	162,038	162,038	146,679	146,679	126,756	318
Pilots	Electric Homes New Construction	153,748	153,748	153,748	153,748	153,748	153,748	153,748	153,748	153,748	12,788	-	-
Pilots	ENERGY STAR Retail Products Platform	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	1,268,111	-	-	-	-
Voltage Optimization	Voltage Optimization	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	270,951,740	-	-	-
CY2021 Portfolio Total Contribution to CPAS (kWh)		1,486,197,502	1,333,499,061	1,301,611,577	1,261,813,956	987,145,906	881,934,564	785,192,626	755,116,627	732,386,485	138,016,977	135,183,225	122,059,363
Historic Portfolio Total Contribution to CPAS†		3,327,673,743	2,912,431,144	2,678,537,824	2,091,471,880	1,792,079,385	1,569,448,916	1,224,766,966	736,297,442	161,357,463	132,639,815	108,955,839	75,957,801
Legacy Savings (kWh)§		1,650,615,540	1,414,813,320	1,336,212,580	-	-	-	-	-	-	-	-	-
Portfolio Total CPAS (kWh)		6,464,486,785	5,660,743,525	5,316,361,981	3,353,285,636	2,779,225,291	2,451,383,480	2,009,959,592	1,491,414,069	893,743,947	270,656,792	244,139,065	198,017,163
CY2021 Portfolio Incremental Expiring Savings#		21,930,281	152,698,441	31,887,484	39,797,621	274,668,050	105,211,342	96,741,937	30,075,999	22,730,142	594,369,508	2,833,751	13,123,863
Historic Portfolio Incremental Expiring Savings#		252,128,049	415,242,599	233,893,319	587,066,144	299,392,294	222,630,469	344,681,950	488,469,524	574,939,979	28,717,648	23,683,975	32,998,039
Legacy Incremental Expiring Savings		157,201,480	235,802,220	78,600,740	-	-	-	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Savings††		431,259,810	803,743,260	344,381,544	626,863,765	574,060,345	327,841,811	441,423,888	518,545,523	597,670,121	623,087,156	26,517,727	46,121,901
Progress towards Applicable Annual Incremental Goal (AAIG)†††		-	-	-	-	-	-	-	-	-	-	-	-

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Standard	18,248,882	18,248,882	2,924,929	2,924,929	2,924,929	796,531	796,531	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business	213,795	213,795	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	44,617,207	43,484,019	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems	2,065,000	2,065,000	89,233	89,233	89,233	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	Incentives - Custm	1,504,669	851,866	771,212	771,212	771,212	614,741	614,741	-	-	-	-	-
Business	RetroCommissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	238,957	238,957	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	130,116	28,135	28,135	28,135	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	457,998	457,998	140,067	140,067	140,067	140,067	140,067	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	12,154,827	12,154,827	3,812,479	3,812,479	3,812,479	3,812,479	3,812,479	-	-	-	-	-
Income Eligible	Single-Family Retrofits - CBA	10,131,076	10,098,470	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	53,298	53,298	-	-	-	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - IHWAP	1,397,395	1,323,648	7,394	7,394	6,817	6,817	6,817	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IHWAP	1,241,415	1,165,118	753,556	495,205	495,205	495,205	495,205	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	142,940	94,453	94,453	94,453	94,453	76,502	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	20,704,397	20,704,397	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Energy Education	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Non-Profit Retrofits	13,520	13,520	13,520	13,520	13,520	-	-	-	-	-	-	-
Pilots	Building Operator Certification	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970	443,970
Pilots	Upstream Commercial Food Service Equipment	40,001	40,001	-	-	-	-	-	-	-	-	-	-
Pilots	SEM Water Savings	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Efficient Choice	318	318	318	318	-	-	-	-	-	-	-	-
Pilots	Electric Homes New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2021 Portfolio Total Contribution to CPAS (kWh)		113,799,781	111,680,672	9,079,267	8,820,916	8,791,885	6,386,313	6,309,810	443,970	443,970	443,970	443,970	443,970
Historic Portfolio Total Contribution to CPAS‡		58,725,779	41,216,530	40,854,426	30,446,815	11,064,638	3,585,213	-	-	-	-	-	-
Legacy Savings (kWh)§		-	-	-	-	-	-	-	-	-	-	-	-
Portfolio Total CPAS (kWh)		172,525,559	152,897,202	49,933,693	39,267,731	19,856,524	9,971,526	6,309,810	443,970	443,970	443,970	443,970	443,970
CY2021 Portfolio Incremental Expiring Savings 		8,259,582	2,119,108	102,601,405	258,351	29,031	2,405,573	76,502	5,865,840	-	-	-	-
Historic Portfolio Incremental Expiring Savings#		17,232,022	17,509,249	362,104	10,407,611	19,382,177	7,479,425	3,585,213	-	-	-	-	-
Legacy Incremental Expiring Savings		-	-	-	-	-	-	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Savings††		25,491,604	19,628,357	102,963,510	10,665,962	19,411,207	9,884,998	3,661,715	5,865,840	-	-	-	-
Progress towards Applicable Annual Incremental Goal (AAIG)†††		-	-	-	-	-	-	-	-	-	-	-	-

Source: Evaluation team analysis

A.1.2 Weighted Average Measure Life

Table A-5. WAML and Verified Gross Savings by Program

[Table 2-8 in the main body]

Sector	Program	First Year Verified Gross Savings (kWh)	WAML
Business			
Business	Incentives - Standard	320,714,688	13.8
Business	Business Instant Discounts	269,381,913	11.2
Business	Small Business	223,011,574	12.5
Business	LED Streetlighting	54,194,123	20.0
Business	Industrial Systems	43,225,396	8.0
Business	Strategic Energy Management	34,145,568	7.0
Business	Non-residential New Construction	32,194,590	17.4
Business	Incentives - Custom	26,935,745	15.9
Business	RetroCommissioning	23,364,353	8.5
Business	Virtual Commissioning	22,473,830	7.3
Business	Industrial Energy Management	10,668,396	5.7
Business	Facility Assessments	2,339,216	3.9
Business	Subtotal	1,062,649,392	12.6
Residential			
Residential	Lighting Discount	318,243,559	10.9
Residential	Residential Behavior	105,968,421	5.0
Residential	Appliance Rebates	56,668,076	10.1
Residential	Single-Family Assessment	16,921,456	9.7
Residential	Multi-Family Assessments	9,369,022	8.1
Residential	Residential HVAC	6,484,681	16.2
Residential	Subtotal	513,655,214	9.6
Income Eligible			
Income Eligible	Product Discounts - Lighting Discounts-IE	82,914,481	10.4
Income Eligible	Multi-Family Retrofits - IEMS	23,752,835	17.2
Income Eligible	Single-Family Retrofits - CBA	11,797,710	19.5
Income Eligible	Product Discounts - Appliance Rebates-IE	7,999,926	7.6
Income Eligible	Public Housing Retrofits	3,188,733	7.3
Income Eligible	Single-Family Retrofits - IHWAP	3,145,645	16.1
Income Eligible	Multi-Family Retrofits - IHWAP	1,596,089	20.4
Income Eligible	Affordable Housing New Construction	1,374,420	15.4
Income Eligible	Subtotal	135,769,839	12.5
Third Party			
Third Party	Food Bank-LED Distribution	127,326,444	11.6
Third Party	UIC-ERC Income Eligible Kits	52,883,831	9.6
Third Party	Business Telecomm	12,350,428	10.8
Third Party	Agriculture	10,159,378	14.3
Third Party	Public Buildings in Distressed Communities	9,091,363	14.8
Third Party	Business Grocery	7,447,225	13.1
Third Party	Small Business Kits	6,148,377	7.2
Third Party	Elementary Energy Education	5,543,705	9.4
Third Party	Non-Profit Retrofits	4,347,609	13.6
Third Party	Subtotal	235,298,360	11.3
Pilots			
Pilots	ENERGY STAR Retail Products Platform	1,268,111	14.0
Pilots	Building Operator Certification	756,433	10.2
Pilots	Water Infrastructure Leak Reduction	587,663	29.2
Pilots	Upstream Commercial Food Service Equipment	349,653	13.1
Pilots	SEM Water Savings	307,653	5.1
Pilots	Efficient Choice	278,151	15.9
Pilots	Electric Homes New Construction	192,185	15.1
Pilots	Subtotal	3,739,849	15.0
Portfolio	Grand Total	1,951,112,654	11.6
Voltage Optimization			
Voltage Optimization	Voltage Optimization	270,951,740	15.0
Voltage Optimization	Subtotal	270,951,740	15.0
Portfolio	Total Including VO	2,222,064,394	12.0

Source: Evaluation team analysis

A.2 Savings by Program

Table A-6. Energy Savings by Program – Electric Only
[Table 3-1 in the main body]

Sector	Program	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Business	Business Instant Discounts	233,713,154	1.15	269,381,913	0.76	205,628,306
Business	Incentives - Standard	262,202,631	1.02	266,168,127	0.77	205,086,296
Business	Small Business	231,131,314	0.96	222,829,653	0.97	216,199,143
Business	LED Streetlighting	54,205,711	1.00	54,194,123	0.86	46,856,560
Business	Industrial Systems	45,507,649	0.95	43,225,396	0.77	33,283,555
Business	Strategic Energy Management	34,128,723	1.00	34,145,568	1.00	34,145,568
Business	Non-residential New Construction	30,070,482	0.99	29,881,254	0.53	15,837,065
Business	Incentives - Custom	29,764,062	0.90	26,935,745	0.52	13,944,832
Business	RetroCommissioning	25,781,470	0.91	23,364,353	0.94	21,962,492
Business	Virtual Commissioning	23,880,939	0.94	22,473,830	1.00	22,473,830
Business	Industrial Energy Management	10,597,231	1.01	10,668,396	0.99	10,523,099
Business	Facility Assessments	2,655,095	0.88	2,339,216	0.94	2,198,863
Business	Subtotal	983,638,462	1.02	1,005,607,575	0.82	828,139,608
Residential	Lighting Discount	281,013,394	1.13	318,243,559	0.56	176,705,487
Residential	Appliance Rebates	58,199,834	0.97	56,668,076	0.79	44,878,796
Residential	Single-Family Assessment	17,325,734	0.98	16,921,456	0.84	14,246,262
Residential	Multi-Family Assessments	9,538,796	0.98	9,369,022	0.87	8,121,286
Residential	Residential HVAC	6,140,953	1.00	6,141,696	0.79	4,838,627
Residential	Residential Behavior	-	-	-	-	105,968,421
Residential	Subtotal	372,218,710	1.09	407,343,808	0.87	354,758,879
Income Eligible	Product Discounts - Lighting Discounts-IE	72,258,217	1.15	82,914,481	0.85	70,353,290
Income Eligible	Product Discounts - Appliance Rebates-IE	7,989,776	1.00	7,999,926	1.00	7,999,926
Income Eligible	Multi-Family Retrofits - IEMS	4,350,903	1.00	4,369,191	1.00	4,369,191
Income Eligible	Single-Family Retrofits - IHWAP	1,983,801	1.00	1,979,150	1.00	1,979,150
Income Eligible	Single-Family Retrofits - CBA	11,716,234	0.15	1,801,107	1.00	1,801,107
Income Eligible	Public Housing Retrofits	1,384,896	1.01	1,404,776	1.00	1,404,776
Income Eligible	Affordable Housing New Construction	1,363,000	1.01	1,374,420	1.00	1,374,420
Income Eligible	Multi-Family Retrofits - IHWAP	350,799	0.99	348,535	1.00	348,535
Income Eligible	Subtotal	101,397,627	1.01	102,191,586	0.88	89,630,395
Third Party	Food Bank-LED Distribution	91,240,466	1.19	108,183,380	1.00	108,183,380
Third Party	UIC-ERC Income Eligible Kits	32,342,486	1.11	35,945,840	1.00	35,945,840
Third Party	Business Telecomm	12,498,595	0.99	12,350,428	0.80	9,883,056
Third Party	Agriculture	10,446,231	0.97	10,159,378	0.80	8,127,502
Third Party	Public Buildings in Distressed Communities	10,916,482	0.83	9,091,363	0.97	8,818,622
Third Party	Business Grocery	6,563,967	1.06	6,937,145	0.97	6,729,031
Third Party	Small Business Kits	7,515,683	0.82	6,148,377	0.97	5,953,315
Third Party	Elementary Energy Education	4,519,834	1.23	5,543,705	0.95	5,238,932
Third Party	Non-Profit Retrofits	4,400,922	0.99	4,347,609	0.97	4,217,181
Third Party	Subtotal	180,444,666	1.10	198,707,224	0.97	193,096,858
Pilots	Building Operator Certification	-	-	756,433	0.80	605,146
Pilots	Water Infrastructure Leak Reduction	587,663	1.00	587,663	0.80	470,131
Pilots	Upstream Commercial Food Service Equipmer	309,399	1.13	349,653	0.80	279,722
Pilots	SEM Water Savings	313,596	0.98	307,653	1.00	307,653
Pilots	Efficient Choice	-	-	278,151	0.63	174,134
Pilots	Electric Homes New Construction	171,166	1.12	192,185	0.80	153,748
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	1,268,111
Pilots	Subtotal	1,381,823	1.79	2,471,737	1.32	3,258,645
Voltage Optimization	Voltage Optimization	270,533,831	1.00	270,951,740	1.00	270,951,740
Voltage Optimization	Subtotal	270,533,831	1.00	270,951,740	1.00	270,951,740
Portfolio	Grand Total	1,909,615,119	1.04	1,987,273,672	0.88	1,739,836,125

Source: Evaluation team analysis

Table A-7. Energy Savings by Program – Total Electric + Gas
[Table 3-2 in the main body]

Sector	Program	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Business	Incentives - Standard	262,202,631	1.22	320,714,688	0.76	243,268,889
Business	Business Instant Discounts	233,713,154	1.15	269,381,913	0.76	205,628,306
Business	Small Business	231,313,235	0.96	223,011,574	0.97	216,375,606
Business	LED Streetlighting	54,205,711	1.00	54,194,123	0.86	46,856,560
Business	Industrial Systems	45,507,649	0.95	43,225,396	0.77	33,283,555
Business	Strategic Energy Management	34,128,723	1.00	34,145,568	1.00	34,145,568
Business	Non-residential New Construction	32,445,296	0.99	32,194,590	0.53	17,063,133
Business	Incentives - Custom	29,764,062	0.90	26,935,745	0.52	13,944,832
Business	RetroCommissioning	25,781,470	0.91	23,364,353	0.94	21,962,492
Business	Virtual Commissioning	23,880,939	0.94	22,473,830	1.00	22,473,830
Business	Industrial Energy Management	10,597,231	1.01	10,668,396	0.99	10,523,099
Business	Facility Assessments	2,655,095	0.88	2,339,216	0.94	2,198,863
Business	Subtotal	986,195,196	1.08	1,062,649,392	0.82	867,724,732
Residential	Lighting Discount	281,013,394	1.13	318,243,559	0.56	176,705,487
Residential	Appliance Rebates	58,199,834	0.97	56,668,076	0.79	44,878,796
Residential	Single-Family Assessment	17,325,734	0.98	16,921,456	0.84	14,246,262
Residential	Multi-Family Assessments	9,538,796	0.98	9,369,022	0.87	8,121,286
Residential	Residential HVAC	6,483,938	1.00	6,484,681	0.79	5,140,454
Residential	Residential Behavior	-	-	-	-	105,968,421
Residential	Subtotal	372,561,695	1.09	407,686,793	0.87	355,060,706
Income Eligible	Product Discounts - Lighting Discounts-IE	72,258,217	1.15	82,914,481	0.85	70,353,290
Income Eligible	Multi-Family Retrofits - IEMS	23,643,402	1.00	23,752,835	1.00	23,752,835
Income Eligible	Single-Family Retrofits - CBA	21,683,849	0.54	11,797,710	1.00	11,797,710
Income Eligible	Product Discounts - Appliance Rebates-IE	7,989,776	1.00	7,999,926	1.00	7,999,926
Income Eligible	Public Housing Retrofits	3,094,099	1.03	3,188,733	1.00	3,188,733
Income Eligible	Single-Family Retrofits - IHWAP	3,150,274	1.00	3,145,645	1.00	3,145,645
Income Eligible	Multi-Family Retrofits - IHWAP	1,637,188	0.97	1,596,089	1.00	1,596,089
Income Eligible	Affordable Housing New Construction	1,363,000	1.01	1,374,420	1.00	1,374,420
Income Eligible	Subtotal	134,819,805	1.01	135,769,839	0.91	123,208,648
Third Party	Food Bank-LED Distribution	91,240,466	1.40	127,326,444	1.00	127,326,444
Third Party	UIC-ERC Income Eligible Kits	32,342,486	1.64	52,883,831	1.00	52,883,831
Third Party	Business Telecomm	12,498,595	0.99	12,350,428	0.80	9,883,056
Third Party	Agriculture	10,446,231	0.97	10,159,378	0.80	8,127,502
Third Party	Public Buildings in Distressed Communities	10,916,482	0.83	9,091,363	0.97	8,818,622
Third Party	Business Grocery	7,074,047	1.05	7,447,225	0.97	7,223,808
Third Party	Small Business Kits	7,515,683	0.82	6,148,377	0.97	5,953,315
Third Party	Elementary Energy Education	4,519,834	1.23	5,543,705	0.95	5,238,932
Third Party	Non-Profit Retrofits	4,400,922	0.99	4,347,609	0.97	4,217,181
Third Party	Subtotal	180,954,745	1.30	235,298,360	0.98	229,672,691
Pilots	Building Operator Certification	-	-	756,433	0.80	605,146
Pilots	Water Infrastructure Leak Reduction	587,663	1.00	587,663	0.80	470,131
Pilots	Upstream Commercial Food Service Equipment	309,399	1.13	349,653	0.80	279,722
Pilots	SEM Water Savings	313,596	0.98	307,653	1.00	307,653
Pilots	Efficient Choice	-	-	278,151	0.63	174,134
Pilots	Electric Homes New Construction	171,166	1.12	192,185	0.80	153,748
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	1,268,111
Pilots	Subtotal	1,381,823	1.79	2,471,737	1.32	3,258,645
Voltage Optimization	Voltage Optimization	270,533,831	1.00	270,951,740	1.00	270,951,740
Voltage Optimization	Subtotal	270,533,831	1.00	270,951,740	1.00	270,951,740
Portfolio	Grand Total	1,946,447,096	1.09	2,114,827,862	0.87	1,849,877,162

Source: Evaluation team analysis

Table A-8. Summer Peak Demand Savings by Program
[Table 3-4 in the main body]

Sector	Program	Ex Ante Gross Savings (KW)	Verified Gross Realization Rate	Verified Gross Savings (KW)	NTG*	Verified Net Savings (KW)
Business	Business Instant Discounts	53,261	1.15	61,393	0.76	46,863
Business	Incentives - Standard	44,097	1.02	44,937	0.78	35,173
Business	Small Business	44,838	1.00	44,834	0.97	43,495
Business	Industrial Systems	6,504	0.93	6,063	0.78	4,729
Business	Non-residential New Construction	4,470	0.98	4,400	0.53	2,332
Business	Incentives - Custom	5,628	0.57	3,213	0.50	1,617
Business	RetroCommissioning	1,965	1.04	2,041	0.94	1,919
Business	Virtual Commissioning	-	-	1,455	1.00	1,455
Business	LED Streetlighting	-	-	14	0.81	12
Business	Facility Assessments	-	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-
Business	Subtotal	160,762	1.05	168,350	0.82	137,594
Residential	Lighting Discount	-	-	42,498	0.55	23,326
Residential	Appliance Rebates	12,934	0.98	12,663	0.78	9,861
Residential	Residential HVAC	2,461	1.00	2,464	0.79	1,956
Residential	Single-Family Assessment	2,401	0.99	2,371	0.84	1,991
Residential	Multi-Family Assessments	1,027	1.00	1,031	0.88	903
Residential	Residential Behavior	-	-	-	-	18,290
Residential	Subtotal	18,823	3.24	61,027	0.92	56,327
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	10,855	0.84	9,158
Income Eligible	Product Discounts - Appliance Rebates-IE	1,386	1.00	1,386	1.00	1,386
Income Eligible	Single-Family Retrofits - CBA	774	0.92	712	1.00	712
Income Eligible	Single-Family Retrofits - IHWAP	610	1.00	611	1.00	611
Income Eligible	Multi-Family Retrofits - IEMS	570	0.83	475	1.00	475
Income Eligible	Affordable Housing New Construction	206	0.97	199	1.00	199
Income Eligible	Public Housing Retrofits	163	1.05	170	1.00	170
Income Eligible	Multi-Family Retrofits - IHWAP	72	0.98	70	1.00	70
Income Eligible	Subtotal	3,781	3.83	14,479	0.88	12,782
Third Party	Food Bank-LED Distribution	10,788	1.19	12,824	1.00	12,824
Third Party	UIC-ERC Income Eligible Kits	3,924	1.08	4,248	1.00	4,248
Third Party	Public Buildings in Distressed Communities	3,230	0.85	2,745	0.97	2,663
Third Party	Agriculture	2,078	0.95	1,966	0.80	1,573
Third Party	Business Telecomm	1,435	1.00	1,438	0.80	1,150
Third Party	Small Business Kits	1,478	0.83	1,222	0.96	1,176
Third Party	Non-Profit Retrofits	1,052	0.92	964	0.97	935
Third Party	Business Grocery	682	1.04	709	0.97	688
Third Party	Elementary Energy Education	489	1.18	579	0.93	540
Third Party	Subtotal	25,156	1.06	26,695	0.97	25,796
Pilots	Building Operator Certification	-	-	83	0.80	67
Pilots	Efficient Choice	-	-	52	0.62	33
Pilots	Upstream Commercial Food Service Equipment	40	1.13	45	0.80	36
Pilots	Electric Homes New Construction	14	1.10	15	0.80	12
Pilots	ENERGY STAR Retail Products Platform	-	-	-	-	163
Pilots	SEM Water Savings	-	-	-	-	-
Pilots	Water Infrastructure Leak Reduction	-	-	-	-	-
Pilots	Subtotal	53	3.67	196	1.58	311
Voltage Optimization	Voltage Optimization	52,308	1.00	52,535	1.00	52,535
Voltage Optimization	Subtotal	52,308	1.00	52,535	1.00	52,535
Portfolio	Grand Total	260,884	1.24	323,281	0.88	285,345

Source: Evaluation team analysis

Table A-9. Comparing Electric Net Goals to Actual Achieved by CY2021 Program

[Table 3-5 in the main body]

Sector	Program	Verified Net Electric Savings (kWh)	2021 Original Plan Savings Goal (kWh)	Implementation Plan Savings Goal (kWh)	Verified Net over Original Plan	Verified Net over Implementation Plan
Business	Small Business	216,199,143	167,663,578	196,000,000	1.29	1.10
Business	Incentives - Standard	205,086,296	-	15,752,988		13.02
Business	Business Instant Discounts	174,827,945	195,530,914	174,162,854	0.89	1.00
Business	LED Streetlighting	46,856,560	67,180,170	50,938,753	0.70	0.92
Business	Strategic Energy Management	34,145,568	27,977,500	33,000,000	1.22	1.03
Business	Industrial Systems	33,283,555	29,159,582	46,700,000	1.14	0.71
Business	Virtual Commissioning	22,473,830	-	-		
Business	RetroCommissioning	21,962,492	61,113,567	44,523,777	0.36	0.49
Business	Non-residential New Construction	15,837,065	31,670,883	14,667,000	0.50	1.08
Business	Incentives - Custom	13,944,832	-	191,120,316		0.07
Business	Industrial Energy Management	10,523,099	-	-		
Business	Facility Assessments	2,198,863	1,654,145	3,428,838	1.33	0.64
Business	Subtotal	797,339,248	581,950,340	770,294,526	1.37	1.04
Residential	Lighting Discount	155,699,629	91,176,496	146,768,600	1.71	1.06
Residential	Residential Behavior	105,968,421	106,471,000	82,567,000	1.00	1.28
Residential	Appliance Rebates	44,878,796	33,862,940	23,256,306	1.33	1.93
Residential	Single-Family Assessment	14,246,262	15,066,644	17,359,000	0.95	0.82
Residential	Multi-Family Assessments	8,121,286	6,843,575	9,117,167	1.19	0.89
Residential	Residential HVAC	4,838,627	9,816,000	3,573,601	0.49	1.35
Residential	Subtotal	333,753,021	263,236,655	282,641,674	1.27	1.18
Income Eligible	Product Discounts - [Lighting Discounts +Appli	67,707,554	15,196,603	66,518,485	4.46	1.02
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	4,717,726	4,111,133	5,513,479	1.15	0.86
Income Eligible	Single Family Retrofits - CBA + IHWAP	3,780,257	6,837,748	3,448,414	0.55	1.10
Income Eligible	Public Housing Retrofits	1,404,776	1,538,944	2,187,000	0.91	0.64
Income Eligible	Affordable Housing New Construction	1,374,420	1,630,878	1,422,830	0.84	0.97
Income Eligible	Subtotal	78,984,734	29,315,307	79,090,209	2.69	1.00
Third Party	Food Bank-LED Distribution	91,190,056	-	89,473,000		1.02
Third Party	UIC-ERC Income Eligible Kits	32,807,229	-	30,538,560		1.07
Third Party	Business Telecomm	9,883,056	-	8,357,228		1.18
Third Party	Public Buildings in Distressed Communities	8,818,622	-	15,261,879		0.58
Third Party	Agriculture	8,127,502	-	8,849,912		0.92
Third Party	Business Grocery	6,729,031	-	5,013,502		1.34
Third Party	Small Business Kits	4,550,554	-	7,289,755		0.62
Third Party	Elementary Energy Education	4,359,185	1,377,478	7,446,419	3.16	0.59
Third Party	Non-Profit Retrofits	4,217,181	-	3,935,666		1.07
Third Party	Subtotal	170,682,416	1,377,478	176,165,921	123.91	0.97
Pilots	ENERGY STAR Retail Products Platform	1,268,111	-	-		
Pilots	Building Operator Certification	605,146	-	-		
Pilots	Water Infrastructure Leak Reduction	470,131	-	-		
Pilots	SEM Water Savings	307,653	-	-		
Pilots	Upstream Commercial Food Service Equipmer	279,722	-	-		
Pilots	Efficient Choice	174,134	-	-		
Pilots	Electric Homes New Construction	153,748	-	-		
Pilots	Subtotal	3,258,645	-	-		
Voltage Optimization	Voltage Optimization	270,951,740	260,000,000	263,833,000	1.04	1.03
Voltage Optimization	Subtotal	270,951,740	260,000,000	263,833,000	1.04	1.03
Other	Lighting Carryover	84,866,323	-	20,000,000		4.24
	Therm Conversion	110,041,036	110,160,000	110,041,000	1.00	1.00
Portfolio	Grand Total	1,849,877,162	1,246,039,779*	1,702,066,329	1.48	1.09

* Note: Goals values are from the ComEd - CY2021 Q4 Statewide Quarterly Report; ICC approved plan compliance filing (Commission's Final Order approving the EE Plan. For Section 8-104 programs); evaluation team analysis. The file does not split the original plan goal for the Incentive- Standard and Custom programs except the implementation goal. The combined program original plan goal is 307,391 MWh (see Table 3-5) which when added to this table produce a total of 1,553,431 MWh original plan savings goal.

Source: Evaluation team analysis

A.3 Lifetime Savings and Total Resource Cost Savings Summary

Table A-10. Verified First Year and Lifetime Savings and Acquisition Costs – Electric Only

[Table 5-1 in the main body]

Sector	ComEd CY2021 Program	Verified Gross Realization Rate	First Year Annual Energy Savings (kWh) - Gross	First Year Peak Demand Savings (kW) - Gross	NTG*	First Year Annual Energy Savings (kWh) - Net	First Year Peak Demand Savings (kW) - Net	Lifetime Savings (kWh) - Net	First Year Cost per First Year Net Annual Savings	First Year Cost per Net Lifetime Savings	Program Costs	Units #	Units Definition	Weighted Average Measure Life
Business	Business Instant Discounts	1.15	269,381,913	61,393	0.76	205,628,306	46,863	2,046,609,042	0.07	0.01	15,209,493	2,204,037	Lamps	11.2
Business	Incentives - Standard	1.02	266,168,127	44,937	0.77	205,086,296	35,173	2,668,928,313	0.03	0.00	5,183,834	3,232	Projects	13.8
Business	Small Business	0.96	222,829,653	44,834	0.97	216,199,143	43,485	2,476,947,097	0.30	0.03	64,676,962	6,909	Projects	12.5
Business	LED Streetlighting	1.00	54,194,123	14	0.86	46,856,560	12	897,929,010	0.41	0.02	19,211,600	69,224	Lamps	20.0
Business	Industrial Systems	0.95	43,225,396	6,063	0.77	33,283,555	4,729	267,711,516	0.31	0.04	10,174,699	343	Measures	8.0
Business	Strategic Energy Management	1.00	34,145,568	1.00	1.00	34,145,568	239,018,974	0.13	0.02	4,389,200	169	Projects	7.0	
Business	Non-residential New Construction	0.99	29,881,254	4,400	0.53	15,837,065	2,332	275,564,929	0.34	0.02	5,392,398	88	Projects	17.4
Business	Incentives - Custom	0.90	26,935,745	3,213	0.52	13,944,832	1,617	212,632,591	3.40	0.22	47,388,731	149	Projects	15.9
Business	RetroCommissioning	0.91	23,364,353	2,041	0.94	21,962,492	1,519	185,969,448	0.54	0.06	11,858,789	104	Projects	8.5
Business	Virtual Commissioning	0.94	22,473,830	1,455	1.00	22,473,830	1,455	164,058,958	0.99	0.06	164,058,958	174	Projects	7.3
Business	Industrial Energy Management	1.01	10,668,396	0.99	0.99	10,623,099	45	58,297,181	0.99	0.01	58,297,181	40	Measures	5.7
Business	Facility Assessments	0.88	2,339,216	0.84	0.84	2,198,863	130	8,602,947	0.57	0.15	1,258,061	81	Measures	3.9
Business	Subtotal	1.02	1,005,607,575	168,350	0.82	828,139,608	137,594	9,502,270,006	0.22	0.02	184,743,787	2,284,550	Measures	12.5
Residential	Lighting Discount	1.13	318,243,559	42,498	0.56	176,705,487	23,326	1,431,751,246	0.11	0.01	19,463,046	6,206,395	Lamps	10.9
Residential	Appliance Rebates	0.97	56,668,076	12,663	0.79	44,878,796	9,861	451,471,934	0.31	0.03	14,092,824	428,717	Measures	10.1
Residential	Single-Family Assessment	0.98	16,921,456	2,371	0.84	14,246,262	1,991	100,823,486	0.37	0.05	5,334,185	417,559	Measures	9.7
Residential	Multi-Family Assessments	0.98	9,369,022	1,031	0.87	8,121,286	903	60,268,599	0.51	0.07	4,123,105	85,431	Measures	8.1
Residential	Residential HVAC	1.00	6,141,696	2,464	0.79	4,838,627	1,566	69,662,297	0.58	0.04	2,797,451	10,249	Projects	16.2
Residential	Residential Behavior	1.00	105,968,421	18,290	0.79	105,968,421	18,290	262,365,944	0.05	0.02	5,622,890	1,920,154	Households	5.0
Residential	Subtotal	1.09	407,343,808	61,027	0.87	354,758,879	56,327	2,376,343,864	0.14	0.02	51,433,501	9,068,595	Measures	10.7
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	1.13	90,914,407	12,240	0.86	78,353,216	10,543	655,072,777	0.10	0.01	7,832,693	2,389,875	Measures	10.2
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	1.00	4,717,726	545	1.00	4,717,726	545	54,259,017	2.26	0.20	10,651,330	892	Projects	17.4
Income Eligible	Single Family Retrofits - CBA + IHWAP	0.28	3,780,257	1,323	1.00	3,780,257	1,323	51,257,133	3.25	0.24	12,279,893	14,884	Projects	17.7
Income Eligible	Public Housing Retrofits	1.01	1,404,776	170	1.00	1,404,776	170	11,061,400	1.19	0.15	1,675,884	135	Projects	7.3
Income Eligible	Affordable Housing New Construction	1.01	1,374,420	199	1.00	1,374,420	199	21,211,557	1.38	0.09	1,892,528	623	Households	15.4
Income Eligible	Subtotal	1.01	102,191,526	14,479	0.88	89,630,395	12,762	792,861,883	0.38	0.04	34,332,326	2,405,409	Measures	10.8
Third Party	Food Bank-LED Distribution	1.19	108,183,380	12,824	1.00	108,183,380	12,824	1,007,322,240	0.07	0.01	7,357,187	2,817,014	Lamps	11.6
Third Party	UIC-ERC Income Eligible Kits	1.11	35,945,840	4,248	1.00	35,945,840	4,248	319,971,254	0.14	0.02	5,156,300	840,000	Measures	9.6
Third Party	Business Telecom	0.99	12,350,428	1,438	0.80	9,883,056	1,150	106,450,699	0.29	0.03	2,817,832	70	Projects	10.8
Third Party	Agriculture	0.97	10,159,378	1,966	0.80	8,127,502	1,573	107,553,247	0.37	0.03	2,994,109	234	Projects	14.3
Third Party	Public Buildings in Distressed Communities	0.83	9,091,363	2,745	0.97	8,818,622	2,663	127,861,084	0.15	0.01	1,306,422	84,549	Measures	14.8
Third Party	Business Grocery	1.06	6,937,145	709	0.97	6,729,031	688	87,227,790	0.36	0.03	2,403,735	149	Measures	13.1
Third Party	Small Business Kits	0.82	6,148,377	1,222	0.97	5,953,315	1,176	35,921,124	0.29	0.05	1,743,180	74,916	Measures	7.2
Third Party	Elementary Energy Education	1.23	5,543,705	579	0.95	5,238,932	540	44,443,348	0.14	0.02	741,944	299,530	Measures	9.4
Third Party	Non-Profit Retrofits	0.99	4,347,609	964	0.97	4,217,181	935	53,868,283	0.52	0.04	2,195,809	16,889	Measures	13.6
Third Party	Subtotal	1.10	198,707,224	26,895	0.97	193,096,858	25,796	1,890,619,069	0.14	0.01	26,716,517	4,133,351	Measures	11.4
Pilots	Building Operator Certification	1.00	756,433	83	0.80	605,146	67	6,172,493	0.18	0.02	110,216	9	Participants	10.2
Pilots	Water Infrastructure Leak Reduction	1.00	587,663	0.80	0.80	470,131	0.80	13,711,511	0.99	0.03	465,653	90	Measures	29.2
Pilots	Upstream Commercial Food Service Equipment	1.13	349,653	45	0.80	279,722	36	3,671,853	0.60	0.05	168,908	90	Measures	13.1
Pilots	SEM Water Savings	0.98	307,653	1.00	1.00	307,653	1.00	1,567,597	0.62	0.12	191,458	6	Participants	5.1
Pilots	Efficient Choice	1.00	278,151	52	0.63	174,134	33	2,775,189	0.60	0.04	103,750	46,826	Measures	15.9
Pilots	Electric Homes New Construction	1.12	192,185	15	0.80	153,748	12	2,319,002	1.82	0.12	279,088	18	Participants	15.1
Pilots	ENERGY STAR Retail Products Platform	1.00	1,268,111	163	0.80	1,005,048	163	17,753,557	0.92	0.07	1,160,695	112,032	Measures	14.0
Pilots	Subtotal	1.79	2,471,737	196	1.32	3,258,645	311	47,971,203	0.76	0.05	2,479,768	159,071	Measures	15.6
Voltage Optimization	Voltage Optimization	1.00	270,951,740	52,535	1.00	270,951,740	52,535	4,064,276,100	0.00	0.00	0	530	Feeders	15.0
Voltage Optimization	Subtotal	1.00	270,951,740	52,535	1.00	270,951,740	52,535	4,064,276,100	-	-	-	530	Measures	15.0
Portfolio	Grand Total	1.00	1,987,273,672	323,281	0.87	1,739,838,126	285,345	18,674,342,124	0.17	0.02	299,705,871	18,055,797	Measures	12.1

Source: Evaluation team analysis

Table A-11. Total Resource Cost Savings Summary

[Table 5-2 in the main body]

Sector	Program	WAML (years)	Verified Gross Electric Energy Savings (kWh)	Verified Gross Peak Demand Reduction (kW)	Verified Gross Gas Savings (Therms)	Gross Secondary Savings due to Water Reduction (kWh)			Gross Heating Penalty (kWh)*	Gross Heating Penalty (Therms)†	NTG (kWh)	NTG (kW)	NTG (Therms)	Verified Net Electric Energy Savings (kWh)	Verified Net Peak Demand Reduction (kW)	Verified Net Gas Savings (Therms)	Net Secondary Savings due to Water Reduction (kWh)	Net Heating Penalty (kWh)	Net Heating Penalty (Therms)
Business	Business Instant Discounts	11.2	269,381,913	61,393	-	-	-	-	-	-	0.76	0.76	-	205,628,306	46,863	-	-	-	(2,833,444)
Business	Incentives - Standard	13.8	266,167,845	44,937	2,999,487	282	-	(3,713,626.69)	(1,179,092.76)	0.77	0.78	0.70	0.70	206,086,099	35,173	2,099,641	198	-	(943,274)
Business	Small Business	12.5	222,815,491	44,834	367,704	14,162	(8,311,759.25)	(2,314,711.87)	0.97	0.97	0.98	0.98	216,185,405	43,495	360,050	13,738	(8,062,406)	(2,245,271)	
Business	LED Streetlighting	20.0	54,194,123	14	-	-	-	-	-	0.86	0.81	-	-	46,856,560	12	-	-	-	-
Business	Industrial Systems	8.0	43,225,396	6,063	-	-	-	-	-	0.77	0.78	-	-	33,283,555	4,729	-	-	-	-
Business	Strategic Energy Management	7.0	34,145,568	-	-	-	-	-	-	1.00	-	-	-	34,145,568	-	-	-	-	-
Business	Non-residential New Construction	17.4	29,863,565	4,400	78,927	17,690	(617,475.13)	(77,779.19)	0.53	0.53	0.53	0.53	16,827,689	2,332	41,831	9,375	(327,262)	(41,223)	
Business	Incentives - Custom	15.9	26,935,745	3,213	-	-	-	(12,394.00)	0.52	0.50	-	-	13,944,832	1,617	-	-	-	-	(6,321)
Business	RetroCommissioning	8.5	23,364,353	2,041	68,573	-	-	-	0.94	0.94	0.94	0.94	21,962,492	1,919	64,459	-	-	-	-
Business	Virtual Commissioning	7.3	22,473,830	1,455	-	-	-	-	1.00	1.00	-	-	22,473,830	1,455	-	-	-	-	-
Business	Industrial Energy Management	5.7	10,668,396	-	-	-	-	-	0.99	-	-	-	10,523,099	-	-	-	-	-	-
Business	Facility Assessments	3.9	2,339,216	-	16,774	-	-	-	0.94	-	0.94	-	2,198,863	-	15,768	-	-	-	-
Residential	Lighting Discount	10.9	318,243,559	42,498	-	-	-	(7,360,519.35)	0.56	0.55	-	-	176,705,487	23,326	-	-	-	-	(4,047,315)
Residential	Appliance Rebates	10.1	56,476,826	12,663	6,344,294	191,250	-	-	0.79	0.78	0.89	0.89	44,758,309	9,861	5,675,167	120,488	-	-	-
Residential	Single-Family Assessment	9.7	16,918,413	2,371	3,042	(249,048.61)	(299,660.39)	0.84	0.84	-	-	-	14,243,097	1,991	-	3,164	(209,201)	(251,715)	
Residential	Multi-Family Assessments	8.1	9,316,945	1,031	-	52,077	(136,848.15)	(46,902.66)	0.87	0.88	-	-	8,067,647	903	-	53,639	(109,645)	(39,867)	
Residential	Residential HVAC	16.2	6,141,696	2,464	248,389	-	-	-	0.79	0.79	0.90	0.90	4,838,627	1,956	223,328	-	-	-	-
Residential	Residential Behavior	5.0	-	-	-	-	-	-	-	-	-	-	105,968,421	18,290	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	10.4	82,914,481	10,855	-	-	-	(1,760,375.64)	0.85	0.84	-	-	70,353,290	9,158	-	-	-	-	(1,483,638)
Income Eligible	Product Discounts - Appliance Rebates-IE	7.6	7,999,926	1,386	-	-	-	-	1.00	1.00	-	-	7,999,926	1,386	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	17.2	4,343,016	475	661,332	26,175	(33,563.12)	(16,988.22)	1.00	1.00	1.00	1.00	4,343,016	475	661,332	26,175	(33,563)	(16,988)	
Income Eligible	Single-Family Retrofits - IHWAP	16.1	1,978,979	611	39,799	1,741	-	(15,950.05)	1.00	1.00	1.00	1.00	1,978,979	611	39,799	171	-	-	(15,950)
Income Eligible	Single-Family Retrofits - CBA	19.5	1,798,458	712	341,065	2,649	-	(10,990.28)	1.00	1.00	1.00	1.00	1,798,458	712	341,065	2,649	-	-	(10,990)
Income Eligible	Public Housing Retrofits	7.3	1,398,963	170	60,865	5,813	(15,936.07)	(8,094.80)	1.00	1.00	1.00	1.00	1,398,963	170	60,865	5,813	(15,936)	(8,095)	
Income Eligible	Affordable Housing New Construction	15.4	1,372,382	199	-	2,038	-	(8,237.63)	1.00	1.00	-	-	1,372,382	199	-	2,038	-	-	(8,238)
Income Eligible	Multi-Family Retrofits - IHWAP	20.4	348,377	70	42,564	158	-	(1,294.02)	1.00	1.00	1.00	1.00	348,377	70	42,564	158	-	-	(1,294)
Third Party	Food Bank-LED Distribution	11.6	108,183,380	12,824	653,124	-	-	(1,907,365.61)	1.00	1.00	1.00	1.00	108,183,380	12,824	653,124	-	-	-	(1,907,366)
Third Party	UIC-ERC Income Eligible Kits	9.6	35,481,098	4,248	577,891	464,742	-	(522,201.98)	1.00	1.00	1.00	1.00	35,481,098	4,248	577,891	464,742	-	-	(522,202)
Third Party	Business Telecomm	10.8	12,350,428	1,438	1,188	-	-	-	0.80	0.80	0.80	0.80	9,883,056	1,150	950	-	-	-	-
Third Party	Agriculture	14.3	10,159,378	1,966	-	-	-	(112,684.31)	0.80	0.80	-	-	8,127,502	1,573	-	-	-	-	(90,147)
Third Party	Public Buildings in Distressed Communities	14.8	9,081,363	2,745	-	-	-	(174,383.45)	0.97	0.97	-	-	8,818,622	2,663	-	-	-	-	(169,152)
Third Party	Business Grocery	13.1	6,937,145	709	17,403	-	-	(22,977.74)	0.97	0.97	0.97	0.97	6,729,031	688	16,881	-	-	-	(22,288)
Third Party	Small Business Kits	7.2	5,983,598	1,222	197,259	164,779	(23,653.61)	(60,184.05)	0.97	0.96	0.97	0.96	5,793,480	1,176	191,380	159,835	(22,944)	(58,219)	
Third Party	Elementary Energy Education	9.4	5,446,202	579	30,152	97,503	(268,195.45)	(43,750.56)	0.94	0.93	1.00	1.00	5,141,429	540	30,152	97,503	(237,490)	(38,529)	
Third Party	Non-Profit Retrofits	13.6	4,347,609	964	-	-	(43,169.91)	(129,268.67)	0.97	0.97	-	-	4,217,181	935	-	-	-	-	(41,875)
Pilots	Building Operator Certification	10.2	756,433	83	-	-	-	-	0.80	0.80	-	-	605,146	67	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipme	13.1	347,501	45	-	2,151	-	-	0.80	0.80	-	-	278,001	36	-	1,721	-	-	-
Pilots	Efficient Choice	15.9	275,607	52	1,726	2,544	-	-	0.63	0.62	0.62	0.62	172,557	33	1,070	1,577	-	-	-
Pilots	Electric Homes New Construction	15.1	191,424	15	-	760	(4,472.61)	-	0.80	0.80	-	-	153,139	12	-	608	(3,578)	-	-
Pilots	ENERGY STAR Retail Products Platform	14.0	-	-	-	-	-	-	-	-	-	-	1,268,111	163	-	-	-	-	-
Pilots	SEM Water Savings	5.1	-	-	-	307,653	-	-	-	-	-	-	-	-	-	307,653	-	-	-
Pilots	Water Infrastructure Leak Reduction	29.2	-	-	-	587,663	-	-	-	-	-	-	-	-	-	470,131	-	-	-
Voltage Optimization	Voltage Optimization	15.0	270,951,740	52,535	-	-	-	-	1.00	1.00	-	-	270,951,740	52,535	-	-	-	-	-
Total		12.1	1,365,330,369	323,281	12,748,533	1,943,303	(9,704,122)	(19,790,534)	0.88	0.88	0.90	0.90	1,738,094,750	265,345	11,097,315	1,741,376	(9,063,991)	(14,886,617)	

Source: Evaluation team analysis